APPENDIX C

BASIX Certificates

BASIX® Certificate

Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 1197070M

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary
Date of issue: Thursday, 20 May 2021
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT | Planning, Industry & Environment

Project summary	
Project name	22088
Street address	35 Bayside Way Brunswick Heads 2483
Local Government Area	Byron Shire Council
Plan type and plan number	deposited 1070724
Lot no.	100
Section no.	-
No. of residential flat buildings	0
No. of units in residential flat buildings	0
No. of multi-dwelling houses	20
No. of single dwelling houses	0

Project score		
Water	✔ 43	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 51	Target 50

Certificate Prepared by
Name / Company Name: Partners Energy Management
ABN (if applicable): 86638119847

Description of project

Project address	
Project name	22088
Street address	35 Bayside Way Brunswick Heads 2483
Local Government Area	Byron Shire Council
Plan type and plan number	deposited 1070724
Lot no.	100
Section no.	-

Project type	
No. of residential flat buildings	0
No. of units in residential flat buildings	0
No. of multi-dwelling houses	20
No. of single dwelling houses	0

Site details	
Site area (m²)	6582
Roof area (m²)	3522
Non-residential floor area (m²)	0.0
Residential car spaces	39
Non-residential car spaces	6

Common area landscape	
Common area lawn (m²)	0.0
Common area garden (m²)	0.0
Area of indigenous or low water use species (m²)	0.0

Assessor details	
Assessor number	101526
Certificate number	0006031710
Climate zone	10
Ceiling fan in at least one bedroom	No
Ceiling fan in at least one living room or other conditioned area	No

Project score		
Water	✔ 43	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 51	Target 50

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Description of project

The tables below describe the dwellings and common areas within the project

Multi-dwelling houses

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
1	3	165.5	12.8	90.0	0.0
6	3	125.2	9.4	100.0	0.0
11	3	131.7	8.2	90.0	0.0
16	3	105.9	10.3	90.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
2	3	139.9	12.2	90.0	0.0
7	3	125.2	9.4	100.0	0.0
12	3	104.0	8.3	65.0	0.0
17	3	102.3	8.3	90.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3	3	129.1	9.6	90.0	0.0
8	3	125.2	9.4	100.0	0.0
13	3	105.6	10.6	75.0	0.0
18	3	111.4	11.7	90.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
4	3	125.2	9.4	120.0	0.0
9	3	129.0	10.3	95.0	0.0
14	3	104.2	9.8	160.0	0.0
19	3	107.9	13.1	90.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
5	3	125.2	9.4	100.0	0.0
10	3	115.1	9.7	90.0	0.0
15	3	114.3	12.1	90.0	0.0
20	3	102.1	12.9	90.0	0.0

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No common areas specified.

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Schedule of BASIX commitments

1. Commitments for multi-dwelling houses

    (a) Dwellings

        (i) Water

        (ii) Energy

        (iii) Thermal Comfort

2. Commitments for single dwelling houses

3. Commitments for common areas and central systems/facilities for the development (non-building specific)

        (i) Water

        (ii) Energy

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Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for multi-dwelling houses

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✔ ✔	✔ ✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

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	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 7.5 but <= 9 L/min)	3 star	3 star	3 star	no	-	-	-	-	-	-	0.0	no	no

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	individual water tank (no. 1)	Tank size (min) 2000.0 litres	To collect run-off from at least: 100.0 square metres of roof area; 0.0 square metres of impervious area; 0.0 square metres of garden and lawn area; and 0.0 square metres of planter box area.	yes	yes	yes	no	no
None	-	-	-	-	-	-	-	-

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✔	✔	✔
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✔	✔
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✔	✔

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✔	✔
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✔	✔	✔
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✔ ✔	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✔ ✔ ✔	✔ 145
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✔	
(j) The applicant must install the photovoltaic system specified for the dwelling under the "Photovoltaic system" heading of the "Alternative energy" column of the table below, and connect the system to that dwelling's electrical system.	✔	✔	✔

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	solar (electric boosted) 31 to 35 STCs	individual fan, not ducted	manual switch on/off	individual fan, not ducted	manual switch on/off	natural ventilation only, or no laundry	-

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
9, 13, 14	ceiling fans	ceiling fans	-	-	3 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	3	yes
All other dwellings	ceiling fans	ceiling fans	-	-	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	3	yes

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	yes	-	-	-	no	no

	Alternative energy
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)
All dwellings	0.0

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✔		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✔	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✔	✔
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✔	✔	✔
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✔	✔	✔

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	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
1	13.4	21.1
2	12.3	23.9
3	16.9	30.4
4	12.7	26.4
9	15.8	27.1
10	17.1	21.6
11	16.8	21.8
12	17.5	19.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
13	17.0	24.0
14	13.8	32.3
15	16.1	17.7
16	17.2	22.5
17	17.2	19.1
18	15.8	25.2
19	17.5	24.0
20	10.6	37.4
All other dwellings	15.1	25.5

	Construction of floors and walls				
Dwelling no.	Concrete slab on ground(m²)	Suspended floor with open subfloor (m²)	Suspended floor with endclosed subfloor (m²)	Suspended floor above garage (m²)	Primarily rammed earth or mudbrick walls
1	112	-	-	-	No
2	87	-	-	-	No
3	98	-	-	-	No
10	61	6	-	-	No
11	72	-	-	-	No
12	51	4	-	-	No
13	70	2	-	-	No
14	54	8	-	-	No
16	56	-	-	-	No
17	53	-	-	-	No
18	83	-	-	-	No
9,15	77	-	-	-	No
19,20	51	2	-	-	No

	Construction of floors and walls				
Dwelling no.	Concrete slab on ground(m²)	Suspended floor with open subfloor (m²)	Suspended floor with endclosed subfloor (m²)	Suspended floor above garage (m²)	Primarily rammed earth or mudbrick walls
All other dwellings	78	-	-	-	No

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3. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✔	✔
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✔	✔	✔
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✔	✔	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✔	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✔	✔
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✔	✔

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Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	4 star	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✔	✔
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✔	✔
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

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1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

THERMAL PERFORMANCE SPECIFICATIONS: (**22088 – 35 Bayside Way)**

The following specifications take precedence over other plan notations for the construction of this building.

NOTE: In addition to BASIX commitments; building compliance is required to comply with the 'New South Wales Additions' in the current edition of the NCC – Vol. 2, at the time of building.
This includes New South Wales Parts 2.6 and 3.12.
Specific mention is made of the following provisions:

- Building Fabric Thermal Insulation

(NOTE: If steel framing is used a thermal break may be required)

- Building Sealing
- Building Services

(NOTE: Ventilation requirements of Section 3.8.7.3 b must also be complied with and this means bathrooms should not normally be exhausted into roofspaces unless they are ventilated.)

WINDOWS (total product specification – glass + frame)
U-value 4.8 (or less than) & SHGC 0.59 (+/-5%) (Typically: Low-e Clear glass in AL. frame)

EXTERNAL WALL (Medium colour)
Cavity Panel – R2.5 – 90mm thick Bulk insulation with vapour barrier
Cavity Panel – R2.7 – 90mm thick Bulk insulation with vapour barrier (Unit 16, 17 and 19)
Brick veneer (for selected Garages) – No insulation

INTERNAL WALL
Cavity Panel – No Insulation (generally)
Cavity Panel – R2.5 – 90mm thick Bulk insulation (between garage & Living areas)

EXTERNAL FLOOR
Concrete Slab on Ground – No Insulation
Concrete Slab on Ground – Units 11,12,13,16,17 – R1.0 edge slab insulation
Suspended Timber floor – Open sub-floor – 15mm foil-board insulation (or equivalent)

CEILING SPACE with CEILING ABOVE
Plasterboard – R2.0 bulk insulation – between garage and floor above

CEILING SPACE with ROOF ABOVE
Plasterboard – R3.5 bulk insulation (Garage – No insulation)
Plasterboard – R2.5 bulk insulation (raked ceiling - Unit 11 (above void)

ROOF (Medium colour (most units) / Dark colour – Units 11,12,13,16 and 17)
Sheet Metal Roofing – 60mm Reflective Foil Blanket

RATED either with NO DOWNLIGHTS or with LED downlights which do not penetrate ceiling insulation (ie: IC rated)

Nationwide House Energy Rating Scheme — Multiple Class1-dwelling summary NatHERS Certificate No. 0006031710

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)

Property

Address 35 Bayside Way , Brunswick Heads , NSW , 2483

Lot/DP 1070724

NatHERS climate zone 10

Accredited assessor

John Marchant

Partners Energy Management

johnm@partnersenergy.com.au

0421381005

Accreditation No. 101526

Assessor Accrediting Organisation ABSA

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=GxxbpCYGT . When using either link, ensure you are visiting hstar.com.au

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m^2/p.a.)	Cooling load (MJ/m^2/p.a.)	Total load (MJ/m^2/p.a.)	Star rating
0006031470	U1	13.4	21.1	34.6	6.9
0006031488	U2	12.3	23.9	36.2	6.8
0006031496	U3	16.9	30.4	47.4	5.6
0006031504	U4	12.7	26.4	39.1	6.4
0006031512	U5	15.1	25.5	40.6	6.3

Continued Over

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

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Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (MJ/m^2/p.a.)	Cooling load (MJ/m^2/p.a.)	Total load (MJ/m^2/p.a.)	Star rating
0006031520	U6	15.1	25.5	40.6	6.3
0006031538	U7	15.1	25.5	40.6	6.3
0006031546	U8	15.1	25.5	40.6	6.3
0006031553	U9	15.8	27.1	42.9	6
0006031561	U10	17.1	21.6	38.7	6.4
0006031579	U11	16.8	21.8	38.6	6.4
0006031587	U12	17.5	19.6	37.1	6.7
0006031595	U13	17	24	41	6.3
0006031603	U14	13.8	32.3	46.1	5.7
0006031611	U15	16.1	17.7	33.8	7
0006031629	U16	17.2	22.5	39.7	6.4
0006031637	U17	17.2	19.1	36.3	6.8
0006031645	U18	15.8	25.2	40.9	6.3
0006031652	U19	17.5	24	41.4	6.2
0006031660	U20	10.6	37.4	48	5.5

Explanatory Notes

About this report

This is a summary of NCC Class 1 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances, or energy production of solar panels. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS 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.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

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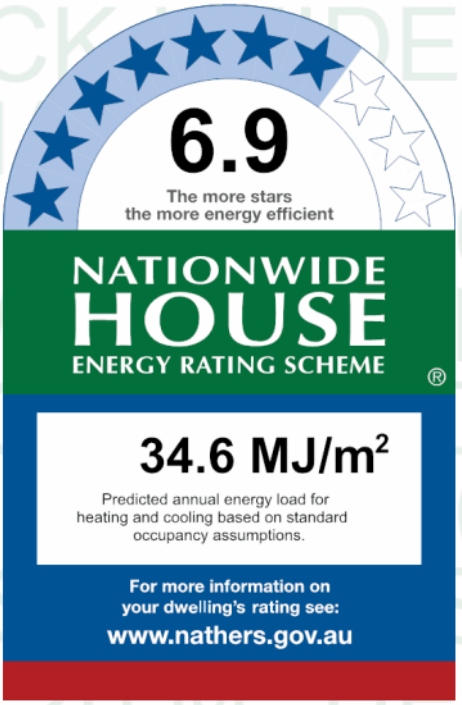
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031470

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U1, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	166.0	Suburban
Unconditioned*	52.0	**NatHERS climate zone**
Total	217.0	10
Garage	39.0	

Thermal performance

Heating	Cooling
13.4 MJ/m^2	21.1 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

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National Construction Code (NCC) requirements

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In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Garage	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Powder G	ALM-004-01 A	n/a	1000	600	n/a	90	W	No
Laundry G	ALM-004-01 A	n/a	2400	1500	n/a	45	W	No
Flexispace G	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 1	ALM-004-01 A	n/a	1800	900	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	1800	2400	n/a	30	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	W	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	W	No
Kitchen/Living/	ALM-004-01 A	n/a	1800	600	n/a	45	N	No
Kitchen/Living/	ALM-004-01 A	n/a	1800	600	n/a	45	N	No
Kitchen/Living/	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Kitchen/Living/	ALM-004-01 A	n/a	2400	2400	n/a	45	NE	No
Kitchen/Living/	ALM-004-01 A	n/a	1800	900	n/a	45	SE	No
Kitchen/Living/	ALM-004-01 A	n/a	900	2400	n/a	45	SE	No
Kitchen/Living/	ALM-004-01 A	n/a	900	2400	n/a	35	SE	No
Kitchen/Living/	ALM-004-01 A	n/a	1800	900	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Bedroom 3	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Bedroom 3	ALM-004-01 A	n/a	1200	2100	n/a	45	N	No
Bedroom 4	ALM-004-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 4	ALM-004-01 A	n/a	1200	1800	n/a	45	S	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
WC L1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	1500	n/a	45	E	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	1500	n/a	45	E	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	1500	n/a	00	W	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	600	n/a	90	W	No

* Refer to glossary.

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	S
Garage	2040	820	90	W
Kitchen/Living/	2040	1200	90	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	595	E	2200	YES
Garage	EW-1	2750	300	N	15200	YES
Garage	EW-1	2750	6000	E	0	NO
Garage	EW-1	2750	5900	S	0	NO
Garage	EW-1	2750	6600	W	100	NO
Garage	EW-1	2750	500	N	15800	YES
Powder G	EW-2	2750	1790	W	600	YES
Laundry G	EW-2	2750	1790	W	600	NO
Flexispace G	EW-2	2750	3290	W	600	NO
Bedroom 1	EW-2	2750	1200	E	8425	YES
Bedroom 1	EW-2	2750	4095	W	600	NO
Bedroom 1	EW-2	2750	4000	N	700	NO
Ensuite Bed 1	EW-2	2750	4090	W	600	NO
Hall G	EW-2	2750	1090	E	2200	YES
Kitchen/Living/	EW-2	2750	4195	N	700	YES
Kitchen/Living/	EW-2	2750	2900	E	4875	YES
Kitchen/Living/	EW-2	2750	2865	NE	5126	YES
Kitchen/Living/	EW-2	2750	6450	SE	626	NO
Kitchen/Living/	EW-2	2750	900	S	5100	YES
Kitchen/Living/	EW-2	2750	2900	E	700	YES
Kitchen/Living/	EW-2	2750	1495	S	2200	YES
Bedroom 2	EW-2	2600	4500	E	700	NO
Bedroom 2	EW-2	2600	1195	S	10000	YES
Bedroom 2	EW-2	2600	1200	N	4100	YES
Bedroom 3	EW-2	2600	3395	E	800	YES
Bedroom 3	EW-2	2600	3095	W	100	NO
Bedroom 3	EW-2	2600	500	N	1000	YES
Bedroom 3	EW-2	2600	300	W	600	YES
Bedroom 3	EW-2	2600	3600	N	700	NO
Bedroom 4	EW-2	2600	4095	E	800	NO
Bedroom 4	EW-2	2600	3500	S	700	NO
Bedroom 4	EW-2	2600	3295	W	700	YES
Bathroom L1	EW-2	2600	600	S	4000	YES
Bathroom L1	EW-2	2600	1995	W	100	NO
WC L1	EW-2	2600	1695	W	100	NO
WC L1	EW-2	2600	900	N	10900	YES
Hall/Stairs L1	EW-2	2600	5195	E	800	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Hall/Stairs L1	EW-2	2600	2295	W	1000	YES
Hall/Stairs L1	EW-2	2600	900	S	10000	YES
Hall/Stairs L1	EW-2	2600	4495	W	100	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		13.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		157.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	38.50	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.80	None	No Insulation	Ceramic Tiles 8mm
Laundry G	Concrete Slab on Ground 100mm	3.70	None	No Insulation	Ceramic Tiles 8mm
Flexispace G	Concrete Slab on Ground 100mm	11.40	None	No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Concrete Slab on Ground 100mm	17.80	None	No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1	Concrete Slab on Ground 100mm	3.50	None	No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1	Concrete Slab on Ground 100mm	7.40	None	No Insulation	Ceramic Tiles 8mm
Hall G	Concrete Slab on Ground 100mm	6.50	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living/	Concrete Slab on Ground 100mm	62.00	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Flexispace G	Timber Above Plasterboard 19mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/WIR Bed 1	Timber Above Plasterboard 19mm	1.90		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Living/	Timber Above Plasterboard 19mm	11.80		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Bedroom 1	Timber Above Plasterboard 19mm	4.10		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/WIR Bed 1	Timber Above Plasterboard 19mm	1.30		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Ensuite Bed 1	Timber Above Plasterboard 19mm	1.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living/	Timber Above Plasterboard 19mm	6.80		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 4/Garage	Timber Above Plasterboard 19mm	12.20		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	5.90		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Hall G	Timber Above Plasterboard 19mm	1.70		No Insulation	Ceramic Tiles 8mm
Vanity L1/Hall G	Timber Above Plasterboard 19mm	3.10		No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	1.00		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Flexispace G	Timber Above Plasterboard 19mm	4.90		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/WIR Bed 1	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Ensuite Bed 1	Timber Above Plasterboard 19mm	0.90		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Hall G	Timber Above Plasterboard 19mm	1.10		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living/	Timber Above Plasterboard 19mm	8.20		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1	Suspended Timber Floor 19mm	0.50	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Plasterboard	Bulk Insulation R3.5	No
Laundry G	Plasterboard	Bulk Insulation R3.5	No
Flexispace G	Plasterboard	Bulk Insulation R3.5	No
Flexispace G	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
Hall G	Timber Above Plasterboard	No Insulation	No
Kitchen/Living/	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living/	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Bedroom 4	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Vanity L1	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

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The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

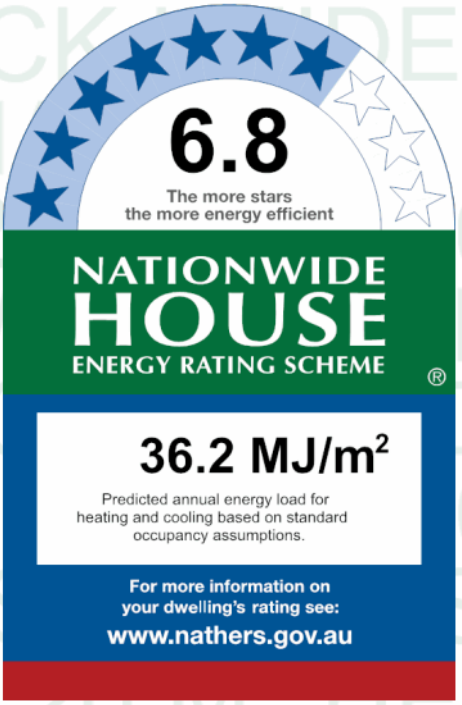
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031488

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

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Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

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Total	190.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
12.3 MJ/m^2	23.9 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

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Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

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Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	E	No
Bedroom 1	ALM-004-01 A	n/a	1800	2400	n/a	30	NE	No
Bedroom 1	ALM-004-01 A	n/a	1800	900	n/a	45	SE	No
Bedroom 1	ALM-004-01 A	n/a	1000	600	n/a	90	NW	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	NW	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	NW	No
Powder G	ALM-004-01 A	n/a	1000	600	n/a	90	NW	No
Laundry G	ALM-004-01 A	n/a	2400	1500	n/a	45	NW	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	45	NE	No
Kitchen/Living	ALM-004-01 A	n/a	600	600	n/a	90	NE	No
Kitchen/Living	ALM-004-01 A	n/a	2400	2700	n/a	45	SE	No
Kitchen/Living	ALM-004-01 A	n/a	1800	900	n/a	45	SE	No
Kitchen/Living	ALM-004-01 A	n/a	2400	2100	n/a	45	NE	No
Kitchen/Living	ALM-004-01 A	n/a	1400	1200	n/a	45	SE	No
Kitchen/Living	ALM-004-01 A	n/a	2400	450	n/a	00	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	2100	n/a	45	NE	No
Bedroom 2	ALM-004-01 A	n/a	900	1800	n/a	45	SE	No
Bathroom L1	ALM-004-01 A	n/a	900	600	n/a	90	NW	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	NW	No
Bedroom 3 NW	ALM-004-01 A	n/a	1200	1500	n/a	45	W	No
Bedroom 4	ALM-004-01 A	n/a	1200	2100	n/a	45	E	No
Bedroom 4	ALM-004-01 A	n/a	1200	2100	n/a	45	S	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	600	n/a	90	NE	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	600	n/a	90	SE	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	600	n/a	90	SE	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

* Refer to glossary.

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	N
Garage	2400	4800	90	S
Kitchen/Living	2400	920	90	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1248	N	0	YES
Garage	EW-1	2750	2550	E	1827	YES
Garage	EW-1	2750	5954	S	0	NO
Garage	EW-1	2750	6637	W	0	NO
Bedroom 1	EW-2	2750	4000	NE	700	NO
Bedroom 1	EW-2	2750	1500	SE	400	YES
Bedroom 1	EW-2	2750	3995	NW	700	NO
Ensuite Bed 1	EW-2	2750	600	SW	3775	YES
Ensuite Bed 1	EW-2	2750	3995	NW	700	NO
Powder G	EW-2	2750	1190	NW	0	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Laundry G	EW-2	2750	2390	NW	0	YES
Kitchen/Living	EW-2	2750	4095	NE	700	YES
Kitchen/Living	EW-2	2750	4500	SE	4200	YES
Kitchen/Living	EW-2	2750	3195	NE	4524	YES
Kitchen/Living	EW-2	2750	4366	SE	664	NO
Kitchen/Living	EW-2	2750	3220	S	1557	YES
Bedroom 2	EW-2	2600	3900	NE	700	NO
Bedroom 2	EW-2	2600	3695	SE	1000	YES
Bedroom 2	EW-2	2600	3295	NW	700	NO
Bathroom L1	EW-2	2600	2590	NW	700	NO
WC L1	EW-2	2600	1090	NW	700	NO
Vanity L1	EW-2	2600	1090	NW	700	NO
Bedroom 3 NW	EW-2	2600	1967	W	695	NO
Bedroom 3 NW	EW-2	2600	2295	NW	700	NO
WIR Bed 3	EW-2	2600	1516	W	729	YES
Bedroom 4	EW-2	2600	3357	E	986	NO
Bedroom 4	EW-2	2600	3443	S	682	YES
WIR Bed 4	EW-2	2600	1521	S	673	YES
WIR Bed 4	EW-2	2600	1831	W	716	YES
Hall/Stairs L1	EW-2	2600	1100	NE	4400	YES
Hall/Stairs L1	EW-2	2600	5400	SE	1000	YES
Hall/Stairs L1	EW-2	2600	578	E	1020	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		26.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		129.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.40	None	No Insulation	Bare
Bedroom 1	Concrete Slab on Ground 100mm	17.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1	Concrete Slab on Ground 100mm	7.30	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.80	None	No Insulation	Carpet+Rubber Underlay 18mm
Powder G	Concrete Slab on Ground 100mm	1.90	None	No Insulation	Ceramic Tiles 8mm
Laundry G	Concrete Slab on Ground 100mm	4.60	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
		169			
Kitchen/Living	Concrete Slab on Ground 100mm	57.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	9.80		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	1.10		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 19mm	3.10		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Ensuite Bed 1	Timber Above Plasterboard 19mm	3.20		No Insulation	Ceramic Tiles 8mm
Bathroom L1/WIR Bed 1	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	1.00		No Insulation	Ceramic Tiles 8mm
WC L1/Laundry G	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
Vanity L1/Ensuite Bed 1	Timber Above Plasterboard 19mm	0.60		No Insulation	Ceramic Tiles 8mm
Vanity L1/Powder G	Timber Above Plasterboard 19mm	1.00		No Insulation	Ceramic Tiles 8mm
Bedroom 3 NW/Garage	Timber Above Plasterboard 19mm	6.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3 NW/Laundry G	Timber Above Plasterboard 19mm	3.90		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 3/Garage	Timber Above Plasterboard 19mm	2.20		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 4/Garage	Timber Above Plasterboard 19mm	11.00		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
WIR Bed 4/Garage	Timber Above Plasterboard 19mm	2.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	2.40		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/WIR Bed 1	Timber Above Plasterboard 19mm	1.50		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living	Timber Above Plasterboard 19mm	11.80		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Timber Above Plasterboard	No Insulation	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry G	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Vanity L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3 NW	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 3	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 4	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 4	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031496

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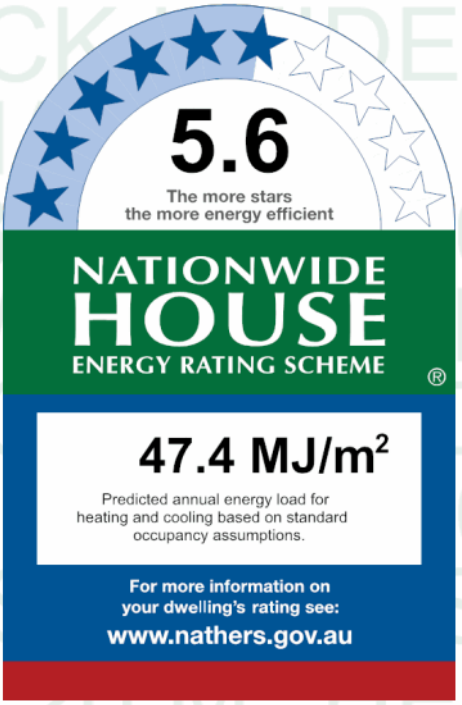

Property

Address	Unit U3, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	129.0	Suburban
Unconditioned*	46.0	**NatHERS climate zone**
Total	175.0	10
Garage	36.0	

Thermal performance

Heating	Cooling
16.9	**30.4**
MJ/m^2	MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=sTrBgXJLb.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

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Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

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Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

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				SHGC lower limit	SHGC upper limit
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Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1500	600	n/a	45	S	No
Garage	ALM-004-01 A	n/a	2400	1800	n/a	45	N	No
WC G	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	1800	2400	n/a	30	E	No
Kitchen/Living	ALM-004-01 A	n/a	1800	600	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	2100	600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	600	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	900	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2400	2700	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	2400	2700	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	750	750	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	1500	750	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	1500	350	n/a	00	W	No
Kitchen/Living	ALM-004-01 A	n/a	300	1200	n/a	00	W	No
Kitchen/Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Bedroom 1	ALM-004-01 A	n/a	1200	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 1	ALM-004-01 A	n/a	600	1800	n/a	45	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	W	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	600	n/a	90	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	900	900	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	600	1800	n/a	45	N	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	1000	1200	n/a	45	W	No
Retreat	ALM-004-01 A	n/a	450	1800	n/a	45	E	No
Hall/Stairs L1	ALM-004-01 A	n/a	1500	750	n/a	45	S	No
Hall/Stairs L1	ALM-004-01 A	n/a	750	750	n/a	45	S	No
Hall/Stairs L1	ALM-004-01 A	n/a	1500	750	n/a	00	W	No

* Refer to glossary.

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	W
Laundry G	2040	820	90	W
Kitchen/Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	2600	S	1600	YES
Garage	EW-1	2750	5900	W	0	NO
Garage	EW-1	2750	3900	N	0	YES
Laundry G	EW-2	2750	1495	W	0	YES
Laundry G	EW-2	2750	1831	N	0	NO
WC G	EW-2	2750	1602	N	0	NO
Kitchen/Living	EW-2	2750	3982	E	0	NO
Kitchen/Living	EW-2	2750	1166	S	750	YES
Kitchen/Living	EW-2	2750	1208	E	660	YES
Kitchen/Living	EW-2	2750	1360	E	735	NO
Kitchen/Living	EW-2	2750	2700	E	700	NO
Kitchen/Living	EW-2	2750	3100	S	3350	YES
Kitchen/Living	EW-2	2750	3900	E	3400	YES
Kitchen/Living	EW-2	2750	5000	S	50	NO
Kitchen/Living	EW-2	2750	600	W	0	YES
Kitchen/Living	EW-2	2750	1300	S	0	YES
Kitchen/Living	EW-2	2750	1595	W	1600	YES
Kitchen/Living	EW-2	2750	3754	N	0	NO
Bedroom 1	EW-2	2600	3982	E	716	NO
Bedroom 1	EW-2	2600	4832	S	716	YES
Bedroom 1	EW-2	2600	3754	N	649	NO
Ensuite Bed 1	EW-2	2600	2795	W	700	YES
Ensuite Bed 1	EW-2	2600	3443	N	660	NO
Bedroom 2	EW-2	2600	3300	E	700	NO
Bedroom 2	EW-2	2600	3395	S	700	YES
Bedroom 2	EW-2	2600	3795	N	700	NO
Bedroom 3	EW-2	2600	2600	S	700	YES
Bedroom 3	EW-2	2600	3300	W	700	NO
Bedroom 3	EW-2	2600	2600	N	700	YES
Bathroom L1	EW-2	2600	2390	W	700	YES
Retreat	EW-2	2600	3290	E	700	YES
Hall/Stairs L1	EW-2	2600	600	E	4100	YES
Hall/Stairs L1	EW-2	2600	5000	S	500	NO
Hall/Stairs L1	EW-2	2600	1095	W	700	NO
Hall/Stairs L1	EW-2	2600	595	N	8825	YES

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		34.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		107.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	35.60	None	No Insulation	Bare
Laundry G	Concrete Slab on Ground 100mm	4.20	None	No Insulation	Ceramic Tiles 8mm
WC G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	61.00	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 19mm	17.70		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
WIR Bed 1/Laundry G	Timber Above Plasterboard 19mm	0.50		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	1.30		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Garage	Timber Above Plasterboard 19mm	1.50		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1/Laundry G	Timber Above Plasterboard 19mm	3.70		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/WC G	Timber Above Plasterboard 19mm	1.70		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	1.30		No Insulation	Ceramic Tiles 8mm
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 19mm	0.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	11.10	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.30		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	2.40		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Living	Timber Above Plasterboard 19mm	1.80		No Insulation	Ceramic Tiles 8mm
WC L1/Kitchen/Living	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
Vanity/Garage	Timber Above Plasterboard 19mm	1.20		Bulk Insulation R2	Ceramic Tiles 8mm
Vanity/Kitchen/Living	Timber Above Plasterboard 19mm	0.40		No Insulation	Ceramic Tiles 8mm
Retreat/Garage	Timber Above Plasterboard 19mm	2.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Retreat/Kitchen/Living	Timber Above Plasterboard 19mm	6.10		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living	Timber Above Plasterboard 19mm	9.50		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Laundry G	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
Retreat	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

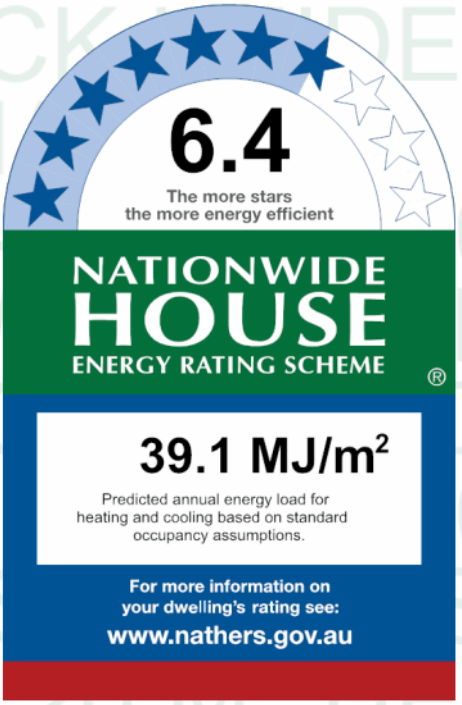
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031504

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U4, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	125.0	Suburban
Unconditioned*	48.0	**NatHERS climate zone**
Total	173.0	10
Garage	38.0	

Thermal performance

Heating	Cooling
12.7 MJ/m^2	26.4 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=QbkzjjJup.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	800	n/a	100	S	No
Bedroom 1	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	W	No
Living	ALM-004-01 A	n/a	1000	2400	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	E	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	NE	No
Kitchen/Dining	ALM-004-01 A	n/a	600	2400	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Family	ALM-004-01 A	n/a	1000	1000	n/a	00	W	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Family	ALM-004-01 A	n/a	1200	2400	n/a	35	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Laundry	1100	820	90	S
Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	E	7900	YES
Garage	EW-2	2750	6500	S	200	NO
Garage	EW-2	2750	6000	W	100	NO
Garage	EW-2	2750	1700	N	6200	YES
Laundry	EW-3	2750	1790	S	700	YES
Bedroom 1	EW-3	2750	3600	E	800	NO
Bedroom 1	EW-3	2750	3595	S	700	NO
Bedroom 1	EW-3	2750	400	N	1900	YES

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ensuite Bed 1	EW-3	2750	1895	E	700	YES
Ensuite Bed 1	EW-3	2750	2795	N	5400	YES
WIR Bed 1	EW-3	2750	1690	S	700	NO
Living	EW-3	2750	1895	W	1800	YES
Living	EW-3	2750	700	S	8100	YES
Living	EW-3	3900	3600	W	700	NO
Living	EW-3	2750	4095	N	700	NO
Kitchen/Dining	EW-3	2750	2600	E	4000	YES
Kitchen/Dining	EW-3	2750	1980	NE	4667	YES
Kitchen/Dining	EW-3	2750	700	E	2600	YES
Kitchen/Dining	EW-3	2750	3895	N	700	NO
Bedroom 2	EW-3	2600	4100	E	500	NO
Bedroom 2	EW-3	2600	3395	S	800	NO
Bedroom 2	EW-3	2600	3795	N	700	YES
Bathroom L1	EW-3	2600	1990	S	800	NO
WC L1	EW-3	2600	1690	S	800	NO
Bedroom 3	EW-3	2600	3995	S	800	NO
Bedroom 3	EW-3	2600	3300	W	500	NO
Bedroom 3	EW-3	2600	1400	N	1800	YES
Family	EW-3	2600	4000	E	700	YES
Family	EW-3	2600	1795	W	1500	YES
Family	EW-3	2600	2000	N	0	YES
Family	EW-3	2600	3000	W	700	YES
Family	EW-3	2600	3900	N	600	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		29.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		119.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.70	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
		185			
Ensuite Bed 1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Living	Concrete Slab on Ground 100mm	22.50	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	27.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	7.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Hallway G	Timber Above Plasterboard 19mm	2.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Dining	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Family/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Family/Living	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
Family/Kitchen/Dining	Timber Above Plasterboard 19mm	18.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Living	Plasterboard	Bulk Insulation R2.5	No
Living	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Family	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

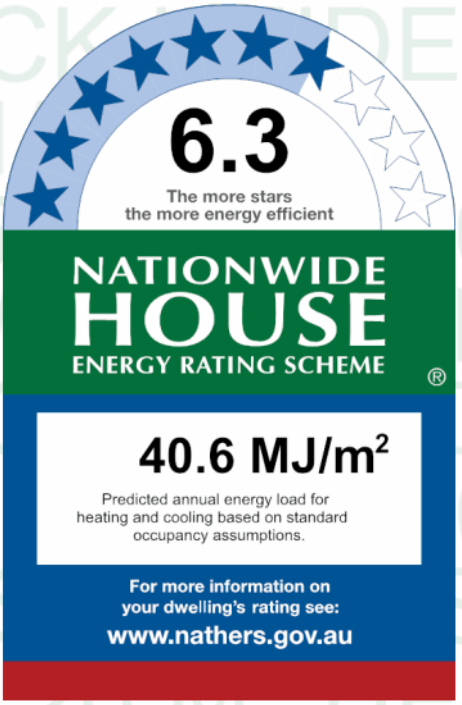
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031512

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U5, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	125.0	Suburban
Unconditioned*	48.0	**NatHERS climate zone**
Total	173.0	10
Garage	38.0	

Thermal performance

Heating	Cooling
15.1 MJ/m^2	**25.5** MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=EeNmgeWmg.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	800	n/a	100	S	No
Bedroom 1	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	W	No
Living	ALM-004-01 A	n/a	1000	2400	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	E	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	NE	No
Kitchen/Dining	ALM-004-01 A	n/a	600	2400	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Family	ALM-004-01 A	n/a	1000	1000	n/a	00	W	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Family	ALM-004-01 A	n/a	1200	2400	n/a	35	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

* Refer to glossary.

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Laundry	1100	820	90	S
Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	E	7900	YES
Garage	EW-2	2750	6500	S	200	NO
Garage	EW-2	2750	6000	W	100	NO
Garage	EW-2	2750	1700	N	6200	YES
Laundry	EW-3	2750	1790	S	700	YES
Bedroom 1	EW-3	2750	3600	E	800	NO
Bedroom 1	EW-3	2750	3595	S	700	NO
Bedroom 1	EW-3	2750	400	N	1900	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ensuite Bed 1	EW-3	2750	1895	E	700	YES
Ensuite Bed 1	EW-3	2750	2795	N	5400	YES
WIR Bed 1	EW-3	2750	1690	S	700	NO
Living	EW-3	2750	1895	W	1800	YES
Living	EW-3	2750	700	S	8100	YES
Living	EW-3	3900	3600	W	700	NO
Living	EW-3	2750	4095	N	700	NO
Kitchen/Dining	EW-3	2750	2600	E	4000	YES
Kitchen/Dining	EW-3	2750	1980	NE	4667	YES
Kitchen/Dining	EW-3	2750	700	E	2600	YES
Kitchen/Dining	EW-3	2750	3895	N	700	NO
Bedroom 2	EW-3	2600	4100	E	500	NO
Bedroom 2	EW-3	2600	3395	S	800	NO
Bedroom 2	EW-3	2600	3795	N	700	YES
Bathroom L1	EW-3	2600	1990	S	800	NO
WC L1	EW-3	2600	1690	S	800	NO
Bedroom 3	EW-3	2600	3995	S	800	NO
Bedroom 3	EW-3	2600	3300	W	500	NO
Bedroom 3	EW-3	2600	1400	N	1800	YES
Family	EW-3	2600	4000	E	700	YES
Family	EW-3	2600	1795	W	1500	YES
Family	EW-3	2600	2000	N	0	YES
Family	EW-3	2600	3000	W	700	YES
Family	EW-3	2600	3900	N	600	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		29.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		119.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.70	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
		193			
Ensuite Bed 1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Living	Concrete Slab on Ground 100mm	22.50	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	27.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	7.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Hallway G	Timber Above Plasterboard 19mm	2.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Dining	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Family/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Family/Living	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
Family/Kitchen/Dining	Timber Above Plasterboard 19mm	18.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Living	Plasterboard	Bulk Insulation R2.5	No
Living	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Family	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

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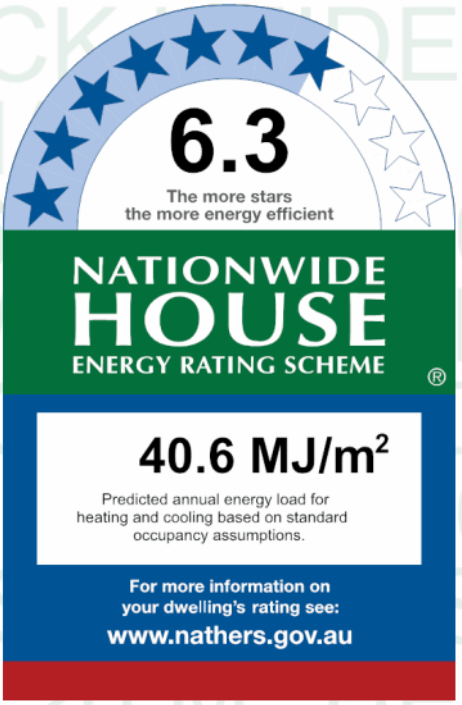
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031520

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U6, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	125.0	Suburban
Unconditioned*	48.0	**NatHERS climate zone**
Total	173.0	10
Garage	38.0	

Thermal performance

Heating	Cooling
15.1 MJ/m^2	**25.5** MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=lxOybDKOR.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	800	n/a	100	S	No
Bedroom 1	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	W	No
Living	ALM-004-01 A	n/a	1000	2400	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	E	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	NE	No
Kitchen/Dining	ALM-004-01 A	n/a	600	2400	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Family	ALM-004-01 A	n/a	1000	1000	n/a	00	W	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Family	ALM-004-01 A	n/a	1200	2400	n/a	35	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Laundry	1100	820	90	S
Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	E	7900	YES
Garage	EW-2	2750	6500	S	200	NO
Garage	EW-2	2750	6000	W	100	NO
Garage	EW-2	2750	1700	N	6200	YES
Laundry	EW-3	2750	1790	S	700	YES
Bedroom 1	EW-3	2750	3600	E	800	NO
Bedroom 1	EW-3	2750	3595	S	700	NO
Bedroom 1	EW-3	2750	400	N	1900	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
				200		
Ensuite Bed 1	EW-3	2750	1895	E	700	YES
Ensuite Bed 1	EW-3	2750	2795	N	5400	YES
WIR Bed 1	EW-3	2750	1690	S	700	NO
Living	EW-3	2750	1895	W	1800	YES
Living	EW-3	2750	700	S	8100	YES
Living	EW-3	3900	3600	W	700	NO
Living	EW-3	2750	4095	N	700	NO
Kitchen/Dining	EW-3	2750	2600	E	4000	YES
Kitchen/Dining	EW-3	2750	1980	NE	4667	YES
Kitchen/Dining	EW-3	2750	700	E	2600	YES
Kitchen/Dining	EW-3	2750	3895	N	700	NO
Bedroom 2	EW-3	2600	4100	E	500	NO
Bedroom 2	EW-3	2600	3395	S	800	NO
Bedroom 2	EW-3	2600	3795	N	700	YES
Bathroom L1	EW-3	2600	1990	S	800	NO
WC L1	EW-3	2600	1690	S	800	NO
Bedroom 3	EW-3	2600	3995	S	800	NO
Bedroom 3	EW-3	2600	3300	W	500	NO
Bedroom 3	EW-3	2600	1400	N	1800	YES
Family	EW-3	2600	4000	E	700	YES
Family	EW-3	2600	1795	W	1500	YES
Family	EW-3	2600	2000	N	0	YES
Family	EW-3	2600	3000	W	700	YES
Family	EW-3	2600	3900	N	600	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		29.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		119.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.70	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m 201)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ensuite Bed 1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Living	Concrete Slab on Ground 100mm	22.50	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	27.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	7.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Hallway G	Timber Above Plasterboard 19mm	2.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Dining	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Family/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Family/Living	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
Family/Kitchen/Dining	Timber Above Plasterboard 19mm	18.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Living	Plasterboard	Bulk Insulation R2.5	No
Living	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

Location	Construction material/type	202 Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Family	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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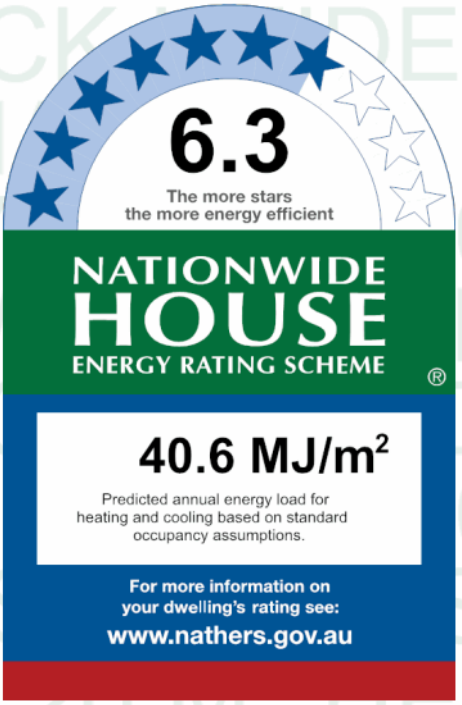
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031538

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U7, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	125.0	Suburban
Unconditioned*	48.0	**NatHERS climate zone**
Total	173.0	10
Garage	38.0	

Thermal performance

Heating	Cooling
15.1 MJ/m^2	**25.5** MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

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National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

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Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	800	n/a	100	S	No
Bedroom 1	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	W	No
Living	ALM-004-01 A	n/a	1000	2400	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	E	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	NE	No
Kitchen/Dining	ALM-004-01 A	n/a	600	2400	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Family	ALM-004-01 A	n/a	1000	1000	n/a	00	W	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Family	ALM-004-01 A	n/a	1200	2400	n/a	35	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Laundry	1100	820	90	S
Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	E	7900	YES
Garage	EW-2	2750	6500	S	200	NO
Garage	EW-2	2750	6000	W	100	NO
Garage	EW-2	2750	1700	N	6200	YES
Laundry	EW-3	2750	1790	S	700	YES
Bedroom 1	EW-3	2750	3600	E	800	NO
Bedroom 1	EW-3	2750	3595	S	700	NO
Bedroom 1	EW-3	2750	400	N	1900	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ensuite Bed 1	EW-3	2750	1895	E	700	YES
Ensuite Bed 1	EW-3	2750	2795	N	5400	YES
WIR Bed 1	EW-3	2750	1690	S	700	NO
Living	EW-3	2750	1895	W	1800	YES
Living	EW-3	2750	700	S	8100	YES
Living	EW-3	3900	3600	W	700	NO
Living	EW-3	2750	4095	N	700	NO
Kitchen/Dining	EW-3	2750	2600	E	4000	YES
Kitchen/Dining	EW-3	2750	1980	NE	4667	YES
Kitchen/Dining	EW-3	2750	700	E	2600	YES
Kitchen/Dining	EW-3	2750	3895	N	700	NO
Bedroom 2	EW-3	2600	4100	E	500	NO
Bedroom 2	EW-3	2600	3395	S	800	NO
Bedroom 2	EW-3	2600	3795	N	700	YES
Bathroom L1	EW-3	2600	1990	S	800	NO
WC L1	EW-3	2600	1690	S	800	NO
Bedroom 3	EW-3	2600	3995	S	800	NO
Bedroom 3	EW-3	2600	3300	W	500	NO
Bedroom 3	EW-3	2600	1400	N	1800	YES
Family	EW-3	2600	4000	E	700	YES
Family	EW-3	2600	1795	W	1500	YES
Family	EW-3	2600	2000	N	0	YES
Family	EW-3	2600	3000	W	700	YES
Family	EW-3	2600	3900	N	600	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		29.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		119.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.70	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
		209			
Ensuite Bed 1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Living	Concrete Slab on Ground 100mm	22.50	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	27.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	7.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Hallway G	Timber Above Plasterboard 19mm	2.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Dining	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Family/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Family/Living	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
Family/Kitchen/Dining	Timber Above Plasterboard 19mm	18.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Living	Plasterboard	Bulk Insulation R2.5	No
Living	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

Location	Construction material/type	210 Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Family	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

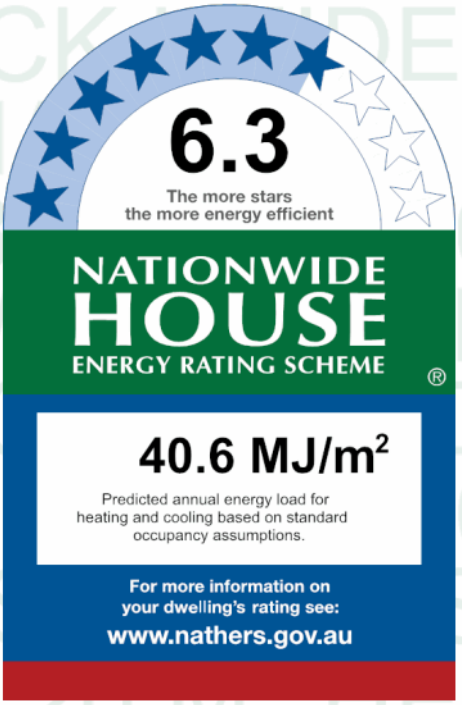
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031546

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U8, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
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Total	173.0	10
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Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
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ABSA

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

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Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	800	n/a	100	S	No
Bedroom 1	ALM-004-01 A	n/a	2400	2400	n/a	45	E	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	1000	900	n/a	90	E	No
Living	ALM-004-01 A	n/a	2400	450	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	W	No
Living	ALM-004-01 A	n/a	1000	2400	n/a	00	W	No
Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	E	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	1800	n/a	45	NE	No
Kitchen/Dining	ALM-004-01 A	n/a	600	2400	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	2400	n/a	35	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Family	ALM-004-01 A	n/a	1000	1000	n/a	00	W	No
Family	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Family	ALM-004-01 A	n/a	1200	2400	n/a	35	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Laundry	1100	820	90	S
Living	2400	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	E	7900	YES
Garage	EW-2	2750	6500	S	200	NO
Garage	EW-2	2750	6000	W	100	NO
Garage	EW-2	2750	1700	N	6200	YES
Laundry	EW-3	2750	1790	S	700	YES
Bedroom 1	EW-3	2750	3600	E	800	NO
Bedroom 1	EW-3	2750	3595	S	700	NO
Bedroom 1	EW-3	2750	400	N	1900	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ensuite Bed 1	EW-3	2750	1895	E	700	YES
Ensuite Bed 1	EW-3	2750	2795	N	5400	YES
WIR Bed 1	EW-3	2750	1690	S	700	NO
Living	EW-3	2750	1895	W	1800	YES
Living	EW-3	2750	700	S	8100	YES
Living	EW-3	3900	3600	W	700	NO
Living	EW-3	2750	4095	N	700	NO
Kitchen/Dining	EW-3	2750	2600	E	4000	YES
Kitchen/Dining	EW-3	2750	1980	NE	4667	YES
Kitchen/Dining	EW-3	2750	700	E	2600	YES
Kitchen/Dining	EW-3	2750	3895	N	700	NO
Bedroom 2	EW-3	2600	4100	E	500	NO
Bedroom 2	EW-3	2600	3395	S	800	NO
Bedroom 2	EW-3	2600	3795	N	700	YES
Bathroom L1	EW-3	2600	1990	S	800	NO
WC L1	EW-3	2600	1690	S	800	NO
Bedroom 3	EW-3	2600	3995	S	800	NO
Bedroom 3	EW-3	2600	3300	W	500	NO
Bedroom 3	EW-3	2600	1400	N	1800	YES
Family	EW-3	2600	4000	E	700	YES
Family	EW-3	2600	1795	W	1500	YES
Family	EW-3	2600	2000	N	0	YES
Family	EW-3	2600	3000	W	700	YES
Family	EW-3	2600	3900	N	600	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		29.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		119.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.70	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.50	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	Area (m 217)	Sub-floor ventilation	Added insulation (R-value)	Covering
Ensuite Bed 1	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Living	Concrete Slab on Ground 100mm	22.50	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	27.20	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Bedroom 1	Timber Above Plasterboard 19mm	7.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Ensuite Bed 1	Timber Above Plasterboard 19mm	4.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Hallway G	Timber Above Plasterboard 19mm	2.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Dining	Timber Above Plasterboard 19mm	1.60		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.20		No Insulation	Ceramic Tiles 8mm
Family/Garage	Timber Above Plasterboard 19mm	0.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Family/Living	Timber Above Plasterboard 19mm	5.30		No Insulation	Carpet+Rubber Underlay 18mm
Family/Kitchen/Dining	Timber Above Plasterboard 19mm	18.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Living	Plasterboard	Bulk Insulation R2.5	No
Living	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Family	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

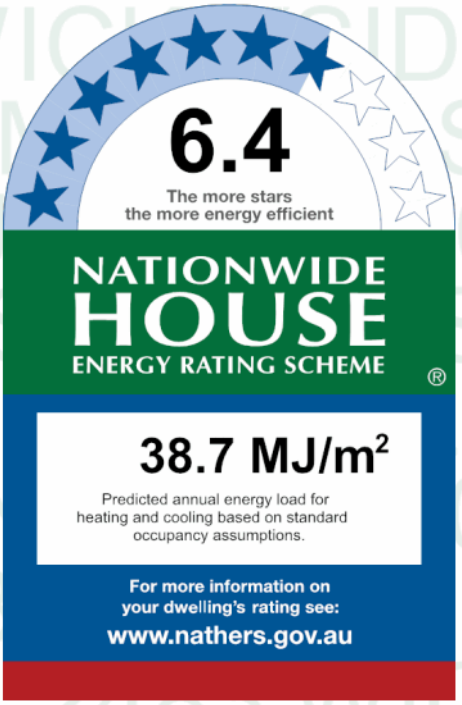
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031561

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U10, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	115.0	Suburban
Unconditioned*	47.0	**NatHERS climate zone**
Total	162.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
17.1 MJ/m^2	21.6 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=BWZsPFnDB.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	2100	1500	n/a	45	S	No
Entry/Stairs	ALM-004-01 A	n/a	2100	300	n/a	00	W	No
Entry/Stairs	ALM-004-01 A	n/a	2100	600	n/a	45	W	No
Entry/Stairs	ALM-004-01 A	n/a	600	600	n/a	00	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3000	n/a	45	E	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2700	n/a	65	N	No
Kitchen/Living	ALM-004-01 A	n/a	1100	2400	n/a	35	E	No
Kitchen/Living	ALM-004-01 A	n/a	1100	600	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	1100	600	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	600	1800	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	600	1800	n/a	00	N	No
Bedroom 1	ALM-004-01 A	n/a	900	2400	n/a	35	E	No
Bedroom 1	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	900	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	750	750	n/a	90	W	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	1100	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Stairs/Void	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Stairs/Void	ALM-004-01 A	n/a	600	600	n/a	00	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	E
Garage	2400	4800	90	W
Entry/Stairs	2100	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2700	695	S	0	YES
Garage	EW-2	2700	1300	E	5300	YES
Garage	EW-2	2700	5900	S	0	NO
Garage	EW-2	2700	6000	W	0	NO
Garage	EW-2	2700	1700	N	2000	YES
Laundry	EW-1	2700	1790	S	0	NO
Entry/Stairs	EW-1	2700	1595	W	1800	YES
Entry/Stairs	EW-1	2700	1300	N	1500	YES
Entry/Stairs	EW-1	2700	1100	W	700	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry/Stairs	EW-1	2700	2795	N	400	NO
Kitchen/Living	EW-1	2700	4600	E	3800	YES
Kitchen/Living	EW-1	2700	3900	N	4400	YES
Kitchen/Living	EW-1	2700	4000	E	700	NO
Kitchen/Living	EW-1	2700	3800	S	700	NO
Kitchen/Living	EW-1	2700	600	W	5300	YES
Kitchen/Living	EW-1	2700	2795	S	0	YES
Kitchen/Living	EW-1	2700	795	N	600	YES
Kitchen/Living	EW-1	2700	600	W	4300	YES
Kitchen/Living	EW-1	2700	4500	N	0	NO
Bedroom 1	EW-1	2450	3995	E	800	NO
Bedroom 1	EW-1	2450	3695	N	700	NO
Bedroom 2	EW-1	2450	3395	E	800	NO
Bedroom 2	EW-1	2450	3895	S	600	NO
WC L1	EW-1	2450	1690	S	600	NO
Bathroom L1	EW-1	2450	1995	S	600	NO
Bathroom L1	EW-1	2450	1400	W	4400	YES
Ensuite Bed 1	EW-1	2450	2190	N	700	NO
Bedroom 3	EW-1	2450	3895	S	800	YES
Bedroom 3	EW-1	2450	3300	W	500	NO
Bedroom 3	EW-1	2450	2000	N	700	YES
Stairs/Void	EW-3	2450	2695	W	0	YES
Stairs/Void	EW-3	2450	3595	N	400	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		148.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.20	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.90	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm
Entry/Stairs	Concrete Slab on Ground 100mm	10.50	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living	Concrete Slab on Ground 100mm	47.40	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 19mm	9.90		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1	Suspended Timber Floor 19mm	5.40	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 19mm	12.30		No Insulation	Carpet+Rubber Underlay 18mm
WC L1/Laundry	Timber Above Plasterboard 19mm	1.50		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	4.00		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/Powder G	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Laundry	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	4.10		No Insulation	Ceramic Tiles 8mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm
Vanity/Laundry	Timber Above Plasterboard 19mm	1.00		No Insulation	Ceramic Tiles 8mm
Vanity/Kitchen/Living	Timber Above Plasterboard 19mm	0.60		No Insulation	Ceramic Tiles 8mm
Hall L1/Garage	Timber Above Plasterboard 19mm	2.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Powder G	Timber Above Plasterboard 19mm	1.10		No Insulation	Carpet+Rubber Underlay 18mm
Hall L1/Kitchen/Living	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Stairs/Void/Entry/Stairs	Timber Above Plasterboard 19mm	8.60		No Insulation	Carpet+Rubber Underlay 18mm
Stairs/Void/Kitchen/Living	Timber Above Plasterboard 19mm	0.90		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Timber Above Plasterboard	No Insulation	No
Entry/Stairs	Plasterboard	Bulk Insulation R3.5	No
Entry/Stairs	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Stairs/Void	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

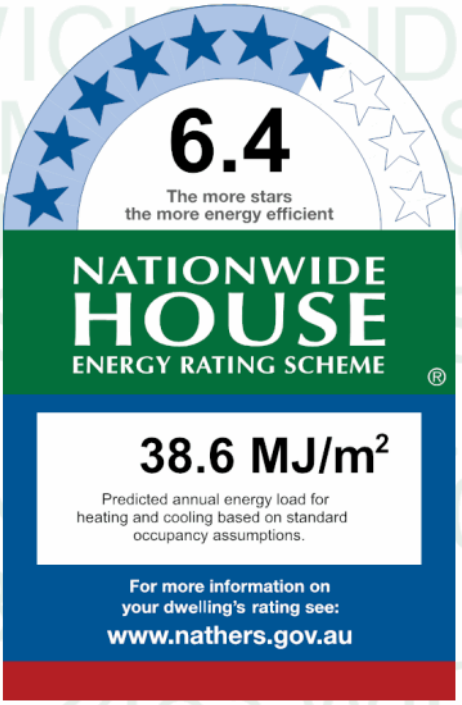
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031579

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U11, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	132.0	Suburban
Unconditioned*	46.0	**NatHERS climate zone**
Total	177.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
16.8 MJ/m^2	21.8 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=DuQrheFFC.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	2100	1800	n/a	45	S	No
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Powder G	ALM-004-01 A	n/a	1200	600	n/a	90	S	No
Entry/Stairs	ALM-004-01 A	n/a	800	800	n/a	90	S	No
Entry/Stairs	ALM-004-01 A	n/a	2100	300	n/a	00	W	No
Entry/Stairs	ALM-004-01 A	n/a	1200	600	n/a	00	W	No
Entry/Stairs	ALM-004-01 A	n/a	1260	600	n/a	00	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3000	n/a	65	E	No
Kitchen/Living	ALM-004-01 A	n/a	1100	2400	n/a	35	E	No
Kitchen/Living	ALM-004-01 A	n/a	1100	600	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	1100	600	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	600	1800	n/a	45	N	No
Bedroom 1	ALM-004-01 A	n/a	1100	2400	n/a	35	E	No
Bedroom 1	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	1200	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	1200	600	n/a	90	W	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Bedroom 3	ALM-004-01 A	n/a	750	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	600	1800	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1100	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Scullery	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Stairs/Void L1	ALM-004-01 A	n/a	600	600	n/a	00	W	No
Stairs/Void L1	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Stairs/Void L1	ALM-004-01 A	n/a	540	600	n/a	00	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

* Refer to glossary.

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	W
Entry/Stairs	1100	820	90	S
Entry/Stairs	2100	920	90	W

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Fibro Cavity Panel Direct Fix	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	600	E	3075	YES
Garage	EW-1	2600	6000	S	0	NO
Garage	EW-1	2600	6000	W	0	NO
Garage	EW-1	2600	2500	N	1900	YES
Powder G	EW-2	2600	990	S	0	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry/Stairs	EW-2	2600	500	E	0	YES
Entry/Stairs	EW-2	2600	1090	S	0	NO
Entry/Stairs	EW-2	2600	1595	W	1900	YES
Entry/Stairs	EW-2	2600	1200	N	1300	YES
Entry/Stairs	EW-2	2600	1100	W	700	YES
Entry/Stairs	EW-2	2600	4000	N	200	NO
Kitchen/Living	EW-2	2600	4200	E	3700	YES
Kitchen/Living	EW-2	2600	900	N	3900	YES
Kitchen/Living	EW-2	2600	4000	E	700	NO
Kitchen/Living	EW-2	2600	3895	S	800	NO
Kitchen/Living	EW-2	2600	6195	N	0	YES
Bedroom 1	EW-2	2450	4195	E	700	NO
Bedroom 1	EW-2	2450	3695	N	800	NO
Bedroom 2	EW-2	2450	3395	E	700	NO
Bedroom 2	EW-2	2450	4195	S	600	NO
WC L1	EW-2	2450	1590	S	600	NO
Bathroom L1	EW-2	2450	1995	S	600	NO
Bathroom L1	EW-2	2450	2100	W	700	YES
Ensuite Bed 1	EW-2	2450	2490	N	800	YES
Bedroom 3	EW-2	2450	3995	S	700	YES
Bedroom 3	EW-2	2450	3300	W	800	NO
Bedroom 3	EW-2	2450	1600	N	2000	YES
Scullery	EW-2	2600	1895	S	800	NO
Scullery	EW-2	2600	600	W	3000	YES
Laundry	EW-2	2600	890	S	0	YES
Stairs/Void L1	EW-2	2450	500	E	6900	YES
Stairs/Void L1	EW-2	2450	2695	W	1300	YES
Stairs/Void L1	EW-2	2450	4000	N	300	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		162.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.10	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.50	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area (m 233)	Sub-floor ventilation	Added insulation (R-value)	Covering
Entry/Stairs	Concrete Slab on Ground 100mm	18.50	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	46.30	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 100mm	16.90		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 19mm	11.20		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Scullery	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.90		No Insulation	Ceramic Tiles 8mm
WC L1/Scullery	Timber Above Plasterboard 19mm	0.70		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Entry/Stairs	Timber Above Plasterboard 19mm	3.20		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Laundry	Timber Above Plasterboard 19mm	1.50		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	4.50		No Insulation	Ceramic Tiles 8mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.40		No Insulation	Carpet+Rubber Underlay 18mm
Vanity/Powder G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Vanity/Kitchen/Living	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
Hall L1/Garage	Timber Above Plasterboard 19mm	0.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall L1/Entry/Stairs	Timber Above Plasterboard 19mm	4.70		No Insulation	Carpet+Rubber Underlay 18mm
Hall L1/Kitchen/Living	Timber Above Plasterboard 19mm	3.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	12.90		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Scullery	Concrete Slab on Ground 19mm	4.10	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	1.60	None	No Insulation	Ceramic Tiles 8mm
Stairs/Void L1/Entry/Stairs	Timber Above Plasterboard 19mm	8.60		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Entry/Stairs	Plasterboard	Bulk Insulation R3.5	No
Entry/Stairs	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
Hall L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Scullery	Plasterboard	Bulk Insulation R3.5	No
Scullery	Timber Above Plasterboard	No Insulation	No
Laundry	Timber Above Plasterboard	No Insulation	No
Stairs/Void L1	Plasterboard	Bulk Insulation R2.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.85	Dark

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

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While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031587

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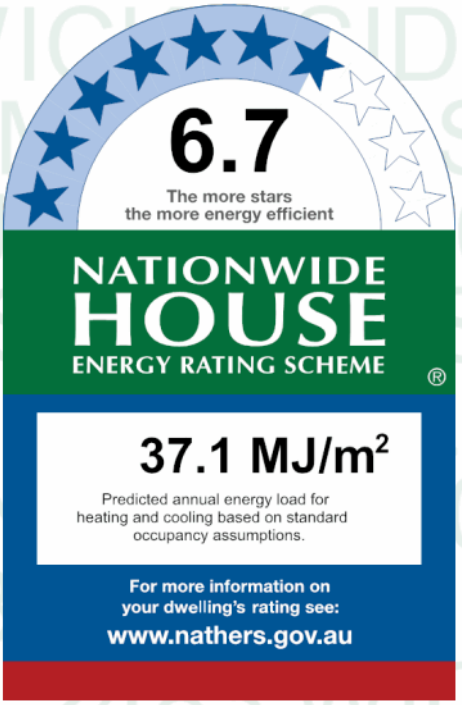

Property

Address	Unit U12, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	104.0	Suburban
Unconditioned*	46.0	**NatHERS climate zone**
Total	150.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
17.5 MJ/m^2	19.6 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=LVFDvQxrE.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Garage	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Kitchen/Living	ALM-004-01 A	n/a	1100	900	n/a	90	W	No
Kitchen/Living	ALM-004-01 A	n/a	1100	1200	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2400	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Entry Hall G	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Entry Hall G	ALM-004-01 A	n/a	1500	900	n/a	90	N	No
WC G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	W	No
Bedroom 1	ALM-004-01 A	n/a	1100	2400	n/a	35	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	E	No
Bedroom 3	ALM-004-01 A	n/a	900	900	n/a	90	N	No
Bedroom 3	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Hall/Stairs L1	ALM-004-01 A	n/a	900	1500	n/a	00	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Entry Hall G	2100	920	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	3600	N	1400	YES
Garage	EW-1	2600	6000	E	400	NO
Garage	EW-1	2600	6500	S	300	NO
Garage	EW-1	2600	1200	W	300	YES
Kitchen/Living	EW-2	2600	3600	W	0	NO
Kitchen/Living	EW-2	2600	2100	N	3700	YES
Kitchen/Living	EW-2	2600	3000	W	4200	YES
Kitchen/Living	EW-2	2600	4695	N	700	NO
Kitchen/Living	EW-2	2600	1595	S	600	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-2	2600	500	E	10300	YES
Kitchen/Living	EW-2	2600	5100	S	0	NO
Entry Hall G	EW-3	2600	4595	N	700	NO
Entry Hall G	EW-3	2600	1295	E	1800	YES
WC G	EW-3	2600	1790	S	600	YES
Bedroom 1	EW-3	2450	3695	W	700	NO
Bedroom 1	EW-3	2450	4695	N	700	NO
WIR Bed 1	EW-3	2450	1595	W	700	NO
WIR Bed 1	EW-3	2450	1495	S	700	NO
Ensuite Bed 1	EW-3	2450	2990	S	700	NO
Bathroom L1	EW-3	2450	2490	S	700	NO
WC L1	EW-3	2450	1690	S	700	NO
Bedroom 2	EW-3	2450	595	N	2000	YES
Bedroom 2	EW-3	2450	1300	W	8400	YES
Bedroom 2	EW-3	2450	3300	N	700	NO
Bedroom 2	EW-3	2450	3495	E	500	YES
Bedroom 3	EW-3	2450	1500	N	700	YES
Bedroom 3	EW-3	2450	3100	E	600	NO
Bedroom 3	EW-3	2450	3795	S	700	NO
Hall/Stairs L1	EW-3	2450	2390	N	700	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		20.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		101.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.40	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	40.40	None	No Insulation	Ceramic Tiles 8mm
Entry Hall G	Concrete Slab on Ground 100mm	5.30	None	No Insulation	Ceramic Tiles 8mm
WC G	Concrete Slab on Ground 100mm	2.40	None	No Insulation	Ceramic Tiles 8mm
Stairs G	Concrete Slab on Ground 100mm	3.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 19mm	15.50		No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.30		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	3.90		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1	Suspended Timber Floor 19mm	0.70	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	1.20		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/WC G	Timber Above Plasterboard 19mm	2.40		No Insulation	Ceramic Tiles 8mm
Bathroom L1	Suspended Timber Floor 19mm	0.90	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.50		Bulk Insulation R2	Ceramic Tiles 8mm
Vanity/Garage	Timber Above Plasterboard 19mm	1.60		Bulk Insulation R2	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	8.40		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 2/Entry Hall G	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	2.20	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	11.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	2.40		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living	Timber Above Plasterboard 19mm	4.20		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Stairs G	Timber Above Plasterboard 19mm	3.50		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Entry Hall G	Plasterboard	Bulk Insulation R3.5	No
Entry Hall G	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Stairs G	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.85	Dark

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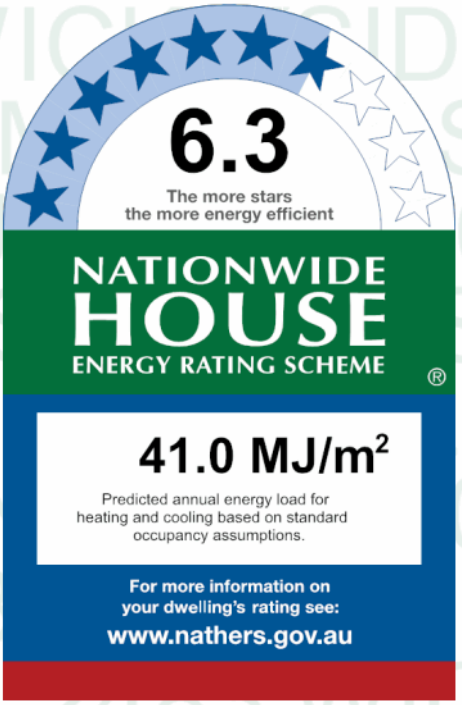
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031595

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U13, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	106.0	Suburban
Unconditioned*	47.0	**NatHERS climate zone**
Total	153.0	10
Garage	36.0	

Thermal performance

Heating	Cooling
17.0	**24.0**
MJ/m^2	MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

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National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Garage	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2400	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	900	2100	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	1200	2100	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	600	1500	n/a	00	S	No
Entry Hall G	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Entry Hall G	ALM-004-01 A	n/a	450	900	n/a	00	E	No
WC G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Laundry G	ALM-004-01 A	n/a	800	800	n/a	90	S	No
Bedroom 1	ALM-004-01 A	n/a	1100	2100	n/a	45	W	No
Bedroom 1	ALM-004-01 A	n/a	1800	600	n/a	45	N	No
Bedroom 1	ALM-004-01 A	n/a	600	1800	n/a	45	N	No
Bedroom 1	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	1100	1500	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	600	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	450	1800	n/a	35	N	No
Flexispace/Stai	ALM-004-01 A	n/a	900	600	n/a	90	N	No
Flexispace/Stai	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Flexispace/Stai	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Flexispace/Stai	ALM-004-01 A	n/a	600	600	n/a	00	N	No
Flexispace/Stai	ALM-004-01 A	n/a	1500	900	n/a	45	E	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Entry Hall G	2100	920	90	E
Laundry G	1300	820	90	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2700	4500	N	200	YES
Garage	EW-1	2700	6000	E	300	NO
Garage	EW-1	2700	6500	S	300	NO

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2700	1295	W	200	YES
Kitchen/Living	EW-2	2700	2900	W	4000	YES
Kitchen/Living	EW-2	2700	6995	N	700	NO
Kitchen/Living	EW-2	2700	895	S	600	YES
Kitchen/Living	EW-2	2700	500	E	10100	YES
Kitchen/Living	EW-2	2700	2295	S	0	NO
Entry Hall G	EW-2	2700	3695	N	700	NO
Entry Hall G	EW-2	2700	1295	E	2100	YES
WC G	EW-2	2700	1190	S	600	NO
Laundry G	EW-2	2700	1195	S	600	YES
Bedroom 1	EW-2	2700	3600	W	600	NO
Bedroom 1	EW-2	2700	4195	N	3600	YES
Bedroom 1	EW-2	2700	3595	S	700	NO
WIR Bed 1	EW-2	2700	1590	S	700	NO
Ensuite Bed 1	EW-2	2700	2090	S	700	NO
Bedroom 2	EW-3	2450	2900	N	700	YES
Bedroom 2	EW-3	2450	3200	E	500	NO
Bedroom 2	EW-3	2450	3995	S	700	NO
WC L1	EW-3	2450	1790	S	700	NO
Bathroom L1	EW-3	2450	2490	S	700	NO
Bedroom 3	EW-3	2450	3795	S	700	NO
Bedroom 3	EW-3	2450	3200	W	600	NO
Bedroom 3	EW-3	2450	3195	N	700	YES
Flexispace/Stai	EW-3	2450	1100	W	3800	YES
Flexispace/Stai	EW-3	2450	1800	N	700	YES
Flexispace/Stai	EW-3	2450	1100	W	2300	YES
Flexispace/Stai	EW-3	2450	4200	N	700	NO
Flexispace/Stai	EW-3	2450	2195	E	500	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		21.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		118.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	36.40	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	33.70	None	No Insulation	Ceramic Tiles 8mm
Entry Hall G	Concrete Slab on Ground 100mm	4.10	None	No Insulation	Ceramic Tiles 8mm
Stairs G	Concrete Slab on Ground 100mm	3.70	None	No Insulation	Ceramic Tiles 8mm
Hallway G	Concrete Slab on Ground 100mm	4.00	None	No Insulation	Ceramic Tiles 8mm
WC G	Concrete Slab on Ground 19mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry G	Concrete Slab on Ground 19mm	2.60	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 19mm	13.40	None	No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1	Concrete Slab on Ground 19mm	3.70	None	No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1	Concrete Slab on Ground 19mm	4.90	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	12.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.80		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	0.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom L1/WC G	Timber Above Plasterboard 19mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Laundry G	Timber Above Plasterboard 19mm	2.70		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1	Suspended Timber Floor 19mm	0.80	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Ceramic Tiles 8mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 19mm	9.60		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/WC G	Timber Above Plasterboard 19mm	0.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Timber Floor 19mm	0.70	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Vanity/Garage	Timber Above Plasterboard 19mm	1.50		Bulk Insulation R2	Ceramic Tiles 8mm
Flexispace/Stai/Garage	Timber Above Plasterboard 19mm	8.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Flexispace/Stai/Stairs G	Timber Above Plasterboard 19mm	2.80		No Insulation	Carpet+Rubber Underlay 18mm
Flexispace/Stai/Hallway G	Timber Above Plasterboard 19mm	4.30		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Entry Hall G	Plasterboard	Bulk Insulation R3.5	No
Stairs G	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Stairs G	Timber Above Plasterboard	No Insulation	No
Hallway G	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Laundry G	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
Flexispace/Stai	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.85	Dark

* Refer to glossary.

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

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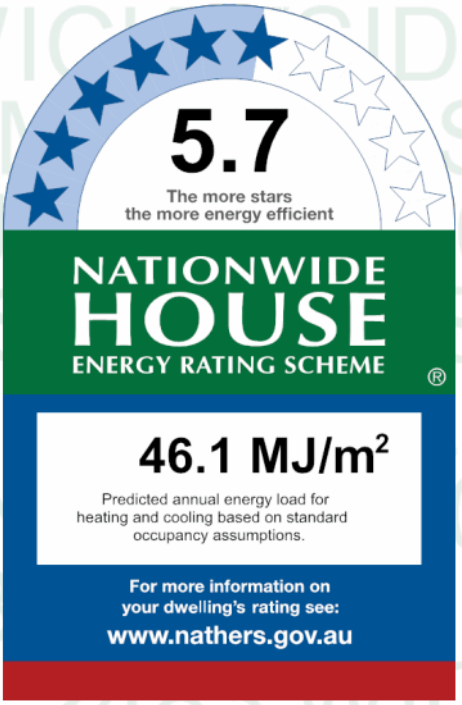

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Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

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ABSA

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

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Window and glazed door *type and performance*

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Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Laundry	ALM-004-01 A	n/a	800	800	n/a	90	S	No
WC G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Living	ALM-004-01 A	n/a	1500	600	n/a	45	W	No
Living	ALM-004-01 A	n/a	1500	600	n/a	45	W	No
Living	ALM-004-01 A	n/a	1100	2100	n/a	45	N	No
Living	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Kitchen/Dining	ALM-004-01 A	n/a	2100	3000	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	1500	900	n/a	45	W	No
Kitchen/Dining	ALM-004-01 A	n/a	1200	2100	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	1500	600	n/a	30	N	No
Kitchen/Dining	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Kitchen/Dining	ALM-004-01 A	n/a	600	1500	n/a	00	S	No
Bedroom 1	ALM-004-01 A	n/a	600	2400	n/a	35	W	No
Bedroom 1	ALM-004-01 A	n/a	1100	2100	n/a	45	N	No
Bedroom 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	900	900	n/a	90	W	No
Bedroom 3	ALM-004-01 A	n/a	1100	2100	n/a	45	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	600	600	n/a	00	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	1500	600	n/a	00	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	2100	600	n/a	23	E	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	W
Garage	2400	2400	90	E
Laundry	1300	820	90	S
Kitchen/Dining	2100	920	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1300	W	7100	YES
Garage	EW-1	2750	1200	N	1300	YES
Garage	EW-1	2750	3200	E	1100	NO
Garage	EW-1	2750	5900	S	0	NO
Laundry	EW-2	2750	1790	S	600	YES
WC G	EW-2	2750	1090	S	600	YES
Living	EW-2	2750	4600	W	700	NO
Living	EW-2	2750	3600	N	500	NO
Living	EW-2	2750	1000	E	3800	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living	EW-2	2750	3595	S	500	NO
Kitchen/Dining	EW-2	2750	3795	N	0	YES
Kitchen/Dining	EW-2	2750	2100	W	3800	YES
Kitchen/Dining	EW-2	2750	7000	N	50	NO
Kitchen/Dining	EW-2	2750	1900	E	0	YES
Kitchen/Dining	EW-2	2750	1000	N	0	YES
Kitchen/Dining	EW-2	2750	1295	E	2300	YES
Kitchen/Dining	EW-2	2750	600	E	9900	YES
Kitchen/Dining	EW-2	2750	4195	S	0	NO
Bedroom 1	EW-2	2450	3600	W	800	NO
Bedroom 1	EW-2	2450	3695	N	900	YES
Bedroom 1	EW-2	2450	3595	S	625	NO
WIR Bed 1	EW-2	2450	1390	S	625	NO
Ensuite Bed 1	EW-2	2450	2690	S	650	NO
Bathroom L1	EW-2	2450	2990	S	675	NO
Bedroom 2	EW-2	2450	3295	N	600	YES
Bedroom 2	EW-2	2450	3800	E	700	NO
Bedroom 2	EW-2	2450	3295	S	675	NO
Bedroom 3	EW-2	2450	2100	W	700	YES
Bedroom 3	EW-2	2450	4395	N	100	NO
Hall/Stairs L1	EW-2	2450	2595	N	100	NO
Hall/Stairs L1	EW-2	2450	1900	E	700	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		22.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		89.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	20.30	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	2.70	None	No Insulation	Ceramic Tiles 8mm
WC G	Concrete Slab on Ground 100mm	1.60	None	No Insulation	Ceramic Tiles 8mm
Living	Concrete Slab on Ground 100mm	16.40	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Dining	Concrete Slab on Ground 100mm	36.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/WC G	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1/Kitchen/Dining	Timber Above Plasterboard 19mm	14.20		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/WC G	Timber Above Plasterboard 19mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Dining	Timber Above Plasterboard 19mm	0.70		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1	Suspended Timber Floor 19mm	0.50	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Garage	Timber Above Plasterboard 19mm	1.10		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Laundry	Timber Above Plasterboard 19mm	1.70		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1	Suspended Timber Floor 19mm	1.10	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Ceramic Tiles 8mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	6.00		No Insulation	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	5.40		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2/Kitchen/Dining	Timber Above Plasterboard 19mm	1.30		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	5.70	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Dining	Timber Above Plasterboard 19mm	12.00		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	3.50		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Laundry	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Dining	Timber Above Plasterboard 19mm	7.70		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	Bulk Insulation R3.5	No
Garage	Timber Above Plasterboard	No Insulation	No
Laundry	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

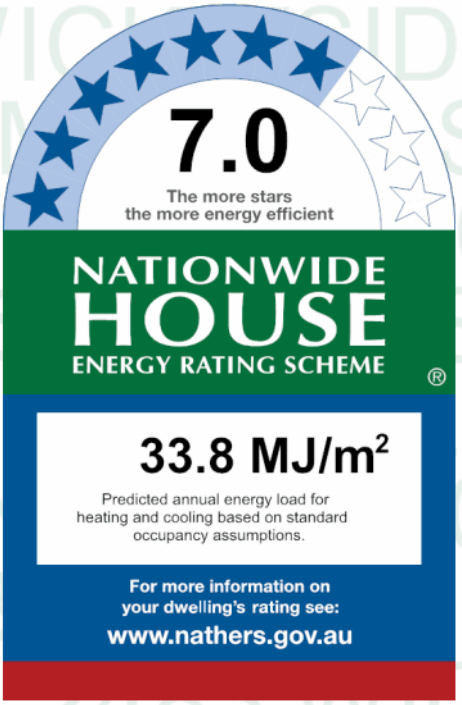
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031611

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U15, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	114.0	Suburban
Unconditioned*	50.0	**NatHERS climate zone**
Total	164.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
16.1	**17.7**
MJ/m^2	MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526
Assessor Accrediting Organisation	ABSA
Declaration of interest	The Assessor has provided design advice to the Applicant

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=jTKcFyezA.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Powder G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Laundry	ALM-004-01 A	n/a	2100	1500	n/a	45	S	No
Bedroom 1	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Bedroom 1	ALM-004-01 A	n/a	1100	2100	n/a	45	W	No
Bedroom 1	ALM-004-01 A	n/a	600	2100	n/a	45	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3000	n/a	65	W	No
Kitchen/Living	ALM-004-01 A	n/a	900	2400	n/a	35	N	No
Kitchen/Living	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Kitchen/Living	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	2400	300	n/a	00	E	No
Bedroom 2	ALM-004-01 A	n/a	1200	900	n/a	00	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	1200	900	n/a	00	E	No
Bedroom 2	ALM-004-01 A	n/a	900	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1200	600	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	900	1800	n/a	45	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	1200	600	n/a	00	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	1200	600	n/a	00	E	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2040	820	90	W
Garage	2400	4800	90	E
Kitchen/Living	2400	920	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2750	1419	W	5554	YES
Garage	EW-1	2750	2724	N	1768	YES
Garage	EW-1	2750	5984	E	0	NO
Garage	EW-1	2750	5968	S	0	NO
Powder G	EW-2	2750	1815	S	0	YES
Laundry	EW-2	2750	1914	S	25	YES
Bedroom 1	EW-2	2750	3695	S	700	NO
Bedroom 1	EW-2	2750	3800	W	700	NO
Bedroom 1	EW-2	2750	3000	N	4800	YES
WIR Bed 1	EW-2	2750	1890	S	700	NO

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Ensuite Bed 1	EW-2	2750	917	S	25	YES
Ensuite Bed 1	EW-2	2750	1695	S	700	NO
Kitchen/Living	EW-2	2750	4095	W	3700	YES
Kitchen/Living	EW-2	2750	3200	N	700	YES
Kitchen/Living	EW-2	2750	600	W	6900	YES
Kitchen/Living	EW-2	2750	3300	N	100	NO
Kitchen/Living	EW-2	2750	600	E	5175	YES
Kitchen/Living	EW-2	2750	4500	N	700	YES
Kitchen/Living	EW-2	2750	2116	E	1641	YES
Bedroom 2	EW-2	2450	3234	N	986	NO
Bedroom 2	EW-2	2450	4554	E	682	NO
Bedroom 2	EW-2	2450	3234	S	736	NO
WC L1	EW-2	2450	1108	S	736	YES
Bathroom L1	EW-2	2450	2012	S	732	YES
Bedroom 3	EW-2	2450	2643	S	711	YES
Bedroom 3	EW-2	2450	1100	S	700	NO
Bedroom 3	EW-2	2450	4600	W	700	NO
Bedroom 3	EW-2	2450	700	N	1000	YES
Bedroom 3	EW-2	2450	2330	N	1015	YES
Hall/Stairs L1	EW-2	2450	702	W	3688	YES
Hall/Stairs L1	EW-2	2450	640	NW	1370	NO
Hall/Stairs L1	EW-2	2450	2022	N	986	NO
Hall/Stairs L1	EW-2	2450	1118	E	4521	YES
Hall/Stairs L1	EW-2	2450	603	N	2104	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		25.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		87.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.40	None	No Insulation	Bare
Powder G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Laundry	Concrete Slab on Ground 100mm	3.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1	Concrete Slab on Ground 100mm	13.90	None	No Insulation	Carpet+Rubber Underlay 18mm

* Refer to glossary.

Location	Construction	265 Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
WIR Bed 1	Concrete Slab on Ground 100mm	3.90	None	No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1	Concrete Slab on Ground 19mm	5.20	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 19mm	52.50	None	No Insulation	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	14.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.60		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	1.70		Bulk Insulation R2	Ceramic Tiles 8mm
Bathroom L1/Powder G	Timber Above Plasterboard 19mm	1.70		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Kitchen/Living	Timber Above Plasterboard 19mm	2.00		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Laundry	Timber Above Plasterboard 19mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Ensuite Bed 1	Timber Above Plasterboard 19mm	3.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 19mm	7.70		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	4.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living	Timber Above Plasterboard 19mm	4.30		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Powder G	Timber Above Plasterboard	No Insulation	No
Laundry	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

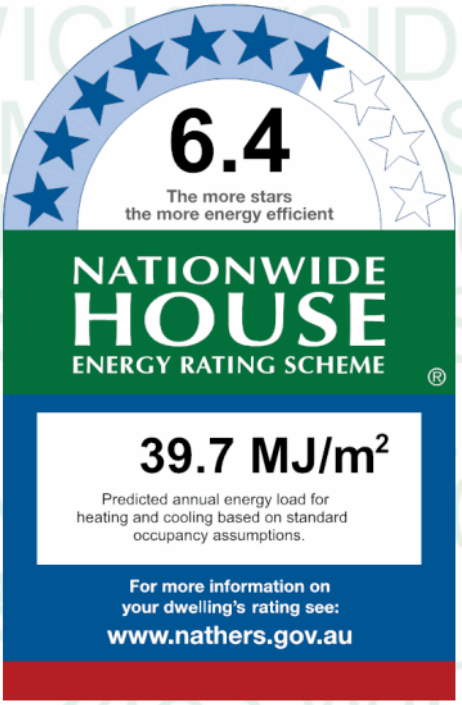
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031629

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U16, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	106.0	Suburban
Unconditioned*	48.0	**NatHERS climate zone**
Total	154.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
17.2 MJ/m^2	22.5 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=nqeBswjxi.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2400	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	1500	450	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	1100	2400	n/a	35	N	No
Kitchen/Living	ALM-004-01 A	n/a	600	2400	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	750	750	n/a	00	E	No
Kitchen/Living	ALM-004-01 A	n/a	1500	400	n/a	00	E	No
Kitchen/Living	ALM-004-01 A	n/a	600	1200	n/a	00	S	No
WC G	ALM-004-01 A	n/a	1000	800	n/a	90	S	No
Living G	ALM-004-01 A	n/a	1200	1800	n/a	45	W	No
Living G	ALM-004-01 A	n/a	1500	450	n/a	45	N	No
Living G	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Living G	ALM-004-01 A	n/a	1200	600	n/a	45	S	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	1100	2400	n/a	45	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	1200	900	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1200	1800	n/a	45	E	No
Bedroom 3	ALM-004-01 A	n/a	1200	750	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	1100	1200	n/a	45	E	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Hallway/Stairs	ALM-004-01 A	n/a	900	600	n/a	00	E	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Kitchen/Living	2400	820	90	E
WC G	1020	820	90	S

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	6000	E	400	NO
Garage	EW-1	2600	6500	S	0	NO
Garage	EW-1	2600	1300	W	5100	YES
Garage	EW-1	2600	2300	N	1900	YES
Kitchen/Living	EW-2	2600	3800	W	3600	YES
Kitchen/Living	EW-2	2600	9400	N	700	NO
Kitchen/Living	EW-2	3300	2195	E	1900	YES
Kitchen/Living	EW-2	2600	3390	S	600	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
WC G	EW-3	2600	1790	S	600	YES
Living G	EW-3	2600	3600	W	700	NO
Living G	EW-3	2600	3595	N	3800	YES
Living G	EW-3	2600	500	E	11700	YES
Living G	EW-3	2600	3600	S	700	NO
Bedroom 1	EW-2	2450	3695	W	700	NO
Bedroom 1	EW-2	2450	3595	N	700	YES
WIR Bed 1	EW-2	2450	1695	W	700	NO
WIR Bed 1	EW-2	2450	1595	S	700	NO
Ensuite Bed 1	EW-2	2450	2690	S	700	NO
Bedroom 2	EW-2	2450	3695	N	700	NO
Bedroom 2	EW-2	2450	3300	E	400	NO
Bedroom 2	EW-2	2450	1200	S	2800	YES
Bedroom 3	EW-2	2450	1200	N	900	YES
Bedroom 3	EW-2	2450	200	W	8500	YES
Bedroom 3	EW-2	2450	595	N	700	NO
Bathroom L1	EW-2	2450	2095	E	700	YES
Bathroom L1	EW-2	2450	3795	S	700	NO
WC L1	EW-2	2450	1690	S	700	NO
Hallway/Stairs	EW-2	2450	400	W	4300	YES
Hallway/Stairs	EW-2	2450	707	NW	778	NO
Hallway/Stairs	EW-2	2450	2500	N	800	NO
Hallway/Stairs	EW-2	2450	1095	E	5900	YES
Hallway/Stairs	EW-2	2450	1090	S	700	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		28.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		100.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.50	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	40.00	None	No Insulation	Ceramic Tiles 8mm
WC G	Concrete Slab on Ground 100mm	3.20	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Powder	Concrete Slab on Ground 100mm	1.90	None	No Insulation	Ceramic Tiles 8mm
Living G	Concrete Slab on Ground 100mm	12.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 19mm	12.90		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	1.80		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1	Suspended Timber Floor 19mm	0.80	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.00		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/WC G	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1	Suspended Timber Floor 19mm	1.30	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	9.70		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	1.80	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	8.10		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 19mm	0.60		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Powder	Timber Above Plasterboard 19mm	1.90		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	6.00		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.50		Bulk Insulation R2	Ceramic Tiles 8mm
Hallway/Stairs /Garage	Timber Above Plasterboard 19mm	4.30		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hallway/Stairs /Kitchen/Living	Timber Above Plasterboard 19mm	5.60		No Insulation	Carpet+Rubber Underlay 18mm
Hallway/Stairs /WC G	Timber Above Plasterboard 19mm	2.10		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Powder	Timber Above Plasterboard	No Insulation	No
Living G	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Hallway/Stairs	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.85	Dark

Explanatory notes

About this report

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While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031637

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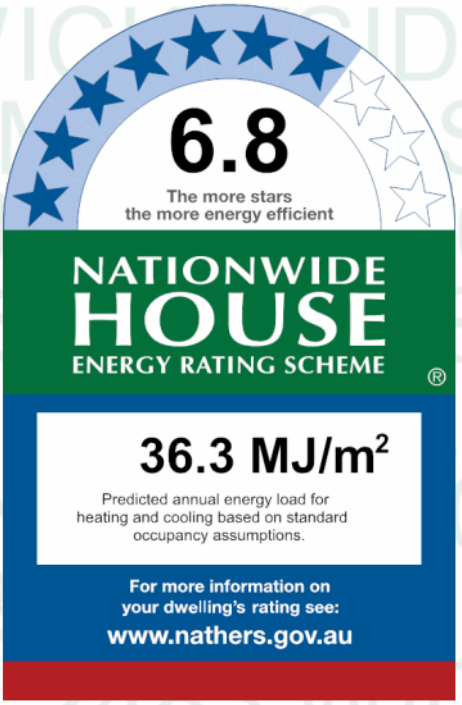

Property

Address	Unit U17, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	102.0	Suburban
Unconditioned*	46.0	**NatHERS climate zone**
Total	148.0	10
Garage	37.0	

Thermal performance

Heating	Cooling
17.2 MJ/m^2	19.1 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=FsIVoGgXM.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	1200	600	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	2100	2400	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	1500	450	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	1100	2400	n/a	35	N	No
Kitchen/Living	ALM-004-01 A	n/a	1200	750	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	600	1800	n/a	45	S	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Kitchen/Living	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Kitchen/Living	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Entry Hall G	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Entry Hall G	ALM-004-01 A	n/a	1500	900	n/a	45	N	No
Entry Hall G	ALM-004-01 A	n/a	300	820	n/a	00	E	No
Entry Hall G	ALM-004-01 A	n/a	1600	400	n/a	00	E	No
WC G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	1100	2100	n/a	45	N	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bedroom 3	ALM-004-01 A	n/a	1200	750	n/a	45	N	No
Bathroom L1	ALM-004-01 A	n/a	900	1500	n/a	45	E	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Hallway/Stairs	ALM-004-01 A	n/a	900	600	n/a	00	E	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Entry Hall G	2100	920	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	6000	E	600	NO
Garage	EW-1	2600	6500	S	0	NO
Garage	EW-1	2600	1300	W	2800	YES
Garage	EW-1	2600	2300	N	2200	YES
Kitchen/Living	EW-2	2600	3800	W	3600	YES
Kitchen/Living	EW-2	2600	4395	N	700	NO
Kitchen/Living	EW-2	2600	1695	S	600	YES
Kitchen/Living	EW-2	2600	500	E	9400	YES
Kitchen/Living	EW-2	2600	4800	S	700	NO

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
				280		
Kitchen/Living	EW-2	2600	3600	W	700	NO
Kitchen/Living	EW-2	2600	2900	N	3800	YES
Entry Hall G	EW-3	2600	4595	N	700	NO
Entry Hall G	EW-3	4200	2195	E	1900	YES
WC G	EW-3	2600	1190	S	600	YES
Bedroom 1	EW-2	2450	3695	W	700	NO
Bedroom 1	EW-2	2450	3595	N	700	YES
WIR Bed 1	EW-2	2450	1695	W	700	NO
WIR Bed 1	EW-2	2450	1595	S	700	NO
Ensuite Bed 1	EW-2	2450	2790	S	700	NO
Bedroom 2	EW-2	2450	3495	N	700	NO
Bedroom 2	EW-2	2450	3300	E	700	NO
Bedroom 2	EW-2	2450	1200	S	2800	YES
Bedroom 3	EW-2	2450	1200	N	900	YES
Bedroom 3	EW-2	2450	200	W	8400	YES
Bedroom 3	EW-2	2450	595	N	700	NO
Bathroom L1	EW-2	2450	2095	E	700	YES
Bathroom L1	EW-2	2450	3795	S	700	NO
WC L1	EW-2	2450	1690	S	700	NO
Hallway/Stairs	EW-2	2450	500	W	4300	YES
Hallway/Stairs	EW-2	2450	566	NW	849	NO
Hallway/Stairs	EW-2	2450	2500	N	700	NO
Hallway/Stairs	EW-2	2450	1095	E	6000	YES
Hallway/Stairs	EW-2	2450	690	S	700	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		26.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		92.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.30	None	No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	42.50	None	No Insulation	Ceramic Tiles 8mm
Entry Hall G	Concrete Slab on Ground 100mm	9.80	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
WC G	Concrete Slab on Ground 100mm	1.70	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 100mm	12.80		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.60		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.60		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1/WC G	Timber Above Plasterboard 19mm	0.50		No Insulation	Ceramic Tiles 8mm
Ensuite Bed 1	Suspended Timber Floor 19mm	1.10	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	9.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Timber Floor 19mm	1.80	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	8.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 19mm	1.80		No Insulation	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	5.30		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.70		Bulk Insulation R2	Ceramic Tiles 8mm
Hallway/Stairs /Garage	Timber Above Plasterboard 19mm	3.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hallway/Stairs /Kitchen/Living	Timber Above Plasterboard 19mm	4.00		No Insulation	Carpet+Rubber Underlay 18mm
Hallway/Stairs /Entry Hall G	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
Hallway/Stairs /WC G	Timber Above Plasterboard 19mm	1.30		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Entry Hall G	Plasterboard	Bulk Insulation R3.5	No
Entry Hall G	Timber Above Plasterboard	No Insulation	No
WC G	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Hallway/Stairs	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.85	Dark

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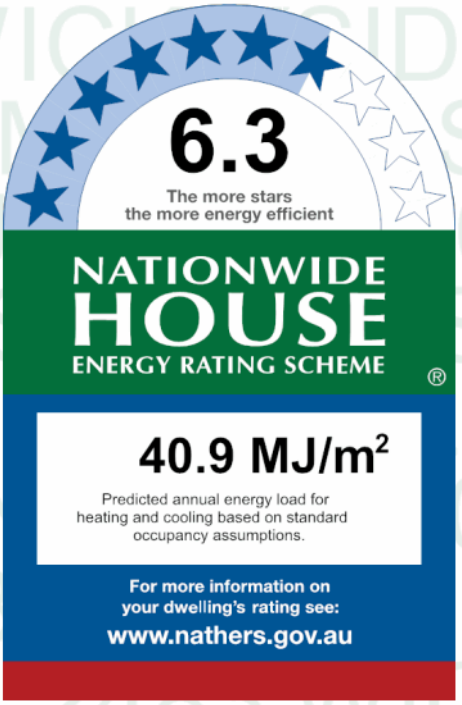
NatHERS Certificate No. 0006031645

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U18, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	111.0	Suburban
Unconditioned*	49.0	**NatHERS climate zone**
Total	160.0	10
Garage	36.0	

Thermal performance

Heating	Cooling
15.8 MJ/m^2	25.2 MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

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State and territory variations and additions to the NCC may also apply.

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Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

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Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Garage	ALM-004-01 A	n/a	600	600	n/a	90	N	No
Bedroom 1	ALM-004-01 A	n/a	2100	2400	n/a	45	W	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Laundry	ALM-004-01 A	n/a	1000	800	n/a	90	S	No
Powder G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Living	ALM-004-01 A	n/a	600	2400	n/a	45	W	No
Living	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	600	1800	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	1200	1800	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2100	3000	n/a	65	E	No
Kitchen/Dining	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1000	1200	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1500	600	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	600	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	1500	600	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	600	n/a	90	S	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	S	No
Bathroom L1	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Bedroom 3	ALM-004-01 A	n/a	600	600	n/a	90	W	No
Bedroom 3	ALM-004-01 A	n/a	1100	1800	n/a	45	N	No
Hall/Stairs L1	ALM-004-01 A	n/a	1000	1500	n/a	00	N	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Laundry	1020	820	90	S
Kitchen/Dining	2400	820	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No
EW-4	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	6000	E	300	NO
Garage	EW-1	2600	6500	S	0	NO
Garage	EW-2	2600	1295	W	50	YES
Garage	EW-3	2600	2500	N	5800	YES
Bedroom 1	EW-4	2600	4190	W	700	YES
Ensuite Bed 1	EW-4	2600	1800	W	100	NO
Ensuite Bed 1	EW-4	2600	600	N	9200	YES
Ensuite Bed 1	EW-4	2600	2695	S	700	NO
WIR Bed 1	EW-4	2600	500	E	2925	YES
WIR Bed 1	EW-4	2600	1495	S	700	NO
Laundry	EW-4	2600	1790	S	0	YES

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Powder G	EW-4	2600	1195	S	0	YES
Living	EW-4	2600	4295	W	700	NO
Living	EW-4	2600	3795	N	700	YES
Kitchen/Dining	EW-4	2600	600	W	4500	YES
Kitchen/Dining	EW-4	2600	5500	N	700	NO
Kitchen/Dining	EW-4	2600	4200	E	3400	YES
Kitchen/Dining	EW-4	2600	1300	N	4900	YES
Kitchen/Dining	EW-4	2600	1495	E	2100	YES
Bedroom 2	EW-4	2450	4195	N	1100	YES
Bedroom 2	EW-4	2450	4100	E	700	NO
Bedroom 2	EW-4	2450	3395	S	600	YES
WC L1	EW-4	2450	600	E	4100	YES
WC L1	EW-4	2450	1695	S	0	NO
Bathroom L1	EW-4	2450	2495	S	0	NO
Bathroom L1	EW-4	2450	1400	W	700	YES
Bedroom 3	EW-4	2450	1895	S	700	YES
Bedroom 3	EW-4	2450	4100	W	700	NO
Bedroom 3	EW-4	2450	3095	N	1100	NO
Hall/Stairs L1	EW-4	2450	2195	N	1100	NO
Hall/Stairs L1	EW-4	2450	800	E	4900	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		26.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		114.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	36.50	None	No Insulation	Bare
Bedroom 1	Concrete Slab on Ground 100mm	15.20	None	No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1	Concrete Slab on Ground 100mm	4.70	None	No Insulation	Ceramic Tiles 8mm
WIR Bed 1	Concrete Slab on Ground 100mm	2.50	None	No Insulation	Carpet+Rubber Underlay 18mm
Laundry	Concrete Slab on Ground 100mm	3.70	None	No Insulation	Ceramic Tiles 8mm
Powder G	Concrete Slab on Ground 19mm	1.80	None	No Insulation	Ceramic Tiles 8mm
Living	Concrete Slab on Ground 19mm	16.00	None	No Insulation	Ceramic Tiles 8mm
Hallway/Stairs	Concrete Slab on Ground 19mm	12.50	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 19mm	29.30	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

Location	Construction	Area (m 289)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bedroom 2/Garage	Timber Above Plasterboard 19mm	15.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Vanity/Garage	Timber Above Plasterboard 19mm	0.70		Bulk Insulation R2	Ceramic Tiles 8mm
Vanity/Hallway/Stairs	Timber Above Plasterboard 19mm	0.80		No Insulation	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	0.80		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Powder G	Timber Above Plasterboard 19mm	0.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Laundry	Timber Above Plasterboard 19mm	3.20		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Powder G	Timber Above Plasterboard 19mm	0.90		No Insulation	Ceramic Tiles 8mm
Bathroom L1/Hallway/Stairs	Timber Above Plasterboard 19mm	0.90		No Insulation	Ceramic Tiles 8mm
Bedroom 3/Bedroom 1	Timber Above Plasterboard 19mm	7.50		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Hallway/Stairs	Timber Above Plasterboard 19mm	3.90		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Hallway/Stairs	Timber Above Plasterboard 19mm	7.10		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Powder G	Timber Above Plasterboard	No Insulation	No
Living	Plasterboard	Bulk Insulation R3.5	No
Hallway/Stairs	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Vanity	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Dining	1	Exhaust Fans	300	Sealed

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031652

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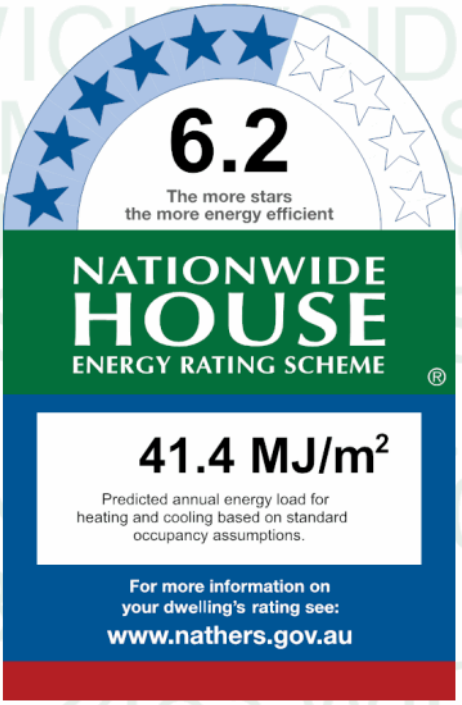

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Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

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Laundry	ALM-004-01 A	n/a	2100	1500	n/a	45	S	No
Powder G	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Hallway/Stairs	ALM-004-01 A	n/a	360	600	n/a	00	W	No
Kitchen/Dining	ALM-004-01 A	n/a	2100	2100	n/a	45	W	No
Kitchen/Dining	ALM-004-01 A	n/a	600	1500	n/a	00	W	No
Kitchen/Dining	ALM-004-01 A	n/a	750	1800	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	750	1800	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2100	3000	n/a	65	E	No
Kitchen/Dining	ALM-004-01 A	n/a	1200	600	n/a	45	N	No
Kitchen/Dining	ALM-004-01 A	n/a	2400	300	n/a	00	E	No
Bedroom 1	ALM-004-01 A	n/a	1100	2400	n/a	45	N	No
Bedroom 1	ALM-004-01 A	n/a	900	900	n/a	90	E	No
Ensuite Bed 1	ALM-004-01 A	n/a	450	900	n/a	90	E	No
Bedroom 2	ALM-004-01 A	n/a	1100	900	n/a	45	N	No
Bedroom 2	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	E	No
Bathroom L1	ALM-004-01 A	n/a	600	600	n/a	90	E	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Bedroom 3	ALM-004-01 A	n/a	600	1800	n/a	45	W	No
Bedroom 3	ALM-004-01 A	n/a	900	600	n/a	90	S	No
Vanity L1	ALM-004-01 A	n/a	1500	600	n/a	00	W	No
Vanity L1	ALM-004-01 A	n/a	1140	600	n/a	00	W	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Kitchen/Dining	2400	820	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No
EW-4	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.7	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	6200	E	0	NO
Garage	EW-1	2600	6100	S	0	NO
Garage	EW-2	2600	1500	W	5200	YES
Garage	EW-1	2600	595	S	800	YES
Garage	EW-1	2600	2600	N	5700	YES
Laundry	EW-3	2600	2400	W	700	NO
Laundry	EW-3	2600	600	N	2300	YES
Laundry	EW-3	2600	2195	S	800	NO

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Powder G	EW-3	2600	1690	S	800	NO
Hallway/Stairs	EW-3	2600	2290	W	0	YES
Kitchen/Dining	EW-3	2600	6000	W	700	NO
Kitchen/Dining	EW-3	2600	6200	N	700	NO
Kitchen/Dining	EW-3	2600	4600	E	3500	YES
Kitchen/Dining	EW-3	2600	1800	N	4300	YES
Kitchen/Dining	EW-3	2600	1395	E	2300	YES
Kitchen/Dining	EW-3	2600	600	S	2300	YES
Bedroom 1	EW-4	2450	3395	W	800	NO
Bedroom 1	EW-4	2450	4500	N	800	NO
Bedroom 1	EW-4	2450	3595	E	700	YES
WIR Bed 1	EW-4	2450	1590	W	800	YES
Ensuite Bed 1	EW-4	2450	1795	N	700	YES
Ensuite Bed 1	EW-4	2450	1395	E	700	YES
Bedroom 2	EW-4	2450	1000	S	2800	YES
Bedroom 2	EW-4	2450	2600	N	700	YES
Bedroom 2	EW-4	2450	3200	E	600	NO
Bathroom L1	EW-4	2450	2595	S	725	NO
Bathroom L1	EW-4	2450	2095	E	800	YES
WC L1	EW-4	2450	1690	S	750	NO
Bedroom 3	EW-4	2450	2995	W	800	YES
Bedroom 3	EW-4	2450	3595	S	775	NO
Vanity L1	EW-4	2450	1100	S	3800	YES
Vanity L1	EW-4	2450	2300	W	800	NO
Vanity L1	EW-4	2450	1100	N	5800	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		23.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		111.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	38.70	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	5.10	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Powder G	Concrete Slab on Ground 100mm	1.50	None	No Insulation	Ceramic Tiles 8mm
Hallway/Stairs	Concrete Slab on Ground 100mm	9.00	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Dining	Concrete Slab on Ground 100mm	39.40	None	No Insulation	Ceramic Tiles 8mm
Vanity G	Concrete Slab on Ground 19mm	1.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Hallway/Stairs	Timber Above Plasterboard 19mm	1.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 1/Kitchen/Dining	Timber Above Plasterboard 19mm	17.60		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Dining	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Garage	Timber Above Plasterboard 19mm	1.90		Bulk Insulation R2	Ceramic Tiles 8mm
Ensuite Bed 1/Kitchen/Dining	Timber Above Plasterboard 19mm	4.50		No Insulation	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	11.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	5.20		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Garage	Timber Above Plasterboard 19mm	1.50		Bulk Insulation R2	Ceramic Tiles 8mm
Vanity L1/Garage	Timber Above Plasterboard 19mm	1.90		Bulk Insulation R2	Ceramic Tiles 8mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	3.60		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3/Laundry	Timber Above Plasterboard 19mm	1.20		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Powder G	Timber Above Plasterboard 19mm	1.70		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3/Vanity G	Timber Above Plasterboard 19mm	2.00		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Timber Floor 19mm	1.60	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Vanity L1/Garage	Timber Above Plasterboard 19mm	4.10		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Vanity L1/Hallway/Stairs	Timber Above Plasterboard 19mm	7.40		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Laundry	Timber Above Plasterboard	No Insulation	No
Powder G	Timber Above Plasterboard	No Insulation	No
Hallway/Stairs	Timber Above Plasterboard	No Insulation	No
Kitchen/Dining	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Dining	Timber Above Plasterboard	No Insulation	No
Vanity G	Timber Above Plasterboard	No Insulation	No

* Refer to glossary.

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Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R4	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Bathroom L1	Plasterboard	Bulk Insulation R4	No
WC L1	Plasterboard	Bulk Insulation R4	No
Vanity L1	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Vanity L1	Plasterboard	Bulk Insulation R4	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Dining	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

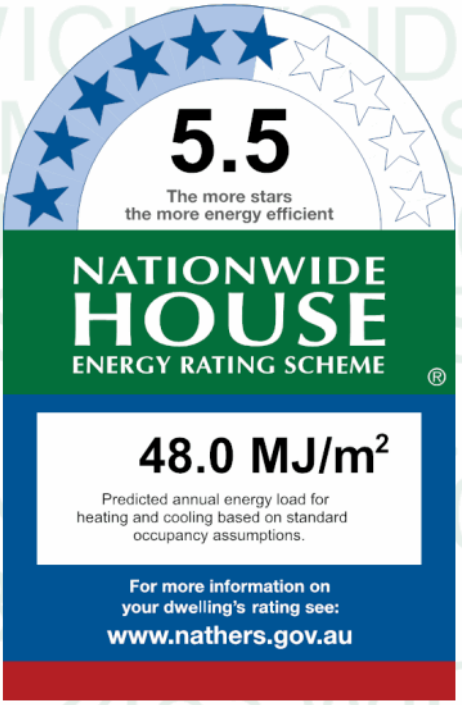
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006031660

Generated on 20 May 2021 using BERS Pro v4.4.0.2 (3.21)



Property

Address	Unit U20, 35 Bayside Way , Brunswick Heads , NSW , 2483
Lot/DP	1070724
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	B1161
Prepared by	Prestige Properties Design Construction

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	102.0	Suburban
Unconditioned*	51.0	**NatHERS climate zone**
Total	153.0	10
Garage	38.0	

Thermal performance

Heating	Cooling
10.6	**37.4**
MJ/m^2	MJ/m^2

Accredited assessor

Name	John Marchant
Business name	Partners Energy Management
Email	johnm@partnersenergy.com.au
Phone	0421381005
Accreditation No.	101526

Assessor Accrediting Organisation

ABSA

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

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=RgHbZJIJj.
When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.

* Refer to glossary.

Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

If carpet is used as floor covering then it may be replaced with any type.
For glazing only the U and SHGC values are to be used - NOT the product descriptions.
Also for all glazing the SHGC tolerances are +/-5% - regardless of the Certificate notations.
Downlights must not penetrate ceiling insulation.

Window and glazed door *type and performance*

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALM-004-01 A	ALM-004-01 A Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.59	0.59

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Laundry	ALM-004-01 A	n/a	2100	1500	n/a	45	S	No
Powder G	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Kitchen/Living	ALM-004-01 A	n/a	300	1000	n/a	00	W	No
Kitchen/Living	ALM-004-01 A	n/a	1100	1500	n/a	45	W	No
Kitchen/Living	ALM-004-01 A	n/a	2100	3000	n/a	65	N	No
Kitchen/Living	ALM-004-01 A	n/a	1500	600	n/a	45	N	No
Kitchen/Living	ALM-004-01 A	n/a	1500	1800	n/a	35	E	No
Kitchen/Living	ALM-004-01 A	n/a	1500	1800	n/a	35	E	No
Kitchen/Living	ALM-004-01 A	n/a	2400	300	n/a	00	E	No
Bedroom 1	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Bedroom 1	ALM-004-01 A	n/a	600	2400	n/a	35	N	No
Bedroom 1	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Ensuite Bed 1	ALM-004-01 A	n/a	900	600	n/a	90	E	No
Bedroom 2	ALM-004-01 A	n/a	900	2100	n/a	45	E	No
Bedroom 2	ALM-004-01 A	n/a	600	1800	n/a	45	S	No
Bedroom 3	ALM-004-01 A	n/a	1100	750	n/a	45	N	No
Bedroom 3	ALM-004-01 A	n/a	1100	1800	n/a	45	E	No
Bathroom L1	ALM-004-01 A	n/a	900	1200	n/a	45	W	No
WC L1	ALM-004-01 A	n/a	900	600	n/a	90	W	No
Hall/Stairs L1	ALM-004-01 A	n/a	1500	1000	n/a	00	W	No

Roof window *type and performance*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

* Refer to glossary.

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2400	4800	90	E
Garage	2040	820	90	W
Kitchen/Living	2400	920	90	E

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Brick Veneer	0.50	Medium	No insulation	No
EW-2	Brick Veneer	0.50	Medium	No insulation	No
EW-3	Fibro Cavity Panel Direct Fix	0.50	Medium	Anti-glare foil with bulk no gap R2.5	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Garage	EW-1	2600	6000	E	0	NO
Garage	EW-1	2600	6200	S	0	NO
Garage	EW-2	2600	1700	W	0	YES
Garage	EW-1	2600	495	S	0	YES
Garage	EW-1	2600	2000	N	0	YES
Laundry	EW-3	2600	1795	S	0	NO
Laundry	EW-3	2600	2595	W	0	NO
Powder G	EW-3	2600	1595	W	0	NO
Powder G	EW-3	2600	900	N	0	YES
Hallway G	EW-3	2600	1190	W	0	NO
Kitchen/Living	EW-3	2600	2295	W	0	YES
Kitchen/Living	EW-3	2600	900	S	0	YES
Kitchen/Living	EW-3	2600	4800	W	0	NO

* Refer to glossary.

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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-3	2600	6100	N	0	NO
Kitchen/Living	EW-3	2600	6600	E	0	YES
Kitchen/Living	EW-3	2600	400	N	0	YES
Kitchen/Living	EW-3	2600	1595	E	0	YES
Bedroom 1	EW-3	2450	3295	W	800	YES
Bedroom 1	EW-3	2450	3800	N	700	NO
Bedroom 1	EW-3	2450	3695	E	700	NO
WIR Bed 1	EW-3	2450	1495	W	200	YES
WIR Bed 1	EW-3	2450	600	N	4000	YES
Ensuite Bed 1	EW-3	2450	2190	E	700	NO
Bedroom 2	EW-3	2450	3395	E	700	YES
Bedroom 2	EW-3	2450	3795	S	800	NO
Bedroom 3	EW-3	2450	695	E	2300	YES
Bedroom 3	EW-3	2450	1600	N	700	YES
Bedroom 3	EW-3	2450	3300	E	700	NO
Bedroom 3	EW-3	2450	600	S	4200	YES
Bathroom L1	EW-3	2450	995	S	800	NO
Bathroom L1	EW-3	2450	1500	W	800	YES
Bathroom L1	EW-3	2450	600	S	2300	YES
Bathroom L1	EW-3	2450	2595	W	0	NO
WC L1	EW-3	2450	990	W	0	YES
Hall/Stairs L1	EW-3	2450	1090	W	0	NO
Hall/Stairs L1	EW-3	2450	800	S	0	YES
Hall/Stairs L1	EW-3	2450	2300	W	700	NO
Hall/Stairs L1	EW-3	2450	800	N	0	YES

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		23.00	Bulk Insulation, No Air Gap R2.5
IW-2 - Cavity wall, direct fix plasterboard, single gap		93.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Garage	Concrete Slab on Ground 100mm	37.90	None	No Insulation	Bare
Laundry	Concrete Slab on Ground 100mm	4.50	None	No Insulation	Ceramic Tiles 8mm
Powder G	Concrete Slab on Ground 100mm	1.90	None	No Insulation	Ceramic Tiles 8mm

* Refer to glossary.

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Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hallway G	Concrete Slab on Ground 100mm	5.00	None	No Insulation	Ceramic Tiles 8mm
Kitchen/Living	Concrete Slab on Ground 100mm	44.80	None	No Insulation	Ceramic Tiles 8mm
Bedroom 1/Kitchen/Living	Timber Above Plasterboard 19mm	15.10		No Insulation	Carpet+Rubber Underlay 18mm
WIR Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	2.40		No Insulation	Carpet+Rubber Underlay 18mm
Ensuite Bed 1/Kitchen/Living	Timber Above Plasterboard 19mm	3.70		No Insulation	Ceramic Tiles 8mm
Bedroom 2/Garage	Timber Above Plasterboard 19mm	12.80		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3/Garage	Timber Above Plasterboard 19mm	5.30		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 19mm	4.20		No Insulation	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Timber Floor 19mm	1.90	Totally Open	Foil Both Sides of Bulk, Gap to Floor R0.9	Carpet+Rubber Underlay 18mm
Bathroom L1/Garage	Timber Above Plasterboard 19mm	4.80		Bulk Insulation R2	Ceramic Tiles 8mm
WC L1/Hallway G	Timber Above Plasterboard 19mm	1.30		No Insulation	Ceramic Tiles 8mm
Hall/Stairs L1/Garage	Timber Above Plasterboard 19mm	2.50		Bulk Insulation R2	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Hallway G	Timber Above Plasterboard 19mm	0.80		No Insulation	Carpet+Rubber Underlay 18mm
Hall/Stairs L1/Kitchen/Living	Timber Above Plasterboard 19mm	8.00		No Insulation	Carpet+Rubber Underlay 18mm

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	Plasterboard	No insulation	No
Garage	Timber Above Plasterboard	Bulk Insulation R2	No
Laundry	Plasterboard	Bulk Insulation R3.5	No
Powder G	Plasterboard	Bulk Insulation R3.5	No
Hallway G	Plasterboard	Bulk Insulation R3.5	No
Hallway G	Timber Above Plasterboard	No Insulation	No
Kitchen/Living	Plasterboard	Bulk Insulation R3.5	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Plasterboard	Bulk Insulation R3.5	No
WIR Bed 1	Plasterboard	Bulk Insulation R3.5	No
Ensuite Bed 1	Plasterboard	Bulk Insulation R3.5	No
Bedroom 2	Plasterboard	Bulk Insulation R3.5	No
Bedroom 3	Plasterboard	Bulk Insulation R3.5	No
Bathroom L1	Plasterboard	Bulk Insulation R3.5	No
WC L1	Plasterboard	Bulk Insulation R3.5	No
Hall/Stairs L1	Plasterboard	Bulk Insulation R3.5	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
Kitchen/Living	1	Exhaust Fans	300	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Corrugated Iron	Bulk, Reflective Side Down, No Air Gap Above R1.4	0.50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

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 ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).