BASIX[°]Certificate

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

Multi Dwelling

Certificate number: 1782298M

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: Wednesday, 05 February 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate HR-TC65F7-01.

Project summary		
Project name	20976	
Street address	39-41 NUWARRA CIRCUIT FORST	ER 2428
Local Government Area	MID-COAST	
Plan type and plan number	Deposited Plan 1043081	
Lot no.	151-152	
Section no.		
No. of residential flat buildings	0	
Residential flat buildings: no. of dwellings	0	
Multi-dwelling housing: no. of dwellings	4	
No. of single dwelling houses	0	
Project score		
Water	4 0	Target 40
Thermal Performance	V Pass	Target Pass
Energy	70	Target 70
Materials	✓ -100	Target n/a



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Version: 4.03 / EUCALYPTUS 03 01 0

Description of project

Project address

Project name	20976
Street address	39-41 NUWARRA CIRCUIT FORSTER 2428
Local Government Area	MID-COAST
Plan type and plan number	Deposited Plan 1043081
Lot no.	151-152
Section no.	
Project type	
No. of residential flat buildings	0
Residential flat buildings: no. of dwellings	0
Multi-dwelling housing: no. of dwellings	4
No. of single dwelling houses	0
Site details	
Site area (m²)	1290
Roof area (m ²)	752
Non-residential floor area (m ²)	-
Residential car spaces	6
Non-residential car spaces	-

Common area landscape							
Common area lawn (m ²)	0						
Common area garden (m ²)	0						
Area of indigenous or low water use species (m²)	-						
Assessor details and therma	al loads						
Assessor number	DMN/24/2214						
Certificate number	HR-TC65F7-01						
Climate zone	15						
Project score							
Water	40	Target 40					
Thermal Performance	V Pass	Target Pass					
Energy	70	Target 70					
Materials	✓ -100	Target n/a					

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 & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
U01	3	105.1	12.1	80	-	U02	2	64.3	10.4	50	-	U03	2	64.3	10.4	50	-	U04	3	105.1	12.1	80	-

No common areas specified.

Schedule of BASIX commitments

1. Commitments for multi-dwelling housing

(a) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance and Materials

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

(b) Common areas and central systems/facilities

(i) Water

(ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carriedout. 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 housing

(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.		 Image: A set of the set of the	~
(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.	v	~	
(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.	~	~	~

		Fixtures					ances	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	-	-	-	-	-	-	-	-	-	-

		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 liters	To collect run-off from at least: 70 square metres of roof area;	yes	yes	yes	-	-				

(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.		~	~
(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.		~	~

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		~	
(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 ven	tilation system	Kitchen venti	lation system	Laundry ventilation system		
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control	
All dwellings	electric storage	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	natural ventilation only, or no laundry	-	

	Coc	bling	Неа	ting	Natural lighting		
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen	
U01, U04	1-phase airconditioning - non ducted / 3 star (average zone)	no individual system	1-phase airconditioning - non ducted / 3 star (average zone)	no individual system	2	yes	

	Coc	bling	Hea	ting	Natural lighting		
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen	
All other dwellings	1-phase airconditioning - non ducted / 3 star (average zone)	no individual system	1-phase airconditioning - non ducted / 3 star (average zone)	no individual system	1	yes	

	Individual pool			Individual sp	Da	Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	electric cooktop & electric oven	-	-	-	yes

	Alternative energy								
Dwelling no.	Photovoltaic system (min rated electrical output in peak kW)	Photovoltaic collector installation	Orientation inputs						
U01, U04	between >10° to <=25° degree to the horizontal	1.9	Ν						
All other dwellings	-	-	-						

(iii) Thermal Performance and Materials	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.			
(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.	>		

(iii) Thermal Performance and Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.	>	~	~
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	>		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		~	

	Thermal loads									
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)	Area adjusted total load (in MJ/m²/yr)							
U01	29.7	14.4	44.100							
U02	32.2	18.2	50.400							
U03	34.3	16.7	51.000							
All other dwellings	32.4	12.3	44.700							

	Construction of floors and walls									
Dwelling no.	Concrete slab on ground (m²)	Suspended floor with open subfloor (m²)	Suspended floor with enclosed subfloor (m²)	Suspended floor above garage (m²)	Primarily rammed earth or mudbrick walls					
U01, U04	117.1	-	-	-	no					
All other dwellings	74.7	-	-	-	no					

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	Floor types	Floor types									
		Concrete	slab on ground		Suspended floor above enclosed subfloor			Suspended floor above open subfloor			
Dwelling no.	Area (m²) Insulation Low Dematerialisation emissions option		Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation			
U01, U04	117.1	-	-	waffle pod slab	-	-	-	-	-	-	
All other dwellings	74.7	-	-	waffle pod slab	-	-	-	-	-	-	

	Floor types	Floor types									
	First floor above habitable rooms or mezzanine		Suspended floor above garage			Garage floor					
Dwelling no.	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Construction type	Area (m²)	Insulation	Low emissions option	Dematerialisation
U01, U04	-	-	-	-	-	-	concrete slab on ground	36.10	-	-	waffle pod slab
All other dwellings	-	-	-	-	-	-	concrete slab on ground	19.1	-	-	waffle pod slab

	External walls	xternal walls										
		External	wall type 1		External wall type 2							
Dwelling no.	Wall type	Area (m²)	Insulation	Low emissions option	Wall type	Area (m²)	Insulation	Low emissions option				
All dwellings	brick veneer, frame : timber - H2 treated softwood	90	-	none	framed (solid or reconstituted timber weatherboard), frame : timber - H2 treated softwood	2	-	none				

	External walls												
		Extern	al wall type 3							External wall type 4			
Dwelling no.	Wall type	Area (m²)	Insulation		Low emiss option	sions	Wall typ)e	Area	(m²)	Insulation	Low emissions option	
II dwellings	-	-	-		-		-		-		-	-	
	Internal walls												
	Internal	walls shared with	garage		lı	nternal	vall type	1			Internal wall t	ype 2	
Dwelling no.	Wall type	Area (m²)	Insulation	Wall	type	Area (r	n²)	Insulatio	n	Wall type	Area (m²)	Insulation	
ll dwellings	plasterboard, frame: timber - H2 treated softwood	30	-	plaste frame: - H2 tr softwo	rboard, timber reated ood	60		-		-	-	-	
	Ceiling and roo	f											
	Flat	t ceiling / pitched	oof		Raked ceil	ing / pito	ched or s	killion roof			Flat ceiling / fla	at roof	
Dwelling no.	Construction type	Area (m²)	Insulation	Cons type	struction	Area (r	n²)	Insulatio	n	Constructio type	n Area (m²)	Insulation	
01, U04	framed - metal roof, frame: timber - H2 treated softwood	229	Ceiling:,Roof:	-		-		Ceiling:,Rc	oof:	-	-	Ceiling:,Roof:	
ll other dwellings	framed - metal roof, frame: timber - H2 treated softwood	147	Ceiling:,Roof:	-		-		Ceiling:,Rc	oof:	-	-	Ceiling:,Roof:	
		Glazing ty	ne						Er	ame types			
welling no.	Single glazing (m²)	g Double glaz (m²)	ing Triple g	lazing	Aluminiu frames (um m²)	Timbe (m²)	er frames	uPV (m²)	C frames	Steel frames (m²)	Composite frames (m²)	
01, U04	16.9	-	-		16.9		-		-		-	-	
ll other dwellings	-	17.5	-		17.5		-		-		İ-	-	

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2. 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.		~	~

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	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.	~	~	~

Central energy systems	Туре	Specification
Other	-	-

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

- 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 "V" 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).

Nationwide House Energy Rating Scheme[®] **Class 1 Summary** NatHERS® Certificate No. #HR-TC65F7-01

Generated on 05 Feb 2025 using Hero 4.1

Property

Address Lot/DP NatHERS climate zone 39-41 Nuwarra Circuit, Forster, NSW, 2428 151-152/1043081 15 - Williamtown AMO

Accredited assessor

Name Business name Email Phone Accreditation No. Assessor Accrediting Organisation

Verification

To verify this certificate. scan the QR code or visit http://www.hero-software.com.au /pdf/HR-TC65F7-01.

When using either link, ensure you are visiting http://www.hero-software.com.au

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

mmany of all dwallings

Summary o	an dwennigs	1K-			<u> </u>	53
Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Ratin
HR-LZIFY1-01	Unit 01	29.7 (47)	14.4 (30)	44.1	7.4	n/a
HR-D3E2VX-01	Unit 02	32.2 (47)	18.2 (30)	50.4	7.0	n/a
HR-2YVAAP-01	Unit 03	34.3 (47)	16.7 (30)	51.0	7.0	n/a
HR-89NPL6-01	Unit 04	32.4 (47)	12.3 (30)	44.7	7.4	n/a

Krzysztof Kwiatkowski **Building Sustainability Assessments** enquiries@buildingsustainability.net.au +61 413626023 DMN/24/2214 DMN



Minimum Rating

Thermal performance Star rating



R

The rating above is the minimum of all dwellings in this summary.

> For more information on your dwelling's rating see: www.nathers.gov.au

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate or not completed for all dwellings.

Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au Generated on 05 Feb 2025 using Hero 4.1 for 39-41 Nuwarra Circuit , Forster, NSW, 2428



Explanatory notes

About the ratings

This is a summary of NCC Class 1 dwellings in a development. For more details of each dwelling refer to the individual dwelling's certificate using the certificate number in summary of all dwellings table.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the homes societal cost.

For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions 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.

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-LZIFY1-01

Unit 01, 39-41 Nuwarra Circuit . Forster

Generated on 05 Feb 2025 using Hero 4.1 (Chenath v3.23)

Property

Address

- Lot/DP NCC Class* **Floor/all Floors** Type
- NSW. 2428 151-152/1043081 1a 1 of 1 floors New

Plans

Main Plan Prepared by

Job No.2023-056 20/01/2025 A Neil Rvan (BSA20976)

Construction and environment

Assessed floor a	rea (m²)
Conditioned*	105.1
Unconditioned*	12.1
Total	153.2
Garage	36.1

Suburban NatHERS climate zone

Exposure Type

15 - Williamtown AMO



ccredited assessor

Name
Business name
Email RO_/
Phone
Accreditation No.
Assessor Accrediting
Organisation
Declaration of interest

Krzysztof Kwiatkowski **Building Sustainability Assessments** enquiries@buildingsustainability.net.au +61 413626023 DMN/24/2214 DMN

No Conflict of Interest

NCC Requirements

вса	prov	visio	ons	
DUR	P 10			

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



44.1 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Coolii
Modelled	29.7	14.4
Load limits	47	30

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

com.au

To verify this certificate, scan the QR code or visit

http://www.hero-software.com au/pdf/HR-LZIFY1-01. When using either link. ensure you are visiting http://www.hero-software.





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:





Cost:



#HR-LZIFY1-01 NatHERS Certificate

7.4 Star Rating as of 05 Feb 2025

NATIONWIDE HOUSE	

Certificate check	Approval stage		Construction stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	ssor checked	ent authority/ yor checked	er checked	ent authority/ yor checked	pancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Assee	Conse surve	Builde	Conse surve	Occul
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.4 Star Rating as of 05 Feb 2025



Certificate check	Approval stage		Construction stage		Index Address Science
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements	dditional re and any st	quirements ate or territ	that must ory variatio	also be sat	isfied ICC

energy efficiency requirements.

Additional Notes

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.

- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.

- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m²)
Garage	Garage	36.09
Ens	Night Time	4.92
Bed 1	Bedroom	16.39
Bath	Unconditioned	8.24
Bed 2	Bedroom	12.46
Bed 3	Bedroom	12.46
Ldry	Unconditioned	3.84
Kitchen/Living	Kitchen/Living	58.83

Window and glazed door type and performance

Default* windows

Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges		
			lower limit	upper limit	
Aluminium B SG Clear	6.70	0.70	0.66	0.73	
	Window Description Aluminium B SG Clear	Window DescriptionMaximum U-value*Aluminium B SG Clear6.70	Window DescriptionMaximum U-value*SHGC*Aluminium B SG Clear6.700.70	Window DescriptionMaximum U-value*SHGC sub tolerance lower limitAluminium B SG Clear6.700.700.66	

Custom* windows

Window ID W	Window Description	Maximum	SHGC*	SHGC sub	stitution ranges
		U-value*	0	lower limit	upper limit

None

Window and glazed door schedule

Location	Window	Window	Height	Width	Window	Opening	Orient-	Shading
	ID	no.	(mm)	(mm)	type	%	ation	device*
Bath	ALM-002-01 A	W07	600	1500	Sliding	45	SE	None





Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bed 1	ALM-002-01 A	W06	600	2100	Sliding	45	SE	None
Bed 2	ALM-002-01 A	W08	600	2100	Sliding	45	SE	None
Bed 3	ALM-002-01 A	W01	1200	600	Louvre	90	NE	None
Bed 3	ALM-002-01 A	W03	1200	1200	Fixed	0	NE	None
Ens	ALM-002-01 A	W05	600	900	Sliding	45	SE	None
Kitchen/Living	ALM-002-01 A	W09	2100	600	Louvre	90	NW	None
Kitchen/Living	ALM-002-01 A	W04	2100	3600	Sliding Door	66	NE	None
Kitchen/Living	ALM-002-01 A	W10	2100	600	Louvre	90	NW	None
Ldry	ALM-002-01 A	W02	1200	600	Louvre	90	NE	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum SHGC	SHGC substitution * tolerance ranges
		U-value*	lower limit upper limit
None			
Custom* roof w	indows		SHGC substitution

Window ID	Window Description	Maximum U-value*	SHGC*	tolerance ranges		
				lower limit	upper limit	
None						

Roof window schedule

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	
Skylight schedule	

Location	Skylight	Skylight	Skylight shaft	Area	Orient-	Outdoor	Diffusor	Shaft
Location	ID	No.	length (mm)	(m²)	ation	shade	Diffuser	Reflectance

* Refer to glossary. Generated on 05 Feb 2025 using Hero 4.1 for Unit 01, 39-41 Nuwarra Circuit , Forster, NSW, 2428



Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance	
None									

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2100	4800	90	NW
Kitchen/Living	2100	920	90	NW

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV-A	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	0.00	No
BV-NONREFL-CAV-B	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	2.50	No
CONC-100-EXP	Precast 100mm Concrete - Exposed	0.50	Medium	0.00	No
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.50	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath	FC-NOCAV	2440	2670	SE	678	Yes
Bed 1	BV-NONREFL-CAV-B	2440	4561	SE	534	Yes
Bed 2	BV-NONREFL-CAV-B	2440	3468	SE	534	Yes
Bed 3	BV-NONREFL-CAV-B	2440	3593	NE	508	Yes
Bed 3	BV-NONREFL-CAV-B	2440	3468	SE	534	Yes
Ens	BV-NONREFL-CAV-B	2440	3593	SW	489	Yes
Ens	BV-NONREFL-CAV-B	2440	1370	SE	534	Yes
Garage	BV-NONREFL-CAV-A	2780	6003	SW	509	Yes
Garage	BV-NONREFL-CAV-A	2780	6012	NW	496	Yes
Garage	CONC-100-EXP	340	5908	SE		No
Garage	CONC-100-EXP	340	5872	NE		No



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	BV-NONREFL-CAV-B	2440	4596	NW	517	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2440	6397	NE	4593	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2440	1988	SW	534	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2441	2596	NW	1431	Yes
Ldry	BV-NONREFL-CAV-B	2440	2410	NW	6914	Yes
Ldry	BV-NONREFL-CAV-B	2440	1594	NE	508	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	27.4	2.50
INT-PB	Internal Plasterboard Stud Wall	54.5	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	8.2	N/A	0.56	Tile (8mm)
Bed 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	16.4	N/A	0.56	Carpet
Bed 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.5	N/A	0.56	Carpet
Bed 3	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.5	N/A	0.56	Carpet
Ens	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.9	N/A	0.56	Tile (8mm)
Garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	36.1	N/A	0.56	Exposed
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	38.6	N/A	0.56	Carpet
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.2	N/A	0.56	Tile (8mm)
Ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.8	N/A	0.56	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
		(



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	0.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ldry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bath	2	Downlight	200	Sealed
Bath	1	Exhaust Fan	350	Sealed
Bed 1	3	Downlight	200	Sealed
Bed 2	2	Downlight	200	Sealed
Bed 3	2	Downlight	200	Sealed
Ens	1	Downlight	200	Sealed
Ens	1	Exhaust Fan	350	Sealed
Kitchen/Living	12	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Ldry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)	
None			
Roof type			

|--|

* Refer to glossary.

7.4 Star Rating as of 05 Feb 2025

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
	(height x width, mm)	(mm)	(BMT mm)	(R-value)
None				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Туре	Location	Fi	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	Fu	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				-	
Hot water system					
		Hot	Minim	um	Assessed
Туре	Fuel type	Water CER Zone	efficie STC	ncy /	daily load [litres]
No Whole of Home Data					
Pool / spa equipment					
Туре	Fuel type	Minimum efficiency / performance	•	Recomi capacit	mended Y
No Whole of Home Data					
Onsite Renewal	ble Energy schedule				
Туре	Orientatation		Generati	on Capacity [k	w]

1 ypo	Onontatation	
No Whole of Home Data		
Battery schedule		

Storage Capacity [kWh]

Туре	
No Whole of Home Data	





Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
СОР	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below
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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. #HR-D3E2VX-01

Unit 02. 39-41 Nuwarra Circuit . Forster

Generated on 05 Feb 2025 using Hero 4.1 (Chenath v3.23)

Property

Address

Lot/DP NCC Class* Floor/all Floors Type

151-152/1043081 1a 1 of 1 floors New

NSW. 2428

Plans

Main Plan Prepared by Job No.2023-056 20/01/2025 A-8 Neil Ryan (BSA20976)

Construction and environment

Assessed floor area (m ²)					
Conditioned*	64.3				
Unconditioned*	10.4				
Total	93.9				
Garage	19.1				

Exposure Type Suburban

NatHERS climate zone

15 - Williamtown AMO

CCREDIAN SSESSOF

Accredited assessor

Name Business name Email Phone Accreditation No. Assessor Accrediting Organisation Declaration of interest Krzysztof Kwiatkowski Building Sustainability Assessments enquiries@buildingsustainability.net.au +61 413626023 DMN/24/2214

DMN

No Conflict of Interest

NCC Requirements

BCA	prov	visio	ns

State/Territory variation

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

Yes

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

* Refer to glossary. Generated on 05 Feb 2025 using Hero 4.1 for Unit 02, 39-41 Nuwarra Circuit , Forster, NSW, 2428 Thermal performance star rating



The more stars

the more energy efficient

50.4 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance (MJ/m²) Limits taken from ABCB Standard 2022

Heating Cooling

Modelled	32.2	18.2	
Load limits	47	30	

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area N Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com

au/pdf/HR-D3E2VX-01. When using either link, ensure you are visiting http://www.hero-software. com.au





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Cost:





#HR-D3E2VX-01 NatHERS Certificate

7.0 Star Rating as of 05 Feb 2025



Certificate check	Approva	Approval stage Construction stage		tion	COMET REPORT STREEM
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	essor checked	sent authority/ eyor checked	der checked	sent authority/ eyor checked	upancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Cons	Build	Cons	Occi
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.0 Star Rating as of 05 Feb 2025



Certificate check	Approval stage Constructio		tion		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	ment is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements	dditional re and any st	quirements ate or territ	that must ory variatio	also be sat ons to the N	isfied CC

energy efficiency requirements.

Additional Notes

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.

- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.

- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m²)
Bed 1	Bedroom	14.57
Ldry	Unconditioned	6.12
Bath	Unconditioned	4.29
Bed 2	Bedroom	12.43
Garage	Garage	19.13
Kitchen/Living	Kitchen/Living	37.34

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges		
				lower limit	upper limit	
ATB-004-01 B	Al Thermally Broken B DG Air Fill Clear-Clear	3.60	0.54	0.51	0.57	

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
None						

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bath	ATB-004-01 B	W05	600	800	Sliding	45	SE	None
Bed 1	ATB-004-01 B	W01	1200	2100	Sliding	45	SW	None
Bed 2	ATB-004-01 B	W06	600	2100	Sliding	45	SE	None





Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Kitchen/Living	ATB-004-01 B	W02	2100	2700	Sliding Door	66	SW	None
Kitchen/Living	ATB-004-01 B	W04	1100	1200	Sliding	45	SW	None
Kitchen/Living	ATB-004-01 B	W07	2100	2700	Sliding Door	66	NW	None
Ldry	ATB-004-01 B	W03	600	900	Sliding	45	SW	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum SHGC*	SHGC substitution tolerance ranges		
	·····	U-value*	lower limit upper limit		
None					
Custom* roof w	indows		SHGC substitution		
Window ID	Window Description	Maximum SHGC*	tolerance ranges		
		U-value*	lower limit upper limit		
None					
Deefwind	a chadula				

	ooncaale					
Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient- ation

None

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2100	2700	90	NW
Kitchen/Living	2040	920	90	NE

Outdoor

shade

Indoor

shade



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV-A	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	2.50	No
BV-NONREFL-CAV-B	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	0.00	No
CONC-100-EXP	Precast 100mm Concrete - Exposed	0.50	Medium	0.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath	BV-NONREFL-CAV-A	2440	1796	SE	534	Yes
Bed 1	BV-NONREFL-CAV-A	2440	3602	SE	534	Yes
Bed 1	BV-NONREFL-CAV-A	2440	4044	SW	493	Yes
Bed 2	BV-NONREFL-CAV-A	2440	4141	NE	519	Yes
Bed 2	BV-NONREFL-CAV-A	2440	3001	SE	534	Yes
Garage	BV-NONREFL-CAV-B	2780	3181	NW	542	Yes
Garage	BV-NONREFL-CAV-B	2780	6013	NE	539	Yes
Garage	CONC-100-EXP	340	3181	SE		No
Garage	CONC-100-EXP	340	5914	SW		No
Kitchen/Living	BV-NONREFL-CAV-A	2440	5808	SW	497	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	4743	NW	3621	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	1305	NE	481	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	1077	NW	522	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	488	SE	548	Yes
Ldry	BV-NONREFL-CAV-A	2440	1537	SW	493	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	58.3	2.50
INT-PB	Internal Plasterboard Stud Wall	4.5	0.00



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.3	N/A	0.56	Tile (8mm)
Bed 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	14.6	N/A	0.56	Carpet
Bed 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.4	N/A	0.56	Carpet
Garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	19.1	N/A	0.56	Exposed
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	25.2	N/A	0.56	Carpet
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.2	N/A	0.56	Tile (8mm)
Ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	6.1	N/A	0.56	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Bed 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	0.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Ldry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bath	1	Downlight	200	Sealed
Bath	1	Exhaust Fan	350	Sealed
Bed 1	3	Downlight	200	Sealed
Bed 2	2	Downlight	200	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Ldry	1	Downlight	200	Sealed



Ceiling fans

Location	Quantity	Diameter (mm)
Bed 1	1	1200
Bed 2	1	1200
Kitchen/Living	2	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Туре	Location	Fu	iel Type	Minimum efficiency / performance	Recomment capacity	led
No Whole of Home Dat	а					
Heating system						
Туре	Location	Fu	iel Type	Minimum efficiency / performance	Recomment capacity	led
No Whole of Home Dat	а					
Hot water system						
		Hot	Minim	um	Assessed	
Туре	Fuel type	Water CER Zone	efficie STC	ncy /	daily load	
No Whole of Home Dat	а		010		[nues]	
Pool / spa equipmen	t					
Туре	Fuel type	Minimum efficiency / performance		Recomr capacity	mended y	
No Whole of Home Dat	а					
Onsite Renew	able Energy schedule					
Туре	Orientatation		Generati	on Capacity [k	w]	

* Refer to glossary. Generated on 05 Feb 2025 using Hero 4.1 for Unit 02, 39-41 Nuwarra Circuit , Forster, NSW, 2428

Orientatation



Onsite Renewable Energy *schedule*

Type No Whole of Home Data Generation Capacity [kW]

Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below
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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Generated on 05 Feb 2025 using Hero 4.1 for Unit 02, 39-41 Nuwarra Circuit , Forster, NSW, 2428

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-2YVAAP-01

Unit 03. 39-41 Nuwarra Circuit . Forster

Generated on 05 Feb 2025 using Hero 4.1 (Chenath v3.23)

Property

Address

- Lot/DP NCC Class* Floor/all Floors Туре
- 151-152/1043081 1a 1 of 1 floors New

NSW. 2428

Plans

Main Plan Prepared by

Job No.2023-056 20/01/2025 A Neil Ryan (BSA20976)

Construction and environment

Assessed floor	area (m²)
Conditioned*	64.3
Unconditioned*	10.4
Total	93.9
Garage	19.1

Exposure Type Suburban

NatHERS climate zone

15 - Williamtown AMO

Accredited assessor

Name
Business name
Email
Phone
Accreditation No.
Assessor Accrediting
Organisation
Declaration of interest

Krzysztof Kwiatkowski **Building Sustainability Assessments** enquiries@buildingsustainability.net.au +61 413626023 DMN/24/2214

No Conflict of Interest

NCC Requirements

BCA	pro	visio	ons		
Stat	e/Te	rrito	ry va	riati	on

Volume 2 Yes

DMN

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



The more stars

51.0 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance (MJ/m²) Limits taken from ABCB Standard 2022

	Heating Coo				
lodelled	34.3	16.7			
oad limits.	47	30			

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit

http://www.hero-software.com au/pdf/HR-2YVAAP-01

When using either link. ensure you are visiting http://www.hero-software. com.au



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About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:





Cost:



7.0 Star Rating as of 05 Feb 2025



Certificate check	Approval stage Construction stage		tion	HOUSE	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	essor checked	sent authority/ eyor checked	der checked	sent authority/ eyor checked	upancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Cons	Build	Cons	Occl
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the <i>'External wall type'</i> table on this Certificate?					
Floor		<u></u>	-		-
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>Ceiling type</i> ' table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.0 Star Rating as of 05 Feb 2025



Certificate check	Approval stage		Construction stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	cted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements	dditional re and any st	quirements ate or territ	that must ory variation	also be sat	tisfied ICC

energy efficiency requirements.

Additional Notes

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.

- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.

- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m²)
Bed 1	Bedroom	14.57
Ldry	Unconditioned	6.12
Bath	Unconditioned	4.29
Bed 2	Bedroom	12.43
Garage	Garage	19.13
Kitchen/Living	Kitchen/Living	37.34

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
	·····	U-value*		lower limit	upper limit
ATB-004-01 B	Al Thermally Broken B DG Air Fill Clear-Clear	3.60	0.54	0.51	0.57

Custom* windows

Window ID Window	Window Description	Maximum	SHGC*	SHGC sub	stitution ranges
		U-value*		lower limit	upper limit
None					

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bath	ATB-004-01 B	W06	600	800	Sliding	45	NW	None
Bed 1	ATB-004-01 B	W01	1200	2100	Sliding	45	SW	None
Bed 2	ATB-004-01 B	W05	600	2100	Sliding	45	NW	None





Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Kitchen/Living	ATB-004-01 B	W02	2100	2700	Sliding Door	66	SW	None
Kitchen/Living	ATB-004-01 B	W04	1100	1200	Sliding	45	SW	None
Kitchen/Living	ATB-004-01 B	W07	2100	2700	Sliding Door	66	SE	None
Ldry	ATB-004-01 B	W03	600	900	Sliding	45	SW	None

Roof window type and performance value

Default* roof windows

Window ID	Window ID Window Description	Maximum SHGC*	SHGC substitution tolerance ranges		
		U-value*	lower limit upper limit		
None					
Custom* roof v	vindows				
Window ID	Window Description	Maximum SHGC*	SHGC substitution tolerance ranges		
		U-value*	lower limit upper limit		
None					
Roof wind	ow schedule				

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2100	2700	90	SE
Kitchen/Living	2040	920	90	NE



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV-A	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	2.50	No
BV-NONREFL-CAV-B	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	0.00	No
CONC-100-EXP	Precast 100mm Concrete - Exposed	0.50	Medium	0.00	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath	BV-NONREFL-CAV-A	2440	1796	NW	525	Yes
Bed 1	BV-NONREFL-CAV-A	2440	3602	NW	525	Yes
Bed 1	BV-NONREFL-CAV-A	2440	4044	SW	493	Yes
Bed 2	BV-NONREFL-CAV-A	2440	4141	NE	519	Yes
Bed 2	BV-NONREFL-CAV-A	2440	3001	NW	525	Yes
Garage	BV-NONREFL-CAV-B	2780	3181	SE	508	Yes
Garage	BV-NONREFL-CAV-B	2780	6013	NE	539	Yes
Garage	CONC-100-EXP	340	3181	NW		No
Garage	CONC-100-EXP	340	5914	SW		No
Kitchen/Living	BV-NONREFL-CAV-A	2440	5808	SW	497	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	4743	SE	3658	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	1305	NE	534	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	1077	SE	488	Yes
Kitchen/Living	BV-NONREFL-CAV-A	2440	488	NW	446	Yes
Ldry	BV-NONREFL-CAV-A	2440	1537	SW	493	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	58.3	2.50
INT-PB	Internal Plasterboard Stud Wall	4.5	0.00



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.3	N/A	0.56	Tile (8mm)
Bed 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	14.6	N/A	0.56	Carpet
Bed 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.4	N/A	0.56	Carpet
Garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	19.1	N/A	0.56	Exposed
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	25.2	N/A	0.56	Carpet
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.2	N/A	0.56	Tile (8mm)
Ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	6.1	N/A	0.56	Tile (8mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Bed 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	0.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
Ldry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bath	1	Downlight	200	Sealed
Bath	1	Exhaust Fan	350	Sealed
Bed 1	3	Downlight	200	Sealed
Bed 2	2	Downlight	200	Sealed
Kitchen/Living	7	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Ldry	1	Downlight	200	Sealed



Ceiling fans

Location	Quantity	Diameter (mm)
Bed 1	1	1200
Bed 2	1	1200
Kitchen/Living	2	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
	(height x width, mm)	(mm)	(BMT mm)	(R-value)
None				

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Туре	Location	Fu	iel Type	Minimum efficiency / performance	Recommende capacity	d
No Whole of Home Dat	а					
Heating system						
Туре	Location	Fi	iel Type	Minimum efficiency / performance	Recommende capacity	d
No Whole of Home Dat	а				-	
Hot water system						
		Hot	Minim	um	Assessed	
Туре	Fuel type	Water	efficie	ncy /	daily load	
		CER Zone	STC		[litres]	
No Whole of Home Dat	а					
Pool / spa equipmen	t					
		Minimum		Pacam	mondod	
Туре	Fuel type	efficiency / performance	1	capacity	y	
No Whole of Home Dat	а					
Onsite Renew	able Energy schedule					
Туре	Orientatation		Generati	on Capacity [k	(W]	

Orientatation



Onsite Renewable Energy *schedule*

Type No Whole of Home Data Generation Capacity [kW]

Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below
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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. #HR-89NPL6-01

Unit 04. 39-41 Nuwarra Circuit . Forster

Generated on 05 Feb 2025 using Hero 4.1 (Chenath v3.23)

Property

Address

Lot/DP NCC Class* Floor/all Floors Type NSW, 2428 151-152/1043081 1a 1 of 1 floors New

Plans

Main Plan Prepared by Job No.2023-056 20/01/2025 A-8 Neil Ryan (BSA20976)

Construction and environment

Assessed floor	area (m²)
Conditioned*	105.1
Unconditioned*	12.1
Total	153.2
Garage	36.1

Exposure Type Suburban

NatHERS climate zone

15 - Williamtown AMO

Accredited assessor

Name Business name Email Phone Accreditation No. Assessor Accrediting Organisation Declaration of interest Krzysztof Kwiatkowski Building Sustainability Assessments enquiries@buildingsustainability.net.au +61 413626023 DMN/24/2214

No Conflict of Interest

DMN

NCC Requirements

BCA provisions

State/Territory variation

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

Yes

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



44.7 MJ/m²

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	32.4	12.3
Load limits	47	30

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area N Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com

au/pdf/HR-89NPL6-01. When using either link,

ensure you are visiting http://www.hero-software. com.au





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:

Cost:





#HR-89NPL6-01 NatHERS Certificate

7.4 Star Rating as of 05 Feb 2025

NATIONWIDE HOUSE

Certificate check	Approva	l stage	ge Construction stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	essor checked	sent authority/ eyor checked	der checked	sent authority/ eyor checked	upancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Cons	Builo	Cons	Occi
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor		·	'		
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>Ceiling type</i> ' table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.4 Star Rating as of 05 Feb 2025



ertificate check Approval stage Constant		Construction stage			
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements	dditional re and any st	quirements ate or territ	that must ory variatio	also be sat ns to the N	isfied ICC

energy efficiency requirements.

Additional Notes

- The information below is provided by Building Sustainability Assessments.
- Assessments are conducted in accordance with the BASIX Thermal Comfort Protocol and the NatHERS Technical Note.

- If this assessment is based on Development Application (DA) documentation then it is recommended that the assessment be reviewed when Construction Certificate (CC) documents are available. Assessments based on the minimum plan requirements suitable only for a DA should not be relied upon for a CC application. A re-assessment at CC stage may be necessary to include details not available at DA stage.

- Where information is not shown on the plans for details of ceiling penetrations, floor coverings, wall and roof colours, waffle pod thickness, window operability & neighbouring buildings the values required by the NatHERS Technical note have been applied. Be aware that these provisional values are often worse case and may adversely affect the assessment.

Room schedule

Room	Zone Type	Area (m²)
Garage	Garage	36.09
Ens	Night Time	4.92
Bed 1	Bedroom	16.39
Bath	Unconditioned	8.24
Bed 2	Bedroom	12.46
Bed 3	Bedroom	12.46
Ldry	Unconditioned	3.84
Kitchen/Living	Kitchen/Living	58.83

Window and glazed door type and performance

Default* windows

Window Description	Maximum U-value*	SHGC*	shoc substitution tolerance ranges		
			lower limit	upper limit	
Aluminium B SG Clear	6.70	0.70	0.66	0.73	
	Window Description Aluminium B SG Clear	Window DescriptionMaximum U-value*Aluminium B SG Clear6.70	Window DescriptionMaximum U-value*SHGC*Aluminium B SG Clear6.700.70	Window DescriptionMaximum U-value*SHGC sub tolerance lower limitAluminium B SG Clear6.700.700.66	

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*	0	lower limit	upper limit	

None

Window and glazed door schedule

Location	Window	Window	Height	Width	Window	Opening	Orient-	Shading
	ID	no.	(mm)	(mm)	type	%	ation	device*
Bath	ALM-002-01 A	W06	600	1500	Sliding	45	NW	None





Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bed 1	ALM-002-01 A	W07	600	2100	Sliding	45	NW	None
Bed 2	ALM-002-01 A	W05	600	2100	Sliding	45	NW	None
Bed 3	ALM-002-01 A	W01	1200	600	Louvre	90	NE	None
Bed 3	ALM-002-01 A	W03	1200	1200	Fixed	0	NE	None
Ens	ALM-002-01 A	W08	600	900	Sliding	45	NW	None
Kitchen/Living	ALM-002-01 A	W10	2100	600	Louvre	90	SE	None
Kitchen/Living	ALM-002-01 A	W04	2100	3600	Sliding Door	66	NE	None
Kitchen/Living	ALM-002-01 A	W09	2100	600	Louvre	90	SE	None
Ldry	ALM-002-01 A	W02	1200	600	Louvre	90	NE	None

Roof window type and performance value

Default* roof windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
None						
Custom* roof wi	ndows					

Window ID	w ID Window Description Maxim U-valu	Maximum	SHGC*	SHGC substitution tolerance ranges
		U-value*	•	lower limit upper limit
None				

Roof window schedule

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	
Skylight schedule	

Shaft Skylight Skylight Skylight shaft Area Orient-Outdoor Diffuser Location ID No. length (mm) (m²) ation shade Reflectance

* Refer to glossary. Generated on 05 Feb 2025 using Hero 4.1 for Unit 04, 39-41 Nuwarra Circuit , Forster, NSW, 2428



Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance	
None									

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage	2100	4800	90	SE
Kitchen/Living	2100	920	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-NONREFL-CAV-A	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	0.00	No
BV-NONREFL-CAV-B	Brick Veneer Stud Wall with Non-Reflective Sarking	0.50	Medium	2.50	No
CONC-100-EXP	Precast 100mm Concrete - Exposed	0.50	Medium	0.00	No
FC-NOCAV	Fibre-Cement Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.50	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath	FC-NOCAV	2440	2670	NW	667	Yes
Bed 1	BV-NONREFL-CAV-B	2440	4561	NW	523	Yes
Bed 2	BV-NONREFL-CAV-B	2440	3468	NW	523	Yes
Bed 3	BV-NONREFL-CAV-B	2440	3593	NE	508	Yes
Bed 3	BV-NONREFL-CAV-B	2440	3468	NW	523	Yes
Ens	BV-NONREFL-CAV-B	2440	3593	SW	489	Yes
Ens	BV-NONREFL-CAV-B	2440	1370	NW	523	Yes
Garage	BV-NONREFL-CAV-A	2780	6003	SW	509	Yes
Garage	BV-NONREFL-CAV-A	2780	6012	SE	505	Yes
Garage	CONC-100-EXP	340	5908	NW		No
Garage	CONC-100-EXP	340	5872	NE		No



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Kitchen/Living	BV-NONREFL-CAV-B	2441	2620	SE	1425	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2440	6397	NE	4593	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2440	1988	SW	534	Yes
Kitchen/Living	BV-NONREFL-CAV-B	2440	4572	SE	533	Yes
Ldry	BV-NONREFL-CAV-B	2440	2410	SE	6930	Yes
Ldry	BV-NONREFL-CAV-B	2440	1594	NE	508	Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	27.4	2.50
INT-PB	Internal Plasterboard Stud Wall	54.5	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	8.2	N/A	0.56	Tile (8mm)
Bed 1	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	16.4	N/A	0.56	Carpet
Bed 2	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.5	N/A	0.56	Carpet
Bed 3	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.5	N/A	0.56	Carpet
Ens	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.9	N/A	0.56	Tile (8mm)
Garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	36.1	N/A	0.56	Exposed
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	38.6	N/A	0.56	Carpet
Kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.2	N/A	0.56	Tile (8mm)
Ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.8	N/A	0.56	Tile (8mm)

Ceiling type

on Reflecti e)	ive
1	on Reflecti wrap* e)



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Garage	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	0.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ldry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bath	2	Downlight	200	Sealed
Bath	1	Exhaust Fan	350	Sealed
Bed 1	3	Downlight	200	Sealed
Bed 2	2	Downlight	200	Sealed
Bed 3	2	Downlight	200	Sealed
Ens	1	Downlight	200	Sealed
Ens	1	Exhaust Fan	350	Sealed
Kitchen/Living	12	Downlight	200	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Ldry	1	Downlight	200	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)	
None			
Roof type			

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
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* Refer to glossary.



Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

Appliance schedule

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Туре	Location	Fu	el Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	Fu	el Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				•	
Hot water system					
		Hot	Minim	um	Assessed
Туре	Fuel type	Water	efficie	ncy /	daily load
		CER Zone	STC		[litres]
No Whole of Home Data					
Pool / spa equipment					
		Minimum		Baaamr	mandad
Туре	Fuel type	efficiency / performance		capacity	/
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				
Туре	Orientatation		Generati	on Capacity [k	w]

1,100	onontatation	Conclution Capacity [KII]
No Whole of Home Data		

Battery schedule

Туре	Storage Capacity [kWh]	
No Whole of Home Data		



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings 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, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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, range hoods, 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below
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.
Net zero home	a home that achieves a net zero energy value*.
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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Generated on 05 Feb 2025 using Hero 4.1 for Unit 04, 39-41 Nuwarra Circuit , Forster, NSW, 2428