Nationwide House Energy Rating Scheme®
Class 1 Summary
NatHERS® Certificate No. #HR-T9SD6R-01

Generated on 26 May 2025 using Hero 4.1

Property

Address	14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NatHERS climate zone	11 - Coffs Harbour MO

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com.au/pdf/HR-T9SD6R-01. When using either link, ensure you are visiting http://www.hero-software.com.au

National Construction Code (NCC) requirements

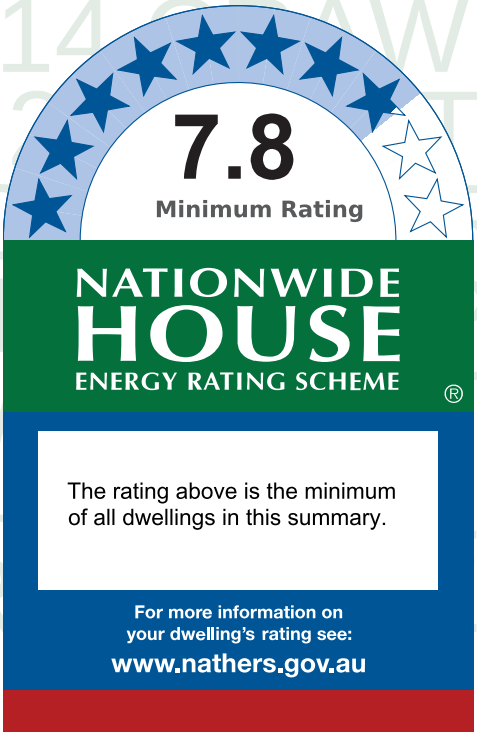
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

Thermal performance Star rating



Whole of Home performance rating

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

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-WMN9KJ-01	U1	4.5 (28)	13.5 (27)	18.0	8.8	n/a
HR-D3JQBX-01	U10	8.0 (28)	13.2 (27)	21.2	8.4	n/a
HR-HMG7DS-01	U2	6.5 (28)	11.8 (27)	18.3	8.7	n/a
HR-UIDEZA-01	U3	4.3 (28)	16.2 (27)	20.4	8.4	n/a
HR-K5YFK9-01	U4	7.5 (28)	14.6 (27)	22.2	8.2	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-D11YTS-01	U5	2.8 (28)	20.4 (27)	23.2	8.1	n/a
HR-JYNZ0E-01	U6	5.3 (28)	13.9 (27)	19.2	8.6	n/a
HR-EEY00V-01	U7	3.0 (28)	17.3 (27)	20.3	8.4	n/a
HR-4M6FNS-01	U8	4.9 (28)	14.0 (27)	18.9	8.6	n/a
HR-OITZ48-01	U9	4.5 (28)	21.3 (27)	25.7	7.8	n/a

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-WMN9KJ-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U1, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	56.7	Suburban	
Unconditioned*	4.5	**NatHERS climate zone**	
Total	61.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

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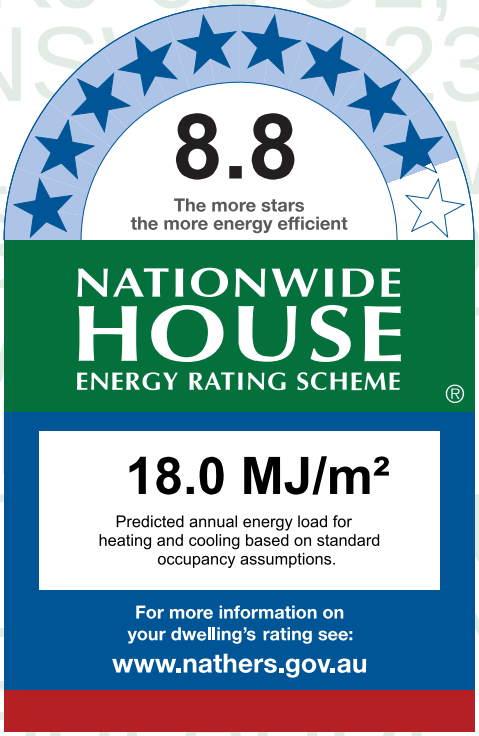
Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	4.5	13.5
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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

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* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	32.28
Bathroom	Unconditioned	4.45
Bedroom 2	Bedroom	11.15
Bedroom 1	Bedroom	13.28

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-004-005	Aluminium Sliding Door - Double Glazed	4.5	0.59	0.56	0.62
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	600	900	Sliding	45	W	OP-60%
Bedroom 1	STG-006-002	W-08	900	1400	Sliding	45	S	None
Bedroom 2	STG-006-002	W-07	900	1400	Sliding	45	S	None
Bedroom 2	STG-006-002	W-06	1200	900	Sliding	45	W	OP-60%
Kitchen/Living	STG-006-002	W-02	900	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-04	1200	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-03	1200	900	Sliding	45	W	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Kitchen/Living	STG-004-005	W-01	2100	2700	Sliding Door	60	N	None

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	E
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	593	N		Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1700	W	281	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	4800	E	2818	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	S	232	Yes
Bedroom 2	AAC-75-NONREFL-CAV1	2700	3718	S	232	Yes
Bedroom 2	AAC-75-NONREFL-CAV1	2700	3000	W	281	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	E	6018	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4101	E	2818	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	W	874	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	593	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3401	W	281	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3618	N	232	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	34.7	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	4.5	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	13.3	N/A	0.64	Tile (8mm)
Bedroom 2	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	11.2	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	32.3	N/A	0.64	Tile (8mm)

Ceiling *type*

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

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	3	Downlight	190	Sealed
Bedroom 2	3	Downlight	190	Sealed
Kitchen/Living	7	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

* Refer to glossary.

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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.

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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.

Glossary

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-HMG7DS-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U2, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	56.7	Suburban	
Unconditioned*	4.5	**NatHERS climate zone**	
Total	61.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

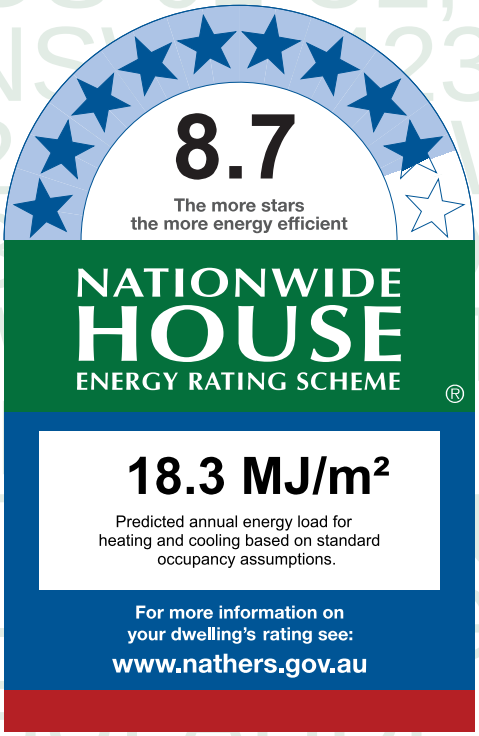
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	6.5	11.8
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-HMG7DS-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Bathroom	Unconditioned	4.45
Bedroom 2	Bedroom	11.15
Kitchen/Living	Kitchen/Living	32.27
Bedroom 1	Bedroom	13.28

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	600	900	Sliding	45	W	OP-60%
Bedroom 1	STG-006-002	W-08	900	900	Sliding	45	S	None
Bedroom 2	STG-006-002	W-07	900	900	Sliding	45	S	None
Bedroom 2	STG-006-002	W-06	1200	900	Sliding	45	W	OP-60%
Kitchen/Living	STG-006-002	W-01	900	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-03	1200	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-04	1200	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-02	1200	2700	Sliding	60	N	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Bedroom 1	2100	920	90	S
Bedroom 2	2100	920	90	S
Kitchen/Living	2100	920	90	E
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	593	N		Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1700	W	283	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	4800	E	2819	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	S	232	No
Bedroom 2	AAC-75-NONREFL-CAV1	2700	3718	S	232	No
Bedroom 2	AAC-75-NONREFL-CAV1	2700	3000	W	283	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	E	6019	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4100	E	2819	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	W	876	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	593	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3400	W	283	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3618	N	232	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	34.7	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	4.5	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	13.3	N/A	0.64	Tile (8mm)
Bedroom 2	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	11.2	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	32.3	N/A	0.64	Tile (8mm)

Ceiling *type*

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

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	3	Downlight	190	Sealed
Bedroom 2	3	Downlight	190	Sealed
Kitchen/Living	7	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

* Refer to glossary.

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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).
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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-UIDEZA-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U3, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	36.9	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	42.6	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

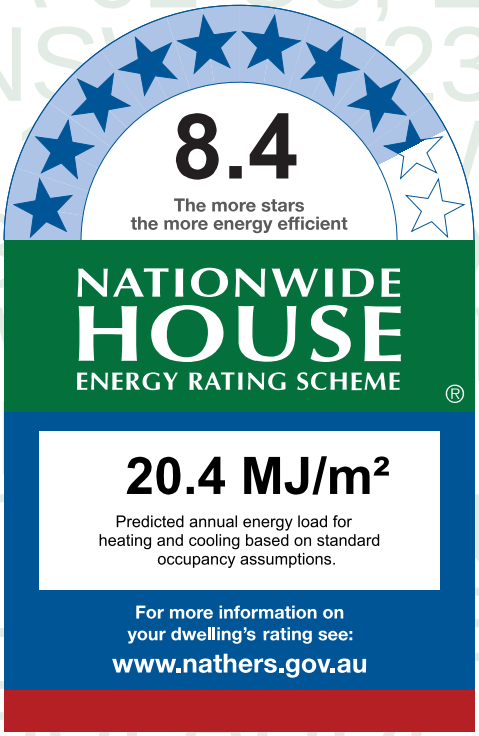
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	4.3	16.2
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-UIDEZA-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.08
Bedroom 1	Bedroom	10.80
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-004-005	Aluminium Sliding Door - Double Glazed	4.5	0.59	0.56	0.62
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60
STG-088-001	Alumiere Hinged Door	4.3	0.55	0.52	0.58

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	500	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-04	900	900	Sliding	45	E	None
Kitchen/Living	STG-088-001	D04	2100	920	Hinged Door	90	N	None
Kitchen/Living	STG-006-002	W-02	900	1400	Sliding	45	N	None
Kitchen/Living	STG-004-005	W-01	2100	2700	Sliding Door	45	N	None
Kitchen/Living	STG-006-002	W-03	900	900	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	E

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	E	2972	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	3600	S	232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	W		Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	E	2972	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	W	327	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	N		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	W	3527	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3575	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3775	S	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1200	E	3572	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4201	W	327	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	9.7	0.00
INT-PB	Internal Plasterboard Stud Wall	14.2	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.8	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.1	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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-K5YFK9-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U4, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.4	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	43.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

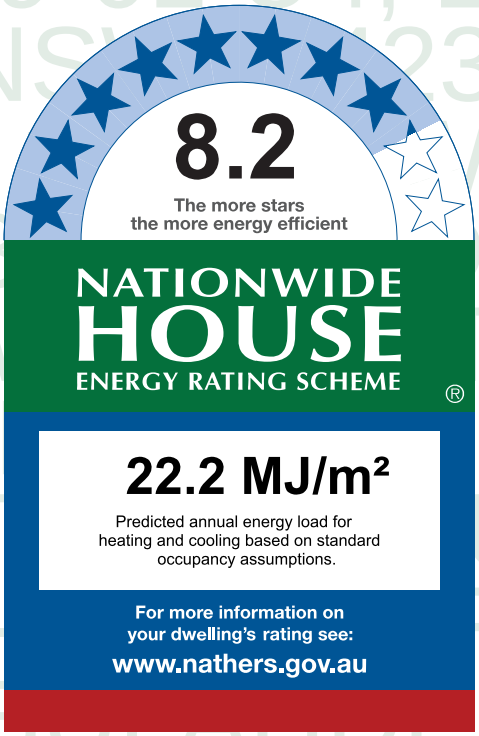
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	7.5	14.6
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-K5YFK9-01.

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

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.48
Bedroom 1	Bedroom	10.92
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-03	900	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-02	900	900	Sliding	45	S	None
Kitchen/Living	STG-006-002	W-06	500	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-05	900	900	Sliding	45	E	None
Kitchen/Living	STG-006-002	W-04	900	900	Sliding	45	E	None
Kitchen/Living	STG-006-002	W-01	2100	1800	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

None

Custom* roof windows

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

None

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade

None

Skylight *type and performance*

Skylight ID	Skylight description

None

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance

None

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	E

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	N	6232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3033	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	W	2368	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	2075	N	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3600	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4600	E	2971	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	E	3571	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1942	S	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	9000	W	326	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	9.7	0.00
INT-PB	Internal Plasterboard Stud Wall	16.8	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.9	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.5	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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-D11YTS-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U5, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	36.9	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	42.6	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

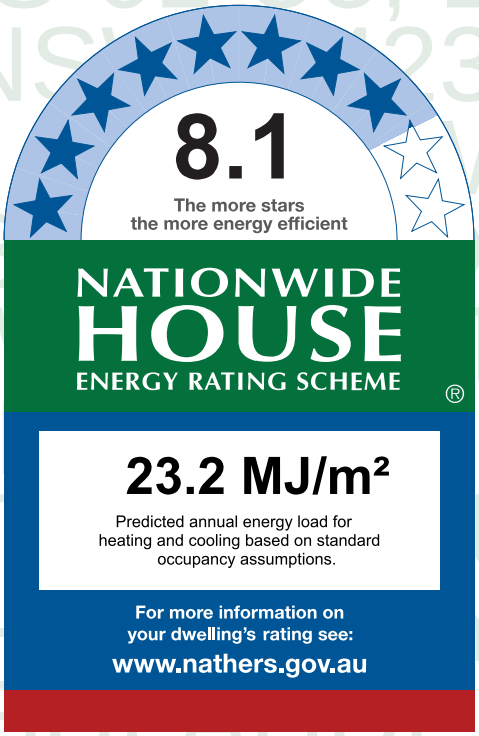
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	2.8	20.4
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-D11YTS-01.

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* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.08
Bedroom 1	Bedroom	10.80
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-004-005	Aluminium Sliding Door - Double Glazed	4.5	0.59	0.56	0.62
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60
STG-088-001	Alumiere Hinged Door	4.3	0.55	0.52	0.58

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	500	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-04	900	900	Sliding	45	W	None
Kitchen/Living	STG-088-001	D04	2100	920	Hinged Door	90	N	None
Kitchen/Living	STG-006-002	W-02	900	1400	Sliding	45	N	None
Kitchen/Living	STG-004-005	W-01	2100	2700	Sliding Door	45	N	None
Kitchen/Living	STG-006-002	W-03	900	900	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	W	3223	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	3600	S	232	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	W	3223	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	N		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	E	2717	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3575	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3775	S	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1200	W	3823	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	33.4	0.00
INT-PB	Internal Plasterboard Stud Wall	14.2	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.8	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.1	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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-JYNZ0E-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U6, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.4	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	43.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

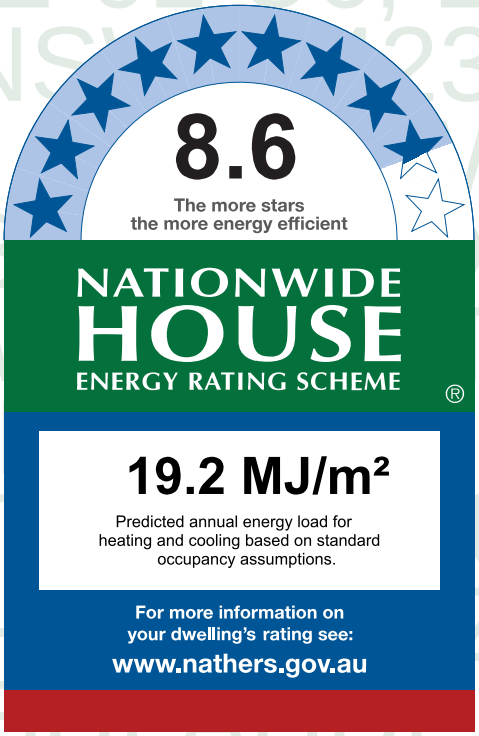
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	5.3	13.9
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-JYNZ0E-01.

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

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.48
Bedroom 1	Bedroom	10.92
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-03	900	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-02	900	900	Sliding	45	S	None
Kitchen/Living	STG-006-002	W-06	500	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-05	900	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-04	900	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-01	2100	1800	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

None

Custom* roof windows

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

None

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade

None

Skylight *type and performance*

Skylight ID	Skylight description

None

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance

None

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	N	6232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3033	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	E		Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	2075	N	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3600	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4600	W	3224	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	W	3824	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1942	S	832	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	34.0	0.00
INT-PB	Internal Plasterboard Stud Wall	16.8	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.9	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.5	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

* Refer to glossary.

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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-EEY00V-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U7, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	36.9	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	42.6	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

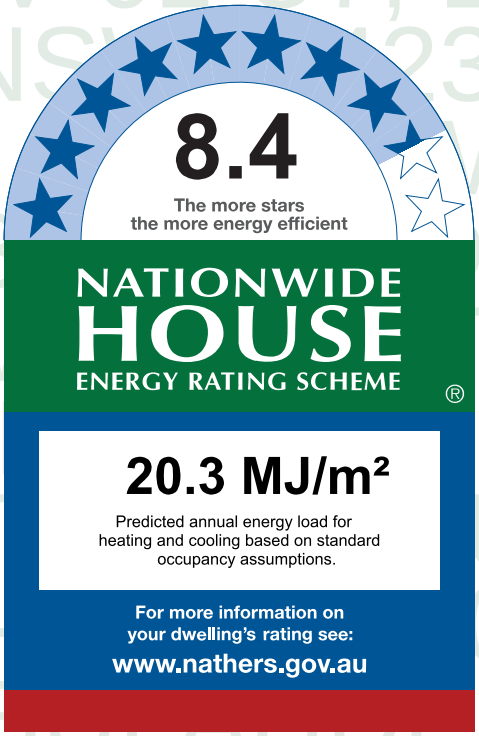
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	3.0	17.3
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-EEY00V-01.

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

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.08
Bedroom 1	Bedroom	10.80
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-004-005	Aluminium Sliding Door - Double Glazed	4.5	0.59	0.56	0.62
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60
STG-088-001	Alumiere Hinged Door	4.3	0.55	0.52	0.58

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	500	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-04	900	900	Sliding	45	E	None
Kitchen/Living	STG-088-001	D04	2100	920	Hinged Door	90	N	None
Kitchen/Living	STG-006-002	W-02	900	1400	Sliding	45	N	None
Kitchen/Living	STG-004-005	W-01	2100	2700	Sliding Door	45	N	None
Kitchen/Living	STG-006-002	W-03	900	900	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	E

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	E	2972	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	3600	S	232	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	E	2972	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	N		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	W	3527	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3575	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3775	S	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1200	E	3572	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	23.7	0.00
INT-PB	Internal Plasterboard Stud Wall	9.7	0.00
INT-PB	Internal Plasterboard Stud Wall	14.2	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.8	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.1	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
Kitchen/Living	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

* Refer to glossary.

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

Glossary

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-4M6FNS-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U8, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.4	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	43.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

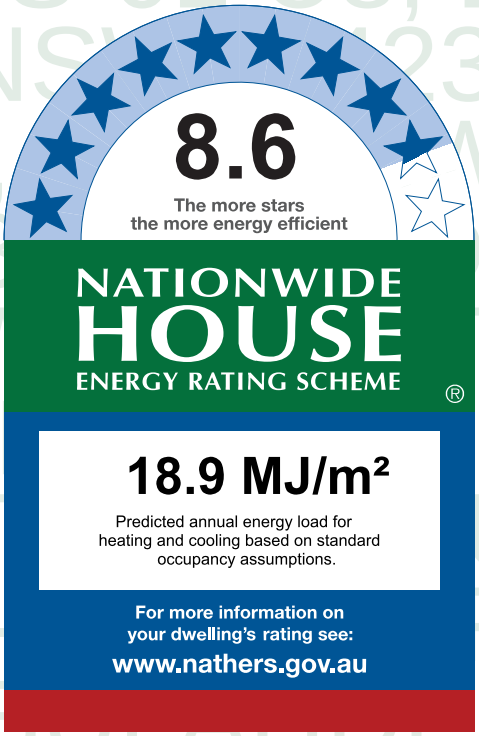
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	4.9	14.0
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-4M6FNS-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.48
Bedroom 1	Bedroom	10.92
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-03	900	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-02	900	900	Sliding	45	S	None
Kitchen/Living	STG-006-002	W-06	500	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-05	900	900	Sliding	45	E	None
Kitchen/Living	STG-006-002	W-04	900	900	Sliding	45	E	None
Kitchen/Living	STG-006-002	W-01	2100	1800	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

None

Custom* roof windows

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

None

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade

None

Skylight *type and performance*

Skylight ID	Skylight description

None

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance

None

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	E

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	N	6232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3033	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	W		Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	2075	N	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3600	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4600	E	2982	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	E	3582	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1942	S	832	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	24.3	0.00
INT-PB	Internal Plasterboard Stud Wall	26.5	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.9	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.5	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

* Refer to glossary.

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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.

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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.

Glossary

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-OITZ48-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U9, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	36.9	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	42.6	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

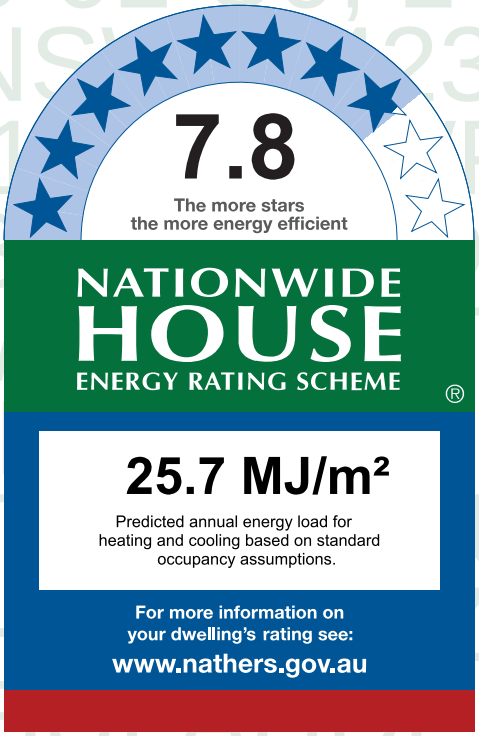
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	4.5	21.3
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-OITZ48-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.08
Bedroom 1	Bedroom	10.80
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-004-005	Aluminium Sliding Door - Double Glazed	4.5	0.59	0.56	0.62
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60
STG-088-001	Alumiere Hinged Door	4.3	0.55	0.52	0.58

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-05	500	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-04	900	900	Sliding	45	W	None
Kitchen/Living	STG-088-001	D04	2100	920	Hinged Door	90	N	None
Kitchen/Living	STG-006-002	W-02	900	1400	Sliding	45	N	None
Kitchen/Living	STG-004-005	W-01	2100	2700	Sliding Door	45	N	None
Kitchen/Living	STG-006-002	W-03	900	900	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

Custom* roof windows

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

Roof window *schedule*

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

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	W	3223	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	3600	S	232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	E		No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	W	3223	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3000	E		No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	N		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3200	N	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	E	3268	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3575	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3775	S	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1200	W	3823	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4201	E		No

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	9.7	0.00
INT-PB	Internal Plasterboard Stud Wall	14.2	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.8	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.1	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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Type	Orientatation	Generation Capacity [kW]
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Battery *schedule*

Type	Storage Capacity [kWh]
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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.

Glossary

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-D3JQBX-01

Generated on 26 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	U10, 14 Crawford Street, Bulahdelah, NSW, 2423
Lot/DP	Lot 4/ DP 758177
NCC Class*	1a
Floor/all Floors	1 of 1 floors
Type	New

Plans

Main Plan	Revision 03 Issue Date 05.05.2025
Prepared by	Smart Eco Group

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	37.4	Suburban	
Unconditioned*	5.8	**NatHERS climate zone**	
Total	43.2	11 - Coffs Harbour MO	
Garage	0.0		

Accredited assessor

Name	Jamie Bonnefin
Business name	Certified Energy
Email	jobs@certifiedenergy.com.au
Phone	+61 1300 443
Accreditation No.	10056
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

National Construction Code (NCC) requirements

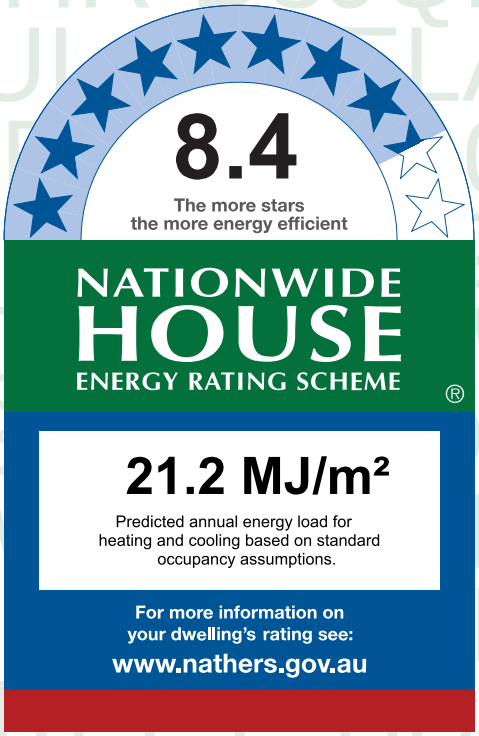
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

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



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	8.0	13.2
Load limits	28	27

Features determining load limits

Floor type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	Y
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-D3JQBX-01. When using either link, ensure you are visiting http://www.hero-software.com.au

* Refer to glossary.

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:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.

* Refer to glossary.

Certificate check

The checklist covers important items impacting the dwelling's ratings.
It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.
It is not mandatory to complete this checklist.

	Approval stage		Construction stage		
	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
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 *'Window and glazed door schedule'* and *'Roof window schedule'* 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 *'External wall type table'* 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 *'Floor type'* 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 *'Ceiling type'* 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 *'Roof type'* 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?	☐	☐	☐	☐	☐

* Refer to glossary.

Certificate check

Continued

	Approval stage		Construction stage		
	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 assessment is not conducted)					
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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 *'Appliance schedule'* 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 NatHERS assessment)					
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. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

* Refer to glossary.

Additional Notes

* Obscure glazing has been modelled as clear glass as it has similar thermal properties.
* The dwelling has been assessed with "Assumed" recessed light fittings as NO electrical plan was provided.
* Custom Windows from the NatHERS custom window library have been used.

Room *schedule*

Room	Zone Type	Area (m²)
Kitchen/Living	Kitchen/Living	26.48
Bedroom 1	Bedroom	10.92
Bathroom	Unconditioned	5.76

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
None					

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
STG-006-002	Aluminium Sliding Window - Double Glazed	4.6	0.58	0.55	0.60

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bathroom	STG-006-002	W-03	900	900	Sliding	45	S	None
Bedroom 1	STG-006-002	W-02	900	900	Sliding	45	S	None
Kitchen/Living	STG-006-002	W-06	500	1800	Sliding	45	N	None
Kitchen/Living	STG-006-002	W-05	900	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-04	900	900	Sliding	45	W	None
Kitchen/Living	STG-006-002	W-01	2100	1800	Sliding	45	S	None

* Refer to glossary.

Roof window *type and performance value*

Default* roof windows

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

None

Custom* roof windows

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

None

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade

None

Skylight *type and performance*

Skylight ID	Skylight description

None

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance

None

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Kitchen/Living	2100	920	90	W

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
AAC-75-NONREFL-CAV1	AAC (75mm) Clad (Non-Refl Cavity) Stud Wall	0.28	Light (Dover White)	2.70	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	N	6232	Yes
Bathroom	AAC-75-NONREFL-CAV1	2700	1600	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	3033	S	232	No
Bedroom 1	AAC-75-NONREFL-CAV1	2700	600	E	2109	Yes
Bedroom 1	AAC-75-NONREFL-CAV1	2700	2075	N	6232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	3600	N	232	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	4600	W	3213	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	600	S		Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1300	W	3813	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	1942	S	832	Yes
Kitchen/Living	AAC-75-NONREFL-CAV1	2700	9000	E		No

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
AAC with Plasterboard1	AAC with plasterboard	16.8	0.00
INT-PB	Internal Plasterboard Stud Wall	9.7	2.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bathroom	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	5.8	N/A	0.64	Tile (8mm)
Bedroom 1	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	10.9	N/A	0.64	Tile (8mm)
Kitchen/Living	WAFFLE-110: Concrete Waffle Pod Slab on Ground (110mm)	26.5	N/A	0.64	Tile (8mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bathroom	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bedroom 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bathroom	1	Downlight	190	Sealed
Bathroom	1	Exhaust Fan	350	Unsealed
Bedroom 1	2	Downlight	190	Sealed
Kitchen/Living	6	Downlight	190	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
None		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.73	Dark (Monument)

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)
Wall	90 x 40	600	0.75	Yes (R0.20)
Ceiling	90 x 40	900	0.75	Yes (R0.20)
Roof	90 x 40	900	0.75	No

Appliance *schedule*

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

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity

* Refer to glossary.

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

* Refer to glossary.

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 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.

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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.

CERTIFIED ENERGY - SUMMARY COMMITMENTS TABLE

1300 443 674
quote@certifiedenergy.com.au
www.certifiedenergy.com.au

Project Details

Accredditation Number: HERA 10056

Proposed:	Multi Dwelling	Address:	14 Crawford St Bulahdelah NSW 2423
Lot Number:	4	DP NUMBER:	758177

Thermal Comfort

NatHERS Certificate Number: #HR-T9SD6R-01

Windows

For detailed window specifications please refer to NatHERS Certificate

(NSW BASIX Thermal Protocol allows for ± 10% tolerance of SHGC Value & U Value =< than which overrides NatHERS Certificate)

Glazing	Glass Type		Frame Type
	Double Glazed Clear		Aluminium (Standard)

External walls		Requirements	
AAC cavity panel on battens		Light colour	R2.7 Bulk insulation
Internal walls			
Cavity wall, direct fix plasterboard		R2.0 Bulk insulation	
Cavity wall, direct fix plasterboard	Unit 7	No insulation	
Partition walls			
AAC, plasterboard		No insulation	
Floors			
Waffle pod slab	375mm Waffle	R1.5 Slab Edge	
Ceiling			
External ceiling -	Plasterboard	R6.0 Bulk insulation	
Roof			
Corrugated iron		Dark Colour (solar absorptance >0.70) R1.8 Bulk + Reflective side down, No air gap above (Anticon 75, 80mm)	
Ceiling Penetrations			
Lighting specification		Dwelling is rated with Assumed downlight as per NatHERS Tech Note "Ceiling Penetrations 9.4 to 9.8"	
Ceiling fans	Unit 3, Unit 7	Ceilings fans of 1200mm must be installed in the rooms mentioned in the NatHERS report	
Overshadowing details		Adjoining units calculated into model calculations	
Site			
Orientation of nominal north elevation		As shown on plans	

* Approved fireproof downlight covers HAVE been specified, which can be fully covered by insulation. Ceiling penetrations for exhaust dampers have been allowed (to all bathrooms, ensuites and internal laundry's) at the rate of 0.04 meters squared per exhaust fan penetration.

Energy & Water

BASIX Certificate Number: 1797146M

Fixtures		Specification	**Alternative water details**				
Shower head rating		4 star (> 6 but <= 7.5 L/min)	Rainwater tank size		Individual	3000L	
Toilet rating		3 star	Connected to:	Garden and lawn areas	All toilets	Laundry	
Kitchen taps rating		3 star		Yes	Yes	No	
Bathroom taps rating		3 star					
Hot water	Specification	Rating	**Lighting**		**Alternative Energy**	Peak kW	
Individual system	Electric heat pump - air sourced	26 to 30 STCs	Refer to NatHERS Certificate	Light-emitting diode (LED)	Photovoltaic System (Minimum)	1.0	
Ventilation							
Bathroom Exhaust	Individual fan, ducted to façade or roof	Kitchen Exhaust	Individual fan, ducted to façade or roof	Laundry Exhaust	Individual fan, ducted to façade or roof		
Control switch	Manual switch on/off	Control switch	Manual switch on/off	Control switch	Manual switch on/off		

Cooling			**Heating**		
Individual systems - living areas	1-phase airconditioning	EER 3.0 - 3.5	Individual systems - living areas	1-phase airconditioning	EER 3.0 - 3.5
Individual systems - bedroom areas	1-phase airconditioning	EER 3.0 - 3.5	Individual systems - bedroom areas	1-phase airconditioning	EER 3.0 - 3.5

Appliances			
Cooktop/oven	Induction cooktop & electric oven	Private Indoor or sheltered clothes drying line	No
Private outdoor clothes drying line	Yes	Zoned Air-conditioning	Yes

DEVELOPMENT APPLICATION

14 CRAWFORD ST, BULAHDELAH
PROPOSED NEW TOWNHOUSES

DRAWING ID	NAME	REV	SCALE
DA000	COVER PAGE	03	
DA001	SITE SURVEY	03	1:100
DA002	SOIL & EROSION SEDIMENT CONTROL PLAN	03	1:100
DA003	DEMOLITION PLAN	03	1:100
DA004	STORMWATER CONCEPT PLAN	03	1:100
DA005	SITE ANALYSIS	03	1:100
DA006	LANSCAPE CONCEPT PLAN	03	1:100
DA100	GROUND FLOOR PLAN	03	1:100
DA200	ELEVATIONS - WEST & NORTH	03	1:100
DA201	ELEVATIONS - EAST & SOUTH	03	1:100
DA300	SECTIONS - A-1 & B-1	03	1:100
DA301	SECTIONS - A-2 & B-2	03	1:100
DA600	BASIX - GROUND FLOOR PLAN	03	1:100
DA700	SHADOW DIAGRAMS - WINTER	03	1:200
DA800	PERSPECTIVE RENDERS	03	
DA900	SCHEDULES - WALL TYPES, MATERIALS & FI...	03	
DA901	SCHEDULES - WINDOWS FOR UNITS	03	
DA902	NOTIFICATION PLAN	03	

NOTE: DESIGN INTENTION DRAWINGS

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **COVER PAGE**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	@ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO. **24003**	DRAWING NO. **DA000**		REVISION **03**

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CRAWFORD STREET

LANE

BM PAINT ON NAIL IN KERB RL.15.07(AHD)

LOT 4
SEC 31
1664.2m²

269°57'40" 50.292

89°57'40" 50.292

359°57'40" 33.092

179°57'40" 33.092

SINGLE STOREY WEATHERBOARD RESIDENCE METAL ROOF No. 14

FL 15.96

RIDGE 19.46

RIDGE 19.45

GUTTER 18.37

GARDEN

GUTTER 18.98

ROOF 18.72

VERANDAH

GUTTER 18.93

CONCRETE VERANDAH

RIDGE 21.13

RIDGE 20.22

GUTTER 18.90

VL 15.92

UNFENCED

STEPS

GRAVEL

ROOF 18.72

ROOF 18.75

ROOF 18.94

ROOF 18.92

CONCRETE

GUTTER 18.25

GRAVEL

GUTTER 17.92

GARDEN

GATE

TIMBER PALING FENCE

GATE

METAL FENCE

FIBRO W.C.

METAL SHED

TAP

METAL FENCE

FIBRO SHED

TIMBER PALING FENCE

ROOF 18.82

WEATHERBOARD GARAGE

GUTTER 18.47

GUTTER 19.80

GUTTER 20.30

GUTTER 19.86

GUTTER 21.64

ROOF 20.50

METAL SHED

RIDGE 22.34

GUTTER 21.66

ROOF 20.56

METAL SHED

ROOF 20.7

RIDGE 21.4

METAL SHED

ROOF 20.9

UPRIGHT KERB & GUTTER

CROSSING

(RWO)

(WM)

(TEL)

(PP)

(SAC)

(HYD)

(FP)

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SITE SURVEY**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
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PROJECT NO.	DRAWING NO.		REVISION
24003	**DA001**		**03**

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EROSION & SEDIMENT LEGEND

1. THE EXISTING CROSSOVER AND DRIVEWAY TO BE RETAINED FOR SITE ACCESS UNTIL REASONABLE COMPLETION OF CONSTRUCTION WORKS.
2. STOCKPILE IN ACCORDANCE WITH DETAIL SD 4-1
3. WASTE STORAGE AREA TO PROVIDE SOLID AND LIQUID WASTE RECEPTACLE BINS. LOCATION IS TO BE ADJUSTED TO SUIT CONSTRUCTION STAGE.
4. SITE ACCESS PROVIDES LARGE COARSE DIA AGGREGATE OR RECYCLED CONCRETE . IN ACCORDANCE WITH DETAIL SD 6-14.
5. BARRIER FENCING OR UTILISE EXISTING BOUNDARY FENCE
6. PROPOSED DISTURBED AREA

Certificate No. #HR-T9SD6R-01

Scan QR code or follow website link for rating details.

Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

http://www.hero-software.com.au/pdf/HR-T9SD6R-01

CRAWFORD STREET

BM PAINT ON NAIL IN KERB RL.15.07(AHD)

269°57'40" 50.292

179°57'40"

359°57'40"

89°57'40" 50.292

33.092

33.092

SINGLE STOREY WEATHERBOARD RESIDENCE METAL ROOF No. 14

FL 15.96

VL 15.92

RIDGE 21.13

RIDGE 20.22

ROOF 18.92

CONCRETE VERANDAH

VERANDAH

GARDEN

STEPS

UNFENCED

CONCRETE

GRAVEL

GARDEN

GATE

TIMBER PALING FENCE

GATE

METAL FENCE

FIBRO W.C.

METAL SHED

TAP

FIBRO SHED

METAL FENCE

METAL FENCE

GATE

TIMBER PALING FENCE

WEATHERBOARD GARAGE

METAL SHED

METAL SHED

METAL SHED

LOT 4
SEC 31
1664.2m²

GUTTER 18.37

GUTTER 17.92

GUTTER 19.80

GUTTER 20.30

GUTTER 19.86

GUTTER 21.64

ROOF 20.50

RIDGE 22.34

GUTTER 21.66

ROOF 20.56

ROOF 20.7

RIDGE 21.4

ROOF 20.5

UPRIGHT KERB & GUTTER

UPRIGHT KERB & GUTTER

CROSSING

CROSSING

(RWO)

(RWO)

(RWO)

(SAC)

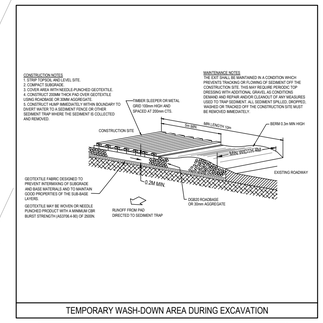
(TEL)

(TEL)

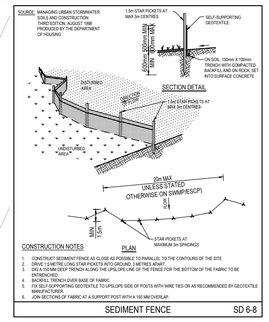
(HYD)

(PP)

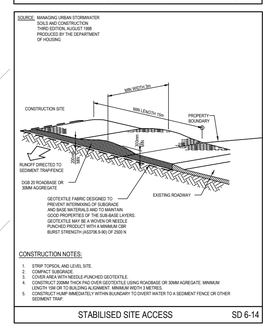
(FP)



TEMPORARY WASH-DOWN AREA DURING EXCAVATION



SEDIMENT FENCE SD 6-8



STABILISED SITE ACCESS SD 6-14

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SOIL & EROSION SEDIMENT CONTROL PLAN**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
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PROJECT NO.	DRAWING NO.		REVISION
24003	**DA002**		**03**

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DEMOLITION LEGEND

TO BE DEMOLISHED

CRAWFORD STREET

LANE

RIDGE 19.46
RIDGE 19.45
GUTTER 18.37
(SAC) 15.02
(TEL) 14.94
(RWO)
UPRIGHT KERB & GUTTER
CROSSING
(PP) 15.19
(RWO)
UPRIGHT KERB & GUTTER
CROSSING
BM PAINT ON NAIL IN KERB RL.15.07(AHD)
(HYD) 15.53
(TEL) 15.78
269°57'40"
50.292
179°57'40"
89°57'40"
359°57'40"
33.092
METAL FENCE
GARDEN
GUTTER 18.98
GUTTER 18.17
ROOF 18.72
VERANDAH
SINGLE STOREY WEATHERBOARD RESIDENCE METAL ROOF No. 14
FL 15.96
STEPS
UNFENCED
VL 15.92
RIDGE 21.13
GUTTER 18.90
RIDGE 20.22
ROOF 18.72
ROOF 18.92
CONCRETE
GUTTER 18.93
CONCRETE VERANDAH
GRAVEL
FIBRO W.C.
METAL SHED
TAP
ROOF 18.75
ROOF 18.94
GUTTER 18.25
GRAVEL
(FP)
GUTTER 17.92
GARDEN
GATE
TIMBER PALING FENCE
GATE
LOT 4
SEC 31
1664.2m 2
TIMBER PALING FENCE
ROOF 18.82
WEATHERBOARD GARAGE
GUTTER 18.47
FIBRO SHED
ROOF 20.56
METAL SHED
GUTTER 19.86
GUTTER 21.64
ROOF 20.50
METAL SHED
RIDGE 22.34
GUTTER 21.66
GUTTER 19.80
GUTTER 20.30
ROOF 20.7
RIDGE 21.4
METAL SHED
ROOF 20.9

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **DEMOLITION PLAN**

SITE ID LOT 4, SEC 31, DP 758177

N

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24003	**DA003**		**03**

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Certificate No. #HR-T9SD6R-01

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Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **STORMWATER CONCEPT PLAN**

SITE ID LOT 4, SEC 31, DP 758177

N

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PROJECT NO. **24003**	DRAWING NO. **DA004**		REVISION **03**

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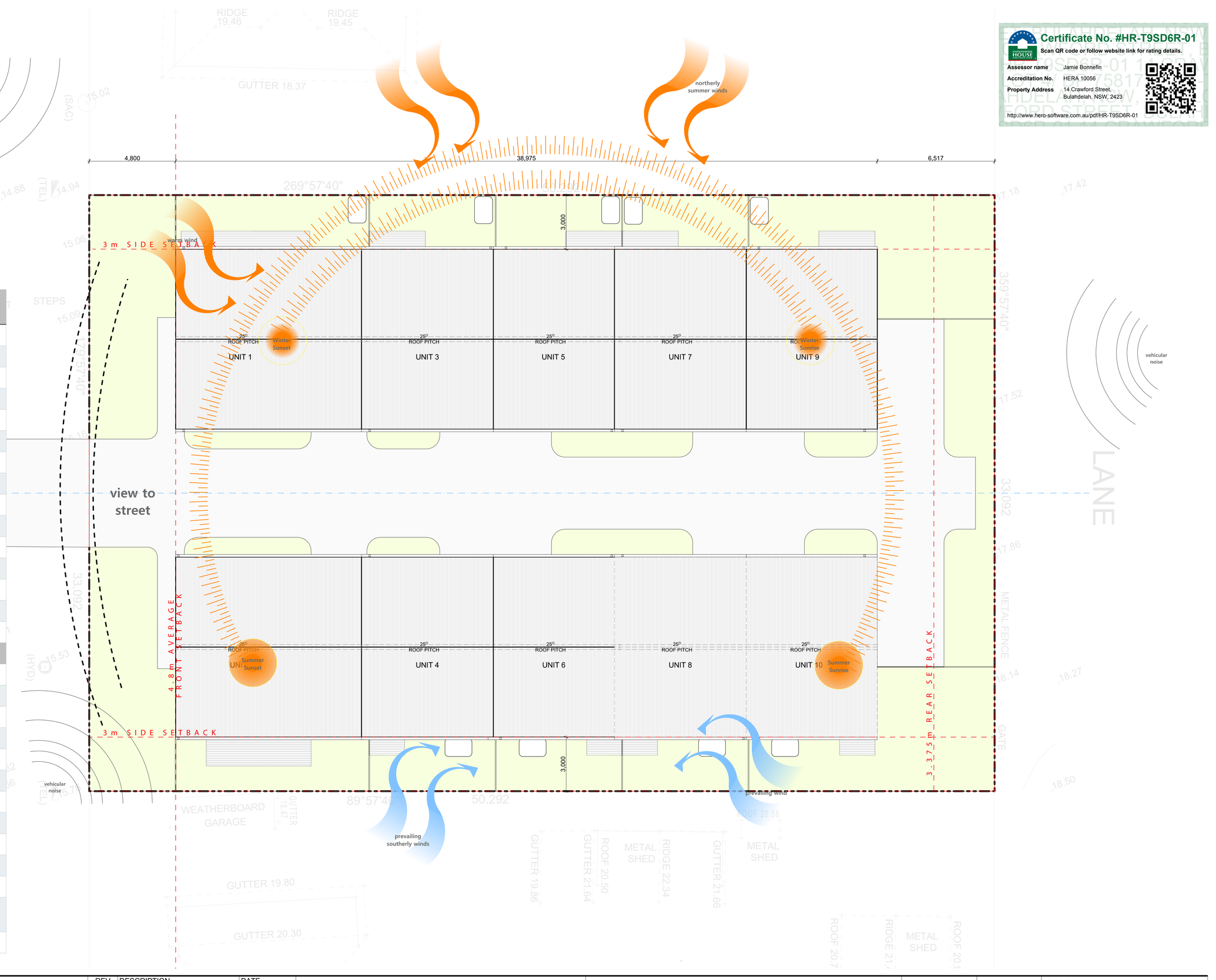

Certificate No. #HR-T9SD6R-01

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Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

http://www.hero-software.com.au/pdf/HR-T9SD6R-01

14 CRAWFORD STREET, BULADELAH - COMPLIANCE INDEX

CALCULATIONS		COMPLY
Zone	RU5	
Site Area (sqm)	1664.2	
FSR = 0.40 : 1	665.7	
FSR COMPLIANCE	**471.36**	☑
BUILT UPON AREA	**244 sqm**	
Building Class	**1**	
GROSS AREAS		
TOWN HOUSES 1-2	125.52	
TOWN HOUSES 3-10	345.84	
GFA (m^2)	**471.36**	☑
CONTROLS		
SETBACKS		
Principal Dwelling		
Front (4.8m Average)	**8.2m**	☑
Side (0.9m)	**3.0m**	☑
Rear (3.0m)	**3.375m**	☑
HEIGHT CONTROLS		
Dwellings		
Maximum Height (8.5m)		☑
Underside Upper Ceiling	2.7m	
Top Ridge	**5.7m**	☑
Storey (within building height envelope)	1-2	

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SITE ANALYSIS**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA005**		**03**

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GROUND COVER
Carex appressa

GROUND COVER
Carex fascicularis

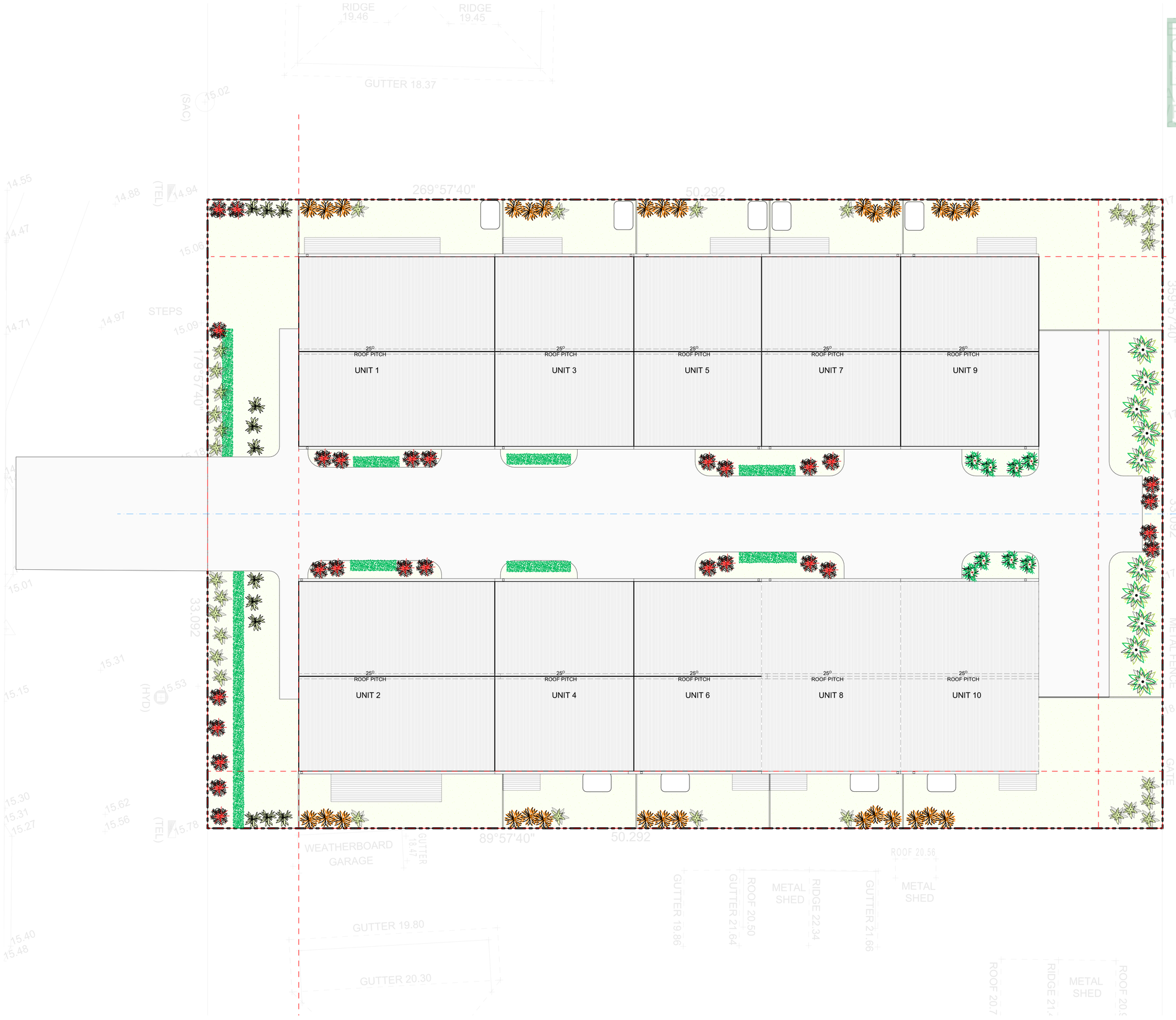
GROUND COVER
Carex polyantha

GROUND COVER
Ficinia nodosa

GROUND COVER
Lomandra hystrix

GROUND COVER
Lomandra longifolia confertifolia

GROUND COVER
Dianella caerulea



LEGEND

Feature Plants

- Carex appressa (tall sedge)
  Mature H x S: 1.0m x 1.0m
  Qty Required: 26
- Carex fascicularis (tassel sedge)
  Mature H x S: 1.5m x 1.0m
  Qty Required: 10
- Carex polyantha (creek sedge)
  Mature H x S: 0.8m x 0.5m
  Qty Required: 30
- Ficinia nodosa (knobby club rush)
  Mature H x S: 1.0m x 1.0m
  Qty Required: 8
- Lomandra hystrix (creek matrush)
  Mature H x S: 1.0m x 1.0m
  Qty Required: 12
- Lomandra longifolia confertifolia (lime tuff)
  Mature H x S: 0.5m x 0.5m
  Qty Required: 30

Ground Cover

- Dianella caerulea (blue flax lilly)
  Mature H x S: 1.0m x 0.8m
  Qty Required: As indicated

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **LANSCAPE CONCEPT PLAN**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA006**		**03**

Certificate No. #HR-T9SD6R-01

Scan QR code or follow website link for rating details.

Assessor name: Jamie Bonnefin

Accreditation No.: HERA 10056

Property Address: 14 Crawford Street, Bulahdelah, NSW, 2423

http://www.hero-software.com.au/pdf/HR-T9SD6R-01

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PROJECT: PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT: RAY GUTHRIE

DRAWING: **GROUND FLOOR PLAN**

SITE ID: LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO. 24003	DRAWING NO. DA100		REVISION 03

5/05/2025 / E:\SEG\24003 14 Crawford St Buladellah\0000-DWG\0000-DA\DWG\PLN\24003-14 Crawford St Buladellah-DA-REV 02.pln

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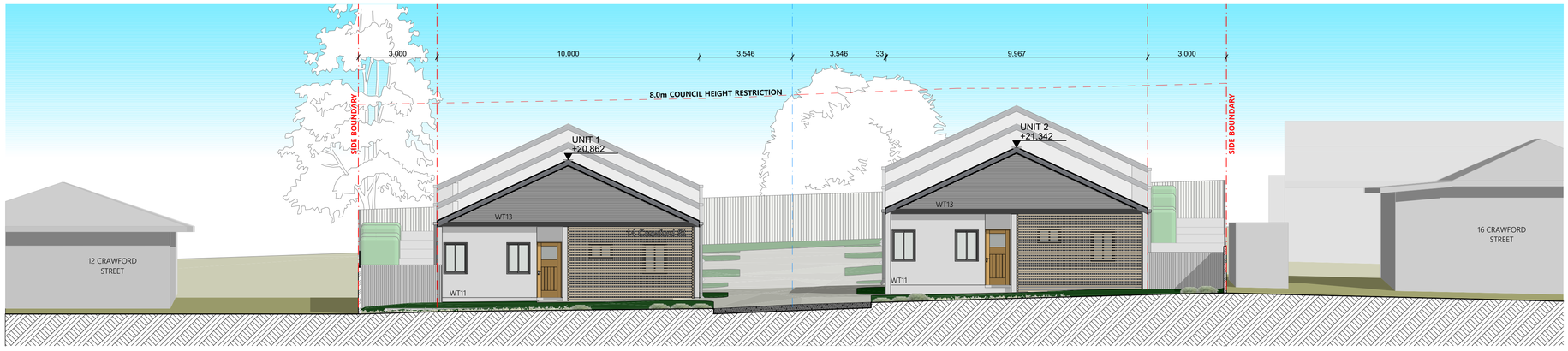

E04

WEST ELEVATION

1:100

E01

NORTH ELEVATION

NOTE: DESIGN INTENTION DRAWINGS

Do not scale from the drawings. All levels and dimensions to be verified prior to commencement of work and all discrepancies are to be brought to the attention of the Architect

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01	Issued for consultants	13/04/2025
02	Issued for DA Submission	26/04/2025
03	Issued for DA Submission	5/05/2025

PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **ELEVATIONS - WEST & NORTH**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA200**		**03**

5/05/2025 / E:\SEG\24003 14 Crawford St Buladellah\0000-DWG\0000-DA\DWG\PLN\24003-14 Crawford St Buladellah-DA-REV 02.pln

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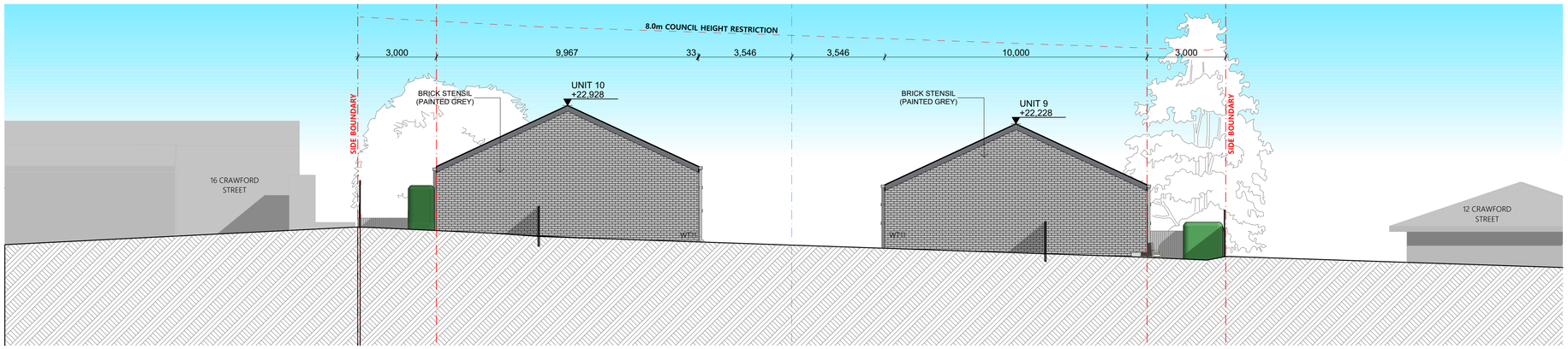

E02 EAST ELEVATION

1:100

E03 SOUTH ELEVATION

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **ELEVATIONS - EAST & SOUTH**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA201**		**03**

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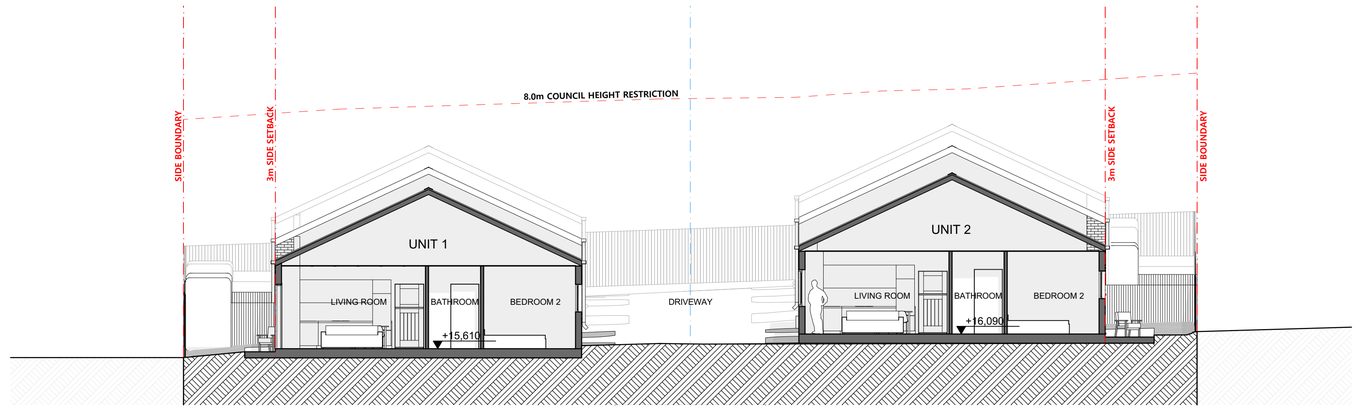
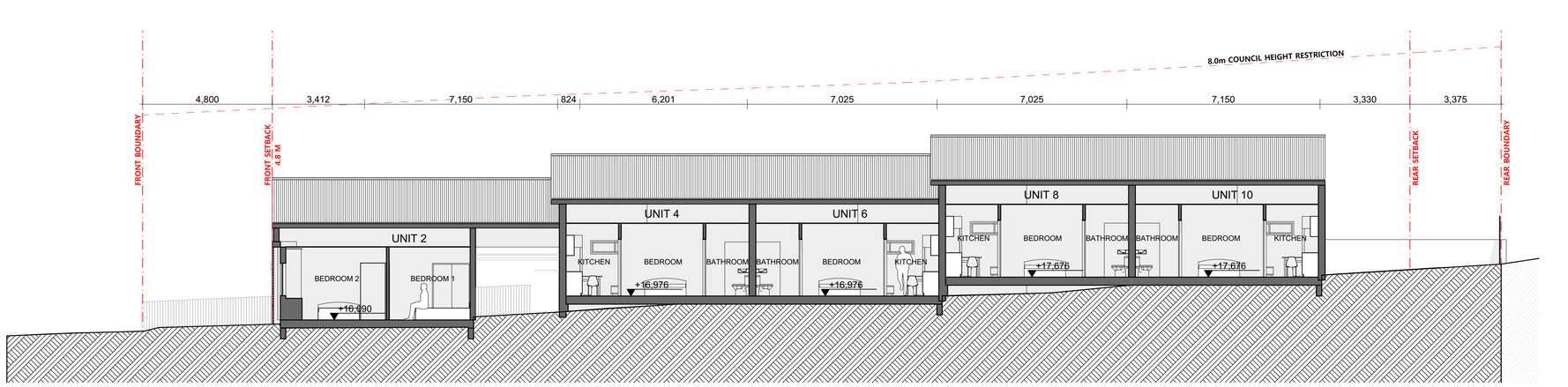


SEC A-1

SECTION A-1

1:100



SEC B-1

SECTION B-1

NOTE: DESIGN INTENTION DRAWINGS

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SECTIONS - A-1 & B-1**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA300**		**03**

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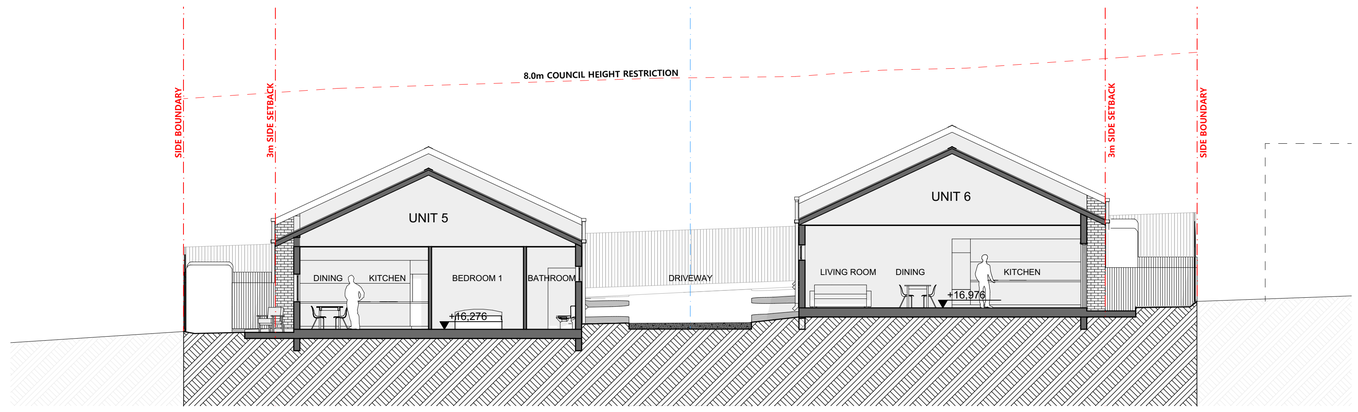
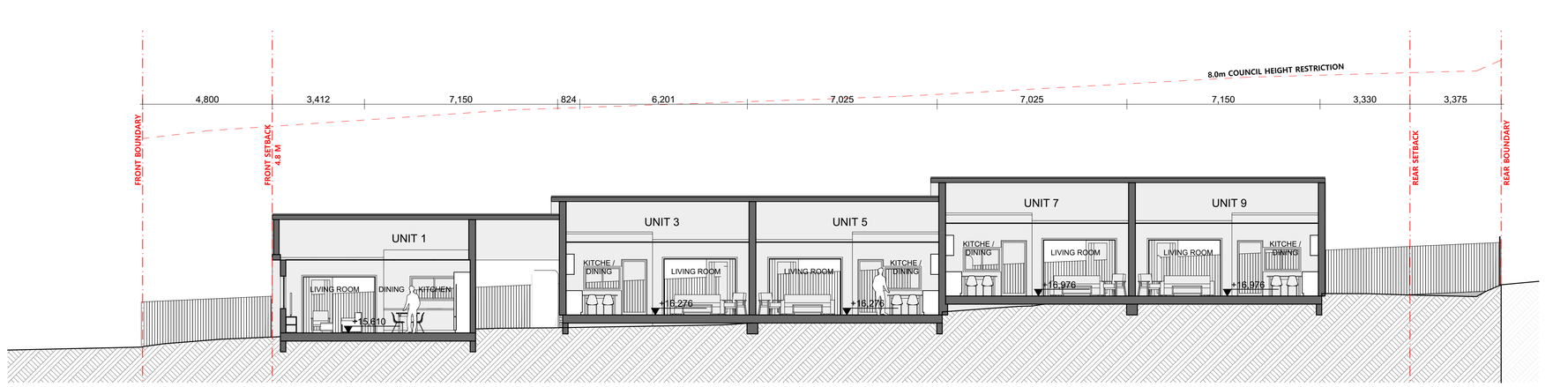
1:100



SEC A-2

SECTION A-2

1:100



SEC B-2

SECTION B-2

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02	Issued for DA Submission	26/04/2025
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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SECTIONS - A-2 & B-2**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA301**		**03**

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LEGEND

- CONDITIONED AREA
- UNCONDITIONED AREA
- AIR FLOW

BASIX CALCULATIONS:

CONDITIONED FLOOR	- 419.16 m^2
UNCONDITIONED	- 54.37 m^2
CARPORTS	- 148.80 m^2

	CONDITIONED	UNCONDITIONED
UNIT 1	- 58.30 m^2	- 4.46 m^2
UNIT 2	- 58.30 m^2	- 4.46 m^2
UNIT 3	- 37.47 m^2	- 5.76 m^2
UNIT 4	- 38.17 m^2	- 5.76 m^2
UNIT 5	- 37.47 m^2	- 5.76 m^2
UNIT 6	- 38.17 m^2	- 5.76 m^2
UNIT 7	- 37.47 m^2	- 5.76 m^2
UNIT 8	- 38.17 m^2	- 5.76 m^2
UNIT 9	- 37.47 m^2	- 5.76 m^2
UNIT 10	- 38.17 m^2	- 5.76 m^2
	- 419.16 m^2	- 54.37 m^2

BASIX NOTES:

- Minimum 4 star shower fittings
- Minimum 4 star toilet flushing system
- Minimum 4 star kitchen taps
- Minimum 4 star basin taps in bathrooms
- Natural lighting in all areas
- Fluorescent or LED energy saving globes
- IXL or heater/exhaust fans to bathroom
- Gas cooktop/electric oven
- Ventilated fridge
- External drying areas

Certificate No. #HR-T9SD6R-01

NATIONWIDE HOUSE ENERGY RATING SCHEME

Scan QR code or follow website link for rating details.

Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

http://www.hero-software.com.au/pdf/HR-T9SD6R-01

NOTE: DESIGN INTENTION DRAWINGS
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PROJECT	PROPOSED TOWNHOUSES 14 CRAWFORD ST BULAHDELAH
CLIENT	RAY GUTHRIE
DRAWING	**BASIX - GROUND FLOOR PLAN**
SITE ID	LOT 4, SEC 31, DP 758177

N

SCALE	1:100 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	**DA600**		**03**

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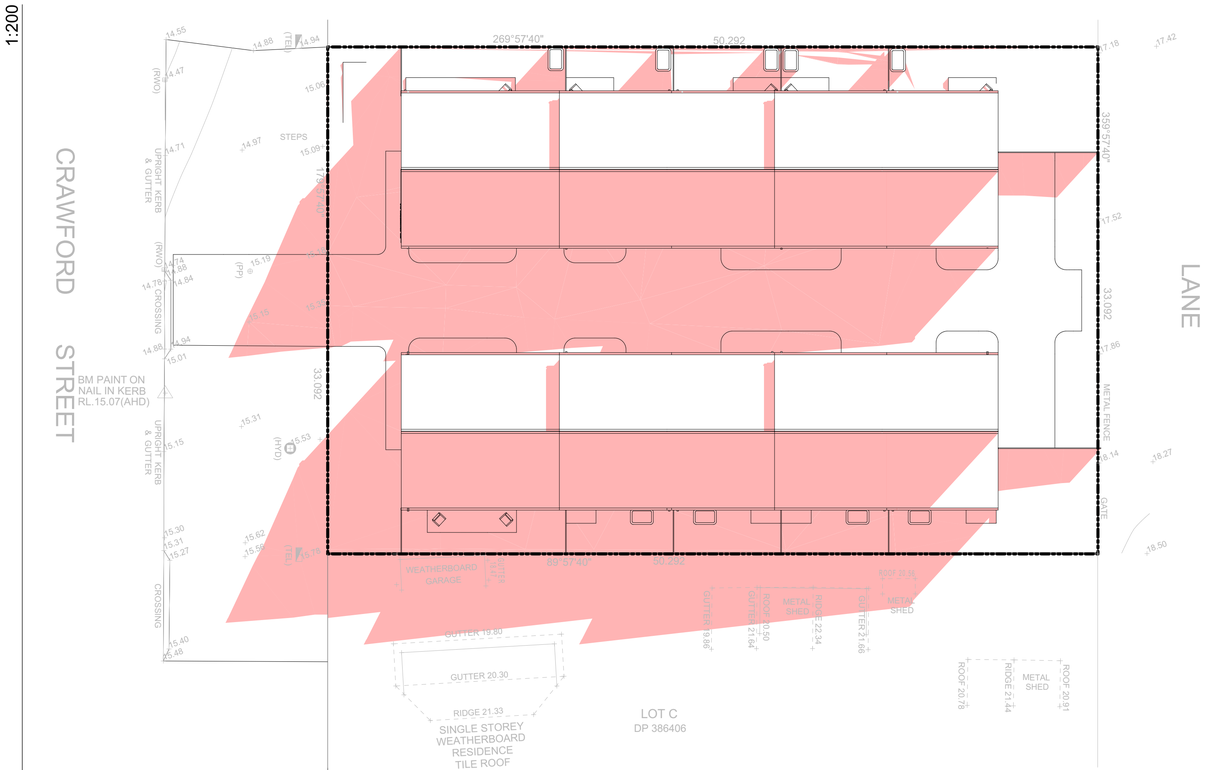
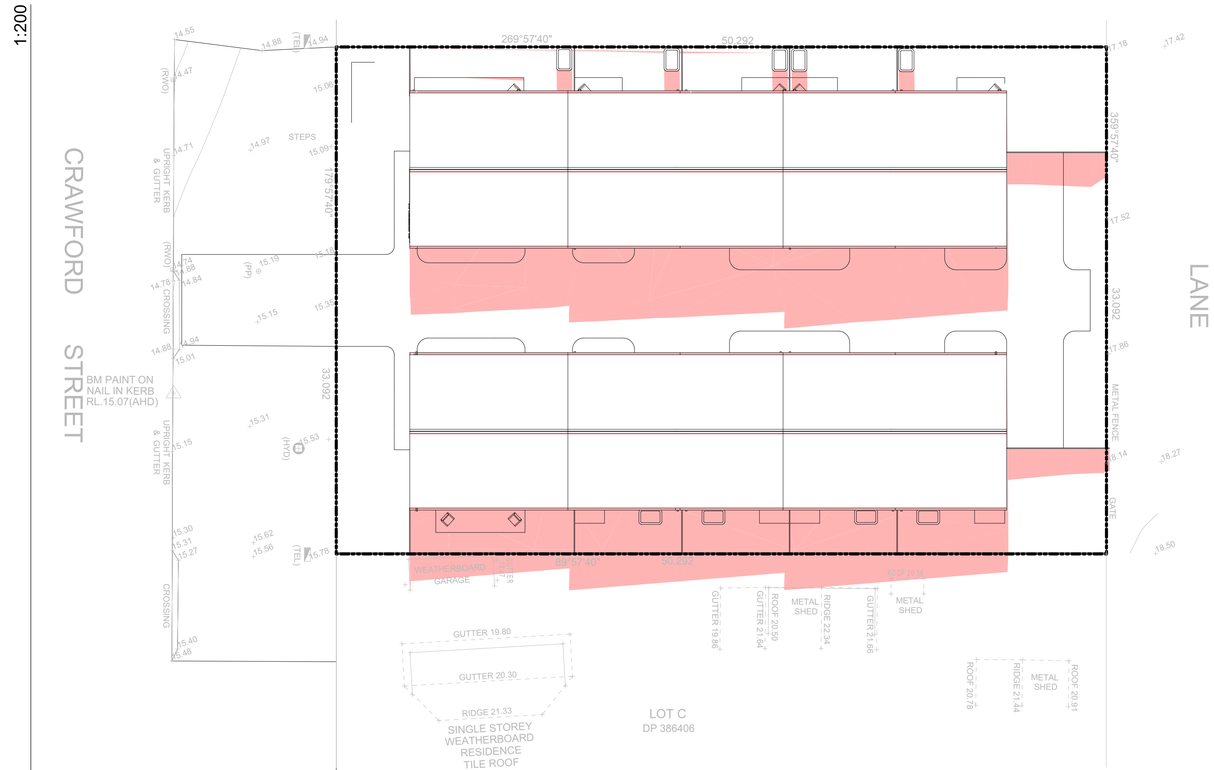


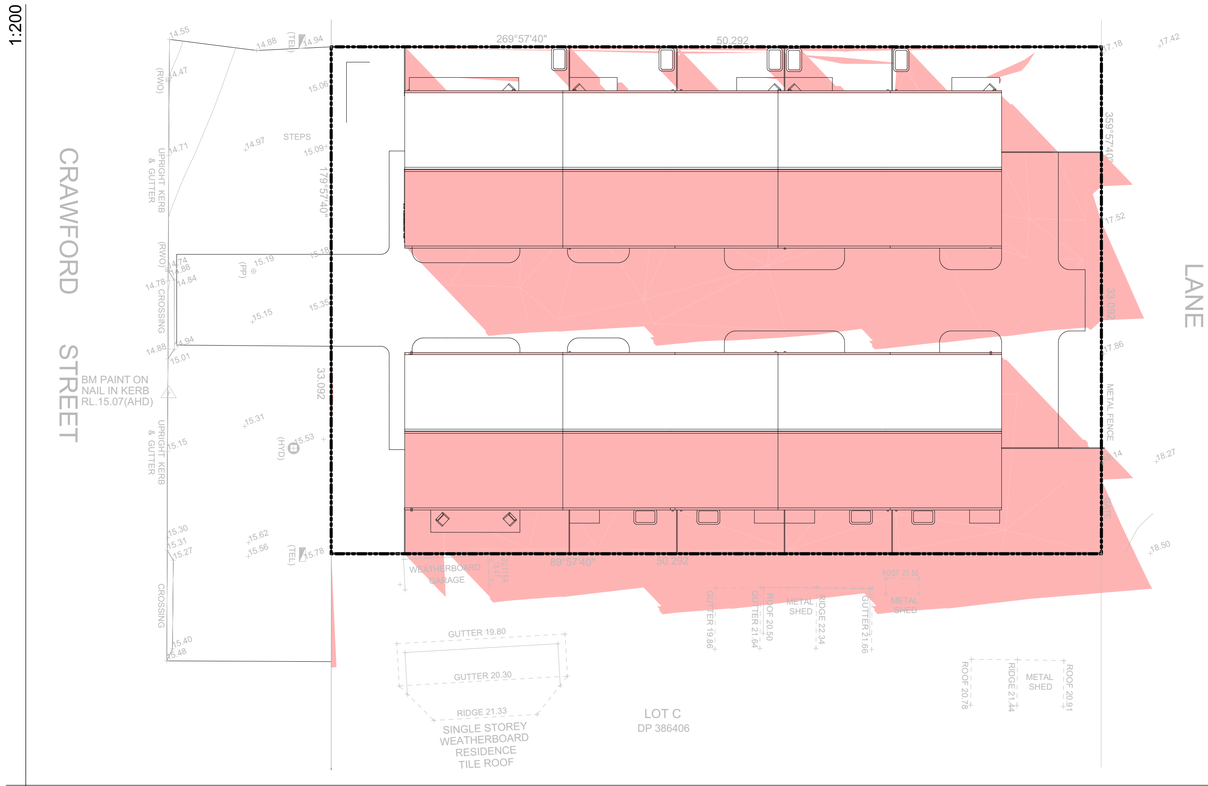
1 JUNE 21 9AM SHADOW DIAGRAM

1:200



2 JUNE 21 12PM SHADOW DIAGRAM

1:200



3 JUNE 21 3PM SHADOW DIAGRAM

PROPOSED SHADOWS

Certificate No. #HR-T9SD6R-01

Scan QR code or follow website link for rating details.

Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SHADOW DIAGRAMS - WINTER**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	1:200 @ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	DA700		03

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Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **PERSPECTIVE RENDERS**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	@ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO. **24003**	DRAWING NO. **DA800**		REVISION **03**

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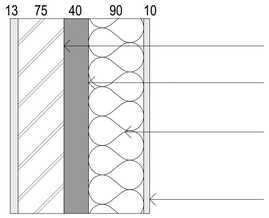
WALL TYPES



HEBEL PANEL + RENDER

BATTENS

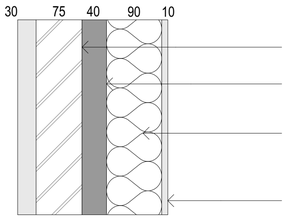
TIMBER FRAME WITH INSULATION
R2.5 ROCKWOOL / FIBREGLASS

INTERNAL LINING TO
ARCHITECTURAL SPECIFICATION

outside **inside**

WT11

R Value : R2.84
Thickness: 228mm



HEBEL PANEL + Corrugated Iron

BATTENS

TIMBER FRAME WITH INSULATION
R2.5 ROCKWOOL / FIBREGLASS

INTERNAL LINING TO
ARCHITECTURAL SPECIFICATION

outside **inside**

WT13

R Value : R2.44
Thickness: 245mm

FINISHES

WALL FINISHES

EXTERNAL WALL Type 11 (Refer to Elevations)
Type: Hebel Wall
Colour: White
Finish: Rendered

EXTERNAL WALL Type 13 (Refer to Elevations)
Type: Hebel Wall
Colour: Monument
Finish: Corrugated Iron (custom orb)

FACADE ELEMENTS

EXTERNAL FACADE
Type: Timber Battens
Colour: Merbau
Finish: Pre oiled

EXTERNAL FACADE
Type: Brick Stencil
Colour: Grey
Finish: Rendered finish

ROOF FINISHES

ROOFING
Type: Corrugated Sheeting (Custom Orb Profile)
Colour: Monument
Finish: Colorbond finish

GUTTERS & DOWNPIPES

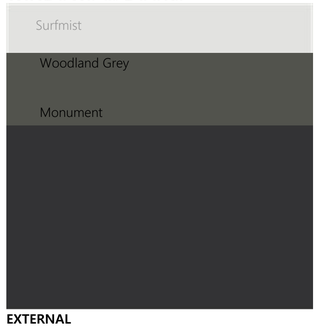
EXTERNAL GUTTERS & DOWNPIPES
Type: Colorbond
Colour: To match roofing & windows
Finish: Colorbond finish

FLOOR FINISHES

EXTERNAL FLOOR
Type: Concrete
Colour: Concrete
Finish: Broom Finish

INTERNAL FLOOR
Type: Tile
Colour: Warm White
Finish: Gloss Finish

WINDOWS & DOORS



EXTERNAL
Type: Aluminium
Colour: Monument
Finish: Aluminium powder coated

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PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

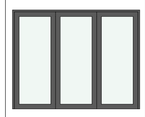
CLIENT RAY GUTHRIE

DRAWING **SCHEDULES - WALL TYPES, MATERIALS & FINISHES**

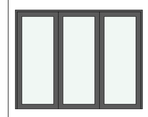
SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	@ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO.	DRAWING NO.		REVISION
24003	DA900		03

ID	W-01	W-02	W-03	W-04	W-05	W-06	W-07	W-08
2D Symbol Plan								
3D View Elevation								
Nominal W x H Size	2,700×2,100	1,800×900	900×1,200	900×1,200	900×600	900×1,200	1,400×900	1,400×900
Location	LIVING ROOM	KITCHEN	LIVING ROOM	LIVING ROOM	BATHROOM	BEDROOM 2	BEDROOM 2	BEDROOM 1
Area	5.67 m2	1.62 m2	1.08 m2	1.08 m2	0.54 m2	1.08 m2	1.26 m2	1.26 m2
Type	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding
Glazing Type	-	-	-	-	-	-	-	-
Framing Type	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated

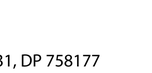
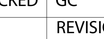
WINDOW SCHEDULE FOR UNIT - 1

ID	W-01	W-02	W-03	W-04	W-05
2D Symbol Plan					
3D View Elevation					
Nominal W x H Size	2,700×2,100	1,400×900	900×900	900×900	900×500
Location	LIVING ROOM	DINING SPACE / DECK	LIVING ROOM	BEDROOM 1	BATHROOM
Area	5.67 m2	1.26 m2	0.81 m2	0.81 m2	0.45 m2
Type	Sliding	Sliding	Sliding	Sliding	Sliding
Glazing Type					
Framing Type	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated

WINDOW SCHEDULE FOR UNITS - 3, 5, 7, 9

ID	W-01	W-02	W-03	W-04	W-05	W-06	W-07	W-08
2D Symbol Plan								
3D View Elevation								
Nominal W x H Size	1,800×900	2,700×1,200	900×1,200	900×1,200	900×600	900×1,200	900×900	900×900
Location	KITCHEN	LIVING ROOM	LIVING ROOM	LIVING ROOM	BATHROOM	BEDROOM 2	BEDROOM 2	BEDROOM 1
Area	1.62 m2	3.24 m2	1.08 m2	1.08 m2	0.54 m2	1.08 m2	0.81 m2	0.81 m2
Type	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding
Glazing Type								
Framing Type	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated

WINDOW SCHEDULE FOR UNIT - 2

ID	W-01	W-02	W-03	W-04	W-05	W-06
2D Symbol Plan						
3D View Elevation						
Nominal W x H Size	1,800×2,100	900×900	900×900	900×900	900×900	1,800×500
Location	KITCHEN / DECK	BEDROOM 1	BATHROOM	DINING SPACE	LIVING ROOM	LIVING ROOM
Area	3.78 m2	0.81 m2	0.81 m2	0.81 m2	0.81 m2	0.90 m2
Type	Sliding	Sliding	Sliding	Sliding	Sliding	Sliding
Glazing Type	-	-	-	-	-	-
Framing Type	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated	Aluminium powder coated

WINDOW SCHEDULE FOR UNITS - 4, 6, 8, 10

WINDOW TOTAL AREA CALCULATION

UNIT 1 - 13.59 m²
UNIT 2 - 10.26 m²
UNIT 3 - 9.00 m²
UNIT 4 - 7.92 m²
UNIT 5 - 9.00 m²
UNIT 6 - 7.92 m²
UNIT 7 - 9.00 m²
UNIT 8 - 7.92 m²
UNIT 9 - 9.00 m²
UNIT 10 - 7.92 m²

Certificate No. #HR-T9SD6R-01
Scan QR code or follow website link for rating details.
Assessor name Jamie Bonnefin
Accreditation No. HERA 10056
Property Address 14 Crawford Street, Bulahdelah, NSW, 2423
http://www.hero-software.com.au/pdf/HR-T9SD6R-01

NOTE: DESIGN INTENTION DRAWINGS

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03	Issued for DA Submission	5/05/2025

PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **SCHEDULES - WINDOWS FOR UNITS**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	@ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO. **24003**	DRAWING NO. **DA901**		REVISION **03**

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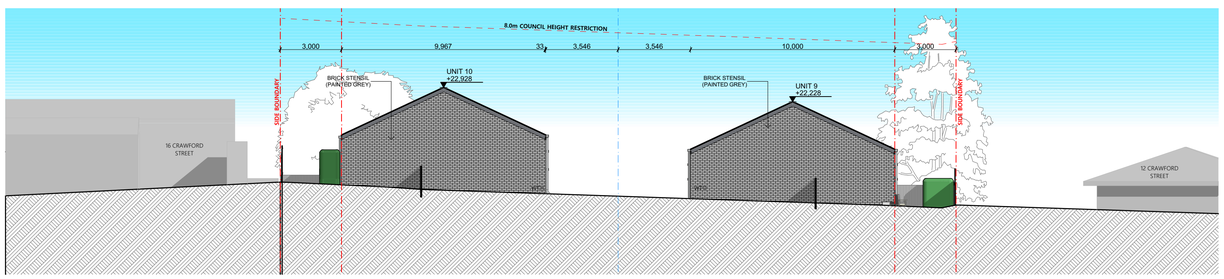
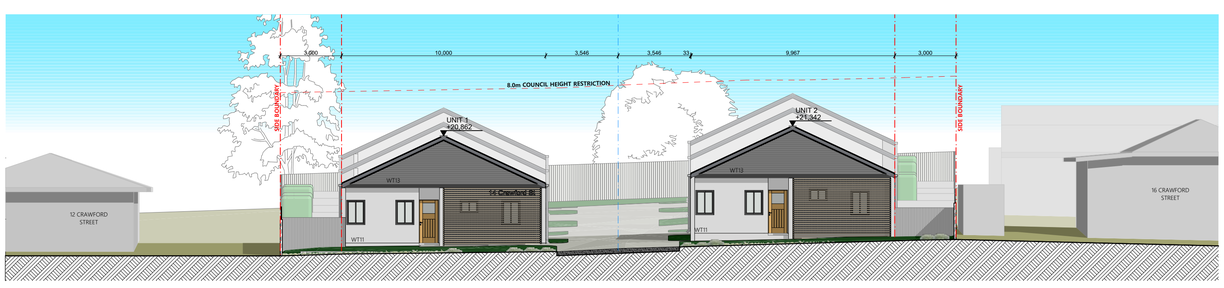
E01 NORTH ELEVATION



E02 EAST ELEVATION

E03 SOUTH ELEVATION



E04 WEST ELEVATION

Certificate No. #HR-T9SD6R-01

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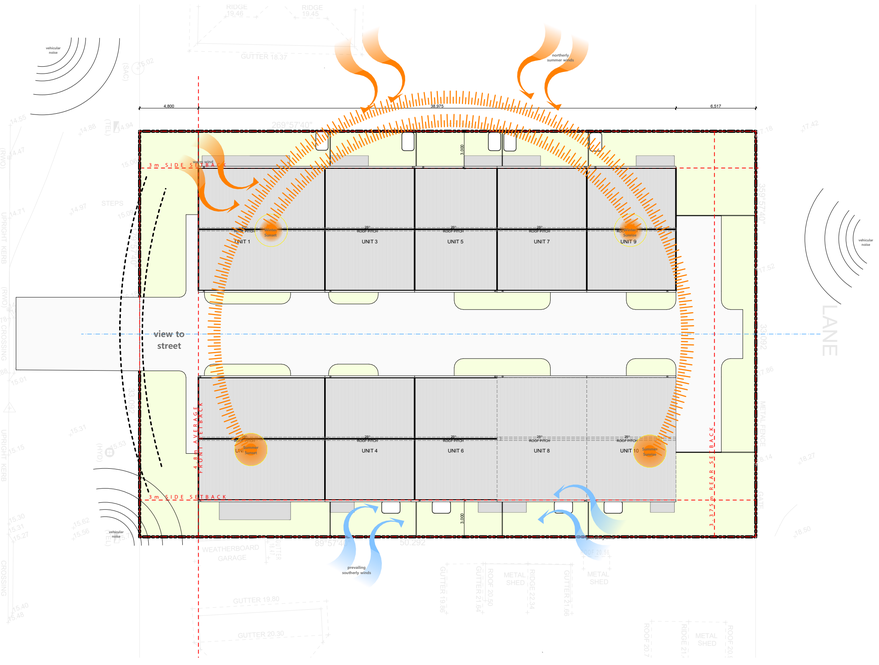
Assessor name	Jamie Bonnefin
Accreditation No.	HERA 10056
Property Address	14 Crawford Street, Bulahdelah, NSW, 2423

http://www.hero-software.com.au/pdf/HR-T9SD6R-01

DEVELOPMENT APPLICATION
PROPOSED TOWNHOUSES

14 CRAWFORD STREET, BULAHDELAH

VIEW FROM STREET



1 SITE ANALYSIS

NOTE: DESIGN INTENTION DRAWINGS

Do not scale from the drawings. All levels and dimensions to be verified prior to commencement of work and all discrepancies are to be brought to the attention of the Architect

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REV	DESCRIPTION	DATE
01	Issued for consultants	13/04/2025
02	Issued for DA Submission	26/04/2025
03	Issued for DA Submission	5/05/2025

PROJECT PROPOSED TOWNHOUSES
14 CRAWFORD ST BULAHDELAH

CLIENT RAY GUTHRIE

DRAWING **NOTIFICATION PLAN**

SITE ID LOT 4, SEC 31, DP 758177

N

SCALE	@ A1		
DRAWN BY	CO	CHECKED	GC
PROJECT NO. **24003**	DRAWING NO. **DA902**		REVISION **03**

5/05/2025 / E:\SEG\24003 14 Crawford St Buladellah\0000-DWG\0000-DA\DWG\PLN\24003-14 Crawford St Buladellah-DA-REV 02.pln

CERTIFIED ENERGY - SUMMARY COMMITMENTS TABLE

1300 443 674
quote@certifiedenergy.com.au
www.certifiedenergy.com.au

Project Details

Accredditation Number: HERA 10056

Proposed:	Multi Dwelling	Address:	14 Crawford St Bulahdelah NSW 2423
Lot Number:	4	DP NUMBER:	758177

Thermal Comfort

NatHERS Certificate Number: #HR-T9SD6R-01

Windows

For detailed window specifications please refer to NatHERS Certificate

(NSW BASIX Thermal Protocol allows for ± 10% tolerance of SHGC Value & U Value =< than which overrides NatHERS Certificate)

Glazing	Glass Type	Frame Type
	Double Glazed Clear	Aluminium (Standard)

External walls		Requirements	
AAC cavity panel on battens		Light colour	R2.7 Bulk insulation
Internal walls			
Cavity wall, direct fix plasterboard		R2.0 Bulk insulation	
Cavity wall, direct fix plasterboard	Unit 7	No insulation	
Partition walls			
AAC, plasterboard		No insulation	
Floors			
Waffle pod slab	375mm Waffle	R1.5 Slab Edge	
Ceiling			
External ceiling -	Plasterboard	R6.0 Bulk insulation	
Roof			
Corrugated iron		Dark Colour (solar absorptance >0.70) R1.8 Bulk + Reflective side down, No air gap above (Anticon 75, 80mm)	
Ceiling Penetrations			
Lighting specification		Dwelling is rated with Assumed downlight as per NatHERS Tech Note "Ceiling Penetrations 9.4 to 9.8"	
Ceiling fans	Unit 3, Unit 7	Ceilings fans of 1200mm must be installed in the rooms mentioned in the NatHERS report	
Overshadowing details		Adjoining units calculated into model calculations	
Site			
Orientation of nominal north elevation		As shown on plans	

* Approved fireproof downlight covers HAVE been specified, which can be fully covered by insulation. Ceiling penetrations for exhaust dampers have been allowed (to all bathrooms, ensuites and internal laundry's) at the rate of 0.04 meters squared per exhaust fan penetration.

Energy & Water

BASIX Certificate Number: 1797146M

Fixtures	Specification
Shower head rating	4 star (> 6 but <= 7.5 L/min)
Toilet rating	3 star
Kitchen taps rating	3 star
Bathroom taps rating	3 star

Hot water	Specification	Rating
Individual system	Electric heat pump - air sourced	26 to 30 STCs

Alternative water details			
Rainwater tank size	Individual	3000L	
Connected to:	Garden and lawn areas	All toilets	Laundry
	Yes	Yes	No

Lighting		Alternative Energy	Peak kW
Refer to NatHERS Certificate	Light-emitting diode (LED)	Photovoltaic System (Minimum)	1.0

Ventilation					
Bathroom Exhaust	Individual fan, ducted to façade or roof	Kitchen Exhaust	Individual fan, ducted to façade or roof	Laundry Exhaust	Individual fan, ducted to façade or roof
Control switch	Manual switch on/off	Control switch	Manual switch on/off	Control switch	Manual switch on/off

Cooling			Heating		
Individual systems - living areas	1-phase airconditioning	EER 3.0 - 3.5	Individual systems - living areas	1-phase airconditioning	EER 3.0 - 3.5
Individual systems - bedroom areas	1-phase airconditioning	EER 3.0 - 3.5	Individual systems - bedroom areas	1-phase airconditioning	EER 3.0 - 3.5

Appliances			
Cooktop/oven	Induction cooktop & electric oven	Private Indoor or sheltered clothes drying line	No
Private outdoor clothes drying line	Yes	Zoned Air-conditioning	Yes