

NatHERS & BASIX ASSESSMENT

20 Beachcomber Drive
Byron Bay NSW 2481



Ella Fairbairn
NatHERS BASIX RE

Assessor. Ella Fairbairn
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AAO. ABSA
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BASIX Submission Window Until: 30th October 2025

Thermal Performance

Issue Date of Issue

Construction and Insulation

Draft 24th July 2025

BASIX Inclusions

DA 30th July 2025

BASIX Certificate

NatHERS Universal Certificate

This assessment has been conducted in accordance with
NatHERS Protocols May 2024, the BASIX Thermal Comfort Protocol June
2024 and the ABSA HERS Code of Practice.

This assessment is backed by professional indemnity insurance.

THERMAL PERFORMANCE

The energy consumption of the dwelling represents how much heating and cooling will be required throughout the year to maintain a comfortable indoor temperature.

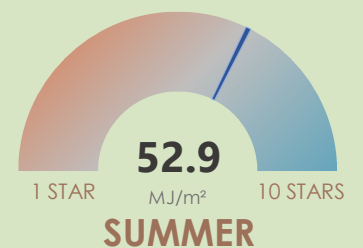
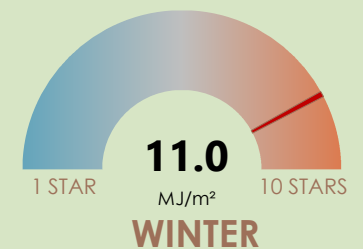
This is calculated with respect to the local climate and is rated on a scale between 0 and 10 stars. The minimum star rating as required by BASIX regulations in the Byron Bay climate is 5 stars.

A higher star rating will result in lower energy bills and smaller, cheaper heating and air conditioning systems.

The closer to 10 stars, the more naturally comfortable the dwelling will be.

Maximum permissible loads as per BASIX:

WINTER	12.0 MJ/m ²
SUMMER	55.5 MJ/m ²



Dwelling Total Star Rating: 5.2



CONSTRUCTION & INSULATION

FLOORS	200mm concrete slab on ground	No insulation required
	200mm suspended concrete slab to first floor	No insulation required
FLOOR COVERINGS	Concrete throughout	
EXTERNAL WALLS	200mm concrete	35mm Kingspan K17 Insulated Plasterboard (R1.15) to family & rumpus No insulation required elsewhere
	Lightweight metal cladding on 90mm timber frames 10mm thick, steel I-beams to pavilion clerestories	90mm Bradfords Gold wall batt (R2.7) No insulation
INTERNAL WALLS	Lightweight metal clad walls: Concrete and steel walls:	Dark colour (Solar Absorptance ≥ 0.7) Medium colour ($0.475 < \text{Solar Absorptance} < 0.7$)
	200mm concrete Lightweight plasterboard lined on 90mm timber frames	No insulation required, except; 35mm Kingspan K17 Insulated Plasterboard (R1.15) isolating garage and store No insulation required, except; 90mm Bradfords Gold wall batt (R2.7) to bath and ensuite internal walls
WINDOWS & SKYLIGHTS	Sliding and fixed glazing to main pavilion	U-Value: 2.60 (equal to or lower than), SHGC: 0.50 ($\pm 5\%$)
	All other fixed and louvre glazing Skylights	U-Value: 5.60 (equal to or lower than), SHGC: 0.41 ($\pm 5\%$) None
CEILINGS	Plasterboard	130mm Bradford Gold roof batt bulk insulation (R3.0) where roof is above
	Exposed 325mm concrete slab to southern ground floor	No insulation required
ROOFS	Timber framed, metal	80mm Light Duty Bradfords Roofing Blanket (R1.8) No roof level insulation required above first floor stair and ensuite WC Dark colour (Solar Absorptance ≥ 0.7)
EXTERNAL SHADE	Eaves as per plans	
VENTILATION	1 x 1,200mm ceiling fan to rumpus, and each bedroom. 6 exhaust fans specified to kitchen and wet areas. All external doors to have weather seals and all exhaust fans to have dampers.	
RECESSED DOWNLIGHTS	Loss of ceiling insulation due to penetrations from recessed LED or CFL down lights has been assessed as per NatHERS default distributions where framed, plasterboard ceiling is present. LED recessed downlights and a maximum number of 68 recessed downlights in the dwelling.	

BASIX COMMITMENTS

This is a summary of the specifications included within the BASIX certificate for water efficiency. These have been specified in order to ensure that the efficiency of the dwelling meets its regulatory requirements.

These specifications indicate the minimum required to meet the regulatory targets. It is possible and encouraged to go beyond these where feasible.

These specifications must be shown in either DA or CDC drawings (as indicated by green tick marks in the BASIX certificate) and will be checked for compliance by the certifying authority during construction and the consent authority at the approval stage.

The star rating for water consuming fixtures is based on the federal Water Efficiency Labelling and Standards (WELS) scheme. This label is what to look for when ensuring that your fixtures and appliances meet the minimum efficiency ratings, as indicated in the BASIX certificate.



WATER

FIXTURES

Showerheads	3 stars (max 9.0 litres per min)
Toilets	4 stars
Kitchen Taps	5 stars
Basin Taps	5 stars

RAINWATER TANK

Minimum Capacity	5,000L
Roof Collection Area	300m ²
Connected to:	Landscaping, laundry + pool

LANDSCAPE

Area	325m ² of landscaped garden and lawn
Low Water Use Plants	No requirement

POOL

Maximum Volume	50kL
Cover	None required

BASIX COMMITMENTS

The following is a summary of the specifications included within the BASIX assessment for energy efficiency. These have been specified in order to ensure that the efficiency of the dwelling meets its regulatory requirements.

These specifications indicate the minimum required to meet the regulatory targets. It is possible and encouraged to go beyond these where feasible.

Heating and cooling systems shown here are the primary heating and cooling systems. Secondary systems such as ceiling fans or fireplaces may also be installed.

These specifications must be shown in either DA or CDC drawings (as indicated in the BASIX certificate) and will be checked for compliance by the certifying authority during construction and the consent authority at the approval stage.

ENERGY

COOLING SYSTEMS

Living Spaces	3 phase ducted AC, EER > 2.5
Bedrooms	3 phase ducted AC, EER > 2.5

HEATING SYSTEMS

Living Spaces	Wood heater / flued fireplace
Bedrooms	3 phase ducted AC, EER > 2.5

VENTILATION

Bathroom(s)	Single fan, ducted to facade, manual on/off
Kitchen (rangehood)	Single fan, ducted to facade, manual on/off
Laundry	Single fan, ducted to facade, manual on/off

ARTIFICIAL LIGHTING

Fixed Lamp Type to All Rooms	LED or CFL throughout
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POOL

Pool Heating	Electric heat pump
Pump type	Multi-speed (Min. 5 stars)
Pump Timer	Yes

PHOTOVOLTAICS

Peak Power Output	3.0kW
Slope	Between 0° and 10°
Orientation	1.5kW East, 1.5kW West

MISCELLANEOUS

Hot Water	Electric heat pump (Min 26 STCs)
Cooktop	Electric oven and gas cooktop
Outdoor Clothes Drying Line	Yes

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Single Dwelling

Certificate number: 1806275S

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

Secretary

Date of issue: Wednesday, 30 July 2025

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



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate SU9PYUOSCH.

Project summary

Project name	20 Beachcomber Drive
Street address	20 BEACHCOMBER Drive BYRON BAY 2481
Local Government Area	Byron Shire Council
Plan type and plan number	Deposited Plan DP262480
Lot no.	110
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	3

Project score

Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 75	Target 68
Materials	✓ -56	Target n/a

Certificate Prepared by

Name / Company Name: Ella Fairbairn

ABN (if applicable):

Description of project

Project address	
Project name	20 Beachcomber Drive
Street address	20 BEACHCOMBER Drive BYRON BAY 2481
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Lot no.	110
Section no.	-
Project type	
Project type	dwelling house (detached)
No. of bedrooms	3
Site details	
Site area (m²)	822
Roof area (m²)	233
Conditioned floor area (m²)	234.1
Unconditioned floor area (m²)	18.0
Total area of garden and lawn (m²)	325
Roof area of the existing dwelling (m²)	0

Assessor details and thermal loads		
NatHERS assessor number	101004	
NatHERS certificate number	SU9PYUOSCH	
Climate zone	10	
Area adjusted cooling load (MJ/ m².year)	53	
Area adjusted heating load (MJ/ m².year)	11	
Project score		
Water	✔ 40	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 75	Target 68
Materials	✔ -56	Target n/a

Schedule of BASIX commitments

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

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 5 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 5000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 300 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: - the cold water tap that supplies each clothes washer in the development - at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) - a tap that is located within 10 metres of the swimming pool in the development		✓ ✓ ✓	✓ ✓ ✓
Swimming Pool			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must not have a volume greater than 50 kilolitres.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
Assessor details and thermal loads			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate and the "Construction" and "Glazing" tables below.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Construction			
The applicant must construct the floors, walls, roofs, ceilings and glazing of the dwelling in accordance with the specifications listed in the tables below.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m ²	Insulation
floor - concrete slab on ground, conventional slab.	276.8	none
floor - suspended floor above garage, concrete - suspended; frame: no frame.	5.1	none
garage floor - concrete slab on ground.	37.9	none
external wall: concrete panel/plasterboard; frame: no frame.	145.1	none
external wall: framed (metal clad); frame: timber - untreated softwood.	89.7	rockwool batts, roll or pump-in
external garage wall: concrete panel/plasterboard; frame: no frame.	55.9	none
internal wall: plasterboard; frame: timber - untreated softwood.	111.1	none
internal wall: plasterboard; frame: timber - untreated softwood.	59.5	rockwool batts, roll or pump-in
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, timber - untreated softwood.	168	ceiling: rockwool batts, roll or pump-in; roof: foil backed blanket.
ceiling and roof - flat ceiling / flat roof, concrete - bare internal, timber - untreated softwood.	65.4	ceiling: none; roof: foil backed blanket.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazing			
The applicant must install windows, glazed doors and skylights as described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓

Frames	Maximum area - m2
aluminium	124.55
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	35.32
double	89.23
triple	0

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump with a performance of 26 to 30 STCs or better.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: wood heater; Energy rating: n/a		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The wood heater must have a compliance plate confirming that it complies with the relevant Australian standards, and must be installed in accordance with the requirements of all applicable regulatory authorities.			✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): electric heat pump		✓	
The applicant must install the following pump for the swimming pool in the development, or a pump with a higher energy rating: multi-speed with a performance of 5 stars.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of:			
• one set of photovoltaic collectors with the capacity to generate at least 1.5 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing west	✓	✓	✓
• another set of photovoltaic collectors with the capacity to generate at least 1.5 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing east	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. SU9PYUOSCH

Thermal performance
star rating

Generated on 30 Jul 2025 using FirstRate5: 5.5.5a (3.22)

Property

Address 20 Beachcomber Drive,
Byron Bay, NSW, 2481
Lot/DP 110/262480
NCC Class* Class 1a
Floor/all Floors
Type New Home

Plans

Main plan Issue 04 / 28.7.2025
Prepared by MvG

Construction and environment

Assessed floor area [m²]*	Exposure type
Conditioned* 234.1	suburban
Unconditioned* 55.9	NatHERS climate zone
Total 290	10 Brisbane AMO
Garage 37.9	



Accredited assessor

Name Ella Fairbairn
Business name Ella Fairbairn
Email ella.c.fairbairn@gmail.com
Phone 0417419022
Accreditation No. 101004
Assessor Accrediting Organisation
ABSA
Declaration of interest Yes, managed

NCC Requirements

NCC provisions Volume 2
State/Territory variation Yes

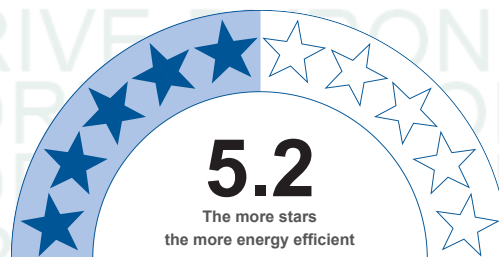
National Construction Code (NCC) requirements

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 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.



**NATIONWIDE
HOUSE**
ENERGY RATING SCHEME®

63.9 MJ/m²

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

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

Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	11	52.9
Load limits	N/A	N/A
Features determining load limits		
Floor type (lowest conditioned area)		N/A
NCC climate zone 1 or 2		N/A
Outdoor living area		N/A
Outdoor living area ceiling fan		N/A

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 <https://www.fr5.com.au/QRCodeLandIng?PublicId=SU9PYUOSCH>
When using either link,
ensure you are visiting
www.fr5.com.au.





About the ratings

Thermal performance rating

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

Whole of Home performance rating

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

Heating & 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 NatHERS heating and cooling load limits Standard 2022 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 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.

Graph key:



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

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		Occupancy/other
	Assessor checked	Consent authority/surveyor checked	Builder checked	Consent authority/surveyor checked	
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 Certificate?	☐	☐	☐	☐	☐
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 the values in the ABCB Standard 2022: NatHERS heating and cooling load limits for the appropriate climate zone?	☐	☐	☐	☐	☐



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 performance 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.					

Additional notes



Room *schedule*

Room	Zone Type	Area [m²]
Kitchen/Living/Dining	kitchen	112.4
Laundry	dayTime	8.6
Hall	dayTime	10.9
Store	unconditioned	10.7
Garage	garage	37.9
Rumpus	living	14
Bath	unconditioned	7.4
Bedroom 3	bedroom	16.2
Bedroom 2	bedroom	15.5
Bedroom 1	bedroom	20.9
Makeup	nightTime	8.3
WIR	nightTime	10.1
Stair	dayTime	11
Ensuite	nightTime	14.1

Window and glazed door *type and performance*

Default* windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
PVC-005-01 W	uPVC A DG Argon Fill Clear-Clear	2.6	0.5	0.48	0.53
ALM-002-04 A	Aluminium B SG Low Solar Gain Low-E	5.6	0.41	0.39	0.43

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living/-Dining	PVC-005-01 W	W.01	3000	6100	fixed	0.0	NE	No
Kitchen/Living/-Dining	PVC-005-01 W	D.02	2700	4570	sliding	45.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.12	500	2391	fixed	0.0	NW	No

*Refer to glossary.



Kitchen/Living/-Dining	PVC-005-01 W	W.13	500	2391	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.14	500	2391	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.15	500	2391	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.16	500	2391	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.17	500	2391	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.18	500	2345	fixed	0.0	NW	No
Kitchen/Living/-Dining	PVC-005-01 W	W.02	3000	2350	fixed	0.0	SE	No
Kitchen/Living/-Dining	PVC-005-01 W	D.03	3000	4800	sliding	45.0	SE	No
Kitchen/Living/-Dining	PVC-005-01 W	W.05	3000	2400	fixed	0.0	SE	No
Kitchen/Living/-Dining	PVC-005-01 W	W.06	3000	2400	fixed	0.0	SE	No
Kitchen/Living/-Dining	PVC-005-01 W	W.04	3000	2400	fixed	0.0	SE	No
Kitchen/Living/-Dining	PVC-005-01 W	W.03	3000	2400	fixed	0.0	SE	No
Garage	ALM-002-04 A	W.11	820	810	louvre	90.0	SW	No
Rumpus	ALM-002-04 A	W.10	820	4020	louvre	90.0	SW	No
Bath	ALM-002-04 A	W.09 (L)	820	2100	louvre	90.0	SW	No
Bedroom 3	ALM-002-04 A	W.08 (F)	2600	1800	fixed	0.0	SE	No
Bedroom 3	ALM-002-04 A	W.08 (L)	2600	900	louvre	90.0	SE	No
Bedroom 2	ALM-002-04 A	W.07 (F)	2600	1800	fixed	0.0	SE	No
Bedroom 2	ALM-002-04 A	W.07 (L)	2600	900	louvre	90.0	SE	No
Bedroom 1	ALM-002-04 A	W.19	2150	1390	fixed	0.0	NE	No
Bedroom 1	ALM-002-04 A	W.20 (F)	2150	1800	fixed	0.0	SE	No
Bedroom 1	ALM-002-04 A	W.20 (L)	2150	900	louvre	90.0	SE	No
Makeup	ALM-002-04 A	W.21	1840	900	louvre	90.0	SW	No
WIR	ALM-002-04 A	W.22	1840	900	louvre	90.0	SW	No
Ensuite	ALM-002-04 A	W.24	1840	1000	fixed	0.0	NW	No
Ensuite	ALM-002-04 A	W.23	1840	900	louvre	90.0	SW	No

Roof window* type and performance value

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit



No Data Available

Custom* roof windows

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

Roof window* schedule

Location	Window ID	Window no.	Opening %	Area [m²]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
No Data Available		

Skylight* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m²]	Orient-ation	Outdoor shade	Diffuser
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Kitchen/Living/Dining	2700	1950	90.0	NW
Store	2800	1800	100.0	NW
Garage	2800	6000	100.0	NW

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
1	20BC - 200mm Concrete	0.5	Medium		No
2	20BC - Steel I-Beam	0.5	Medium		No
3	20BC - Lightweight Metal Clad	0.7	Dark	Rockwool batt (k = 0.033) (R2.7)	No
4	20BC - 200mm Concrete Garage	0.5	Medium		No
5	20BC - 200mm Concrete K17	0.5	Medium	Polystyrene extruded (k = 0.028) (R1.1)	No

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature* (yes/no)
Kitchen/Living/Dining	1	3000	6198	NE	977	Yes



Kitchen/Living/Dining	2	500	6198	NE	850	Yes
Kitchen/Living/Dining	1	3000	14339	NW	7137	Yes
Kitchen/Living/Dining	3	500	14339	NW	0	Yes
Kitchen/Living/Dining	3	500	2395	NW	850	Yes
Kitchen/Living/Dining	1	3500	1118	NE	7923	Yes
Kitchen/Living/Dining	1	3500	2262	NW	6071	Yes
Kitchen/Living/Dining	1	3000	16689	SE	850	Yes
Kitchen/Living/Dining	2	500	16595	SE	850	Yes
Store	4	2800	4821	NE	10451	Yes
Store	4	2800	1845	NW	1201	Yes
Garage	4	2800	6525	NW	1193	Yes
Garage	4	2800	5809	SW	1004	Yes
Rumpus	5	2600	4023	SW	980	Yes
Bath	5	2600	2121	SW	972	Yes
Bedroom 3	1	2600	4802	SE	752	No
Bedroom 3	5	2600	3466	SW	980	Yes
Bedroom 2	1	2600	3533	SE	750	No
Bedroom 2	5	2600	3447	NE	0	Yes
Bedroom 1	3	2550	3372	NE	0	No
Bedroom 1	3	2550	3374	SW	0	No
Bedroom 1	3	2550	6205	SE	0	No
Makeup	3	2550	2140	SW	0	No
WIR	3	2550	2607	SW	0	No
Stair	3	2050	4836	NE	0	No
Ensuite	3	2050	2268	NE	0	No
Ensuite	3	2550	6218	NW	0	No
Ensuite	3	2550	2268	SW	0	No

Internal wall type

Wall ID	Wall type	Area [m²]	Bulk insulation
1	20BC - Lightweight PB	113.9	
2	20BC - Internal PB Ins	59.4	Rockwool batt (k = 0.033) (R2.7)
3	20BC - 200mm Concrete K17	8.5	Polystyrene extruded (k = 0.028) (R1.1)
4	20BC - 200mm Concrete	3.4	

Floor type

Location	Construction	Area [m²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Living/D-ining	20BC - 200mm Concrete Slab on Ground	6.5	Enclosed	R0.0	none



Kitchen/Living/D-ining	20BC - 200mm Concrete Slab on Ground	105.9	Enclosed	R0.0	none
Laundry	20BC - 200mm Concrete Slab on Ground	8.6	Enclosed	R0.0	none
Hall	20BC - 200mm Concrete Slab on Ground	10.9	Enclosed	R0.0	none
Store	20BC - 200mm Concrete Slab on Ground	9.1	Enclosed	R0.0	none
Store	20BC - 200mm Concrete Slab on Ground	1.5	Enclosed	R0.0	none
Garage	20BC - 200mm Concrete Slab on Ground	34.3	Enclosed	R0.0	none
Garage	20BC - 200mm Concrete Slab on Ground	3.6	Enclosed	R0.0	none
Rumpus	20BC - 200mm Concrete Slab on Ground	9.1	Enclosed	R0.0	none
Rumpus	20BC - 200mm Concrete Slab on Ground	4.8	Enclosed	R0.0	none
Bath	20BC - 200mm Concrete Slab on Ground	4.8	Enclosed	R0.0	none
Bath	20BC - 200mm Concrete Slab on Ground	2.5	Enclosed	R0.0	none
Bedroom 3	20BC - 200mm Concrete Slab on Ground	8.2	Enclosed	R0.0	none
Bedroom 3	20BC - 200mm Concrete Slab on Ground	8	Enclosed	R0.0	none
Bedroom 2	20BC - 200mm Concrete Slab on Ground	15.5	Enclosed	R0.0	none
Bedroom 1	20BC - 200mm Suspended Slab	20.9	Enclosed	R0.0	Carpet
Makeup	20BC - 200mm Concrete Slab on Ground	8.3	Enclosed	R0.0	Carpet
WIR	20BC - 200mm Concrete Slab on Ground	10.1	Enclosed	R0.0	Carpet
Stair	20BC - 200mm Concrete Slab on Ground	11	Enclosed	R0.0	Carpet
Ensuite	20BC - 200mm Concrete Slab on Ground	14.1	Enclosed	R0.0	Carpet

Ceiling type

Location	Construction material/type	Bulk insulation R-value [may include edge batt values]	Reflective wrap*
Kitchen/Living/D-ining	20BC - 200mm Concrete Slab on Ground	R0.0	No
Kitchen/Living/D-ining	Plasterboard	R4.8	No



Laundry	20BC - 200mm Concrete Slab on Ground	R0.0	No
Hall	20BC - 200mm Suspended Slab	R0.0	No
Hall	20BC - 200mm Concrete Slab on Ground	R0.0	No
Store	20BC - 200mm Concrete Slab on Ground	R0.0	No
Store	Plasterboard	R1.8	No
Store	20BC - 200mm Concrete Slab on Ground	R0.0	No
Garage	20BC - 200mm Concrete Slab on Ground	R0.0	No
Garage	Plasterboard	R1.8	No
Garage	20BC - 200mm Concrete Slab on Ground	R0.0	No
Rumpus	Plasterboard	R1.8	No
Rumpus	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bath	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bath	Plasterboard	R1.8	No
Bath	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bedroom 3	20BC - 200mm Suspended Slab	R0.0	No
Bedroom 3	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bedroom 3	20BC - 200mm Suspended Slab	R0.0	No
Bedroom 3	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bedroom 3	Plasterboard	R1.8	No
Bedroom 2	20BC - 200mm Suspended Slab	R0.0	No



Bedroom 2	20BC - 200mm Concrete Slab on Ground	R0.0	No
Bedroom 1	Plasterboard	R4.8	No
Makeup	Plasterboard	R4.8	No
WIR	Plasterboard	R4.8	No
Stair	Plasterboard	R4.8	No
Ensuite	Plasterboard	R4.8	No

Ceiling penetrations*

Location	Quantity	Type	Height [mm]	Width [mm]	Sealed/unsealed
Kitchen/Living/Dining	2	Exhaust Fans	250	250	Sealed
Kitchen/Living/Dining	1	Heater Flues	250	250	Unsealed
Kitchen/Living/Dining	42	Downlights	50	50	Sealed
Laundry	1	Exhaust Fans	250	250	Sealed
Bath	1	Exhaust Fans	250	250	Sealed
Bedroom 1	8	Downlights	50	50	Sealed
Makeup	4	Downlights	50	50	Sealed
WIR	4	Downlights	50	50	Sealed
Stair	4	Downlights	50	50	Sealed
Ensuite	6	Downlights	50	50	Sealed
Ensuite	2	Exhaust Fans	200	200	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Rumpus	1	1200
Bedroom 3	1	1200
Bedroom 2	1	1200
Bedroom 1	1	1200

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.7	Dark
SlabExt:Slab - Suspended Slab - External Insul : 300mm: 300mm Suspended Slab - External Insul	0.0	0.7	Dark

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]
No Data				
Available				



Appliance *schedule*

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

Note: A flat assumption of 5W/m2 is used for lighting, therefore lighting is not included in the appliance schedule.

Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.				

Hot water system

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Hot Water CER Zone	Zone 3 STC	Assessed daily load
No Whole of Home performance assessment conducted for this certificate.					

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Whole of Home performance assessment conducted for this certificate.			

Onsite renewable energy *schedule*

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

System type	Orientation	System size or generation capacity
No Whole of Home performance assessment conducted for this certificate.		

Battery *schedule*

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

System type	Size [battery storage capacity]
No Whole of Home performance assessment conducted for this certificate.	

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 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 air gap 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.

*Refer to glossary.



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)