

BASIX™ Certificate

Building Sustainability Index

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

Single Dwelling

Certificate number: 1821077S

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: Monday, 10 November 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 0012372645.

Project summary

Project name	K and M Burrows
Street address	80 HILLSIDE Parade BOOMERANG BEACH 2428
Local Government Area	Mid-Coast Council
Plan type and plan number	Deposited Plan DP1285824
Lot no.	4249
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	4

Project score

Water	✓ 41	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 100	Target 70
Materials	✓ -44	Target n/a

Certificate Prepared by

Name / Company Name: Concept Designs Australia

ABN (if applicable): 39715492700

Description of project

Project address	
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Section no.	-
Project type	
Project type	dwelling house (detached)
No. of bedrooms	4
Site details	
Site area (m ²)	1204
Roof area (m ²)	225
Conditioned floor area (m ²)	255.5
Unconditioned floor area (m ²)	21.4
Total area of garden and lawn (m ²)	400
Roof area of the existing dwelling (m ²)	0

Assessor details and thermal loads		
NatHERS assessor number	10137	
NatHERS certificate number	0012372645	
Climate zone	15	
Area adjusted cooling load (MJ/ m².year)	27	
Area adjusted heating load (MJ/ m².year)	24	
Project score		
Water	✓ 41	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 100	Target 70
Materials	✓ -44	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 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 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 200 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: - all toilets in the development - 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.)		✓ ✓ ✓	✓ ✓ ✓

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.	24.1	polystyrene
floor - suspended floor above open subfloor, concrete - suspended; frame: no frame.	82.7	fibreglass batts or roll
floor - above habitable rooms or mezzanine, concrete - suspended; frame: no frame..	118.5	none
floor - suspended floor above garage, concrete - suspended; frame: no frame.	51.6	fibreglass batts or roll
garage floor - concrete slab on ground.	61	none
external wall: concrete block/plasterboard; frame: timber - H2 treated softwood.	10.1	fibreglass batts or roll
external wall: cavity brick; frame: no frame.	43.6	foil-foam composite board
external wall: framed (fibre cement sheet or boards); frame: timber - H2 treated softwood.	163.9	fibreglass batts or roll
external garage wall: concrete block/plasterboard; frame: timber - H2 treated softwood.	55.9	none
internal wall: single skin masonry; frame: timber - H2 treated softwood.	41.4	none
internal wall: plasterboard; frame: timber - H2 treated softwood.	146	none
ceiling and roof - raked ceiling / pitched or skillion roof, framed - metal roof, timber - H2 treated softwood.	225	ceiling: fibreglass batts or roll; 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	106.9
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	9.1
double	97.8
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 boosted solar with a performance of 15 to 20 STCs or better.	✓	✓	✓
Cooling system			
The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
Heating system			
The living areas must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
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: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
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			
The applicant must install a window and/or skylight in the kitchen of the dwelling for 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 4 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
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: • photovoltaic collectors with the capacity to generate at least 12 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing north	✓	✓	✓
Other			
The applicant must install an induction 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. 0012372645

Generated on 10 Nov 2025 using BERS Pro v5.2.6 (3.23)

Property

Address 80 Hillside Parade,
ELIZABETH BEACH , NSW , 2428

Lot/DP Lot 4249 DP 1285824

NCC class* 1a

Floor/all Floors G of 3 floors

Type New Home

Plans

Main plan Barrows Hillside

Prepared by Moore Design

Construction and environment

Assessed floor area [m2]*		Exposure type
Conditioned*	255.5	Suburban
Unconditioned*	21.9	
Total	337.9	NatHERS climate zone
Garage	60.5	15 Williamtown



Accredited assessor

Name Leanne Houseman

Business name Concept Designs Australia

Email leanne.cdaus@outlook.com

Phone 0408 864 184

Accreditation No. 10137

Assessor Accrediting Organisation

HERA

Declaration of interest Declaration completed: no conflicts

NCC Requirements

NCC provisions Volume Two

State/Territory variation Yes

National Construction Code (NCC) requirements

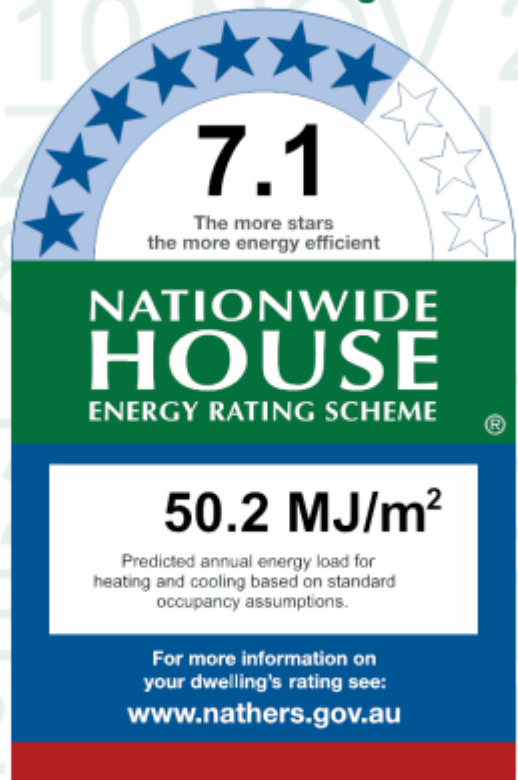
The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two.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

Thermal performance Star rating



Thermal performance [MJ/m²]

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	23.6	26.6
Load limits	N/A	N/A

Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

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
[hstar.com.au/QR/Generate?](http://hstar.com.au/QR/Generate?p=0HfrCILWk)
[p=0HfrCILWk](http://hstar.com.au/QR/Generate?p=0HfrCILWk).
When using either link,
ensure you are visiting
hstar.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 *ABC Standard 2022: 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

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

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 by whom each item should be checked. 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 what is shown	☐	☐	☐	☐	☐



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

Vapour barrier to be added to external wall insulation.

Cavity brick has been modelled with 190mm concrete block external skin, single brick internal skin, due to choices in the software.

Room schedule

Room	Zone Type	Area [m ²]
Garage	Garage	60.48
Entrance	Daytime	21.1
Lift GF	Daytime	2.16
Bath	Unconditioned	7.76
WC	Unconditioned	3.44
Laundry	Unconditioned	7.94
Hall FF	Daytime	32.08
Lift FF	Daytime	2.2
Stair FF	Daytime	11.72
Office	Daytime	7.66
Bedroom 4	Bedroom	15.34
Bedroom 2	Bedroom	16.87
Bedroom 3	Bedroom	16.82
Kitchen/Living	Kitchen/Living	100.75
Stair SF	Daytime	11.5
Lift SF	Daytime	2.2
Linen	Daytime	2.4
WC SF	Unconditioned	2.79
Ensuite	Nighttime	10.6
Bedroom 1	Bedroom	25.16

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
No Data Available					

Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-005-002	Aluminium Double Hung Window SG 5Clr	6.2	0.72	0.68	0.75



Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-008-025	Aluminium Awning Window DG LB Clr 5/10/5	3.4	0.43	0.41	0.45
AWS-021-015	Aluminium French Door DG LB ClrSI 6.38/10/4	3.4	0.39	0.37	0.41
AWS-031-047	Aluminium Double Hung Window DG LB Clr 4/12/4	3.6	0.42	0.40	0.44
AWS-110-073	Aluminium Sliding Door DG LB Clr 5/12/5	2.4	0.53	0.51	0.56
AWS-069-009	Aluminium Fixed Window DG LB Clr 4/12/4	2.5	0.54	0.51	0.56
AWS-058-003	Aluminium Louvre Window SG 6EVClr	4.9	0.43	0.40	0.45
AWS-003-302	Aluminium Sliding Window DG LB Clr 4/12/4	3.2	0.47	0.45	0.49

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bath	AWS-005-002-001	W06	1590	600	Double Hung	45	E	No
WC	AWS-005-002-001	W05	1590	600	Double Hung	45	S	No
Laundry	AWS-005-002-001	W04	1080	600	Double Hung	45	S	No
Hall FF	AWS-008-025-001	W01	2590	4050	Awning	30	N	No
Hall FF	AWS-021-015-001	D05	2590	900	Casement	90	E	No
Office	AWS-031-047-001	W03	1600	800	Double Hung	10	W	Yes
Bedroom 4	AWS-008-025-001	W02	1800	4200	Double Hung	10	N	No
Bedroom 2	AWS-110-073-001	D03	2590	2628	Sliding	45	N	No
Bedroom 2	AWS-069-009-001	W07	1490	1000	Fixed	00	E	Yes
Bedroom 2	AWS-058-003-001	W07	1490	1000	Louvre	90	E	Yes
Bedroom 3	AWS-110-073-001	D04	2590	2662	Sliding	45	N	No
Kitchen/Living	AWS-021-015-001	D09	2500	1250	Casement	90	S	No
Kitchen/Living	AWS-003-302-002	W14	1600	4050	Sliding	66	S	No
Kitchen/Living	AWS-110-073-001	D07	2500	4190	Sliding	66	N	No

* Refer to glossary.



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	AWS-110-073-001	W08	2500	5400	Sliding	75	N	No
Kitchen/Living	AWS-058-003-001	D06	2500	600	Louvre	90	N	No
Kitchen/Living	AWS-058-003-001	W15	1600	1000	Louvre	90	E	Yes
Kitchen/Living	AWS-069-009-001	W16	1600	3000	Fixed	00	E	Yes
Kitchen/Living	AWS-069-009-001	W16	380	6487	Fixed	00	N	No
Kitchen/Living	AWS-069-009-001	W17-19	765	11350	Awning	10	N	No
Stair SF	AWS-069-009-001	W13	2500	3980	Fixed	00	S	No
WC SF	AWS-005-002-001	W12	1500	800	Double Hung	45	S	No
Ensuite	AWS-031-047-001	W11	2500	1000	Double Hung	45	S	No
Ensuite	AWS-058-003-001	W10	1200	600	Louvre	90	N	No
Bedroom 1	AWS-110-073-001	D08	2500	4050	Sliding	66	N	No
Bedroom 1	AWS-069-009-001	W21	765	1616	Awning	30	N	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
VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25

Roof window* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Kitchen/Living	VEL-011-01 W	S6	0	900	750	N	No	No
Kitchen/Living	VEL-011-01 W	S7	0	900	750	N	No	No
Kitchen/Living	VEL-011-01 W	S8	0	900	750	N	No	No
Kitchen/Living	VEL-011-01 W	S9	0	900	750	N	No	No



Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
Bedroom 1	VEL-011-01 W	S5	0	900	750	N	No	No

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 [m ²]	Orientation	Outdoor shade	Diffuser
No Data Available							

External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Garage	2930	6000	90	N
Entrance	2900	1400	90	N
Hall FF	2400	820	90	S

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Concrete Block, Lined Timber Stud Frame	0.85		No insulation	No
EW-2	Concrete Block	0.85		No insulation	No
EW-3	Cavity Brick	0.85		Foil Sided Bubble Wrap, Anti-glare one side + Bulk Insulation R0.1	No
EW-4	Cavity Brick	0.50		Foil Sided Bubble Wrap, Anti-glare one side + Bulk Insulation R0.1	No
EW-5	Fibro Timber Stud Frame Panel Direct Fix	0.85		Bulk Insulation R2.7	No
EW-6	Concrete Block, Lined Timber Stud Frame	0.50		Bulk Insulation R2.5	No
EW-7	Fibro Timber Stud Frame Panel Direct Fix	0.50		Bulk Insulation R2.7	No
EW-8	Fibro Timber Stud Frame Panel on Battens	0.85		Bulk Insulation R5.4	No
EW-9	Concrete Block, Lined Timber Stud Frame	0.85		Bulk Insulation R2.5	No



External wall *schedule*

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Garage	EW-1	2930	9895	S	100	No
Garage	EW-2	2931	7095	N	5400	No
Garage	EW-2	2930	1400	N	0	No
Garage	EW-1	2930	6700	E	0	No
Entrance	EW-3	2930	2795	S	100	No
Entrance	EW-4	2930	6700	W	100	No
Entrance	EW-5	2930	4195	N	0	No
Bath	EW-6	1000	2295	S	0	No
Bath	EW-7	1590	2295	S	0	No
Bath	EW-8	2590	3495	E	0	No
WC	EW-9	2590	1590	S	5000	No
Laundry	EW-9	1200	2195	S	0	No
Laundry	EW-7	1391	2195	S	5000	No
Laundry	EW-9	2590	945	S	0	No
Hall FF	EW-5	2590	1695	S	3500	No
Hall FF	EW-5	2892	4390	N	5400	Yes
Hall FF	EW-8	2590	1440	E	0	No
Stair FF	EW-4	1600	4145	S	0	No
Stair FF	EW-7	990	4145	S	0	No
Stair FF	EW-3	2590	3495	W	5100	No
Office	EW-5	2590	2695	S	3500	No
Office	EW-8	2590	2895	W	0	No
Bedroom 4	EW-8	2590	3595	W	0	No
Bedroom 4	EW-8	2590	4300	N	2100	Yes
Bedroom 4	EW-8	2590	3300	E	11400	No
Bedroom 2	EW-8	2590	3445	N	4000	Yes
Bedroom 2	EW-8	2590	4945	E	0	No
Bedroom 3	EW-8	2590	3300	W	8700	No
Bedroom 3	EW-8	2590	3445	N	4000	Yes



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Kitchen/Living	EW-5	2500	7045	S	600	No
Kitchen/Living	EW-5	2501	4295	N	2100	Yes
Kitchen/Living	EW-5	2500	7100	N	4100	Yes
Kitchen/Living	EW-5	3000	7100	E	300	No
Kitchen/Living	EW-5	2501	2900	E	0	No
Stair SF	EW-5	2500	4090	S	600	No
WC SF	EW-5	2500	1640	S	600	No
Ensuite	EW-5	2500	2695	S	600	No
Ensuite	EW-5	2500	1500	W	0	No
Ensuite	EW-5	2500	700	S	0	No
Ensuite	EW-5	2500	2000	W	0	No
Ensuite	EW-5	2500	700	N	0	No
Bedroom 1	EW-5	3000	6495	W	200	No
Bedroom 1	EW-5	2500	4295	N	2100	Yes

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation
IW-001	Timber Stud Frame, Direct Fix Plasterboard	44.81	Bulk Insulation, No Air Gap R2.5
IW-002	Timber Stud Frame, Direct Fix Plasterboard	134.61	No insulation
IW-003	Timber Stud Frame, Reverse Brick Veneer	0.00	Bulk Insulation, No Air Gap R2.5
IW-004	TimberStud Frame, Brick Veneer	4.75	Bulk Insulation, No Air Gap R2.5
IW-005	Single Skin Brick	43.83	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage	Concrete Slab on Ground 100mm	60.45	None	No Insulation	Bare
Entrance	Concrete Slab on Ground 100mm	21.10	None	Bulk Insulation in Contact with Floor R1.1	Ceramic Tiles 8mm



Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Lift GF	Concrete Slab on Ground 100mm	2.16	None	Bulk Insulation in Contact with Floor R1.1	Bare
Bath / Garage	Concrete Timber Framed Above Plasterboard 19mm	7.76		Bulk Insulation R2.5	Ceramic Tiles 8mm
WC / Garage	Concrete Timber Framed Above Plasterboard 19mm	3.44		Bulk Insulation R2.5	Ceramic Tiles 8mm
Laundry / Garage	Concrete Timber Framed Above Plasterboard 19mm	7.94		Bulk Insulation R2.5	Ceramic Tiles 8mm
Hall FF / Garage	Concrete Timber Framed Above Plasterboard 150mm	6.11		Bulk Insulation R2.5	Ceramic Tiles 8mm
Hall FF / Entrance	Concrete Timber Framed Above Plasterboard 150mm	4.30		No Insulation	Ceramic Tiles 8mm
Hall FF	Suspended Concrete Slab 150mm	3.39	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Lift FF / Lift GF	Concrete Timber Framed Above Plasterboard 19mm	0.04		No Insulation	Ceramic Tiles 8mm
Stair FF / Garage	Concrete Timber Framed Above Plasterboard 19mm	0.00		Bulk Insulation R2.5	Cork Tiles or Parquetry 8mm
Stair FF / Entrance	Concrete Timber Framed Above Plasterboard 19mm	2.05		No Insulation	Cork Tiles or Parquetry 8mm
Office	Suspended Concrete Slab 150mm	7.66	Totally Open	Bulk Insulation in Contact with Floor R2.5	Cork Tiles or Parquetry 8mm
Bedroom 4	Suspended Concrete Slab 150mm	15.34	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Bedroom 2 / Garage	Concrete Timber Framed Above Plasterboard 150mm	5.32		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
Bedroom 2	Suspended Concrete Slab 150mm	10.92	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm



Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 3 / Garage	Concrete Timber Framed Above Plasterboard 150mm	5.27		Bulk Insulation R2.5	Carpet+Rubber Underlay 18mm
Bedroom 3	Suspended Concrete Slab 150mm	10.87	Totally Open	Bulk Insulation in Contact with Floor R2.5	Carpet+Rubber Underlay 18mm
Kitchen/Living / Bath	Concrete Timber Framed Above Plasterboard 150mm	7.38		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living / WC	Concrete Timber Framed Above Plasterboard 150mm	3.01		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living / Laundry	Concrete Timber Framed Above Plasterboard 150mm	8.01		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living / Hall FF	Concrete Timber Framed Above Plasterboard 150mm	30.81		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living / Bedroom 2	Concrete Timber Framed Above Plasterboard 150mm	16.83		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living / Bedroom 3	Concrete Timber Framed Above Plasterboard 150mm	16.83		No Insulation	Carpet+Rubber Underlay 18mm
Kitchen/Living	Suspended Concrete Slab 150mm	13.87	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Stair SF / Stair FF	Concrete Timber Framed Above Plasterboard 19mm	5.90		No Insulation	Ceramic Tiles 8mm
Lift SF / Lift FF	Concrete Timber Framed Above Plasterboard 19mm	0.04		No Insulation	Ceramic Tiles 8mm
Linen	Suspended Concrete Slab 150mm	2.40	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
WC SF	Suspended Concrete Slab 150mm	2.79	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Ensuite	Suspended Concrete Slab 150mm	10.60	Totally Open	Bulk Insulation in Contact with Floor R2.5	Ceramic Tiles 8mm
Bedroom 1 / Hall FF	Concrete Timber Framed Above Plasterboard 19mm	1.85		No Insulation	Ceramic Tiles 8mm
Bedroom 1 / Office	Concrete Timber Framed Above Plasterboard 19mm	7.50		No Insulation	Ceramic Tiles 8mm



Location	Construction	Area [m ²]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1 / Bedroom 4	Concrete Timber Framed Above Plasterboard 19mm	15.15		No Insulation	Ceramic Tiles 8mm

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage	Plasterboard on Timber	Bulk Insulation R2.5	
Garage	Concrete Timber Framed Above Plasterboard	Bulk Insulation R2.5	
Entrance	Concrete Timber Framed Above Plasterboard	No Insulation	
Lift GF	Concrete Timber Framed Above Plasterboard	No Insulation	
Bath	Concrete Timber Framed Above Plasterboard	No Insulation	
WC	Concrete Timber Framed Above Plasterboard	No Insulation	
Laundry	Concrete Timber Framed Above Plasterboard	No Insulation	
Hall FF	Concrete Timber Framed Above Plasterboard	No Insulation	
Lift FF	Concrete Timber Framed Above Plasterboard	No Insulation	
Stair FF	Concrete Timber Framed Above Plasterboard	No Insulation	
Office	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 4	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 2	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 3	Concrete Timber Framed Above Plasterboard	No Insulation	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R6	
Kitchen/Living	Plasterboard on Timber	Bulk Insulation R6	
Stair SF	Plasterboard on Timber	Bulk Insulation R6	
Lift SF	Plasterboard on Timber	Bulk Insulation R6	
Linen	Plasterboard on Timber	Bulk Insulation R6	
WC SF	Plasterboard on Timber	Bulk Insulation R6	
Ensuite	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R6	

Ceiling penetrations*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Entrance	4	Downlights - LED	100	Sealed
Bath	2	Downlights - LED	100	Sealed



Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bath	1	Exhaust Fans	300	Sealed
WC	1	Downlights - LED	100	Sealed
WC	1	Exhaust Fans	300	Sealed
Laundry	2	Downlights - LED	100	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Hall FF	7	Downlights - LED	100	Sealed
Office	2	Downlights - LED	100	Sealed
Bedroom 4	3	Downlights - LED	100	Sealed
Bedroom 2	4	Downlights - LED	100	Sealed
Bedroom 3	4	Downlights - LED	100	Sealed
Kitchen/Living	20	Downlights - LED	100	Sealed
Stair SF	3	Downlights - LED	100	Sealed
Linen	1	Downlights - LED	100	Sealed
WC SF	1	Downlights - LED	100	Sealed
WC SF	1	Exhaust Fans	300	Sealed
Ensuite	2	Downlights - LED	100	Sealed
Ensuite	1	Exhaust Fans	300	Sealed
Bedroom 1	5	Downlights - LED	100	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Office	1	1200
Bedroom 4	1	1400
Bedroom 2	1	1400
Bedroom 3	1	1400
Kitchen/Living	2	1800
Bedroom 1	1	1800

Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Added Insulation, No air Gap	0.50	Medium
Corrugated Iron Timber Frame	No Insulation, Only an Air Gap	0.50	Medium



Construction	Added insulation [R-value]	Solar absorptance	Roof shade [colour]
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.85	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 Data Available				

Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

Onsite Renewable Energy *Schedule*

System Type	Orientation	System Size Or Generation Capacity
No Data Available		



Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



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 home's 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

AFRC	Australian Fenestration Rating Council
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, 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.
COP	Coefficient of performance
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it will include garages.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
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 home's 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 – protected	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category – suburban	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 operability 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.
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.
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.
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 Regulator (CER)
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 or continuous thermal breaks such as polystyrene insulation sheathing or plastic strips
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	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.