

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. 0012713046

Generated on 16 Jan 2026 using BERS Pro v5.2.6 (3.23)

Property

Address 12 Bykool Avenue,
KINGSGROVE, NSW, 2208
Lot/DP Lot 8 DP 20665
NCC class* 1a
Floor/all Floors G of 3 floors
Type New Home

Plans

Main plan n/a
Prepared by n/a

Construction and environment

Assessed floor area [m²]*	Exposure type
Conditioned* 285.5	Suburban
Unconditioned* 38.4	NatHERS climate zone
Total 576.7	56 Mascot (Sydney Airport)
Garage 252.7	



Accredited assessor

Name Zoran Cvetkovski
Business name Sustainability-Z
Email sustainability-z@outlook.com
Phone 0414273176
Accreditation No. DMN/13/1641
Assessor Accrediting Organisation
Design Matters National
Declaration of interest Declaration not completed

NCC Requirements

NCC provisions Volume Two
State/Territory variation Yes

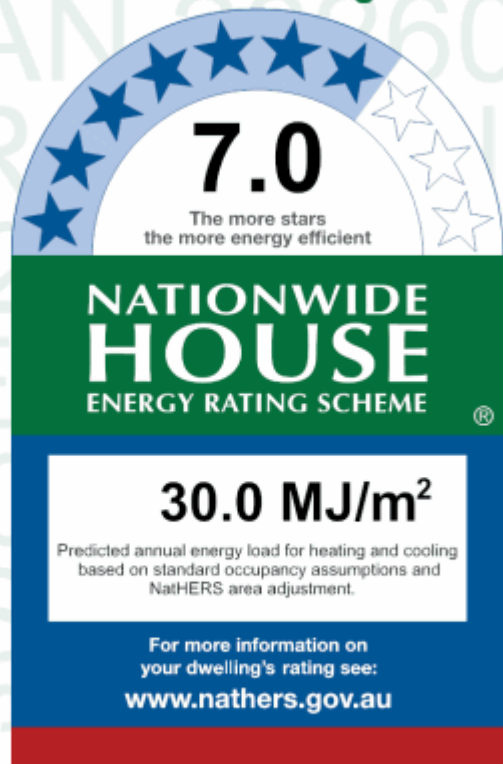
National Construction Code (NCC) requirements

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.

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
Area adjustment included

	Heating	Cooling
Modelled Load limits	18.3 N/A	11.7 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?p=GJpSWEvPR
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, cooking, plug-in loads 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 Standard 2025: 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

Rated with provisional values for downlights. All downlights: IC-F /IC-4/ (insulation covered/

including the control gears/) rated as per AS/NZS standard 60598 and IP (sealed) rated as per BS EN

60529:1992, European IEC 60509:1989. Rated with exhaust fans (clear 300mm).

Rated with ceiling fans (1200mm) throughout (as shown on the plans).

All bathrooms with ventilation opening of less than 5% are rated with mechanical ventilation.

Rated with provisional floor covering/6.5 as per the NatHERS Technical Note.

Rated with concrete walls in the basement, double brick walls on the ground floor and brick veneer on the first floor.

Rated with lightweight internal walls.

Rated with light-coloured walls/as per the Finishes Schedule.

Rated with medium-coloured roof/9.2 as per the NatHERS Technical Note

Rated with reduced insulation of R2.5 near the eave in the distance of 580mm (as per the housing provision note 10.8).

Rated with AWS windows.

All obscure windows are rated as custom windows/8.7 as per the NatHERS Technical Note.

W11 and W12 are rated as awning windows (as per the elevation).

D04, D05, D15 and DCS02 are rated as aluminium framed glass doors (worst-case scenario).

Rated with 80% skylight shading.

All coffer ceiling verticals and walls against the roof-space, to be insulated, with the same

insulation as the ceiling insulation (the skylight shaft to be insulated with min R5.0).

Where the roof is extended over an open area such as a deck or carport: A barrier to be installed

within the roof space to separate the space above the zoned part of the house and the space above

the open veranda.

Thermal Compliance Provision: Data provided is for thermal performance modeling only, based on assumptions from the

Designer's email instructions. If onsite construction, window sizes, or material specifications vary from these

assumptions, this assessment is not valid, and a full recalculation is required.

Room schedule

Room	Zone Type	Area [m ²]
Carpark-BSMNT	Garage	252.7
Lift-BSMNT	Daytime	2.73
Stairs-BSMNT	Daytime	6.42
Guest Bed-GF	Bedroom	13.01
ENS/G.Bed-GF	Nighttime	3.96
WIR/G.Bed-GF	Nighttime	2.06
Study-GF	Daytime	16.3
Stairs-GF	Daytime	6.76
Lift-GF	Daytime	2.85



Room	Zone Type	Area [m ²]
Bath-GF	Unconditioned	6.28
Laundry-GF	Unconditioned	9.65
B.Pantry-GF	Daytime	11.32
Ktch/Din/Liv-GF	Kitchen/Living	92.55
Hall-GF	Daytime	19.08
Entry-GF	Daytime	8.91
Master Bed-FF	Bedroom	14.82
WIR/M.Bed-FF	Daytime	11.31
ENS/M.Bed-FF	Unconditioned	8.81
Bath S-FF	Unconditioned	6.21
Bed 1-FF	Bedroom	14.05
Bed 2-FF	Bedroom	14.05
Bed 4-FF	Bedroom	13.81
Bed 3-FF	Bedroom	14.53
Bath N-FF	Unconditioned	7.49
Lift-FF	Daytime	2.85
Hall-FF	Daytime	29.43
Stairs-FF	Daytime	11.8
Void/Dining-FF	Unconditioned	26.53

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-007-001	Aluminium Awning Window SG 3Clr	6.5	0.66	0.63	0.69
AWS-088-003	Aluminium Awning Window DG AGG Is SI EA 4/12/4	2.7	0.57	0.54	0.60
AWS-021-007	Aluminium French Door DG 4Sn/10/4Clr	3.9	0.38	0.36	0.40



Custom windows*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
AWS-089-046	Aluminium Sliding Door DG LB Clr 5/12/5	2.2	0.56	0.53	0.59
AWS-067-009	Aluminium Fixed Window DG LB Clr 4/12/4	2.1	0.53	0.50	0.56
AWS-003-055	Aluminium Sliding Window DG AGG PRIME Clr 4/12/4	3.4	0.44	0.42	0.46

Window and glazed door schedule

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Carpark-BSMNT	AWS-007-001-001	W32	500	2170	Awning	90	N	No
Carpark-BSMNT	AWS-007-001-001	W33	500	1450	Awning	90	N	No
Carpark-BSMNT	AWS-007-001-001	W37	500	2170	Awning	90	S	No
Carpark-BSMNT	AWS-007-001-001	W36	500	2170	Awning	90	S	No
Carpark-BSMNT	AWS-007-001-001	W35	500	2170	Awning	90	S	No
Carpark-BSMNT	AWS-007-001-001	W34	500	2170	Awning	90	S	No
Guest Bed-GF	AWS-088-003-001	W02	1800	1450	Awning	10	N	No
Guest Bed-GF	AWS-088-003-001	W01	2700	2410	Awning	60	W	No
ENS/G.Bed-GF	AWS-088-003-001	W03	600	1210	Awning	30	N	No
Study-GF	AWS-088-003-001	W13	1475	1450	Awning	10	S	No
Study-GF	AWS-088-003-001	W14	2500	2410	Awning	60	W	No
Stairs-GF	AWS-021-007-001	D04	2340	820	Casement	90	E	No
Bath-GF	AWS-088-003-001	W04	600	1450	Awning	40	N	No
Laundry-GF	AWS-021-007-001	W05	2400	1000	Casement	90	N	No
Laundry-GF	AWS-088-003-001	W05	950	570	Awning	90	N	No
B.Pantry-GF	AWS-088-003-001	W06	600	1450	Awning	40	N	No



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
B.Pantry-GF	AWS-089-046-001	DCS02	2340	820	Sliding	90	E	No
Ktch/Din/Liv-GF	AWS-088-003-001	W09	2700	900	Awning	90	S	No
Ktch/Din/Liv-GF	AWS-088-003-001	W10	2700	900	Awning	90	S	No
Ktch/Din/Liv-GF	AWS-088-003-001	W11	2700	900	Awning	90	S	No
Ktch/Din/Liv-GF	AWS-088-003-001	W12	2700	900	Awning	90	S	No
Ktch/Din/Liv-GF	AWS-067-009-001	Glass Wall	3000	4000	Fixed	00	W	No
Ktch/Din/Liv-GF	AWS-089-046-001	SD01	2700	7200	Sliding	75	E	No
Hall-GF	AWS-021-007-001	D05	2340	820	Casement	90	N	No
Hall-GF	AWS-089-046-001	SD02	2650	2410	Sliding	45	S	No
Entry-GF	AWS-067-009-001	W15	2700	300	Fixed	00	W	No
Entry-GF	AWS-067-009-001	W16	2700	300	Fixed	00	W	No
Master Bed-FF	AWS-088-003-001	W21	900	610	Awning	10	N	No
Master Bed-FF	AWS-088-003-001	W38	900	610	Awning	10	N	No
Master Bed-FF	AWS-089-046-001	SD04	2400	2480	Sliding	45	E	No
ENS/M.Bed-FF	AWS-088-003-001	W26	600	610	Awning	90	S	No
ENS/M.Bed-FF	AWS-088-003-001	W25	600	610	Awning	90	S	No
Bath S-FF	AWS-088-003-001	W27	600	1210	Awning	45	S	No
Bed 1-FF	AWS-088-003-001	W28	900	1810	Awning	10	S	No
Bed 2-FF	AWS-088-003-001	W29	900	1810	Awning	10	S	No
Bed 4-FF	AWS-003-055-001	W30	900	1210	Sliding	10	S	No
Bed 4-FF	AWS-088-003-001	W31	2500	2410	Awning	60	W	No
Bed 3-FF	AWS-003-055-001	W40	900	1210	Sliding	10	N	No
Bed 3-FF	AWS-089-046-001	SD03	2650	2410	Sliding	45	W	No



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bath N-FF	AWS-088-003-001	W19	600	1450	Awning	40	N	No
Hall-FF	AWS-021-007-001	D15	2340	820	Casement	90	W	No
Stairs-FF	AWS-067-009-001	W18	2400	3260	Fixed	00	N	No
Void/Dining-FF	AWS-088-003-001	W22	2400	3010	Awning	60	N	No
Void/Dining-FF	AWS-088-003-001	W23	2400	3010	Awning	60	E	No
Void/Dining-FF	AWS-067-009-001	W24	2400	3260	Fixed	00	S	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
WIR/M.Bed-FF	VEL-011-01 W	SK02	0	1275	1275	N	Yes	Yes
Hall-FF	VEL-011-01 W	SK01	0	1275	1275	N	Yes	Yes
Void/Dining-FF	VEL-011-01 W	SK03	0	970	665	N	Yes	Yes
Void/Dining-FF	VEL-011-01 W	SK04	0	970	665	N	Yes	Yes
Void/Dining-FF	VEL-011-01 W	SK05	0	970	665	N	Yes	Yes
Void/Dining-FF	VEL-011-01 W	SK06	0	970	665	N	Yes	Yes

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
Carpark-BSMNT	2400	3500	90	W
Carpark-BSMNT	2340	820	90	S
Entry-GF	2690	1060	90	W

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Tilt up Concrete	0.50		No insulation	No
EW-2	Tilt up Concrete	0.73		No insulation	No
EW-3	Tilt Up Concrete, Lined Timber Stud Frame	0.50		Bulk Insulation R2.5	No
EW-4	Cavity Brick	0.30		Foil Sided Bubble Wrap, Anti-glare one side	No
EW-5	Timber Stud Frame Brick Veneer	0.30		Reflective foil with bulk no gap R2.5	Yes

External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Carpark-BSMNT	EW-1	1900	4895	N	0	No
Carpark-BSMNT	EW-1	800	4895	N	100	No
Carpark-BSMNT	EW-1	2700	19695	N	100	No
Carpark-BSMNT	EW-1	2700	10300	E	100	No
Carpark-BSMNT	EW-1	2150	23500	S	0	No
Carpark-BSMNT	EW-1	550	23500	S	100	No



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Carpark-BSMNT	EW-2	2700	4800	W	3700	No
Carpark-BSMNT	EW-1	2700	3900	S	4900	No
Carpark-BSMNT	EW-1	2200	5500	W	0	No
Carpark-BSMNT	EW-1	500	5500	W	100	No
Stairs-BSMNT	EW-3	1900	2790	N	0	No
Stairs-BSMNT	EW-3	800	2790	N	100	No
Guest Bed-GF	EW-4	3000	3295	N	100	No
Guest Bed-GF	EW-4	3000	900	S	6400	No
Guest Bed-GF	EW-4	3000	4000	W	400	Yes
ENS/G.Bed-GF	EW-4	3000	1590	N	100	No
Study-GF	EW-4	3000	600	N	6400	No
Study-GF	EW-4	3000	3995	E	0	No
Study-GF	EW-4	3000	4100	S	100	No
Study-GF	EW-4	3000	4000	W	650	Yes
Stairs-GF	EW-4	3000	1195	E	18700	Yes
Stairs-GF	EW-4	3000	3895	N	100	No
Bath-GF	EW-4	3000	2095	N	700	Yes
Bath-GF	EW-4	3000	600	W	10400	No
Laundry-GF	EW-4	3000	2590	N	700	Yes
B.Pantry-GF	EW-4	3000	600	W	15100	No
B.Pantry-GF	EW-4	3000	6800	N	100	No
B.Pantry-GF	EW-4	3000	1695	E	6000	Yes
Ktch/Din/Liv-GF	EW-4	3000	12600	S	100	No
Ktch/Din/Liv-GF	EW-4	3000	3995	W	9250	Yes
Ktch/Din/Liv-GF	EW-4	3000	8595	E	6000	Yes
Hall-GF	EW-4	3000	1195	N	1300	Yes
Hall-GF	EW-4	3000	3990	S	4100	Yes
Entry-GF	EW-4	3000	2290	W	2200	Yes
Entry-GF	EW-4	3000	495	S	4100	No
Master Bed-FF	EW-5	3000	4295	N	100	No
Master Bed-FF	EW-5	3000	3495	E	7800	Yes

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
WIR/M.Bed-FF	EW-5	3000	995	E	7800	No
WIR/M.Bed-FF	EW-5	3000	1100	S	5900	No
WIR/M.Bed-FF	EW-5	3000	1500	E	8900	No
ENS/M.Bed-FF	EW-5	3000	2590	S	100	No
Bath S-FF	EW-5	3000	1690	S	100	No
Bed 1-FF	EW-5	3000	3590	S	100	No
Bed 2-FF	EW-5	3000	3590	S	100	No
Bed 4-FF	EW-5	3000	3495	S	100	No
Bed 4-FF	EW-5	3000	4000	W	100	Yes
Bed 4-FF	EW-5	3000	1000	N	6400	No
Bed 3-FF	EW-5	3000	3595	N	100	No
Bed 3-FF	EW-5	3000	4095	W	1700	Yes
Bath N-FF	EW-5	3000	2090	N	100	No
Hall-FF	EW-5	3000	2190	W	2900	Yes
Stairs-FF	EW-5	3000	5090	N	100	No
Void/Dining-FF	EW-5	3000	6195	N	6100	Yes
Void/Dining-FF	EW-5	3000	4300	E	2700	Yes
Void/Dining-FF	EW-5	3000	6195	S	100	No

Internal wall type

Wall ID	Wall type	Area [m ²]	Bulk insulation [R-value]
IW-001	Timber Stud Frame, Direct Fix Plasterboard	19.44	Bulk Insulation, No Air Gap R2.5
IW-002	Timber Stud Frame, Direct Fix Plasterboard	370.90	No insulation

Floor type

Location	Construction	Area [m ²]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Carpark-BSMNT	Concrete Slab on Ground 100mm	252.62	None	No Insulation	N/A	Bare
Lift-BSMNT	Concrete Slab on Ground 100mm	2.73	None	Bulk Insulation in Contact with Floor R0.8	N/A	Bare



Location	Construction	Area [m ²]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Stairs-BSMNT	Concrete Slab on Ground 100mm	6.42	None	Bulk Insulation in Contact with Floor R0.8	N/A	Ceramic Tiles 8mm
Guest Bed-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	13.01		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
ENS/G.Bed-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	3.96		Bulk Insulation R3	N/A	Ceramic Tiles 8mm
WIR/G.Bed-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	2.06		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
Study-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	1.90		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
Study-GF	Suspended Concrete Slab 150mm	14.30	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
Stairs-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	0.00		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
Stairs-GF / Stairs-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Lift-GF / Lift-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Bare
Bath-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	6.28		Bulk Insulation R3	N/A	Ceramic Tiles 8mm
Laundry-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	9.64		Bulk Insulation R3	N/A	Ceramic Tiles 8mm
B.Pantry-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	11.32		Bulk Insulation R3	N/A	Ceramic Tiles 8mm
Ktch/Din/Liv-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	92.46		Bulk Insulation R3	N/A	60/40 Carpet 10mm/Ceramic
Hall-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	17.85		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
Hall-GF / Stairs-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	0.87		No Insulation	N/A	Carpet+Rubber Underlay 18mm



Location	Construction	Area [m ²]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Entry-GF / Carpark-BSMNT	Concrete Timber Framed Above Plasterboard 150mm	6.51		Bulk Insulation R3	N/A	Carpet+Rubber Underlay 18mm
Entry-GF	Suspended Concrete Slab 150mm	2.11	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
Master Bed-FF / Laundry-GF	Concrete Timber Framed Above Plasterboard 150mm	7.31		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Master Bed-FF / B.Pantry-GF	Concrete Timber Framed Above Plasterboard 150mm	2.65		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Master Bed-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	2.83		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Master Bed-FF	Suspended Concrete Slab 150mm	1.33	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
WIR/M.Bed-FF / Laundry-GF	Concrete Timber Framed Above Plasterboard 150mm	1.73		No Insulation	N/A	Carpet+Rubber Underlay 18mm
WIR/M.Bed-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	9.24		No Insulation	N/A	Carpet+Rubber Underlay 18mm
ENS/M.Bed-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	8.81		No Insulation	N/A	Ceramic Tiles 8mm
Bath S-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	6.21		No Insulation	N/A	Ceramic Tiles 8mm
Bed 1-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	8.05		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Bed 1-FF	Suspended Concrete Slab 150mm	5.65	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
Bed 2-FF / Study-GF	Concrete Timber Framed Above Plasterboard 150mm	2.05		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Bed 2-FF	Suspended Concrete Slab 150mm	11.65	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
Bed 4-FF / Study-GF	Concrete Timber Framed Above Plasterboard 150mm	13.80		No Insulation	N/A	Carpet+Rubber Underlay 18mm



Location	Construction	Area [m ²]	Sub-floor ventilation	Insulation [R-value]	Slab edge insulation [R-value]	Covering
Bed 3-FF / Guest Bed-GF	Concrete Timber Framed Above Plasterboard 150mm	7.77		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Bed 3-FF / ENS/G.Bed-GF	Concrete Timber Framed Above Plasterboard 150mm	3.93		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Bed 3-FF / WIR/G.Bed-GF	Concrete Timber Framed Above Plasterboard 150mm	2.01		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Bath N-FF / Bath-GF	Concrete Timber Framed Above Plasterboard 150mm	6.22		No Insulation	N/A	Ceramic Tiles 8mm
Bath N-FF	Suspended Concrete Slab 150mm	0.98	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Ceramic Tiles 8mm
Lift-FF / Lift-GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Bare
Hall-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Hall-FF / Hall-GF	Concrete Timber Framed Above Plasterboard 150mm	5.02		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Hall-FF / Entry-GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Stairs-FF / Stairs-GF	Concrete Timber Framed Above Plasterboard 150mm	0.89		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Stairs-FF / Hall-GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Carpet+Rubber Underlay 18mm
Stairs-FF	Suspended Concrete Slab 150mm	1.00	Totally Open	Bulk Insulation in Contact with Floor R3	N/A	Carpet+Rubber Underlay 18mm
Void/Dining-FF / Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	N/A	Carpet+Rubber Underlay 18mm

Ceiling type

Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Carpark-BSMNT	Concrete, Plasterboard with Timber Frame	Bulk Insulation R3
Carpark-BSMNT	Concrete Timber Framed Above Plasterboard	Bulk Insulation R3
Lift-BSMNT	Concrete, Plasterboard with Timber Frame	Bulk Insulation R2.5



Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Lift-BSMNT	Concrete Timber Framed Above Plasterboard	No Insulation
Stairs-BSMNT	Concrete, Plasterboard with Timber Frame	Bulk Insulation R2.5
Stairs-BSMNT	Concrete Timber Framed Above Plasterboard	No Insulation
Guest Bed-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Guest Bed-GF	Concrete Timber Framed Above Plasterboard	No Insulation
ENS/G.Bed-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
ENS/G.Bed-GF	Concrete Timber Framed Above Plasterboard	No Insulation
WIR/G.Bed-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
WIR/G.Bed-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Study-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Study-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Stairs-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Stairs-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Lift-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Lift-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Bath-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bath-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Laundry-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Laundry-GF	Concrete Timber Framed Above Plasterboard	No Insulation
B.Pantry-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
B.Pantry-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Ktch/Din/Liv-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Ktch/Din/Liv-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Hall-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Hall-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Entry-GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Entry-GF	Concrete Timber Framed Above Plasterboard	No Insulation
Master Bed-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
WIR/M.Bed-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
ENS/M.Bed-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bath S-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bed 1-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5



Location	Construction material/type	Bulk insulation [R-value] (may include edge batt values)
Bed 2-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bed 4-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bed 3-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Bath N-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Lift-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Hall-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Stairs-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5
Void/Dining-FF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R5

Ceiling penetrations*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Stairs-BSMNT	1	Downlights - LED	0	Sealed
Guest Bed-GF	5	Downlights - LED	0	Sealed
ENS/G.Bed-GF	1	Downlights - LED	0	Sealed
WIR/G.Bed-GF	1	Downlights - LED	0	Sealed
Study-GF	7	Downlights - LED	0	Sealed
Stairs-GF	1	Downlights - LED	0	Sealed
Bath-GF	2	Downlights - LED	0	Sealed
Laundry-GF	2	Downlights - LED	0	Sealed
B.Pantry-GF	4	Downlights - LED	0	Sealed
B.Pantry-GF	1	Exhaust Fans	300	Sealed
Ktch/Din/Liv-GF	37	Downlights - LED	0	Sealed
Ktch/Din/Liv-GF	1	Exhaust Fans	300	Sealed
Hall-GF	7	Downlights - LED	0	Sealed
Entry-GF	2	Downlights - LED	0	Sealed
Master Bed-FF	6	Downlights - LED	0	Sealed
WIR/M.Bed-FF	4	Downlights - LED	0	Sealed
ENS/M.Bed-FF	2	Downlights - LED	0	Sealed
Bath S-FF	2	Downlights - LED	0	Sealed
Bed 1-FF	6	Downlights - LED	0	Sealed
Bed 2-FF	6	Downlights - LED	0	Sealed
Bed 4-FF	6	Downlights - LED	0	Sealed



Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bed 3-FF	6	Downlights - LED	0	Sealed
Bath N-FF	2	Downlights - LED	0	Sealed
Bath N-FF	1	Exhaust Fans	300	Unsealed
Hall-FF	12	Downlights - LED	0	Sealed
Stairs-FF	5	Downlights - LED	0	Sealed
Void/Dining-FF	10	Downlights - LED	0	Sealed

Ceiling fans

Location	Quantity	Diameter [mm]
Guest Bed-GF	1	1200
Study-GF	1	1200
Ktch/Din/Liv-GF	1	1200
Master Bed-FF	1	1200
Bed 1-FF	1	1200
Bed 2-FF	1	1200
Bed 4-FF	1	1200
Bed 3-FF	1	1200

Roof type

Construction	Insulation [R-value]	Reflective wrap* [yes/no]	Solar absorptance	Roof shade [colour]
Waterproofing Membrane	No Insulation, Only an Air Gap		0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions [height x width, mm]	Frame spacing [mm]	Steel thickness [BMT,mm]	Thermal break [R-value]
No Data Available				

Appliance schedule

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

Cooling system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				



Heating system

Appliance/ system type	Location	Fuel type	Performance	Recommended capacity
No Data Available				

Hot water system

Appliance/ system type	Fuel type	Performance	Hot water CER* zone
No Data Available			

Lighting

Lighting power density [W/m ²] (default assumption 5W/m ²)
No Data Available

Cooking

Cooktop type	Oven type
No Data Available	

Pool/spa equipment

Appliance/ system type	Volume [Litres]	Star rating	Recommended pump capacity [W]
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.
CER	Clean Energy Regulator
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.
Modelled airtightness	the air permeability rate determined by software inputs when generating this rating. This is for informational purposes only and not suitable for assessing compliance.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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). NatHERS uses a 10-year STC.
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 sheeting 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 attached to 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)