

Nationwide House Energy Rating Scheme

NatHERS Certificate No. 0008265555-01

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Property

Address 103 Bynya Road , Palm Beach , NSW , 2108
Lot/DP Lot 8 DP 14630
NCC Class* 1a
Type New Home

Plans

Main Plan 165/3.3.23
Prepared by Rachel Hudson

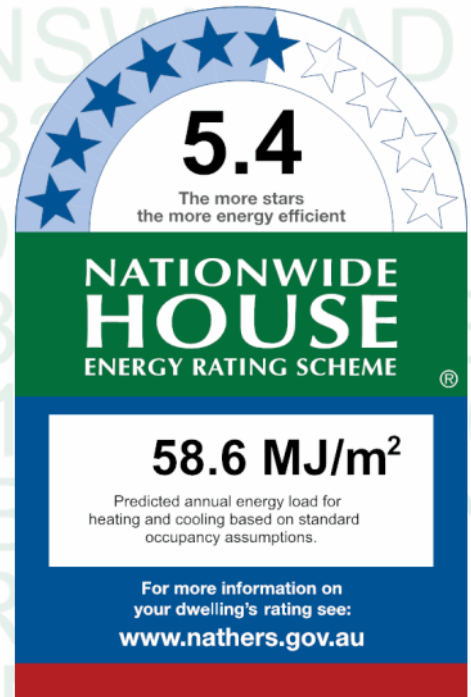
Construction and environment

Assessed floor area (m²*)	Exposure Type
Conditioned* 257.4	Suburban
Unconditioned* 63.6	NatHERS climate zone
Total 321.0	56
Garage 46.7	



Accredited assessor

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Assessor Accrediting Organisation
ABSA
Declaration of interest Declaration not completed



Thermal performance

Heating	Cooling
35.5	23.2
MJ/m²	MJ/m²

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=EgpiKSBgS. When using either link, ensure you are visiting hstar.com.au



National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling’s rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the ‘number’ and ‘type’ of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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 level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is “exposed” or a top floor high-rise apartment is “protected”.

Provisional* values

Have provisional values been used in the assessment and, if so, noted in “additional notes” below?

Additional notes

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
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60

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*
Store	ALM-001-01 A	W05	2400	1350	Casement	100	SE	None
laundry	ALM-002-01 A	W09	1850	1050	Double Hung	45	NW	None
media	ALM-004-01 A	W04	2850	3100	Sliding	45	NE	None
bedroom 2	ALM-004-01 A	W03	2850	3600	Sliding	45	NE	None
bedroom 3	ALM-004-01 A	W02	2850	3300	Sliding	45	NW	None
bedroom 3	ALM-002-01 A	W01 louvre	2850	900	Louvre	90	NE	None
bedroom 3	ALM-002-01 A	W01 fixed	2850	1900	Other	00	NE	None
bedroom 3	ALM-002-01 A	W07	2850	1050	Double Hung	45	SE	None
bathroom lower floor	ALM-002-01 A	W06	2850	1050	Double Hung	45	SE	None
hall/stair lower floor	ALM-001-01 A	W08	2850	1050	Casement	100	NW	None
garage	ALM-002-01 A	W23	1800	1050	Double Hung	45	SE	None
Pantry	ALM-002-01 A	W10	2850	700	Double Hung	45	SW	None
living/dining/kitchen	ALM-002-01 A	W11	700	3900	Sliding	45	SE	None
living/dining/kitchen	ALM-004-01 A	W12	2850	10080	Sliding	60	NE	None
living/dining/kitchen	ALM-002-01 A	W13	1850	2150	Other	00	NW	None
Entry/hall/stair	ALM-002-01 A	Entry	2850	1050	Other	00	SW	None
Entry/hall/stair	ALM-001-01 A	Entry door	2850	1200	Casement	100	SW	None
Entry/hall/stair	ALM-002-01 A	W14	2850	2150	Other	00	NW	None
master bedroom	ALM-004-01 A	W17	2600	3160	Sliding	45	NE	None
master bedroom	ALM-002-01 A	W16	1800	1050	Double Hung	45	SE	None
ensuite	ALM-002-01 A	W22	1800	1050	Double Hung	45	SW	None
ensuite	ALM-002-01 A	W21	1800	540	Other	00	SW	None
ensuite	ALM-002-01 A	W20	1800	540	Double Hung	45	NE	None
ensuite	ALM-001-01 A	W19	2600	1200	Casement	100	NE	None
Stair upper floor	ALM-002-01 A	W18	2600	1000	Other	00	NE	None

Roof window *type and performance*

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 %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
No Data Available								

Skylight type and performance

Skylight ID	Skylight description
No Data Available	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m ²)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
garage	2400	5400	100	SW

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Plasterboard	50	Medium	Rockwool batt: R2.0	No
EW-002	Timber/Plasterboard	50	Medium	Rockwool batt: R2.0	No
EW-004	Retaining Concrete block	50	Medium		No
EW-005	Brick wall/Plasterboard	50	Medium		No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Store	EW-001	2670	2150	SE		Yes
Store	EW-004	2670	6450	SW		No
laundry	EW-001	2850	1200	NW		Yes
laundry	EW-004	1100	3100	NW		No
laundry	EW-001	1750	3100	NW		No
laundry	EW-004	2850	1900	SW		No
media	EW-001	2850	5350	NW		Yes
media	EW-001	2850	3600	NE	3600	Yes
bedroom 2	EW-001	2850	4200	NE	3600	Yes
bedroom 3	EW-001	2850	3300	NW	8100	Yes

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
bedroom 3	EW-001	2850	4100	NE		Yes
bedroom 3	EW-001	2850	8750	SE		Yes
bedroom 3	EW-001	2850	800	SW		Yes
bedroom 3	EW-001	2850	1050	SE		Yes
bathroom lower floor	EW-001	2850	2000	SE		Yes
bathroom lower floor	EW-004	2850	1350	SW		Yes
hall/stair lower floor	EW-001	2850	1050	NW		No
garage	EW-005	2400	7350	SE		Yes
garage	EW-005	2400	6500	SW		No
garage	EW-005	2400	3750	NW	3300	Yes
Pantry	EW-001	2850	1860	SE		Yes
Pantry	EW-001	2850	1360	SW		Yes
living/dining/kitchen	EW-001	2850	6250	SE		Yes
living/dining/kitchen	EW-001	2850	11400	NE		No
living/dining/kitchen	EW-001	2850	6250	NW		Yes
Entry/hall/stair	EW-001	2850	2500	SW	4100	Yes
Entry/hall/stair	EW-001	2850	5200	NW		No
master bedroom	EW-002	2600	3600	NE	1100	Yes
master bedroom	EW-002	2600	5400	SE	450	No
master bedroom	EW-002	2600	1300	S	750	No
master bedroom	EW-002	2600	3500	SW	450	No
master bedroom	EW-002	2600	1500	E		No
ensuite	EW-002	2600	2300	SW	450	No
ensuite	EW-002	2600	2200	NW	700	Yes
ensuite	EW-002	2600	540	SW	2800	Yes
ensuite	EW-002	2600	2400	NW		No
ensuite	EW-002	2600	540	NE	1900	Yes
ensuite	EW-002	2600	1800	NW	700	Yes
ensuite	EW-002	2600	1200	NE	1100	Yes
Stair upper floor	EW-002	2600	1000	NE	1100	No

Internal wall type

Wall ID	Wall type	Area (m ²)	Bulk insulation
IW-001	Plasterboard	186.26	
IW-002	Plasterboard	40.34	Polyester or polyester/wool blanket: R2.0

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Store/Ground	Concrete Slab 200 mm: bare/bare	13.87			
laundry/Ground	Concrete Slab 200 mm: ceramic tiles/bare	8.17			Ceramic tile
media/Ground	Concrete Slab 200 mm: bare/bare	20.46			
bedroom 2/Ground	Concrete Slab 200 mm: bare/bare	21.36			
bedroom 3/Ground	Concrete Slab 200 mm: bare/bare	38.90			
bathroom lower floor/Ground	Concrete Slab 200 mm: bare/bare	8.80			
hall/stair lower floor/Ground	Concrete Slab 200 mm: bare/bare	15.20			
cellar/Ground	Concrete Slab 200 mm: bare/bare	4.60			
garage/Ground	Concrete Slab 200 mm: bare/bare	33.57			
garage/Store	Concrete Slab 200 mm: bare/plasterboard	13.10			
Pantry/bathroom lower floor	Concrete Slab 200 mm: bare/plasterboard	5.80			
living/dining/kitchen/bedroom 3	Concrete Slab 200 mm: bare/plasterboard	21.78			
living/dining/kitchen/bathroom lower floor	Concrete Slab 200 mm: bare/plasterboard	0.56			
living/dining/kitchen/cellar	Concrete Slab 200 mm: bare/plasterboard	0.94			
living/dining/kitchen/hall/stair lower floor	Concrete Slab 200 mm: bare/plasterboard	8.70			
living/dining/kitchen/media	Concrete Slab 200 mm: bare/plasterboard	20.46			
living/dining/kitchen/bedroom 2	Concrete Slab 200 mm: bare/plasterboard	21.36			
Entry/hall/stair/laundry	Concrete Slab 200 mm: bare/plasterboard	8.17			
Entry/hall/stair/hall/stair lower floor	Concrete Slab 200 mm: bare/plasterboard	4.40			
Entry/hall/stair/Ground	Concrete Slab 200 mm: bare/bare	4.02			
WC/hall to garage/bathroom lower floor	Concrete Slab 200 mm: ceramic tiles/plasterboard	2.44			Ceramic tile
WC/hall to garage/Store	Concrete Slab 200 mm: ceramic tiles/plasterboard	0.77			Ceramic tile
WC/hall to garage/hall/stair lower floor	Concrete Slab 200 mm: ceramic tiles/plasterboard	2.10			Ceramic tile
WC/hall to garage/cellar	Concrete Slab 200 mm: ceramic tiles/plasterboard	3.66			Ceramic tile
master bedroom/WC/hall to garage	Concrete slab/timber flooring/plasterboard	8.51			
master bedroom/living/dining/kitchen	Concrete slab/timber flooring/plasterboard	1.50			
master bedroom/garage	Concrete slab/timber flooring/plasterboard	19.75			
ensuite/Entry/hall/stair	Concrete Slab 200 mm: ceramic tiles/plasterboard	8.26			Ceramic tile
ensuite/Outdoor Air	Concrete Slab 200 mm: ceramic tiles/plasterboard	2.50			Ceramic tile
Stair upper floor/Entry/hall/stair	Concrete slab/timber flooring/plasterboard	5.50			

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
garage/Store	Concrete Slab 200 mm: bare/plasterboard		No

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
WC/hall to garage/Store	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Entry/hall/stair/laundry	Concrete Slab 200 mm: bare/plasterboard		No
living/dining/kitchen/media	Concrete Slab 200 mm: bare/plasterboard		No
living/dining/kitchen/bedroom 2	Concrete Slab 200 mm: bare/plasterboard		No
living/dining/kitchen/bedroom 3	Concrete Slab 200 mm: bare/plasterboard		No
Pantry/bathroom lower floor	Concrete Slab 200 mm: bare/plasterboard		No
living/dining/kitchen/bathroom lower floor	Concrete Slab 200 mm: bare/plasterboard		No
WC/hall to garage/bathroom lower floor	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
living/dining/kitchen/hall/stair lower floor	Concrete Slab 200 mm: bare/plasterboard		No
Entry/hall/stair/hall/stair lower floor	Concrete Slab 200 mm: bare/plasterboard		No
WC/hall to garage/hall/stair lower floor	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
living/dining/kitchen/cellar	Concrete Slab 200 mm: bare/plasterboard		No
WC/hall to garage/cellar	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
master bedroom/garage	Concrete slab/timber flooring/plasterboard		No
master bedroom/living/dining/kitchen	Concrete slab/timber flooring/plasterboard		No
ensuite/Entry/hall/stair	Concrete Slab 200 mm: ceramic tiles/plasterboard		No
Stair upper floor/Entry/hall/stair	Concrete slab/timber flooring/plasterboard		No
master bedroom/WC/hall to garage	Concrete slab/timber flooring/plasterboard		No

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm ²)	Sealed/unsealed
laundry	1	Ceiling exhaust fan	300	Sealed
bathroom lower floor	1	Ceiling exhaust fan	300	Sealed
living/dining/kitchen	1	Ceiling exhaust fan	300	Sealed
WC/hall to garage	1	Ceiling exhaust fan	300	Sealed
ensuite	1	Ceiling exhaust fan	300	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
No Data Available		

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Metal deck raked ceiling	R4.1	50	Medium

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
concrete terrace	R2.5	50	Medium
green roof	R2.5	50	Medium
deck	R2.5	50	Medium

Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings 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, indoor air temperature and local climate.

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

Glossary

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, rangehoods, 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.
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.
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 10m 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 .
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
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.
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).