Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0006824536

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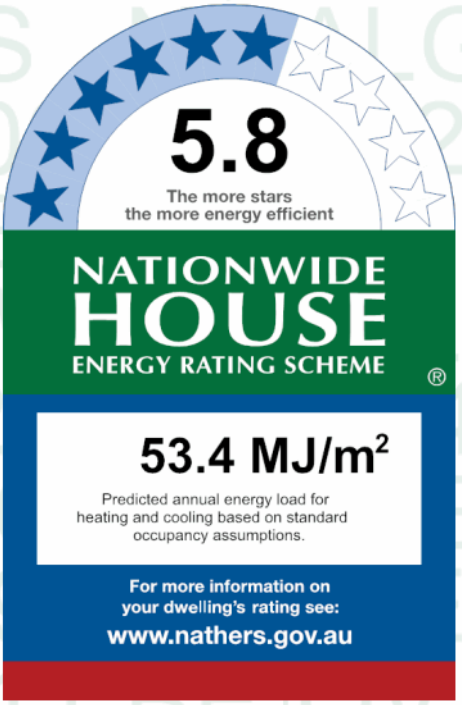

Property

Address	11 BEATTY ST , BALGOWLAH HEIGHTS , NSW , 2093
Lot/DP	A/373783
NCC Class*	1A
Type	New Dwelling

Plans

Main Plan	1-9
Prepared by	LH

Construction and environment

Assessed floor area (m^2)*		**Exposure Type**
Conditioned*	259.0	Suburban
Unconditioned*	75.0	**NatHERS climate zone**
Total	334.0	56
Garage	57.0	

Thermal performance

Heating	Cooling
27.7 MJ/m^2	25.7 MJ/m^2

Accredited assessor

Name	Damian OToole
Business name	DOTP
Email	damian@sydneytownplanning.com.au
Phone	96900496
Accreditation No.	20420
Assessor Accrediting Organisation	ABSA
Declaration of interest	NONE

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=TWqCmHHtl.
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?

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-003-01 A	ALM-003-01 A Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	600	3500	n/a	45	SE	No
Kitchen/Living	ALM-003-01 A	n/a	2400	900	n/a	45	SE	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3000	n/a	45	SW	No

* Refer to glossary.

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ALM-003-01 A	n/a	1200	900	n/a	45	SW	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3000	n/a	45	NE	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3000	n/a	45	NW	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3000	n/a	45	NW	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3000	n/a	45	NW	No
Kitchen/Living	ALM-003-01 A	n/a	2400	3500	n/a	45	NE	No
Bedroom 1	ALM-003-01 A	n/a	2400	900	n/a	45	SE	No
Bedroom 1	ALM-003-01 A	n/a	2400	900	n/a	45	SE	No
Night Time 1	ALM-003-01 A	n/a	2400	900	n/a	45	SE	No
Night Time 1	ALM-003-01 A	n/a	600	1500	n/a	45	SW	No
Unconditioned 1	ALM-003-01 A	n/a	600	2400	n/a	45	SW	No
Unconditioned 1	ALM-003-01 A	n/a	2400	1200	n/a	45	NW	No
Bedroom 2	ALM-003-01 A	n/a	2400	3000	n/a	45	NE	No
Bedroom 2	ALM-003-01 A	n/a	2400	600	n/a	45	SW	No
Bedroom 2	ALM-003-01 A	n/a	2400	900	n/a	45	SW	No
Bedroom 2	ALM-003-01 A	n/a	2400	900	n/a	45	SW	No
Night Time 2	ALM-003-01 A	n/a	2400	1200	n/a	45	SW	No
Bedroom 3	ALM-003-01 A	n/a	2400	1800	n/a	45	NW	No
Bedroom 4	ALM-003-01 A	n/a	2400	1800	n/a	45	NW	No
Day Time 1	ALM-003-01 A	n/a	2400	1200	n/a	45	NW	No
Day Time 1	ALM-003-01 A	n/a	2400	2700	n/a	45	NW	No
Day Time 1	ALM-003-01 A	n/a	2400	3500	n/a	45	NE	No
Day Time 1	ALM-003-01 A	n/a	2400	1200	n/a	45	NE	No

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
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m^2)	Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance
Night Time 2	GEN-04-008a	n/a	50	1.10	NW	None	No	0.50
Unconditioned 2	GEN-04-008a	n/a	50	1.10	NW	None	No	0.50
Day Time 1	GEN-04-008a	n/a	50	1.60	NW	None	No	0.50
Day Time 1	GEN-04-008a	n/a	50	1.60	NW	None	No	0.50

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Garage 1	2040	5500	90	NE

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-1	Cavity Brick	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-2	Cavity Brick	0.50	Medium	Foil reflective both sides of the Bulk Insulation R1.5	Yes
EW-3	Concrete Block	0.50	Medium	No insulation	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	5100	SE	800	YES
Kitchen/Living	EW-1	2700	2300	NE	800	YES
Kitchen/Living	EW-1	2700	4900	SE	500	NO
Kitchen/Living	EW-1	2700	900	SW	10200	YES
Kitchen/Living	EW-1	2700	5695	SE	500	YES
Kitchen/Living	EW-1	2700	6500	SW	1000	YES
Kitchen/Living	EW-1	2700	4500	NW	900	NO
Kitchen/Living	EW-1	2700	6700	NE	1325	YES

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Kitchen/Living	EW-1	2700	15200	NW	1250	YES
Kitchen/Living	EW-1	2700	4600	NE	1150	NO
Bedroom 1	EW-1	2700	3995	SE	500	NO
Bedroom 1	EW-1	2700	600	SW	3000	YES
Night Time 1	EW-1	2700	2695	SE	600	YES
Night Time 1	EW-1	2700	1895	SW	325	NO
Unconditioned 1	EW-1	2700	3695	SW	375	NO
Unconditioned 1	EW-1	2700	2695	NW	400	YES
Bedroom 2	EW-2	2700	4600	NW	500	NO
Bedroom 2	EW-2	2700	6700	NE	1475	YES
Bedroom 2	EW-2	2700	3490	SW	1125	NO
Bedroom 2	EW-2	2700	3695	SW	1025	NO
Night Time 2	EW-2	2700	2890	SW	1075	NO
Unconditioned 2	EW-2	2700	3095	SE	700	NO
Unconditioned 2	EW-2	2700	2595	SW	1175	NO
Bedroom 3	EW-2	2700	4490	NW	1400	YES
Bedroom 4	EW-2	2700	3790	NW	1400	NO
Day Time 1	EW-2	2700	4695	NW	1400	NO
Day Time 1	EW-2	2700	4600	NE	650	NO
Day Time 1	EW-2	2700	3000	SE	600	YES
Day Time 1	EW-2	2700	1400	NE	500	YES
Day Time 1	EW-2	2700	11495	SE	700	NO
Garage 1	EW-3	2700	6000	NE	0	NO
Garage 1	EW-3	2700	9500	SE	0	NO
Garage 1	EW-3	2700	6000	SW	0	NO
Garage 1	EW-3	2700	9500	NW	0	NO

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-1 - Cavity wall, direct fix plasterboard, single gap		118.00	No insulation

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Kitchen/Living /Garage 1	Timber Above Plasterboard 100mm	44.80		No Insulation	Bare
Kitchen/Living	Concrete Slab on Ground 100mm	88.30	None	No Insulation	Bare
Bedroom 1/Garage 1	Timber Above Plasterboard 100mm	11.60		No Insulation	Bare

* Refer to glossary.

Location	Construction	Area (m)	Sub-floor ventilation	Added insulation (R-value)	Covering
Night Time 1	Concrete Slab on Ground 100mm	4.90	None	No Insulation	Bare
Unconditioned 1	Concrete Slab on Ground 100mm	9.70	None	No Insulation	Bare
Bedroom 2/Kitchen/Living	Timber Above Plasterboard 100mm	35.70		No Insulation	Bare
Bedroom 2/Bedroom 1	Timber Above Plasterboard 100mm	1.60		No Insulation	Bare
Bedroom 2	Concrete Slab on Ground 100mm	0.70	None	No Insulation	Bare
Night Time 2/Kitchen/Living	Timber Above Plasterboard 100mm	7.50		No Insulation	Bare
Unconditioned 2/Bedroom 1	Timber Above Plasterboard 100mm	7.80		No Insulation	Bare
Bedroom 3/Kitchen/Living	Timber Above Plasterboard 100mm	14.80		No Insulation	Bare
Bedroom 4/Kitchen/Living	Timber Above Plasterboard 100mm	12.40		No Insulation	Bare
Day Time 1/Kitchen/Living	Timber Above Plasterboard 100mm	46.50		No Insulation	Bare
Day Time 1/Bedroom 1	Timber Above Plasterboard 100mm	2.30		No Insulation	Bare
Garage 1	Concrete Slab on Ground 100mm	57.00	None	No Insulation	Bare

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Kitchen/Living	Plasterboard	Bulk Insulation R4	No
Kitchen/Living	Timber Above Plasterboard	No Insulation	No
Bedroom 1	Timber Above Plasterboard	No Insulation	No
Night Time 1	Plasterboard	Bulk Insulation R4	No
Unconditioned 1	Plasterboard	Bulk Insulation R4	No
Bedroom 2	Plasterboard	Bulk Insulation R4	No
Night Time 2	Plasterboard	Bulk Insulation R4	No
Unconditioned 2	Plasterboard	Bulk Insulation R4	No
Bedroom 3	Plasterboard	Bulk Insulation R4	No
Bedroom 4	Plasterboard	Bulk Insulation R4	No
Day Time 1	Plasterboard	Bulk Insulation R4	No
Garage 1	Timber Above Plasterboard	No Insulation	No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm^2)	Sealed/unsealed
No Data Available				

Ceiling *fans*

Location	Quantity	Diameter (mm)
Bedroom 1	1	900
Bedroom 2	1	900

* Refer to glossary.

Location	Quantity	Diameter (mm)
Bedroom 3	1	900
Bedroom 4	1	900
Day Time 1	1	900

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Concrete	No Insulation, Only an Air Gap	0.50	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 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.
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).

Assessor # 20420 Certificate # 0006824536 Issued: 241121

Thermal Performance Specifications
NATHERS SUMMARY SHEET

These are the Specifications upon which the Certified Assessment is based. If details included in these Specifications vary from other drawings or written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the project. If alternate specifications are detailed for a building element, the location and extent of alternate specifications must be detailed below and / or clearly indicated on referenced documents

Windows	*Product ID*	*Glass*	*Frame*	*U value*	*SHGC*	*Area M²*	*Detail*
Single or Double glazed		Clear	Aluminium	4.8	0.51		As per plans

Skylights	*Product ID*	*Glass*	*Frame*	*U value*	*SHGC*	*Area M²*	*Detail*

Window and skylight U and SHGC values, if specified, are according to ANAC 2005. Alternate products or specifications may be used if their U value is lower, and the SHGC value is less than 10% higher or lower, than the U and SHGC values of the product specified above.

External walls	*Construction*	*Insulation*	*Colour – solar abs.*	*Detail*
Cavity Brick		Foil + R1.5	Medium	As per plans.

Internal walls	*Construction*	*Insulation*	*Detail*
Plasterboard		None	As per plans.

Floors	*Construction*	*Insulation*	*Covering*	*Detail*
Concrete		None	Varies	As per plans.

Ceilings	*Construction*	*Insulation*	*Detail*
Plasterboard		R4.0/None	As per plans. Insulation where adjoins roof/exterior.

Roof	*Construction*	*Insulation*	*Colour – solar abs.*	*Detail*
Concrete		None	Medium	As per plans.

Window cover	*Internal (curtains)*	*External (awnings, shutters, etc)*
As plans		As plans

Fixed shading	*Eaves (width - inc. gutters, h't above windows)*	*Location*
	As plans – eaves /soffits	*As plans – eaves/soffits/louvres as shown*

Overshadowing	*Overshadowing structures*	*Overshadowing trees*
NA		

Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north:	**0**	Living area open to entry:	**Y**	Ventilated skylights:	**N**
Terrain category:	**Suburban**	Doors separate living areas:	**N**	Open fire, unflued gas heat:	**N**
Roof ventilation:	**Unventilated**	Stair open to heated areas:	**Y**	Vented downlights:	**N**
Cross ventilation:	**Standard**	Seals to windows and doors:	**Y**	Wall and ceiling vents:	**N**
Subfloor:	**Enclosed**	Exhaust fans without dampers:	**N**		


5.8
NATIONWIDE HOUSE ENERGY RATING SCHEME
53.4
MJ/m²
www.nathers.gov.au
0006824536 24 Nov 2021
Assessor Damian OToole
Accreditation No. 20420
Address
11 BEATTY ST , BALGOWLAH HEIGHTS , NSW , 2093
hstar.com.au


ABSA
Australian Building Sustainability Association
Assessments completed within the accreditation period are part of the ABSA quality audit system
Accreditation Period 01/04/2021-31/03/2022
Assessor Name Damian O'Toole
Assessor Number 20420
Assessor Signature
This Accredited Assessor is qualified to use NatHERS Accredited Software and has agreed to follow the ABSA Code of Practice