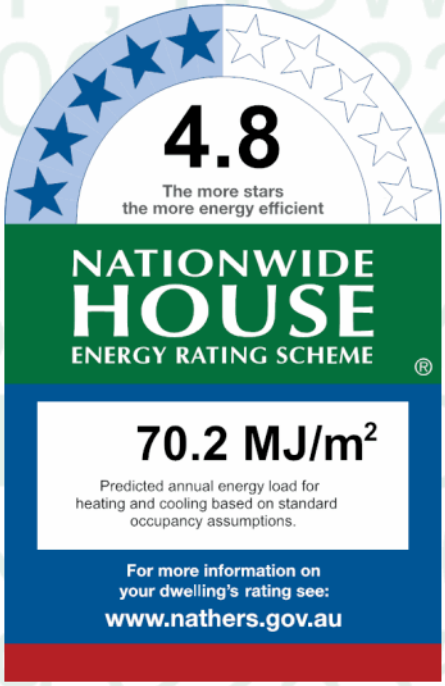
Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322835

Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1



Property

Address	Unit 1, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	138.1
Unconditioned*	0.0
Total	138.1
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
58.4	**11.8**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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

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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
TIM-001-01 W	Timber A SG Clear	5.4	0.56	0.53	0.59
TIM-002-01 W	Timber B SG Clear	5.4	0.63	0.60	0.66

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*
Living Room (EX)	TIM-002-01 W	02 EX	2100	800	Double Hung	10	NE	None
Living Room (EX)	TIM-002-01 W	3a EX	2700	400	Double Hung	45	E	None
Living Room (EX)	TIM-001-01 W	3b EX	2700	1200	Casement	90	SE	None
Living Room (EX)	TIM-002-01 W	3c EX	2700	400	Double Hung	45	S	None
Living Room (EX)	TIM-002-01 W	04 EX	1500	2100	Sliding	10	SW	None
Living / Dining / Kitchen	ALM-002-01 A	01	1800	1640	Sliding	10	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	1800	1200	Sliding	10	NE	None
Living / Dining / Kitchen	ALM-002-01 A	03	2600	3000	Sliding	45	SE	None
Bedroom 1	ALM-002-01 A	04	2700	1600	Sliding	45	NE	None
Bedroom 1	ALM-002-01 A	05	1800	2700	Other	00	S	None
Bedroom 1 Ens	ALM-002-01 A	06	1200	1000	Double Hung	10	SW	None
Bedroom 2	ALM-002-01 A	07	1800	1450	Sliding	10	NE	None
Bedroom 3	ALM-002-01 A	08	1800	850	Double Hung	10	NE	None
Bedroom 3	ALM-002-01 A	09	1800	850	Double Hung	10	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								

* Refer to glossary.

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-009	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)
Living Room (EX)	EW-009	2700	3300	NE	550	Yes
Living Room (EX)	EW-009	2700	2200	SE	2800	Yes
Living Room (EX)	EW-009	2700	500	E	2800	Yes
Living Room (EX)	EW-009	2700	1200	SE	2800	No
Living Room (EX)	EW-009	2700	500	S	2800	Yes
Living Room (EX)	EW-009	2700	800	SE	2800	Yes

* Refer to glossary.
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Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living Room (EX)	EW-009	2700	3300	SW		Yes
Living / Dining / Kitchen	EW-002	2700	1700	SE		Yes
Living / Dining / Kitchen	EW-002	2700	2100	NE		Yes
Living / Dining / Kitchen	EW-004	2700	4400	SE	3300	Yes
Bedroom 1	EW-002	2700	1900	NE	5200	Yes
Bedroom 1	EW-002	2700	3900	S		Yes
Bedroom 1	EW-004	2700	3000	SW		Yes
Bedroom 1	EW-004	2700	600	NW		Yes
Bedroom 1	EW-003	2700	2300	SW		Yes
Bedroom 1 Ens	EW-003	2700	2300	SW		Yes
Bedroom 2	EW-002	2700	3000	NE		Yes
Bedroom 3	EW-002	2700	4100	NE		Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	65.88	
IW-002	Plasterboard/AAC block	42.12	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	
IW-005	Plasterboard/Brick wall	10.80	
IW-009	Plasterboard/Brick wall	6.48	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living Room (EX)/Neighbour	timber - concrete 200mm	22.50			
Living Room (EX)/Outdoor Air	R1.0 - timber - concrete 200mm	0.60		R1.0	
Roof Space/Living Room (EX)	R3.5 - Plasterboard	17.60		R3.5	
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	40.70			

* Refer to glossary.
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Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Outdoor Air	R1.0 - timber - concrete 200mm	8.40		R1.0	
Bedroom 1/Neighbour	carpet - concrete 200mm	0.60			Carpet 10 + rubber underlay 8
Bedroom 1/Outdoor Air	R1.0 - carpet - concrete 200mm	21.00		R1.0	Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Outdoor Air	R1.0 - tiles - concrete 200mm	6.40		R1.0	Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	13.00			Carpet 10 + rubber underlay 8
Bedroom 2/Outdoor Air	R1.0 - carpet - concrete 200mm	1.00		R1.0	Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	11.50			Carpet 10 + rubber underlay 8
Bedroom 3/Outdoor Air	R1.0 - carpet - concrete 200mm	1.20		R1.0	Carpet 10 + rubber underlay 8
Hall / Bath/Neighbour	timber - concrete 200mm	3.50			
Hall / Bath/Neighbour	tiles - concrete 200mm	7.70			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living Room (EX)	carpet - concrete 200mm		No
Roof Space/Living Room (EX)	R3.5 - Plasterboard	R3.5	No
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 3	carpet - concrete 200mm		No
Neighbour/Hall / Bath	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living Room (EX)	4	Downlight	0	Sealed
Living / Dining / Kitchen	12	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	5	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 3	4	Downlight	0	Sealed
Hall / Bath	4	Downlight	0	Sealed
Hall / Bath	2	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Clay tile roof + Anticon R1.0 insul with no ceiling under	R1.0	60	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).

Nationwide House Energy Rating Scheme
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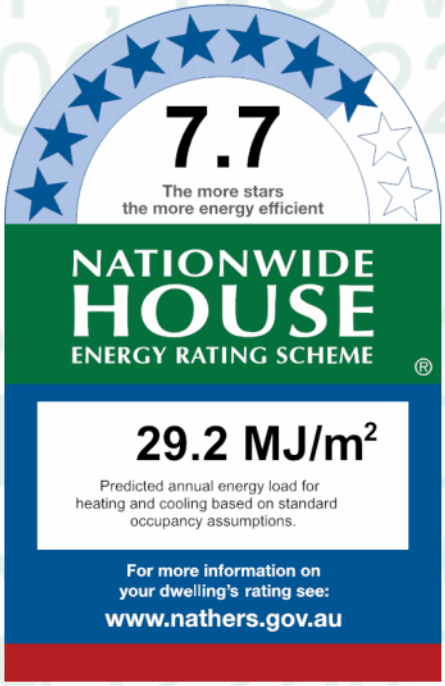

Property

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NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	77.9
Unconditioned*	3.4
Total	81.3
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
10.5	**18.7**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
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Declaration of interest	Declaration completed: no conflicts

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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

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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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3300	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3100	Sliding	67	NW	None
Bedroom 2	ALM-002-01 A	03	900	2350	Sliding	10	SW	None
Bedroom 1 Ens	ALM-002-01 A	04	1000	1000	Sliding	10	SW	None
Bathroom	ALM-002-01 A	05	1000	1000	Sliding	10	SW	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	

* Refer to glossary.
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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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-004	2700	4100	NW	2700	Yes
Bedroom 1	EW-004	2700	3300	NW	2700	Yes
Bedroom 1	EW-004	2700	4500	SW		Yes
Bedroom 2	EW-006	2700	2800	SW		Yes
Bedroom 1 Ens	EW-006	2700	1600	SW		Yes
Bathroom	EW-006	2700	1500	SW		Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	57.24	
IW-002	Plasterboard/AAC block	34.02	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	22.68	

* Refer to glossary.

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	40.30			
Living / Dining / Kitchen/Neighbour	tiles - concrete 200mm	6.00			Ceramic tile
Bedroom 1/Neighbour	carpet - concrete 200mm	14.90			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	13.20			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.40			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

* Refer to glossary.

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	50	Medium

Explanatory notes

About this report

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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.

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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.

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Glossary

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322850

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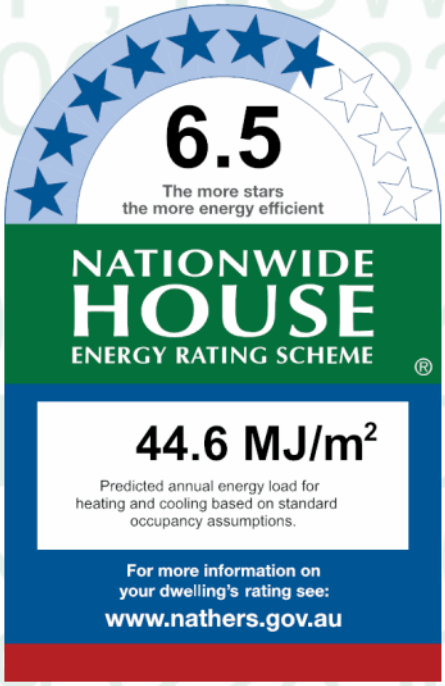

Property

Address	Unit 3, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	83.6
Unconditioned*	3.5
Total	87.1
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
30.2	**14.4**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=ABqcChgHN.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3300	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3100	Sliding	67	NW	None
Bedroom 2	ALM-002-01 A	03	2600	800	Double Hung	10	NW	None
Bedroom 1 Ens	ALM-002-01 A	05	700	900	Sliding	10	NE	None
Bathroom	ALM-002-01 A	06	700	900	Sliding	10	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	

* Refer to glossary.
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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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-004	2700	4100	NW	2700	Yes
Bedroom 1	EW-004	2700	3200	NW	2700	Yes
Bedroom 1	EW-004	2700	4400	NE		Yes
Bedroom 2	EW-002	2700	800	NW		Yes
Bedroom 2	EW-002	2700	3400	NE		Yes
Bedroom 1 Ens	EW-006	2700	1500	NE		Yes
Bathroom	EW-006	2700	1600	NE		Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	57.51	

* Refer to glossary.

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-002	Plasterboard/AAC block	49.41	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	44.10			
Living / Dining / Kitchen/Outdoor Air	timber - concrete 200mm	5.90			
Bedroom 1/Neighbour	carpet - concrete 200mm	12.60			Carpet 10 + rubber underlay 8
Bedroom 1/Outdoor Air	carpet - concrete 200mm	2.30			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	2.60			Carpet 10 + rubber underlay 8
Bedroom 2/Outdoor Air	carpet - concrete 200mm	12.80			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	2.40			Ceramic tile
Bedroom 1 Ens/Outdoor Air	tiles - concrete 200mm	0.90			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	1.90			Ceramic tile
Bathroom/Outdoor Air	tiles - concrete 200mm	1.60			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No

* Refer to glossary.
Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1 for Manly , NSW , 2095

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	50	Medium

Explanatory notes

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322868

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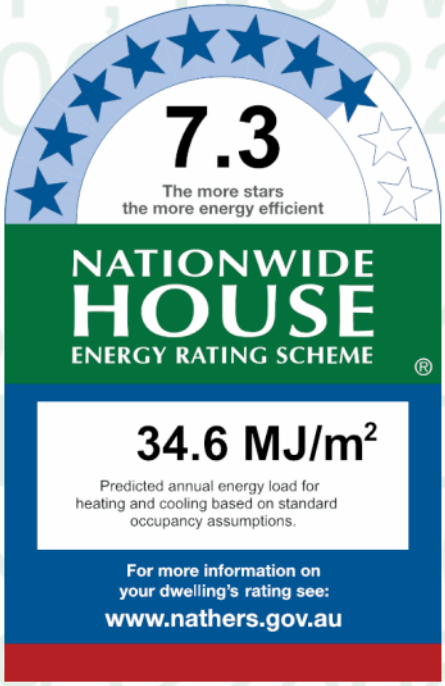

Property

Address	Unit 5, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	65.6
Unconditioned*	3.3
Total	68.9
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
11.6	**23.0**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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.

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* Refer to glossary

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.

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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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3400	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3200	Sliding	20	NW	None
Bedroom 1	ALM-002-01 A	03	2700	1200	Other	00	NE	None
Bedroom 2	ALM-002-01 A	04	900	2350	Sliding	10	SW	None
Bedroom 1 Ens	ALM-002-01 A	05	700	900	Sliding	10	SW	None
Bathroom	ALM-002-01 A	06	700	900	Sliding	10	SW	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	

* Refer to glossary.

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-003	2700	3900	NW	2300	Yes
Bedroom 1	EW-002	2700	3200	NW	900	Yes
Bedroom 1	EW-004	2700	4000	SW		Yes
Bedroom 1	EW-002	2700	1200	NE	4100	Yes
Bedroom 2	EW-006	2700	2600	SW		Yes
Bedroom 1 Ens	EW-006	2700	1600	SW		Yes
Bathroom	EW-006	2700	1500	SW		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	51.84	
IW-002	Plasterboard/AAC block	28.35	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	22.41	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	30.50			
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	6.00			
Bedroom 1/Neighbour	carpet - concrete 200mm	13.40			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	12.20			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.30			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	10	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

Explanatory notes

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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

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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.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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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).
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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322876

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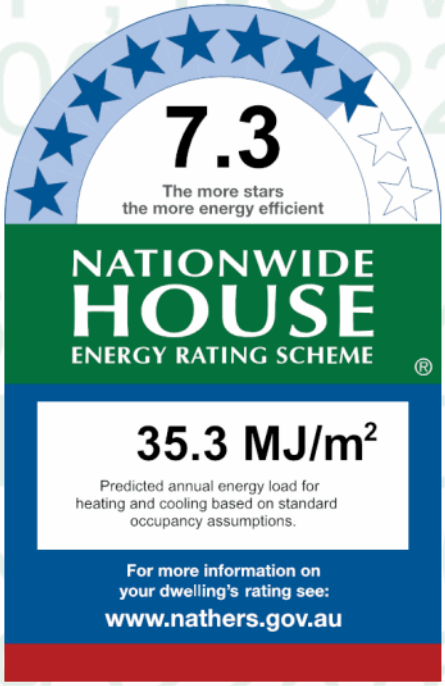

Property

Address	Unit 6, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	70.7
Unconditioned*	3.5
Total	74.2
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
14.9	**20.5**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=whXQbJzXH.
When using either link, ensure you are visiting www.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.

* Refer to glossary

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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3400	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3100	Sliding	20	NW	None
Bedroom 1	ALM-002-01 A	03	2700	1200	Other	00	SW	None
Bedroom 2	ALM-002-01 A	04	2600	800	Double Hung	10	NW	None
Bedroom 1 Ens	ALM-002-01 A	06	700	900	Sliding	10	NE	None
Bathroom	ALM-002-01 A	07	700	900	Sliding	10	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	

* Refer to glossary.
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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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-003	2700	3800	NW	2300	Yes
Bedroom 1	EW-002	2700	3200	NW	900	Yes
Bedroom 1	EW-004	2700	4100	NE		Yes
Bedroom 1	EW-002	2700	1200	SW	4300	Yes
Bedroom 2	EW-002	2700	800	NW		Yes
Bedroom 2	EW-002	2700	3300	NE		Yes
Bedroom 1 Ens	EW-006	2700	1600	NE		Yes
Bathroom	EW-004	2700	1600	NE		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	50.49	
IW-002	Plasterboard/AAC block	43.20	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	30.60			
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	10.00			
Bedroom 1/Neighbour	carpet - concrete 200mm	13.60			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	13.20			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.30			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	10	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

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Explanatory notes

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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.
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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.
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Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322884

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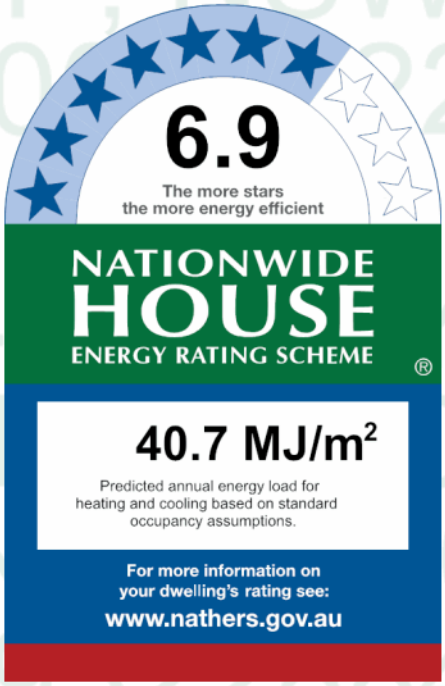

Property

Address	Unit 4, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	119.4
Unconditioned*	0.0
Total	119.4
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
23.3	**17.5**
MJ/m^2	MJ/m^2

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.

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	
Design Matters National	
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit www.hstar.com.au/QR/Generate?p=ZmGRfnJhG.
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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.

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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?

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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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	1800	1600	Sliding	10	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	1800	1200	Sliding	10	NE	None
Living / Dining / Kitchen	ALM-002-01 A	03	2700	3000	Sliding	45	SE	None
Bedroom 1	ALM-002-01 A	04	2700	1600	Sliding	45	NE	None
Bedroom 1	ALM-002-01 A	05	1800	2700	Other	00	S	None
Bedroom 1 Ens	ALM-002-01 A	06	1200	1000	Double Hung	10	SW	None
Bedroom 2	ALM-002-01 A	07	1800	1450	Sliding	10	NE	None
Bedroom 2	ALM-002-01 A	08	1450	600	Other	00	SE	None
Bedroom 3	ALM-002-01 A	09	1800	850	Double Hung	10	NE	None
Bedroom 3	ALM-002-01 A	10	1800	850	Double Hung	10	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	

* Refer to glossary.
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Skylight ID	Skylight description

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-002	2700	3100	SE		Yes
Living / Dining / Kitchen	EW-002	2700	2100	NE		Yes
Living / Dining / Kitchen	EW-004	2700	4400	SE	3300	Yes
Bedroom 1	EW-002	2700	1900	NE	5200	Yes
Bedroom 1	EW-002	2700	3900	S		Yes
Bedroom 1	EW-004	2700	3000	SW		Yes
Bedroom 1	EW-004	2700	600	NW		Yes
Bedroom 1	EW-003	2700	2300	SW		Yes
Bedroom 1 Ens	EW-003	2700	2300	SW		Yes

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 2	EW-002	2700	3900	NE		Yes
Bedroom 2	EW-002	2700	4700	SE		No
Bedroom 3	EW-002	2700	4100	NE		Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	70.74	
IW-002	Plasterboard/AAC block	42.39	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	49.80			
Bedroom 1/Neighbour	carpet - concrete 200mm	21.60			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	6.40			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	17.30			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	12.70			Carpet 10 + rubber underlay 8
Hall / Bath/Neighbour	timber - concrete 200mm	4.60			
Hall / Bath/Neighbour	tiles - concrete 200mm	7.00			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Bedroom 3	carpet - concrete 200mm		No
Neighbour/Hall / Bath	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	5	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 3	4	Downlight	0	Sealed
Hall / Bath	4	Downlight	0	Sealed
Hall / Bath	2	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

Explanatory notes

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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.

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Glossary

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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.
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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322892

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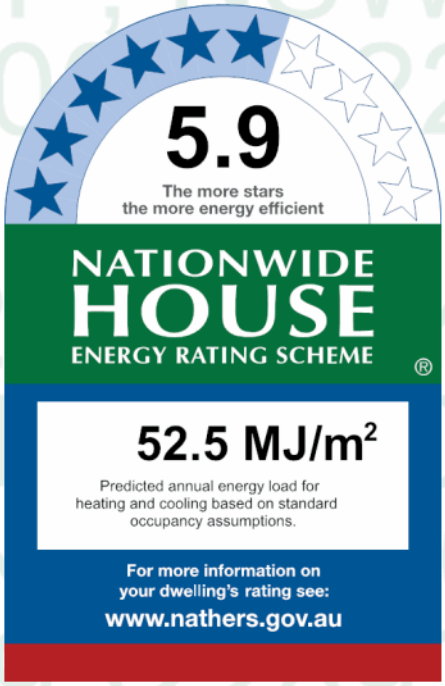

Property

Address	Unit 7, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	119.4
Unconditioned*	0.0
Total	119.4
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
23.3	**29.2**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=ycLBCZGXk.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	1800	1600	Sliding	10	SE	None
Living / Dining / Kitchen	ALM-002-01 A	02	1800	1200	Sliding	10	NE	None
Living / Dining / Kitchen	ALM-002-01 A	03	2700	3000	Sliding	45	SE	None
Bedroom 1	ALM-002-01 A	04	2700	1600	Sliding	45	NE	None
Bedroom 1	ALM-002-01 A	05	1800	2700	Other	00	S	None
Bedroom 1 Ens	ALM-002-01 A	06	1200	1000	Double Hung	10	SW	None
Bedroom 2	ALM-002-01 A	07	1800	1000	Other	00	NE	None
Bedroom 2	ALM-002-01 A	08	1800	3850	Sliding	10	SE	None
Bedroom 3	ALM-002-01 A	09	1800	850	Double Hung	10	NE	None
Bedroom 3	ALM-002-01 A	10	1800	850	Double Hung	10	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	

* Refer to glossary.
Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1 for Manly , NSW , 2095

Skylight ID	Skylight description

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-002	2700	3100	SE		Yes
Living / Dining / Kitchen	EW-002	2700	2100	NE		Yes
Living / Dining / Kitchen	EW-004	2700	4400	SE	3300	Yes
Bedroom 1	EW-002	2700	1900	NE	5200	Yes
Bedroom 1	EW-002	2700	3900	S		Yes
Bedroom 1	EW-004	2700	3000	SW		Yes
Bedroom 1	EW-004	2700	600	NW		Yes
Bedroom 1	EW-003	2700	2300	SW		Yes
Bedroom 1 Ens	EW-003	2700	2300	SW		Yes

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 2	EW-002	2700	3900	NE		Yes
Bedroom 2	EW-002	2700	4700	SE		No
Bedroom 3	EW-002	2700	4100	NE		Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	70.74	
IW-002	Plasterboard/AAC block	42.39	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	49.80			
Bedroom 1/Neighbour	carpet - concrete 200mm	21.60			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	6.40			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	17.30			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	12.70			Carpet 10 + rubber underlay 8
Hall / Bath/Neighbour	timber - concrete 200mm	4.60			
Hall / Bath/Neighbour	tiles - concrete 200mm	7.00			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No

* Refer to glossary.

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Hall / Bath	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
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Bedroom 3	4	Downlight	0	Sealed
Hall / Bath	4	Downlight	0	Sealed
Hall / Bath	2	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	50	Medium

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322900

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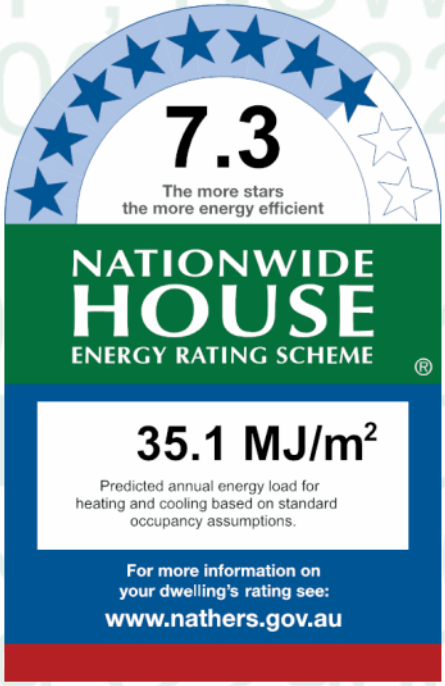

Property

Address	Unit 8, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	65.6
Unconditioned*	3.3
Total	68.9
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
12.3 MJ/m^2	22.7 MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=AUzfNLQbS.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3400	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3200	Sliding	20	NW	None
Bedroom 1	ALM-002-01 A	03	2700	1200	Other	00	NE	None
Bedroom 2	ALM-002-01 A	04	900	2350	Sliding	10	SW	None
Bedroom 1 Ens	ALM-002-01 A	05	800	900	Sliding	10	SW	None
Bathroom	ALM-002-01 A	06	800	900	Sliding	10	SW	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	

* Refer to glossary.
Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1 for Manly , NSW , 2095

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-003	2700	3900	NW	2300	Yes
Bedroom 1	EW-002	2700	3200	NW	900	Yes
Bedroom 1	EW-004	2700	4000	SW		Yes
Bedroom 1	EW-002	2700	1200	NE	4100	Yes
Bedroom 2	EW-006	2700	2600	SW		Yes
Bedroom 1 Ens	EW-006	2700	1600	SW		Yes
Bathroom	EW-006	2700	1500	SW		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	51.84	
IW-002	Plasterboard/AAC block	28.35	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	22.41	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	30.50			
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	6.00			
Bedroom 1/Neighbour	carpet - concrete 200mm	13.40			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	12.20			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.30			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	10	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322918

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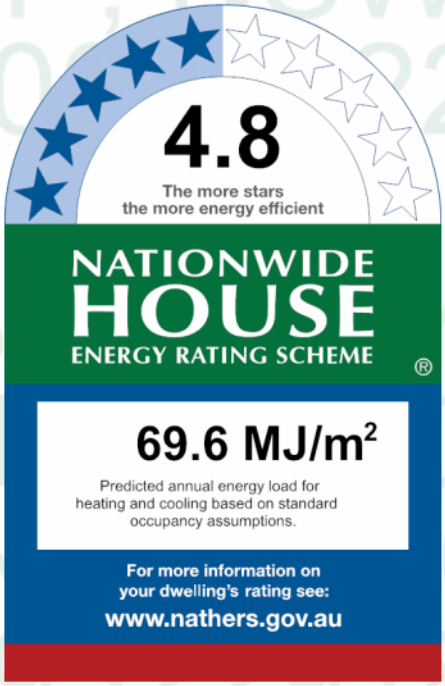

Property

Address	Unit 10, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	94.4
Unconditioned*	0.0
Total	94.4
Garage	

Exposure type

Open

NatHERS climate zone

56

Thermal performance

Heating	Cooling
40.0	**29.6**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=cjjqkEoBZ.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	8	2600	4700	Sliding	67	NE	None
Living / Dining / Kitchen	ALM-002-01 A	9	2600	2100	Sliding	45	NE	None
Living / Dining / Kitchen	ALM-002-01 A	03	1900	1800	Other	00	E	None
Living / Dining / Kitchen	ALM-002-01 A	6	1750	1600	Double Hung	10	SE	None
Bedroom 1	ALM-002-01 A	3	2700	1600	Sliding	45	NE	None
Bedroom 1	ALM-002-01 A	2	1800	2700	Other	00	S	None
Bedroom 2	ALM-002-01 A	5	1750	1100	Double Hung	10	NE	None
Bedroom 2	ALM-002-01 A	8	2700	3000	Sliding	45	SE	None
Bedroom 1 Ens	ALM-002-01 A	1	1200	900	Double Hung	10	SW	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	

* Refer to glossary.
Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1 for Manly , NSW , 2095

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-002	2700	8700	NE	800	Yes
Living / Dining / Kitchen	EW-002	2700	1800	E	900	Yes
Living / Dining / Kitchen	EW-002	2700	3400	SE		Yes
Bedroom 1	EW-002	2700	1900	NE	5300	Yes
Bedroom 1	EW-002	2700	3900	S		Yes
Bedroom 1	EW-004	2700	2800	SW		Yes
Bedroom 1	EW-004	2700	700	NW		Yes
Bedroom 1	EW-003	2700	2150	SW		Yes
Bedroom 1	EW-004	2700	500	SE	3300	Yes
Bedroom 2	EW-002	2700	1900	NE		Yes
Bedroom 2	EW-002	2700	4400	SE	3300	Yes
Bedroom 1 Ens	EW-003	2700	2400	SW		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	54.81	
IW-002	Plasterboard/AAC block	20.79	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	18.36	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	44.30			
Bedroom 1/Neighbour	carpet - concrete 200mm	20.40			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	12.10			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	6.00			Ceramic tile
Hall / Bath/Neighbour	timber - concrete 200mm	5.60			
Hall / Bath/Neighbour	tiles - concrete 200mm	6.00			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Hall / Bath	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	14	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Hall / Bath	3	Downlight	0	Sealed
Hall / Bath	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	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.

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Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322926

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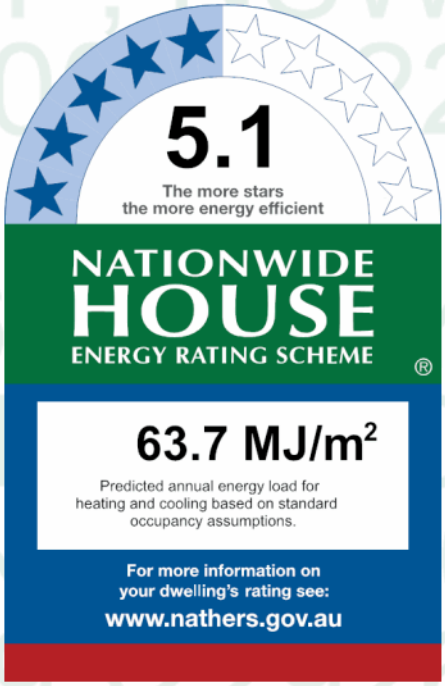

Property

Address	Unit 9, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	70.7
Unconditioned*	3.5
Total	74.2
Garage	

Exposure type

Suburban

NatHERS climate zone

56

Thermal performance

Heating	Cooling
34.8	**28.8**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=DyUBIyLbf.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2700	3400	Sliding	67	NW	None
Bedroom 1	ALM-002-01 A	02	2700	3100	Sliding	20	NW	None
Bedroom 1	ALM-002-01 A	03	2700	1200	Other	00	SW	None
Bedroom 2	ALM-002-01 A	04	2600	800	Double Hung	10	NW	None
Bedroom 1 Ens	ALM-002-01 A	06	700	900	Sliding	10	NE	None
Bathroom	ALM-002-01 A	07	700	900	Sliding	10	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	

* Refer to glossary.
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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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-003	AAC block/Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-003	2700	3800	NW	2300	Yes
Bedroom 1	EW-002	2700	3200	NW	900	Yes
Bedroom 1	EW-004	2700	4100	NE		Yes
Bedroom 1	EW-002	2700	1200	SW	4300	Yes
Bedroom 2	EW-002	2700	800	NW		Yes
Bedroom 2	EW-002	2700	3300	NE		Yes
Bedroom 1 Ens	EW-006	2700	1600	NE		Yes
Bathroom	EW-004	2700	1600	NE		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	50.49	
IW-002	Plasterboard/AAC block	43.20	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	7.56	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	30.60			
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	10.00			
Bedroom 1/Neighbour	carpet - concrete 200mm	13.60			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	13.20			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.30			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	10	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed

* Refer to glossary.

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	50	Medium

Explanatory notes

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Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322942

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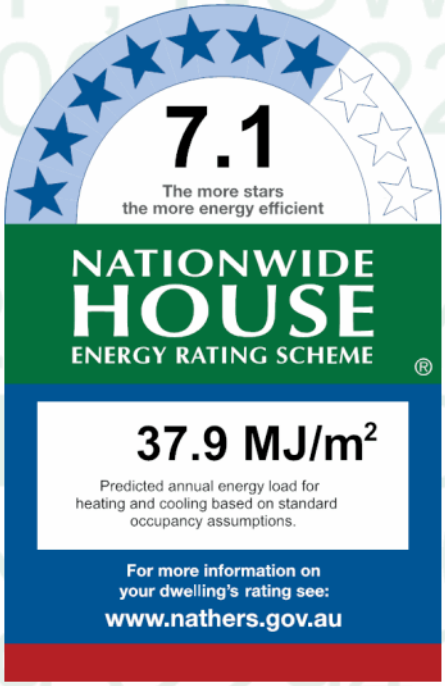

Property

Address	Unit 11, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	07/09/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	78.6
Unconditioned*	3.5
Total	82.1
Garage	

Exposure type

Open

NatHERS climate zone

56

Thermal performance

Heating	Cooling
15.8	**22.1**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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

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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-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.60
ALM-002-01 A	Aluminium B SG Clear	6.7	0.70	0.67	0.74

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*
Living / Dining / Kitchen	ALM-002-01 A	01	2600	6100	Sliding	45	NE	None
Bedroom 1	ALM-002-01 A	02	1700	2100	Other	00	NW	None
Bedroom 1	ALM-001-01 A	03	2600	900	Casement	90	NE	None
Bedroom 1	ALM-002-01 A	04	1700	1000	Other	00	SW	None
Bedroom 2	ALM-002-01 A	05	900	2350	Sliding	10	SW	None
Bedroom 1 Ens	ALM-002-01 A	06	700	900	Sliding	10	SW	None
Bathroom	ALM-002-01 A	07	700	900	Sliding	10	SW	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	

* Refer to glossary.
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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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-002	2700	3500	NW	900	Yes
Living / Dining / Kitchen	EW-002	2700	8800	NE	1600	Yes
Bedroom 1	EW-006	2700	3200	NW		Yes
Bedroom 1	EW-006	2700	900	NE	700	Yes
Bedroom 1	EW-004	2700	4400	SW		Yes
Bedroom 2	EW-006	2700	2800	SW		Yes
Bedroom 1 Ens	EW-006	2700	1500	SW		No
Bathroom	EW-006	2700	1600	SW		Yes

* Refer to glossary.

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	62.37	
IW-002	Plasterboard/AAC block	7.29	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	29.70	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	30.60			
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	9.00			
Living / Dining / Kitchen/Outdoor Air	timber - concrete 200mm	2.70			
Bedroom 1/Neighbour	carpet - concrete 200mm	12.90			Carpet 10 + rubber underlay 8
Bedroom 1/Outdoor Air	carpet - concrete 200mm	1.60			Carpet 10 + rubber underlay 8
Bedroom 2/Neighbour	carpet - concrete 200mm	12.70			Carpet 10 + rubber underlay 8
Entry Hall/Neighbour	timber - concrete 200mm	5.80			
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	3.30			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	3.50			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	carpet - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Entry Hall	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bathroom	tiles - concrete 200mm		No

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	14	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 2	4	Downlight	0	Sealed
Entry Hall	2	Downlight	0	Sealed
Bedroom 1 Ens	2	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R1.0 - Concrete slab 200mm	R1.0	50	Medium

* Refer to glossary.
Generated on 22 Mar 2024 using AccuRate Sustainability V2.4.3.21 SP1 for Manly , NSW , 2095

Explanatory notes

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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.

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322959

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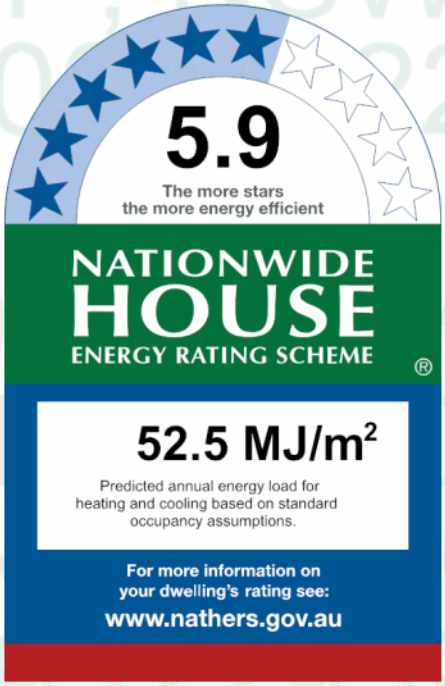

Property

Address	Unit 12, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	07/09/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	139.1
Unconditioned*	5.6
Total	144.7
Garage	

Exposure type

Open

NatHERS climate zone

56

Thermal performance

Heating	Cooling
34.0	**18.5**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=xTySrHnEz.
When using either link, ensure you are visiting www.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

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*
Living / Dining / Kitchen	ALM-002-01 A	5	1700	2600	Sliding	10	NE	None
Living / Dining / Kitchen	ALM-002-01 A	4	2600	4600	Sliding	67	NE	None
Living / Dining / Kitchen	ALM-002-01 A	3	2600	700	Louvre	90	SE	None
Living / Dining / Kitchen	ALM-002-01 A	2	2600	3040	Sliding	45	SE	None
Flex Room	ALM-002-01 A	1	2600	2200	Sliding	45	SE	None
Bedroom 1	ALM-002-01 A	9	2600	2000	Sliding	45	NE	None
Bedroom 1 Ens	ALM-002-01 A	8	2400	1000	Double Hung	45	NE	None
Bedroom 2	ALM-002-01 A	12	1700	1000	Other	00	SW	None
Bedroom 2	ALM-002-01 A	11	1700	2100	Other	00	NW	None
Bedroom 2	ALM-002-01 A	10	1700	900	Double Hung	10	NE	None
Bedroom 3	ALM-002-01 A	14	900	2350	Sliding	10	SW	None
Bathroom	ALM-002-01 A	13	700	900	Sliding	10	SW	None
WIP	ALM-002-01 A	6	1500	900	Louvre	45	NE	None
WIP	ALM-002-01 A	7	2400	1000	Double Hung	45	NW	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								

* Refer to glossary.

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-004	2700	4400	NE	300	No
Living / Dining / Kitchen	EW-002	2700	4600	NE	1500	No
Living / Dining / Kitchen	EW-004	2700	7700	SE	2000	No
Flex Room	EW-004	2700	2800	SE	1800	Yes
Flex Room	EW-006	2700	4600	SW		Yes
Bedroom 1	EW-004	2700	1500	NE		Yes
Bedroom 1	EW-006	2700	2800	NE	1900	Yes

* Refer to glossary.

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	EW-002	2700	3300	NW		Yes
Bedroom 1 Ens	EW-006	2700	2300	NE	1900	Yes
Bedroom 2	EW-004	2700	4300	SW		Yes
Bedroom 2	EW-006	2700	3100	NW		Yes
Bedroom 2	EW-002	2700	900	NE	500	Yes
Bedroom 3	EW-006	2700	2800	SW		Yes
Bathroom	EW-006	2700	3400	SW		Yes
WIP	EW-004	2700	2100	NE	300	No
WIP	EW-006	2700	2300	NW	5200	Yes

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	110.16	
IW-002	Plasterboard/AAC block	19.98	
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	45.90	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	45.80			
Living / Dining / Kitchen/Outdoor Air	timber - concrete 200mm	0.40			
Flex Room/Neighbour	timber - concrete 200mm	12.90			
Bedroom 1/Neighbour	carpet - concrete 200mm	19.00			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	9.80			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	14.30			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	13.00			Carpet 10 + rubber underlay 8
Hall / WC/Neighbour	timber - concrete 200mm	16.00			

* Refer to glossary.

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hall / WC/Neighbour	tiles - concrete 200mm	2.90			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	5.60			Ceramic tile
WIP/Neighbour	timber - concrete 200mm	3.20			
WIP/Outdoor Air	timber - concrete 200mm	1.80			

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/Living / Dining / Kitchen	timber - concrete 200mm		No
Neighbour/Flex Room	timber - concrete 200mm		No
Neighbour/Bedroom 1	carpet - concrete 200mm		No
Neighbour/Bedroom 1 Ens	carpet - concrete 200mm		No
Neighbour/Bedroom 2	carpet - concrete 200mm		No
Neighbour/Bedroom 3	carpet - concrete 200mm		No
Neighbour/Hall / WC	timber - concrete 200mm		No
Neighbour/Bathroom	carpet - concrete 200mm		No
Neighbour/WIP	timber - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Flex Room	4	Downlight	0	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 1 Ens	3	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 3	4	Downlight	0	Sealed
Hall / WC	5	Downlight	0	Sealed

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Hall / WC	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
WIP	1	Downlight	0	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
No Data Available			

Explanatory notes

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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).

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 0009322967

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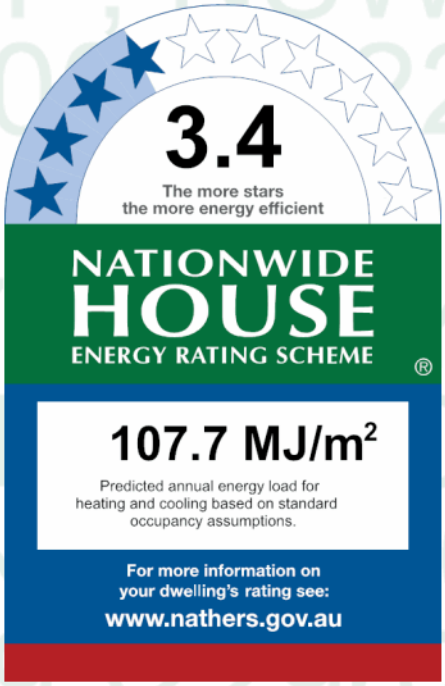

Property

Address	Unit 13, 9-11 Victoria Parade, Manly , NSW , 2095
Lot/DP	Lot -
NCC Class*	2
Type	New Home

Plans

Main plan	20/12/2023
Prepared by	Platform Architects

Construction and environment

Assessed floor area (m^2)*

Conditioned*	149.8
Unconditioned*	5.6
Total	155.4
Garage	

Exposure type

Open

NatHERS climate zone

56

Thermal performance

Heating	Cooling
55.5	**52.2**
MJ/m^2	MJ/m^2

Accredited assessor

Name	Robert Mallindine
Business name	AGA Consultants Pty Ltd
Email	rob@agaconsultants.com.au
Phone	02 8859 6563
Accreditation No.	DMN/12/1475
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

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 www.hstar.com.au/QR/Generate?p=jhdFdnVhj.
When using either link, ensure you are visiting www.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-002-04 A	Aluminium B SG Low Solar Gain Low-E	5.6	0.41	0.39	0.43

Custom* windows

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

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Living / Dining / Kitchen	ALM-002-01 A	5	1700	2600	Sliding	10	NE	None
Living / Dining / Kitchen	ALM-002-01 A	4	2600	4600	Sliding	67	NE	None
Living / Dining / Kitchen	ALM-002-01 A	3	2600	700	Louvre	90	SE	None
Living / Dining / Kitchen	ALM-002-01 A	2	2600	3040	Sliding	45	SE	None
Flex Room	ALM-002-01 A	1	2600	2200	Sliding	45	SE	None
Bedroom 1	ALM-002-01 A	9	2600	2000	Sliding	45	NE	None
Bedroom 1 Ens	ALM-002-01 A	8	2400	1000	Double Hung	45	NE	None
Bedroom 2	ALM-002-01 A	12	1700	1000	Other	00	SW	None
Bedroom 2	ALM-002-01 A	11	1700	2100	Other	00	NW	None
Bedroom 2	ALM-002-01 A	10	1700	900	Double Hung	10	NE	None
Bedroom 3	ALM-002-01 A	14	900	2350	Sliding	10	SW	None
Bathroom	ALM-002-01 A	13	700	900	Sliding	10	SW	None
WIP	ALM-002-01 A	6	1500	900	Louvre	45	NE	None
WIP	ALM-002-01 A	7	2400	1000	Double Hung	45	NW	None
Roof Access	ALM-002-04 A	RA1	950	2800	Other	30	NW	None
Roof Access	ALM-002-04 A	RA2	2100	2400	Sliding	45	NE	None
Roof Access	ALM-002-04 A	RA3	950	2800	Other	30	SE	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
SG-Generic-01 A	Clear Al SG DEFAULT ROOF WINDOW System 01	7.3	0.79	0.75	0.83
DG-Generic-02 A	Clear Al DG DEFAULT ROOF WINDOW System 02	4.2	0.72	0.68	0.76

Custom* roof windows

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

* Refer to glossary.

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
Bedroom 1 Ens	SG-Generic-01 A	01	0	837	837	N	None	None
Hall / WC	SG-Generic-01 A	02	0	775	775	N	None	None
Roof Access	DG-Generic-02 A	RA	0	3082	3082	NW	None	None

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
No Data Available				

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-002	Plasterboard	50	Medium	Glass fibre batt: R2.0	No
EW-004	Concrete wall/Plasterboard	50	Medium	Polystyrene extruded: R1.0	No
EW-006	Fibre-cement sheet/Plasterboard	50	Medium	Glass fibre batt: R2.0	No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Living / Dining / Kitchen	EW-004	2700	4400	NE	300	No
Living / Dining / Kitchen	EW-002	2700	4600	NE	1500	No
Living / Dining / Kitchen	EW-004	2700	7700	SE	2000	No
Flex Room	EW-004	2700	2800	SE	1800	Yes
Flex Room	EW-006	2700	4600	SW		Yes
Bedroom 1	EW-004	2700	1500	NE		Yes
Bedroom 1	EW-006	2700	2800	NE	1900	Yes
Bedroom 1	EW-002	2700	3300	NW		Yes
Bedroom 1 Ens	EW-006	2700	2300	NE	1900	Yes
Bedroom 2	EW-004	2700	4300	SW		Yes
Bedroom 2	EW-006	2700	3100	NW		Yes
Bedroom 2	EW-002	2700	900	NE	500	Yes
Bedroom 3	EW-006	2700	2800	SW		Yes
Bathroom	EW-006	2700	3400	SW		Yes
WIP	EW-004	2700	2100	NE	300	No
WIP	EW-006	2700	2300	NW	5200	Yes
Stair	EW-004	2700	1000	SW		No
Roof Access	EW-004	1600	2800	NW		No
Roof Access	EW-006	2100	2400	NE		Yes
Roof Access	EW-004	1600	2800	SE		No
Roof Access	EW-004	700	1000	SE		No
Roof Access	EW-004	700	2400	SW		No
Roof Access	EW-004	700	1000	NW		No

Internal wall *type*

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-001	Plasterboard	112.86	
IW-002	Plasterboard/AAC block	19.98	

* Refer to glossary.

Wall ID	Wall type	Area (m^2)	Bulk insulation
IW-004	Fibre-cement sheet/Concrete wall/Plasterboard	54.54	

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
Living / Dining / Kitchen/Neighbour	timber - concrete 200mm	45.80			
Living / Dining / Kitchen/Outdoor Air	timber - concrete 200mm	0.40			
Flex Room/Neighbour	timber - concrete 200mm	12.90			
Bedroom 1/Neighbour	carpet - concrete 200mm	19.00			Carpet 10 + rubber underlay 8
Bedroom 1 Ens/Neighbour	tiles - concrete 200mm	9.80			Ceramic tile
Bedroom 2/Neighbour	carpet - concrete 200mm	14.30			Carpet 10 + rubber underlay 8
Bedroom 3/Neighbour	carpet - concrete 200mm	13.00			Carpet 10 + rubber underlay 8
Hall / WC/Neighbour	timber - concrete 200mm	16.00			
Hall / WC/Neighbour	tiles - concrete 200mm	2.90			Ceramic tile
Bathroom/Neighbour	tiles - concrete 200mm	5.60			Ceramic tile
WIP/Neighbour	timber - concrete 200mm	3.20			
WIP/Outdoor Air	timber - concrete 200mm	1.80			
Stair/Neighbour	tiles - concrete 200mm	4.10			Ceramic tile
Roof Access/Stair	tiles - concrete 200mm	4.20			Ceramic tile
Roof Access/Neighbour	tiles - concrete 200mm	5.40			Ceramic tile

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Roof Access/Stair	tiles - concrete 200mm		No

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Living / Dining / Kitchen	12	Downlight	0	Sealed
Living / Dining / Kitchen	1	Ceiling exhaust fan	160	Sealed
Flex Room	4	Downlight	0	Sealed
Bedroom 1	4	Downlight	0	Sealed
Bedroom 1 Ens	3	Downlight	0	Sealed
Bedroom 1 Ens	1	Ceiling exhaust fan	160	Sealed
Bedroom 2	4	Downlight	0	Sealed
Bedroom 3	4	Downlight	0	Sealed
Hall / WC	5	Downlight	0	Sealed
Hall / WC	1	Ceiling exhaust fan	160	Sealed
Bathroom	2	Downlight	0	Sealed
Bathroom	1	Ceiling exhaust fan	160	Sealed
WIP	1	Downlight	0	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
R2.5 - Concrete slab 200mm	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 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).