## Nationwide House Energy Rating Scheme — Class 2 summary

Generated on 5 Feb 2021 using FirstRate5 v5.3.0a

### Property

Address

2 Kulgun Court, OCEAN SHORES, NSW, 2483

Lot/DP NatHERS climate zone

## Accredited assessor



Duncan Hope Senica Consultancy Group duncan@senica.com.au 61280067784 Accreditation No. DMN/14/1658 Assessor Accrediting Organisation DMN





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The rating above is the average of all dwellings in this summary.

For more information on your dwelling's rating see: www.nathers.gov.au

## ■辨言該計■ Verification



**To verify this certificate, scan the QR code or visit** https://www.fr5.com.au/QRCodeLanding?PublicId=ZSWKKA9QXM&GrpCert=1 When using either link, ensure you are visiting www.fr5.com.au.

### Summary of all dwellings

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
53SM20ARZM	09	18.2	39.2	57.4	4.8
EGWTZOXZD6	10	18.7	38.3	57	4.9
2EAALA21PS	Z 11 U	18.5	38.4	56.9	4.9
8P00MUHFP0	12	18.7	38.3	57	4.9
INQLERRMGC	13	18.7	38.1	56.8	4.9
FM6AV12RA2	14	19	38	57	4.9
7JBHOYQ6HF	15	19	38	57	4.9

Continued over

### 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.

Nationwide House Energy Rating Scheme (NatHERS) is an initiative of the Australian, state and territory governments. For more details see www.nathers.gov.au.



## Summary of and links to all dwellings (continued)

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
HRKMXOXZ54	16	19	38	57	4.9
Avera	ge	18.7	38.3	57	4.9



### **Explanatory notes**

### About this report

This summary rating is the average rating of all NCC Class 2 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the 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. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

#### 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). 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.

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, input and creation of the NatHERS Certificate is by the assessor. 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.

# Nationwide House Energy Rating Scheme NatHERS Certificate No. 2EAALA21PS

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address Lot/DP NCC Class\* Type 11, 2 Kulgun Court, OCEAN SHORES, NSW, 2483 9//SP102058 Class 1a New Home

### Plans

Main plan Pr Prepared by St

Project No. 20017 Story Design Collective

### Construction and environment

Assessed floor area (m²)\*Conditioned\*97.2Unconditioned\*5.4Total102Garage-

n²)\*Exposure type97.4suburban5.4NatHERS climate zone102.810, OCEAN SHORES

## CCREDIA V SSESSOF

## Accredited assessor

NameDuncBusiness nameSenioEmailduncaPhone61280Accreditation No.DMN.Assessor Accrediting OrganisationDMNDeclaration of interestDeclaration

Duncan Hope

Senica Consultancy Group duncan@senica.com.au 61280067784 DMN/14/1658

Declaration completed: no conflicts



# 56.9 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performanceHeatingCooling18.538.4MJ/m²MJ/m²

### About the rating

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

## Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au /QRCodeLanding?PublicId= 2EAALA21PS When using either link, ensure you are visiting www.FR5.com.au.



### National Construction Code (NCC) requirements

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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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 11, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
Custom* window	S			Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availab	le				

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 11, 2 Kulgun Court, OCEAN SHORES

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### 2EAALA21PS NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021

								INTRO RAING SCHEM
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

					Substi	Substitution tolerance ranges		
Window ID	Window description		Maximum U-value*	SHGC*	SHGC lov	ver limit	it SHGC upper limit	
No Data Available								
Custom* roof windows								
					Substi	tution to	lerance ranges	
Window ID	Window description		Maximum U-value*	SHGC*	SHGC lov	ver limit	SHGC upper limit	
No Data Available								
Roof window se	chedule							
Location	Window ID	Window no	Opening %	Area	Orientation	Outdoo	or Indoor	

Location	Window ID	Window no.	Opening %	(m²)	Orientation	shade	shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

		Skylight	Skylight shaft	Area Orient-	Outdoor	r	Skylight shaft
Location	Skylight ID	No.	length (mm)	(m <sup>2</sup> ) ation	shade	Diffuser	reflectance
No Data Available							

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	Ret Walls - Conc. Block 190mm Retaining Walls w/ p'board	0.5	Medium		No

\* Refer to glossary.

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## External wall schedule

					Horizontal shading	Vertical
	Wall	Height	Width		feature* maximum	shading feature
Location	ID	(mm)	(mm)	Orientation	projection (mm)	(yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	2	1450	3170	WNW	0	No
Bedroom 2	1	1100	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation	
1	FR5 - Internal Plasterboard Stud Wall	90.9	

## Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

		Bulk insulation R-value (may	Reflective	
Location	Construction material/type	include edge batt values)	wrap*	
* Defente alessen				,

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 11, 2 Kulgun Court, OCEAN SHORES

### 2EAALA21PS NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021



Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes
Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.5	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 NatHERSAdministrator. 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

the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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.
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.
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.
windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
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.
terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
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).
terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
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### 2EAALA21PS NatHERS Certificate



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
<b>Reflective wrap</b> (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. 7JBHOYQ6HF

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address15, 2 KulguLot/DP9//SP10205NCC Class\*Class 1aTypeNew Home

15, 2 Kulgun Court, OCEAN SHORES, NSW, 2483 9//SP102058 Class 1a

## Plans

Main planProject NPrepared byStory De

Project No. 20017 Story Design Collective

### Construction and environment

Assessed floor area (m²)\*Conditioned\*97.4Unconditioned\*5.4Total102Garage-

97.4 5.4 102.8

20

### Accredited assessor

NameDuncBusiness nameSenioEmailduncaPhone61280Accreditation No.DMN.Assessor Accrediting OrganisationDMNDeclaration of interestDeclaration

Duncan Hope

Senica Consultancy Group duncan@senica.com.au 61280067784 DMN/14/1658

Exposure type

NatHERS climate zone

**10, OCEAN SHORES** 

suburban

Declaration completed: no conflicts



# **57 MJ/m<sup>2</sup>**

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance						
Heating	Cooling					
19 2	38					
MJ/m²	MJ/m <sup>2</sup>					

### About the rating

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## 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.

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Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 15, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

### Window and glazed door type and performance

				Substitution tolerance ranges		
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74	
Custom* windows	S			Substitution to	lerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availabl	le					

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 15, 2 Kulgun Court, OCEAN SHORES

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### 4.9 Star Rating as of 5 Feb 2021

								ENERGY RATING SCHEME
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

						Substit	tution to	lerance ranges
Window ID	Window description		Maximum U-value*	SHG	)*	SHGC low	ver limit	SHGC upper limit
No Data Available								
Custom* roof windows	S							
						Substit	tution to	lerance ranges
Window ID	Window description		Maximum U-value*	SHG	)*	SHGC low	ver limit	SHGC upper limit
No Data Available								
Location	Window ID	Window no.	Opening %	Area % (m²)	-	rientation	Outdoo shade	or Indoor shade
	and performance							
Skylight ID			Skylight des	cription				
No Data Available								
Skylight sched	dule							
Location	Skylight ID	Skylight No.	Skylight shaft length (mm)		rient- ion	Outdoor shade	Diffuse	Skylight shaft r reflectance

Location	Skylight ID	No.	length (mm)		reflectance	
No Data Available						

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	) Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

## External wall schedule

\* Refer to glossary. Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 15, 2 Kulgun Court, OCEAN SHORES

### 4.9 Star Rating as of 5 Feb 2021



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	1	2550	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	90.9

## Floor type

	Area	Sub-floor	Added insulation	
Construction	(m²)	ventilation	(R-value)	Covering
FR5 - Timber Lined	13.6	Open	R0.0	Carpet
FR5 - Timber Lined	10.4	Open	R0.0	Carpet
FR5 - Timber Lined	10.6	Open	R0.0	Carpet
FR5 - Timber Lined	5	Open	R0.0	Timber
FR5 - Timber Lined	5.4	Open	R0.0	Tiles
FR5 - Timber Lined	18.9	Open	R0.0	Timber
FR5 - Timber Lined	29.9	Open	R0.0	Timber
FR5 - Timber Lined	3.9	Open	R0.0	Carpet
FR5 - Timber Lined	5.2	Open	R0.0	Tiles
	FR5 - Timber LinedFR5 - Timber Lined	Construction(m²)FR5 - Timber Lined13.6FR5 - Timber Lined10.4FR5 - Timber Lined10.6FR5 - Timber Lined5FR5 - Timber Lined5.4FR5 - Timber Lined18.9FR5 - Timber Lined29.9FR5 - Timber Lined3.9	FR5 - Timber Lined13.6OpenFR5 - Timber Lined10.4OpenFR5 - Timber Lined10.6OpenFR5 - Timber Lined5OpenFR5 - Timber Lined5.4OpenFR5 - Timber Lined18.9OpenFR5 - Timber Lined29.9OpenFR5 - Timber Lined3.9Open	Construction(m²) ventilation(R-value)FR5 - Timber Lined13.6OpenR0.0FR5 - Timber Lined10.4OpenR0.0FR5 - Timber Lined10.6OpenR0.0FR5 - Timber Lined5OpenR0.0FR5 - Timber Lined5.4OpenR0.0FR5 - Timber Lined18.9OpenR0.0FR5 - Timber Lined18.9OpenR0.0FR5 - Timber Lined3.9OpenR0.0

## Ceiling type

		Bulk insulation R-value (may	Reflective
Location	Construction material/type	include edge batt values)	wrap*
Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 15, 2 Kulgun Court, OCEAN SHORES

4.9 Star Rating as of 5 Feb 2021



Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		
Roof type		
Construction	Added insulation (R-value)	Solar absorptance Roof shade
Cont:Attic-Continuous	1.3	0.5 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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## Glossary

Annual energy loadthe predicted amount of energy required for heating and cooling, based on standardAssessed floor areathe floor area modelled in the software for the purpose of the NatHERS assessment the floor area in the design documents.Ceiling penetrationsfeatures that require a penetration to the ceiling, including downlights, vents, exhaus flues. Excludes fixtures attached to the ceiling with small holes through the ceiling fo lights, and heating and cooling ducts.Conditioneda zone within a dwelling that is expected to require heating and cooling based on sta some circumstances it will include garages.Custom windowswindows listed in NatHERS software that are available on the market in Australia an Rating Scheme) rating.Default windowswindows that are representative of a specific type of window product and whose pro methods.Entrance doorthese signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.Exposure category - exposedterrain with few obstructions e.g. flat grazing land, ocean-frontage, desert, exposed h with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floor with scattered sheds, lightly vegetated bush blocks, el	Note, this may not be consistent with fans, rangehoods, chimneys and wiring, e.g. ceiling fans; pendant
Ceiling penetrationsthe floor area in the design documents.Ceiling penetrationsfeatures that require a penetration to the ceiling, including downlights, vents, exhaus flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for lights, and heating and cooling ducts.Conditioneda zone within a dwelling that is expected to require heating and cooling based on state some circumstances it will include garages.Custom windowswindows listed in NatHERS software that are available on the market in Australia an Rating Scheme) rating.Default windowswindows that are representative of a specific type of window product and whose pro- methods.Entrance doorthese signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.Exposure category - 	fans, rangehoods, chimneys and wiring, e.g. ceiling fans; pendant
flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for lights, and heating and cooling ducts.Conditioneda zone within a dwelling that is expected to require heating and cooling based on sta some circumstances it will include garages.Custom windowswindows listed in NatHERS software that are available on the market in Australia an Rating Scheme) rating.Default windowswindows that are representative of a specific type of window product and whose pro methods.Entrance doorthese signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.Exposure category - exposedterrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed h exposed terrain with few obstructions at a similar height e.g. grasslands with few well scattered	wiring, e.g. ceiling fans; pendant
some circumstances it will include garages.         Custom windows       windows listed in NatHERS software that are available on the market in Australia an Rating Scheme) rating.         Default windows       windows that are representative of a specific type of window product and whose promethods.         Entrance door       these signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.         Exposure category - exposed       terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed hexposed         Exposure category - open       terrain with few obstructions at a similar height e.g. grasslands with few well scattered	ndard occupancy assumptions. In
Rating Scheme) rating.         Default windows         windows that are representative of a specific type of window product and whose promethods.         Entrance door       these signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.         Exposure category - exposed       terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed herein with few obstructions at a similar height e.g. grasslands with few well scattered	
Entrance door       these signify ventilation benefits in the modelling software and must not be modelled ventilated corridor in a Class 2 building.         Exposure category - exposed       terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed herein with few obstructions at a similar height e.g. grasslands with few well scattered	I have a WERS (Window Energy
Exposure category - exposed       terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed here         Exposure category - open       terrain with few obstructions at a similar height e.g. grasslands with few well scattered	perties have been derived by statistical
exposed Exposure category - open terrain with few obstructions at a similar height e.g. grasslands with few well scattered	as a door when opening to a minimally
	gh-rise unit (usually above 10 floors).
Exposure category - terrain with numerous, closely spaced obstructions below 10m e.g. suburban housin suburban	g, heavily vegetated bushland areas.
Exposure category - terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial protected	areas.
Horizontal shading feature provides shading to the building in the horizontal plane, e.g. eaves, verandahs, perg 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. 8P00MUHFP0

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address Lot/DP NCC Class\* Type 12, 2 Kulgun Court, OCEAN SHORES, NSW, 2483 9//102058 Class 1a

### Plans

Main plan Prepared by Project No. 20017 Story Design Collective

### Construction and environment

New Home

Assessed floor area (m²)\*Conditioned\*97.2Unconditioned\*5.4Total102Garage-

97.4 5.4 102.8

CREDIP
VSSESSOF

### Accredited assessor

NameDuncan HopBusiness nameSenica ConsEmailduncan@sePhone6128006778Accreditation No.DMN/14/165Assessor Accrediting OrganisationDMNDeclaration of interestDeclaration

Duncan Hope Senica Consultancy Group duncan@senica.com.au 61280067784 DMN/14/1658

**Exposure type** 

NatHERS climate zone

10, OCEAN SHORES

suburban

Declaration completed: no conflicts

## NATIONWIDE HOUSE ENERGY RATING SCHEME

the more energy efficient

# **57 MJ/m<sup>2</sup>**

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance									
Heating	Cooling								
18.7	38.3								
MJ/m²	MJ/m <sup>2</sup>								

### 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 https://www.fr5.com.au /QRCodeLanding?PublicId= 8P00MUHFP0 When using either link, ensure you are visiting www.FR5.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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 12, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

#### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution tolerance ranges		
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74	
Custom* windows	5			Substitution to	lerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availabl	e					

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 12, 2 Kulgun Court, OCEAN SHORES

- - --

### 8P00MUHFP0 NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021

								INTRO RAING SCHEM
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

				Substit	Substitution tolerance ranges		
Window ID	Window description		Maximum U-value*	SHGC*	SHGC low	er limit	SHGC upper limit
No Data Available							
Custom* roof windows							
					Substit	ution to	lerance ranges
Window ID	Window description		Maximum U-value*	SHGC*	SHGC low	SHGC lower limit S	
No Data Available							
Roof window so	chedule						

Location	Window ID	Window no.	Opening %	(m²)	Orientation	shade	shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

		Skylight	Skylight shaft	Area Orient-	Outdoor	r	Skylight shaft
Location	Skylight ID	No.	length (mm)	(m <sup>2</sup> ) ation	shade	Diffuser	reflectance
No Data Available							

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	le	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	Ret Walls - Conc. Block 190mm Retaining Walls w/ p'board	0.5	Medium		No

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## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	2	800	3170	WNW	0	No
Bedroom 2	1	1750	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation	
1	FR5 - Internal Plasterboard Stud Wall	90.9	

## Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
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WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
* Refer to glossary.			Page 4 of 7

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 12, 2 Kulgun Court, OCEAN SHORES

### 8P00MUHFP0 NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021



Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes
Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.5	Medium



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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.

### 8P00MUHFP0 NatHERS Certificate



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. 53SM20ARZM

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

## Property

Address Lot/DP 9//SP102058 NCC Class\* Class 1a Type New Home

09, 2 Kulgun Court, OCEAN SHORES, NSW, 2483

## Plans

Main plan	Project No. 20017
Prepared by	Story Design Collectiv

### Construction and environment

Assessed floor area (m <sup>2</sup> )*			
Conditioned*	97.4		
Unconditioned*	5.4		
Total	102.8		
Garage	I-N		

**Exposure type** suburban NatHERS climate zone **10, OCEAN SHORES** 

## Accredited assessor

Name	Duncan Hope
Business name	Senica Consultancy Gro
Email _ G U \	duncan@senica.com.au
Phone	61280067784
Accreditation No.	DMN/14/1658
Assessor Accrediting Orga	inisation
DMN	
Declaration of interest	Declaration completed:

oup u

ompleted: no conflicts

# NATIONWIDE **ENERGY RATING SCHEME**

the more energy efficient

# 57.4 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance Heating Cooling 18.2 39.2 MJ/m<sup>2</sup> MJ/m<sup>2</sup>

### 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 https://www.fr5.com.au /QRCodeLanding?PublicId= 53SM20ARZM When using either link, ensure you are visiting www.FR5.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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 09, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

#### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
Custom* window	S			Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availab	le				

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 09, 2 Kulgun Court, OCEAN SHORES

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### 53SM20ARZM NatHERS Certificate

### 4.8 Star Rating as of 5 Feb 2021

								ENERGY RATING SCHEME
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

				Substitution tolerance ranges		
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Available						
Custom* roof windo	WS					
				Substitution to	lerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Available						
Roof window	schedule		Area	Outdo	or Indoor	

Location	Window ID	Window no.	Opening %	(m²)	Orientation	shade	shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description	
No Data Available		

## Skylight schedule

		Skylight	Skylight shaft	Area Orient-	Outdoor	r	Skylight shaft
Location	Skylight ID	No.	length (mm)	(m <sup>2</sup> ) ation	shade	Diffuser	reflectance
No Data Available							

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	le	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	Ret Walls - Conc. Block 190mm Retaining Walls w/ p'board	0.5	Medium		No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 09, 2 Kulgun Court, OCEAN SHORES



## External wall schedule

					Horizontal shading	Vertical
	Wall	Height	Width		feature* maximum	shading feature
Location	ID	(mm)	(mm)	Orientation	projection (mm)	(yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	2	800	3170	WNW	0	No
Bedroom 2	1	1750	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	90.9

## Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

		Bulk insulation R-value (may	Reflective	
Location	Construction material/type	include edge batt values)	wrap*	

\* Refer to glossary.

### 53SM20ARZM NatHERS Certificate

### 4.8 Star Rating as of 5 Feb 2021



Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes
Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Colling fana		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.5	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 NatHERSAdministrator. 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.

### 53SM20ARZM NatHERS Certificate

4.8 Star Rating as of 5 Feb 2021



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. EGWTZOXZD6

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address Lot/DP NCC Class\* Type

10, 2 Kulgun Court, OCEAN SHORES, NSW, 2483 9//SP102058 Class 1a New Home

## Plans

Main plan Prepared by Project No. 20017 Story Design Collective

### Construction and environment

Assessed floor area (m<sup>2</sup>)\* Conditioned\* Unconditioned\* Total Garage

97.4 5.4 102.8 **Exposure type** suburban NatHERS climate zone 10, OCEAN SHORES



### Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation DMN Declaration of interest

Duncan Hope

Senica Consultancy Group duncan@senica.com.au 61280067784 DMN/14/1658

Declaration completed: no conflicts

# the more energy efficient NATIONWIDE **ENERGY RATING SCHEME**

# 57 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal pe	erformance
Heating	Cooling
18.7	38.3
MJ/m²	MJ/m²

### About the rating

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

## Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au /QRCodeLanding?PublicId= EGWTZOXZD6 When using either link, ensure you are visiting www.FR5.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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 10, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

### Genuine certificate

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

### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

#### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
Custom* windows	5			Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availabl	e				

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 10, 2 Kulgun Court, OCEAN SHORES

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### EGWTZOXZD6 NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021

								INSIGN BOURSE SCHEME
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					
Custom* roof window	S				
				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					
Roof window	schedule		Area	Outdo	or Indoor

Location	Window ID	Window no.	Opening %	(m²)	Orientation	shade	shade
No Data Available							

## Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

		Skylight	Skylight shaft	Area Orient-	Outdoor		Skylight shaft
Location	Skylight ID	No.	length (mm)	(m <sup>2</sup> ) ation	shade	Diffuser	reflectance
No Data Available							

## External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	Ret Walls - Conc. Block 190mm Retaining Walls w/ p'board	0.5	Medium		No

\* Refer to glossary.

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## External wall schedule

					Horizontal shading	Vertical
	Wall	Height	Width		feature* maximum	shading feature
Location	ID	(mm)	(mm)	Orientation	projection (mm)	(yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	2	800	3170	WNW	0	No
Bedroom 2	1	1750	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	90.9

## Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
* Refer to glossary.			Page 4 of 7

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 10, 2 Kulgun Court, OCEAN SHORES

### EGWTZOXZD6 NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021



Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes
Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Colling force		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.5	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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### 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.

#### EGWTZOXZD6 NatHERS Certificate



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. FM6AV12RA2

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address	14, 2 Kulgun Court, OCEAN
Lot/DP	9//SP102058
NCC Class*	Class 1a
Туре	New Home

### Plans

Main plan	Project No. 20017
Prepared by	Story Design Collective

### Construction and environment

Assessed floor area (m <sup>2</sup> )"					
Conditioned*	97.4				
Unconditioned*	5.4				
Total	102.8				
Garage	<b>QL</b>				

**Exposure type** suburban NatHERS climate zone **10, OCEAN SHORES** 

SHORES, NSW, 2483

## ccredited assessor

Name	Duncan Hope
Business name	Senica Consultancy
Email 2	duncan@senica.co
Phone	61280067784
Accreditation No.	DMN/14/1658
Assessor Accrediting Organ	nisation
DMN	
Declaration of interest	Declaration comple

y Group om.au

eted: no conflicts

# NATIONWIDE **ENERGY RATING SCHEME**

the more energy efficient

## **57 MJ/m<sup>2</sup>**

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal p	erformance
Heating	Cooling
19	38
MJ/m <sup>2</sup>	MJ/m <sup>2</sup>

#### 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 https://www.fr5.com.au /QRCodeLanding?PublicId= FM6AV12RA2 When using either link, ensure you are visiting www.FR5.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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 14, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

#### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

#### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

### Window and glazed door type and performance

				Substitution tolerance ranges		
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74	
Custom* windows	5			Substitution to	lerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit	
No Data Availabl	e					

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 14, 2 Kulgun Court, OCEAN SHORES

- - --

#### 4.9 Star Rating as of 5 Feb 2021

								DARKY RADING SCHOOL
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

					Substit	ution to	lerance ranges
Window ID	Window description		Maximum U-value*	SHGC*	SHGC low	ver limit	SHGC upper limi
No Data Available							
Custom* roof windo	OWS						
					Substit	ution to	lerance ranges
Window ID	Window description		Maximum U-value*	SHGC*	SHGC low	ver limit	SHGC upper limi
No Data Available							
Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoo shade	or Indoor shade
No Data Available							
Skylight <i>type</i>	e and performance						
Skylight ID			Skylight desc	ription			
No Data Available							
Skylight sch	eaule						
location	Skylight ID	Skylight No	Skylight shaft A			Diffuse	Skylight shaft

		Okyngin	ony ngine on an	Alva	Onone	Outdool		okyngne onare
Location	Skylight ID	No.	length (mm)	(m²)	ation	shade	Diffuser	reflectance
No Data Available								

### External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	) Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

## External wall schedule

\* Refer to glossary. Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 14, 2 Kulgun Court, OCEAN SHORES

#### 4.9 Star Rating as of 5 Feb 2021



Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	1	2550	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	90.9

## Floor type

51		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

		Bulk insulation R-value (may	Reflective
Location	Construction material/type	include edge batt values)	wrap*
Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 14, 2 Kulgun Court, OCEAN SHORES

4.9 Star Rating as of 5 Feb 2021



Bedroom 3	Plasterboard	R	.0 Yes	
Laundry Hallway	Plasterboard	R	.0 Yes	
Bath	Plasterboard	R	.0 Yes	
Living	Plasterboard	R	.0 Yes	
Kitchen/Living	Plasterboard	R	.0 Yes	
WIR	Plasterboard	R	.0 Yes	
Ensuite	Plasterboard	R	.0 Yes	

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		
Roof type		
Construction	Added insulation (R-value)	Solar absorptance Roof shade
Cont:Attic-Continuous	1.3	0.5 Medium



## **Explanatory Notes**

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Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
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## **Nationwide House Energy Rating Scheme** NatHERS Certificate No. HRKMXOXZ54

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address Lot/DP NCC Class\* Type

16, 2 Kulgun Court, OCEAN SHORES, NSW, 2483 9//SP102058 Class 1a New Home

### Plans

Main plan Prepared by Project No. 20017 Story Design Collective

### Construction and environment

Assessed floor area (m<sup>2</sup>)\* Conditioned\* 97.4 Unconditioned\* 5.4 Total 102.8 Garage

**Exposure type** suburban NatHERS climate zone **10, OCEAN SHORES** 

## Accredited assessor

Name **Business name** Email Phone Accreditation No. Assessor Accrediting Organisation DMN Declaration of interest

Duncan Hope

Senica Consultancy Group duncan@senica.com.au 61280067784 DMN/14/1658

Declaration completed: no conflicts



## 57 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performance						
Heating Cooling						
19	38					
MJ/m²	MJ/m <sup>2</sup>					

#### 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 https://www.fr5.com.au /QRCodeLanding?PublicId= HRKMXOXZ54 When using either link, ensure you are visiting www.FR5.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.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 16, 2 Kulgun Court, OCEAN SHORES



## **Certificate Check**

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

#### Genuine certificate

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

#### Ceiling penetrations\*

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

#### Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

#### Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

#### Exposure\*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

#### Provisional\* values

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution tolerance ranges	
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
Custom* windows	5			Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availabl	e				

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

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#### HRKMXOXZ54 NatHERS Certificate

#### 4.9 Star Rating as of 5 Feb 2021

								INTRO RAING SCHEM
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

						Substit	tution to	lerance ranges
Window ID	Window description		Maximum U-value*	SH	GC*	SHGC low	ver limit	SHGC upper limit
No Data Available			C fuido	0.1				
Custom* roof windo	DWS							
			<b>N A a a a b a a a b <b>a b a b <b>a b a b <b>a b a b <b>a b a b a b a b a b a b a b a b</b></b></b></b></b>			Substit	tution to	lerance ranges
Window ID	Window description		Maximum U-value*	SH	GC*	SHGC low	ver limit	SHGC upper limit
No Data Available								
Location	Window ID	Window no.	Opening %		.rea m²) Or	ientation	Outdoo shade	or Indoor shade
	Window ID	Window no.	Opening %	6 (I	m²) Or	ientation	shade	shade
No Data Available								
Skvliaht <i>tvpe</i>	e and performance							
Skylight ID	,		Skylight dese	cripti	on			
No Data Available								
Skylight sch	edule							
		Skylight	Skylight shaft			Outdoor		Skylight shaft
Location	Skylight ID	No.	length (mm)	(m²)	ation	shade	Diffuse	r reflectance
No Data Available								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

## External wall schedule

\* Refer to glossary. Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 16, 2 Kulgun Court, OCEAN SHORES

#### 4.9 Star Rating as of 5 Feb 2021



		Height			Horizontal shading feature* maximum	Vertical shading feature
Location	ID	(mm)	(mm)	Orientation	projection (mm)	(yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	1	2550	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	90.9

## Floor type

51		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

		Bulk insulation R-value (may	Reflective
Location	Construction material/type	include edge batt values)	wrap*
Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 16, 2 Kulgun Court, OCEAN SHORES

#### HRKMXOXZ54 NatHERS Certificate

4.9 Star Rating as of 5 Feb 2021



Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		
Roof type		
Construction	Added insulation (R-value)	Solar absorptance Roof shade
Cont:Attic-Continuous	1.3	0.5 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 NatHERSAdministrator. 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.

#### HRKMXOXZ54 NatHERS Certificate



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. INQLERRMGC

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21)

### Property

Address13, 2 Kulgun Court, OCEAN SHORES, NSW, 2483Lot/DP9//SP102058NCC Class\*Class 1aTypeNew Home

### Plans

Main planProjPrepared byStor

Project No. 20017 Story Design Collective

### Construction and environment

Assessed floor area (m <sup>2</sup> )*						
Conditioned*	97.4					
Unconditioned*	5.4					
Total	102.8					
Garage						

Exposure type suburban NatHERS climate zone 10, OCEAN SHORES



### Accredited assessor

NameDunctBusiness nameSeniorEmailduncaPhone6128Accreditation No.DMNAssessor Accrediting OrganisationDMNDeclaration of interestDeclaration

Duncan Hope Senica Consultancy Group

duncan@senica.com.au 61280067784 DMN/14/1658

Declaration completed: no conflicts



## 56.8 MJ/m<sup>2</sup>

R

Predicted annual energy load for heating and cooling based on standard occupancy assumptions.

For more information on your dwelling's rating see: www.nathers.gov.au

Thermal performanceHeatingCooling18.738.1MJ/m²MJ/m²

#### About the rating

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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.

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## **Certificate Check**

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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?

#### 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.

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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

Default\* windows

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

### **Additional Notes**

Due to limitations with the window library, windows have been used in a generic manner. Please ignore the brand/make and refer to the U-Value and SHGC requirements.

If downlights are used in construction, they should be Insulation Continuous rated so that insulation may be laid over the downlights with no requirement for holes in the insulation.

## Window and glazed door type and performance

				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
ALM-002-01 A	Aluminium B SG Clear	6.7	0.7	0.66	0.74
Custom* window	S			Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Availab	le				

### Window and glazed door Schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Bedroom 1	ALM-002-01 A	1221s	1200	2100	sliding	45.0	ESE	No
Bedroom 1	ALM-002-01 A	2108dh	2100	800	double_hung	45.0	NNE	No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 13, 2 Kulgun Court, OCEAN SHORES

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#### INQLERRMGC NatHERS Certificate

#### 4.9 Star Rating as of 5 Feb 2021

								INDEX RAING KOHME
Bedroom 2	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bedroom 3	ALM-002-01 A	1221s	1200	2100	sliding	45.0	SSW	No
Bath	ALM-002-01 A	0615s	600	1500	sliding	45.0	SSW	No
Living	ALM-002-01 A	2424sd	2400	2400	sliding	45.0	WNW	No
Kitchen/Living	ALM-002-01 A	Opening 68	900	2400	sliding	45.0	NNE	No
Kitchen/Living	ALM-002-01 A	2434sd	2400	3400	sliding	66.0	ESE	No
Ensuite	ALM-002-01 A	1206s	1200	600	sliding	45.0	SSW	No

## Roof window type and performance value

#### Default\* roof windows

					Substi	Substitution tolerance ranges			
Window ID	Window description		Maximum U-value*	SHGC*	SHGC low	ver limit	SHGC upper limit		
No Data Available									
Custom* roof windows									
					Substit	tution to	erance ranges		
			Maximum		SHGC lov	ver limit	SHGC upper limit		
Window ID	Window description		U-value*	SHGC*	0100100				
No Data Available									
Roof window so	chedule								
				Area		Outdoo	or Indoor		
Location	Window ID	Window no.	Opening %	(m²)	Orientation	shade	shade		

# Skylight type and performance

Skylight ID	Skylight description
No Data Available	

## Skylight schedule

No Data Available

		Skylight	Skylight shaft	Area Orient-	Outdoor		Skylight shaft
Location	Skylight ID	No.	length (mm)	(m <sup>2</sup> ) ation	shade	Diffuser	reflectance
No Data Available							

### External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
Living	2300	920	100.0	WNW

## External wall type

		Solar	Wall shad	e	Reflective
Wall ID	Wall type	absorptance	e (colour)	Bulk insulation (R-value)	wall wrap*
1	Weatherboard - 90mm Weatherboard with R2.0	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	Ret Walls - Conc. Block 190mm Retaining Walls w/ p'board	0.5	Medium		No

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 13, 2 Kulgun Court, OCEAN SHORES



## External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Bedroom 1	1	2550	3775	ESE	0	No
Bedroom 1	1	2550	3594	NNE	4217	Yes
Bedroom 1	1	2550	3594	SSW	0	No
Bedroom 2	2	700	3170	WNW	0	No
Bedroom 2	1	1850	3170	WNW	6072	Yes
Bedroom 2	1	2550	3498	SSW	0	No
Bedroom 3	1	2550	2988	SSW	0	No
Bath	1	2550	2739	SSW	0	No
Living	1	2700	105	NNE	0	Yes
Living	1	2700	780	ESE	0	Yes
Living	1	2700	3903	NNE	0	No
Living	1	2700	4743	WNW	1625	Yes
Kitchen/Living	1	2700	4490	NNE	0	No
Kitchen/Living	1	2700	780	WNW	0	No
Kitchen/Living	1	2700	3134	NNE	0	Yes
Kitchen/Living	1	2700	4163	ESE	3973	Yes
WIR	1	2550	320	NNE	0	Yes
Ensuite	1	2550	2494	SSW	0	No

## Internal wall type

Wall ID	Wall type	Area (m <sup>2</sup> ) Bulk insulation	
1	FR5 - Internal Plasterboard Stud Wall	90.9	

## Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Bedroom 1	FR5 - Timber Lined	13.6	Open	R0.0	Carpet
Bedroom 2	FR5 - Timber Lined	10.4	Open	R0.0	Carpet
Bedroom 3	FR5 - Timber Lined	10.6	Open	R0.0	Carpet
Laundry Hallway	FR5 - Timber Lined	5	Open	R0.0	Timber
Bath	FR5 - Timber Lined	5.4	Open	R0.0	Tiles
Living	FR5 - Timber Lined	18.9	Open	R0.0	Timber
Kitchen/Living	FR5 - Timber Lined	29.9	Open	R0.0	Timber
WIR	FR5 - Timber Lined	3.9	Open	R0.0	Carpet
Ensuite	FR5 - Timber Lined	5.2	Open	R0.0	Tiles

## Ceiling type

		Bulk insulation R-value (may	Reflective	
Location	Construction material/type	include edge batt values)	wrap*	
			_	

\* Refer to glossary.

Generated on 5 Feb 2021 using FirstRate5: 5.3.0a (3.21) for 13, 2 Kulgun Court, OCEAN SHORES

#### INQLERRMGC NatHERS Certificate

### 4.9 Star Rating as of 5 Feb 2021



Bedroom 1	Plasterboard	R3.0	Yes
Bedroom 2	Plasterboard	R3.0	Yes
Bedroom 3	Plasterboard	R3.0	Yes
Laundry Hallway	Plasterboard	R3.0	Yes
Bath	Plasterboard	R3.0	Yes
Living	Plasterboard	R3.0	Yes
Kitchen/Living	Plasterboard	R3.0	Yes
WIR	Plasterboard	R3.0	Yes
Ensuite	Plasterboard	R3.0	Yes

## Ceiling penetrations\*

Location	Quantity Type	Diameter (mm) Sealed/unsealed
No Data Available		
Ceiling fans		
Location	Quantity	Diameter (mm)
No Data Available		

## Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Cont:Attic-Continuous	1.3	0.5	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 NatHERSAdministrator. 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.

#### INQLERRMGC NatHERS Certificate



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).