

NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 5, Lorikeet Grove, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401219	NatHERS Thermal Comfort and BASIX Assessment	JF/DR	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 5, Lorikeet Grove, Warriewood **Sekisui House Services NSW Pty**

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-XTR5R0-01

Generated on 13 Dec 2024 using Hero 4.1 (Chenath v3.23)

Lot 5. Lorikeet Grove, Warriewood,

Property

Address Lot/DP NCC Class* **Floor/all Floors**

NSW, 2102 5/unreg 1a 1 of 2 floors New

Plans

Туре

Main Plan Prepared by

TL02/ LOT5-NM105600-12.11.2024 SEKISUI HOUSE SERVICE

Construction and environment

Assessed floor a	rea (m²)*
Conditioned*	154.3
Unconditioned*	0.0
Total	187.1
Garage	32.8

Suburban NatHERS climate zone 56 - Mascot AMO

Exposure Type



ccredited assessor

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

Daniela Russo Efficient Livina daniela@efficientliving.com.au +61 299706181 10270 HERA

No Conflict of Interest

NCC Requirements

BCA provisions State/Territory variation Volume 2

Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

* Refer to glossary. Generated on 13 Dec 2024 using Hero 4.1 for Lot 5, Lorikeet Grove, Warriewood, NSW, 2102 **Thermal performance** star rating

NATIONWIDE

The more stars

the more energy efficient

30.0 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

Heating

	Heating	Cooling
Modelled	16.8	13.2
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com au/pdf/HR-XTR5R0-01 When using either link. ensure you are visiting http://www.hero-software. com.au



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About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:

Cost:





#HR-XTR5R0-01 NatHERS Certificate

7.0 Star Rating as of 13 Dec 2024



Certificate check	Approva	l stage	Construc stage	construction tage	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Cons	Build	Cons	Occi
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.0 Star Rating as of 13 Dec 2024



Certificate check		stage	Construction stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Noom schedule		
Room	Zone Type	Area (m²)
garage	Garage	32.82
pdr	Day Time	1.78
linen	Day Time	5.18
entry	Day Time	12.91
KITCHEN/LIVING	Kitchen/Living	44.99
BED1	Bedroom	16.95
ens	Night Time	6.35
wir	Night Time	7.75
bath	Day Time	7.15
BED2	Bedroom	11.71
bed 3	Bedroom	10.51
BED4	Bedroom	10.51
HALLWAY FF	Day Time	23.81

Room schedule





Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges
		U-value*		lower limit upper limit

None

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
WID-101-012	Horizon Awning Window	3.17	0.45	0.43	0.47	
WID-102-028	Horizon Sliding Window	3.12	0.47	0.45	0.49	
WID-106-028	Horizon Fixed Window	2.08	0.54	0.52	0.57	
WID-111-005	Ascend Stacking Door	2.93	0.48	0.46	0.50	
WID-124-029	Paragon Stacking Door	3.26	0.45	0.43	0.47	

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED1	WID-111-005	W05	2510	3576	Sliding Door	60	SW	None
BED2	WID-102-028	W08	1030	1810	Sliding	10	NW	None
BED4	WID-102-028	W10	1030	1810	Sliding	10	NE	None
HALLWAY FF	WID-106-028	W07	1030	1570	Fixed	0	NW	None
KITCHEN/LIVING	WID-124-029	W02	2660	3060	Sliding Door	60	NE	None
KITCHEN/LIVING	WID-124-029	W03	2660	2905	Sliding Door	45	NW	None
KITCHEN/LIVING	WID-101-012	W04	2050	1570	Awning	30	NE	None
bed 3	WID-102-028	W09	1030	1810	Sliding	10	NE	None
ens	WID-101-012	W06	1030	2410	Awning	42	NW	None
entry	WID-101-012	W01	2050	1570	Awning	30	NW	None



Roof window type and performance value

Default* roof windows

									SHGC sub	stitution
Window ID	Window Description			Maximum U-value*	SHGC*	toloronoo rongoo				
				0-value		lower limit	upper limit			
lone										
Custom* roof wi	ndows									
Window ID							Maximu	^m SHGC∗	SHGC sub tolerance	
Window ID	winac	w Description	Jescription		U-value*	SIGC		upper limit		
None										
Roof windo	w sch	edule								
Location	Wind ID	ow	Window no.	Opening %	-	leight mm)	Width (mm)	Orient- ation	Outdoor shade	Indoor shade
None					`		. ,			
Skylight <i>typ</i>	be and	performa	nce							
Skylight ID		<i>p</i>	Skylight de	scription						
None										
Skylight sci	hedule	,								
Location Sk	ylight	Skylight No.	Skylight shaft length (mm)		Orie atio		Outdoor shade	Diffuse	Shaft Refle	ctance
None										
External do	or scl	nedule								
Location			Height	(mm)	Wi	dth (mi	m) C	Opening %	Orier	itation
entry			2360		98	2	ç	0	SW	
garage			2265		48	17	ç	0	SW	
External wa	all type	ò								
Wall ID		Wall Type				Solar absor		Vall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha C Walls-A	ladding	Sekisui Nichiha Cladding Walls - Cement Clad Battened (Refl Cav Wall				0.50	Γ	<i>l</i> ledium	0.00	Yes
Sekisui Nichiha C Walls-B	ladding		na Cladding Walls Battened (Refl C			0.50	Γ	<i>l</i> ledium	3.10	Yes

NATIONWIDE HOUSE DUELE REME

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED1	Sekisui Nichiha Cladding Walls-B	1740	4690	SE		Yes
BED1	Sekisui Nichiha Cladding Walls-B	2510	4080	SW	3135	Yes
BED2	Sekisui Nichiha Cladding Walls-B	2510	3891	NW	435	Yes
BED4	Sekisui Nichiha Cladding Walls-B	2510	3630	NE	434	Yes
BED4	Sekisui Nichiha Cladding Walls-B	2510	3080	SE		Yes
HALLWAY FF	Sekisui Nichiha Cladding Walls-B	2510	1680	NW	435	Yes
HALLWAY FF	Sekisui Nichiha Cladding Walls-B	1740	3611	SE		Yes
KITCHEN/LIVING	Sekisui Nichiha Cladding Walls-B	2660	4681	NW		Yes
KITCHEN/LIVING	Sekisui Nichiha Cladding Walls-B	2660	3901	NE	2974	Yes
KITCHEN/LIVING	Sekisui Nichiha Cladding Walls-B	2660	3000	NW	3877	Yes
KITCHEN/LIVING	Sekisui Nichiha Cladding Walls-B	2660	3480	NE		Yes
KITCHEN/LIVING	Sekisui Nichiha Cladding Walls-B	2660	3000	SE		No
bath	Sekisui Nichiha Cladding Walls-B	1740	2590	SE		Yes
bed 3	Sekisui Nichiha Cladding Walls-B	2510	3080	NW	435	Yes
bed 3	Sekisui Nichiha Cladding Walls-B	2510	3640	NE	434	Yes
ens	Sekisui Nichiha Cladding Walls-B	1740	3780	NW	419	Yes
ens	Sekisui Nichiha Cladding Walls-B	2510	1680	SW	3135	Yes
entry	Sekisui Nichiha Cladding Walls-B	2660	4980	NW		Yes
entry	Sekisui Nichiha Cladding Walls-B	2660	1381	SW	1774	Yes
garage	Sekisui Nichiha Cladding Walls-A	2660	5880	SW	1270	Yes
garage	Sekisui Nichiha Cladding Walls-A	2660	3001	NW	1523	Yes
wir	Sekisui Nichiha Cladding Walls-B	2510	1380	NW	435	Yes
wir	Sekisui Nichiha Cladding Walls-B	1740	1510	SW	7035	Yes

Internal wall type

Wall ID Wall IVDe Area (m ⁻)	Wall ID	Well Tyre	Area (m ²) Bulk
	waii iD	Wall Type	Area (m ²) insulation



Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	20.0	2.50
INT-PB	Internal Plasterboard Stud Wall	112.4	0.00
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	12.5	3.10
PARTIWALL	PARTIWALL	33.4	4.00

Floor type

				Added	
Location	Construction	Area (m²)	Sub-floor ventilation	insulation (R-value)	Covering
BED1	TIMB-001: Suspended Timber Floor	16.0	N/A	4.00	Carpet
BED1	TIMB-001: Suspended Timber Floor	1.0	N/A	0.15	Carpet
BED2	TIMB-001: Suspended Timber Floor	11.7	N/A	0.15	Carpet
BED4	TIMB-001: Suspended Timber Floor	10.2	N/A	0.15	Carpet
BED4	TIMB-002: Suspended Timber Floor - Lined Below	0.3	N/A	4.00	Carpet
HALLWAY FF	TIMB-001: Suspended Timber Floor	23.1	N/A	0.15	Carpet
HALLWAY FF	TIMB-002: Suspended Timber Floor - Lined Below	0.7	N/A	4.00	Carpet
KITCHEN/LIVING	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	45.0	N/A	0.59	Tile (8mm)
bath	TIMB-001: Suspended Timber Floor	7.1	N/A	0.15	Tile (8mm)
bed 3	TIMB-001: Suspended Timber Floor	0.3	N/A	0.15	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	10.2	N/A	4.00	Carpet
ens	TIMB-001: Suspended Timber Floor	6.4	N/A	4.00	Tile (8mm)
entry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	12.9	N/A	0.59	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	32.8	N/A	0.59	Exposed
linen	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	5.2	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	1.8	N/A	0.59	Tile (8mm)
wir	TIMB-001: Suspended Timber Floor	0.9	N/A	4.00	Tile (8mm)
wir	TIMB-001: Suspended Timber Floor	6.9	N/A	0.15	Tile (8mm)



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
HALLWAY FF	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
entry	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
garage	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	4.00	No
wir	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BED1	3	Downlight	150	Sealed
BED2	2	Downlight	150	Sealed
BED4	2	Downlight	150	Sealed
HALLWAY FF	4	Downlight	150	Sealed
KITCHEN/LIVING	9	Downlight	150	Sealed
KITCHEN/LIVING	1	Exhaust Fan	200	Sealed
bath	1	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
entry	3	Downlight	150	Sealed
linen	1	Downlight	150	Sealed



Ceiling *penetrations**

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
linen	1	Exhaust Fan	200	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
wir	1	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED1	1	1200
BED2	1	1200
BED4	1	1200
bed 3	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	0.00	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
	(height x width, mm)	(mm)	(BMT mm)	(R-value)
None				

Appliance schedule

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

Cooling system

Туре	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Hor	me Data			
Heating syster	n			
Туре	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity



Heating system

Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system		Hot	Minim	um	Assessed

Туре	Fuel type	Water CER Zone	efficiency / STC	daily load [litres]	
No Whole of Home Data					

Pool / spa equipment

		Minimum	Recommended
Туре	Fuel type	efficiency / performance	capacity

No Whole of Home Data

Onsite Renewable Energy schedule

Туре	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Storage Capacity [kWh]

Battery schedule

Type No Whole of Home Data



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Smal scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 6, Lorikeet Grove, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401220	NatHERS Thermal Comfort and BASIX Assessment	CB/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au



13 December 2024 Lot 6, Lorikeet Grove, Warriewood **Sekisui House Services NSW Pty**

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-AH31LG-01

Generated on 13 Dec 2024 using Hero 4.1 (Chenath v3.23)

Lot 6. Lorikeet Grove. Warriewood.

Property

Address

NSW, 2102 Lot/DP Lot 6/unreg NCC Class* 1a Floor/all Floors Туре New

1 of 2 floors

Plans

Main Plan Prepared by

NM105595 SEKISUI HOUSE SERVICES PTY LIMITED

Construction and environment

Assessed floor a	rea (m²)*
Conditioned*	156.0
Unconditioned*	3.9
Total	194.3
Garage	34.4

Exposure Type Suburban NatHERS climate zone 56 - Mascot AMO



Accredited assessor

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

Daniela Russo Efficient Living daniela@efficientliving.com.au +61 299706181 10270 HERA

No Conflict of Interest

NCC Requirements

BCA provisions

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au

Thermal performance star rating

NATIONWIDE

The more stars

the more energy efficient

29.7 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	21.2	8.4
Load limits	25	18

Features determining load limits

Floor type		
	<u> </u>	OG
(lowest conditioned area)	CS	UG
NCC climate zone 1 or 2	Ν	
Outdoor living area	Ν	
Outdoor living area ceiling fan	Ν	

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com au/pdf/HR-AH31LG-01. When using either link.

ensure you are visiting http://www.hero-software. com.au



* Refer to glossary. Generated on 13 Dec 2024 using Hero 4.1 for Lot 6, Lorikeet Grove, Warriewood, NSW, 2102



Note, variations and additions to the NCC energy efficiency requirements Predicted Whole of Home annual may apply in some states and territories.

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB Standard: NatHERS heating and cooling load limits for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Enerav use:



Greenhouse gas emissions:

Cost:





7.0 Star Rating as of 13 Dec 2024



Certificate check	Approva	Approval stage Construction stage		tion	HOUSE
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked. Note: The boxes indicate when and who should check each item.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
It is not mandatory to complete this checklist.	As	Sur	Bu	Sur	ő
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>Window and glazed door</i> <i>schedule</i> ' and <i>'Roof window schedule</i> ' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor		<u>.</u>	·	·	
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)		-		<u></u>	
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.0 Star Rating as of 13 Dec 2024



Certificate check	Approval stage		Construction stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
KITCHEN/LIVING/DINING/ENTRY/STAIRS	Kitchen/Living	61.75
LDRY	Unconditioned	3.89
PDR	Day Time	2.31
GARAGE	Garage	34.40
ENS	Night Time	7.46
WIR	Night Time	8.07
BATH	Day Time	7.37
BED 3	Bedroom	11.06
BED 4	Bedroom	10.86
WIL	Day Time	2.49
STAIRS/PASS	Day Time	14.44
BED 2	Bedroom	10.11
PRINCIPAL SUITE	Bedroom	17.26
BUTLER'S PANTY	Day Time	4.32
PASS	Day Time	4.84

Room schedule





Window and glazed door type and performance

Default* windows

Window ID) Window Description	Maximum SHGC	SHGC substitution tolerance ranges
		U-value*	lower limit upper limit
None			

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit	upper limit
WID-101-012	Horizon Awning Window	3.17	0.45	0.43	0.47
WID-102-028	Horizon Sliding Window	3.12	0.47	0.45	0.49
WID-106-028	Horizon Fixed Window	2.08	0.54	0.52	0.57
WID-111-005	Ascend Stacking Door	2.93	0.48	0.46	0.50
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED 2	WID-101-012	W08	1030	2650	Awning	10	SE	None
BED 3	WID-102-028	W12	1030	1810	Sliding	10	NE	None
BED 4	WID-106-028	W11	1030	850	Fixed	0	NE	None
BED 4	WID-101-012	W10	1030	2410	Awning	10	SE	None
ENS	WID-101-012	W06	455	1570	Awning	45	SW	None
KITCHEN/LIVING/DINING /ENTRY/STAIRS	WID-101-012	W04	2050	610	Awning	60	SE	None
KITCHEN/LIVING/DINING /ENTRY/STAIRS	WID-111-005	W03	2660	2400	Sliding Door	60	SW	None
KITCHEN/LIVING/DINING /ENTRY/STAIRS	WID-111-005	W02	2660	2400	Sliding Door	60	SE	None
KITCHEN/LIVING/DINING /ENTRY/STAIRS	WID-101-012	W01	2050	1210	Awning	60	SW	None
LDRY	WID-122-017	W05	2120	900	Casement	90	NE	None
PRINCIPAL SUITE	WID-111-005	W07	2510	2400	Sliding Door	60	SW	None
STAIRS/PASS	WID-106-028	W09	1030	1810	Fixed	0	SE	None



Roof window type and performance value

Default* roof windows

Delaut 1001 windo	///3							SHGC sub	stitution
Window ID	Window E	Description	I			Maximu U-value'	SHCC		
								lower limit	upper limit
None									
Custom* roof winde	ows								
Window ID	Window D	Description	l			Maximu	SHGC	SHGC sub	
						U-value [*]	• • • • • •	lower limit	upper limit
None									
Roof window	schea	lule							
Location	Window		Window	Opening	-	Width	Orient		Indoor
None	ID		no.	%	(mm)	(mm)	ation	shade	shade
Skylight ID	and pe	erforma	<i>NCC</i> Skylight de	scription					
None				Scription					
Skylight sche Skylig		kylight	Skylight shaft	Area	Orient-	Outdoor		Shaft	
Location ID	N		length (mm)		ation	shade	Diffus	or	ctance
None									
External dooi	r sched	dule							
Location			Height	(mm)	Width (m	m) (Opening %	orien	tation
GARAGE			2285		4817	ç	90	SE	
KITCHEN/LIVING/DI	NING/ENT	RY/STAIR	S 2360		1275	ç	90	SE	
External wall	type								
Wall ID	W	all Type			Solar abso		Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Clado Walls	aina	ement Clad	na Cladding Walls Battened (Refl Ca		0.50	1	Medium	3.10	Yes
F (1) (1)	schod	ule							
External wall	Scheu								
External wall	Wal	II ID		Height (mm)	Width (mm)	Orien ation	t- shao	zontal ling feature* ection (mm)	Vertical shading feature
		II ID		-			t- shao	ling feature*	shading

* Refer to glossary. Generated on 13 Dec 2024 using Hero 4.1 for Lot 6, Lorikeet Grove, Warriewood, NSW, 2102



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	Sekisui Nichiha Cladding Walls	1750	3696	NW		Yes
BED 2	Sekisui Nichiha Cladding Walls	2510	2880	SE		Yes
BED 2	Sekisui Nichiha Cladding Walls	2510	632	SE		No
BED 3	Sekisui Nichiha Cladding Walls	1750	675	NW		Yes
BED 3	Sekisui Nichiha Cladding Walls	2040	3065	NE	200	Yes
BED 3	Sekisui Nichiha Cladding Walls	2510	2935	NW		Yes
BED 4	Sekisui Nichiha Cladding Walls	2040	3010	NE	200	Yes
BED 4	Sekisui Nichiha Cladding Walls	1910	3610	SE		Yes
ENS	Sekisui Nichiha Cladding Walls	1750	3791	NW		Yes
ENS	Sekisui Nichiha Cladding Walls	2510	1674	SW	1192	Yes
ENS	Sekisui Nichiha Cladding Walls	2510	618	SE	4200	Yes
ENS	Sekisui Nichiha Cladding Walls	2510	293	SW		No
GARAGE	Sekisui Nichiha Cladding Walls	2660	3187	NW		Yes
GARAGE	Sekisui Nichiha Cladding Walls	2660	6183	NE	454	Yes
GARAGE	Sekisui Nichiha Cladding Walls	2660	5564	SE	854	Yes
GARAGE	Sekisui Nichiha Cladding Walls	2660	1802	SW	1621	Yes
GARAGE	Sekisui Nichiha Cladding Walls	2660	2377	NW	154	Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	4963	SE		Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	4216	SW	4810	Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	3609	SE	4200	Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	2137	SW	1201	Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	1645	SW		Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	1509	SE		No
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	1801	SE		Yes
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	1802	NE	7314	Yes



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
KITCHEN/LIVING /DINING/ENTRY/STAIRS	Sekisui Nichiha Cladding Walls	2660	312	SE		No
LDRY	Sekisui Nichiha Cladding Walls	2660	1702	NE	200	Yes
PRINCIPAL SUITE	Sekisui Nichiha Cladding Walls	2510	919	SE		No
PRINCIPAL SUITE	Sekisui Nichiha Cladding Walls	2510	4103	SW	1810	Yes
PRINCIPAL SUITE	Sekisui Nichiha Cladding Walls	2510	2862	SE		Yes
STAIRS/PASS	Sekisui Nichiha Cladding Walls	2510	2266	SE		Yes
WIL	Sekisui Nichiha Cladding Walls	1910	1301	SE		Yes
WIR	Sekisui Nichiha Cladding Walls	1750	4101	NW		Yes

Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	108.6	0.00
INT-PB	Internal Plasterboard Stud Wall	9.4	2.70
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	15.1	3.10
PARTIWALL	PARTIWALL	31.8	4.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-001: Suspended Timber Floor	7.4	N/A	6.00	Tile (8mm)
BED 2	TIMB-001: Suspended Timber Floor	10.1	N/A	6.00	Carpet
BED 3	TIMB-001: Suspended Timber Floor	11.1	N/A	6.00	Carpet
BED 4	TIMB-001: Suspended Timber Floor	10.2	N/A	6.00	Carpet
BED 4	TIMB-002: Suspended Timber Floor - Lined Below	0.8	N/A	6.00	Carpet
BUTLER'S PANTY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.3	N/A	0.59	Tile (8mm)
ENS	TIMB-001: Suspended Timber Floor	7.5	N/A	6.00	Tile (8mm)
GARAGE	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	34.4	N/A	0.59	Exposed



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation	Covering
KITCHEN/LIVING/DINING /ENTRY/STAIRS	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	61.8	N/A	(R-value) 0.59	Tile (8mm)
LDRY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.9	N/A	0.59	Tile (8mm)
PASS	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	4.8	N/A	0.59	Tile (8mm)
PDR	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.3	N/A	0.59	Tile (8mm)
PRINCIPAL SUITE	TIMB-001: Suspended Timber Floor	5.0	N/A	6.00	Carpet
PRINCIPAL SUITE	TIMB-002: Suspended Timber Floor - Lined Below	12.3	N/A	6.00	Carpet
STAIRS/PASS	TIMB-001: Suspended Timber Floor	14.4	N/A	6.00	Carpet
WIL	TIMB-001: Suspended Timber Floor	0.1	N/A	6.00	Tile (8mm)
WIL	TIMB-002: Suspended Timber Floor - Lined Below	2.3	N/A	6.00	Tile (8mm)
WIR	TIMB-001: Suspended Timber Floor	8.1	N/A	6.00	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BUTLER'S PANTY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
GARAGE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
KITCHEN/LIVING/DINING /ENTRY/STAIRS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
LDRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
PRINCIPAL SUITE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
STAIRS/PASS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
WIL	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BATH	1	Exhaust Fan	200	Sealed
BATH	1	Downlight	150	Sealed
BED 2	2	Downlight	150	Sealed
BED 3	2	Downlight	150	Sealed
BED 4	2	Downlight	150	Sealed
BUTLER'S PANTY	1	Downlight	150	Sealed
ENS	1	Exhaust Fan	200	Sealed
ENS	1	Downlight	150	Sealed
KITCHEN/LIVING/DINING/ENTRY/STAIRS	1	Exhaust Fan	200	Sealed
KITCHEN/LIVING/DINING/ENTRY/STAIRS	12	Downlight	150	Sealed
LDRY	1	Downlight	150	Sealed
PASS	1	Downlight	150	Sealed
PDR	1	Exhaust Fan	200	Sealed
PDR	1	Downlight	150	Sealed
PRINCIPAL SUITE	3	Downlight	150	Sealed
STAIRS/PASS	2	Downlight	150	Sealed
WIL	1	Downlight	150	Sealed
WIR	1	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 2	1	1300
BED 3	1	1300



Ceiling fans

Location	Quantity	Diameter (mm)
BED 4	1	1300
PRINCIPAL SUITE	1	1300

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
Nono					

None

Appliance schedule

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

Cooling system

Туре	Location	F	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	F	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system		Hot	Minimu	ım .	Assessed
Туре	Fuel type	Water CER Zone	efficier STC	ncy /	daily load [litres]
No Whole of Home Data					
Pool / spa equipment		Minimum			
Туре	Fuel type	efficiency / performanc	e	Recomm capacity	ended
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				
Туре	Orientatation		Generatio	on Capacity [kV	vj
No Whole of Home Data					



Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	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
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 6, Lorikeet Grove, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 7, Lorikeet Grove, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401187	NatHERS Thermal Comfort and BASIX Assessment	JF/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au



13 December 2024 Lot 7, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme[®] NatHERS[®] Certificate No. #HR-CAEBUA-01

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Lot 7. Lorikeet Grove, Warriewood,

Property

Address

Lot/DP NCC Class* Floor/all Floors Type NSW, 2102 7/unreg 1a 1 of 2 floors New

Plans

Main Plan Prepared by NM105619 SEKISUI HOUSE SERVICES PTY LIMITED

Construction and environment

Assessed floor area (m²)* Conditioned* 116.5 Unconditioned* 14.1 Total 148.4 Garage 17.8 Exposure Type Suburban NatHERS climate zone 56 - Mascot AMO

na com



Accredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficientliving
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Thermal performance star rating

NATIONWIDE HOUSE ENERGY RATING SCHEME

The more stars

the more energy efficient

30.0 MJ/m²

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 (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	18.3	11.7
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area N Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com au/pdf/HR-CAEBUA-01. When using either link, ensure you are visiting http://www.hero-software. com.au





Note, variations and additions to the NCC energy efficiency requirements Predicted Whole of Home annual may apply in some states and territories.

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB Standard: NatHERS heating and cooling load limits for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Enerav use:



Greenhouse gas emissions:

Cost:





7.0 Star Rating as of 13 Dec 2024



Certificate check	Approva	Approval stage		Construction stage	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Cons	Build	Cons	Occi
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor		·	·		
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>Ceiling type</i> ' table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					
7.0 Star Rating as of 13 Dec 2024



Certificate check	Approval	stage	Construc stage	tion	
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Room schedule

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
garage	Garage	17.75
ldry	Unconditioned	3.85
pdr	Unconditioned	2.46
entry	Day Time	17.07
kitchen/Living	Kitchen/Living	39.84
bed 3	Bedroom	11.07
wir	Night Time	5.89
BED 1	Bedroom	17.87
ens	Night Time	7.03
bath	Unconditioned	7.80
bed 2	Bedroom	11.79
hallway	Day Time	11.98

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum SF	SHGC substitution tolerance ranges		
		U-value*	lower limit upper limit		





Window and glazed door type and performance

Default* windows

Window ID	Maximum SHG	SHGC substitution
	U-value*	lower limit upper limit
None		

Custom* windows

Window ID Window Description		Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit	upper limit
WID-101-012	Horizon Awning Window	3.17	0.45	0.43	0.47
WID-106-028	Horizon Fixed Window	2.08	0.54	0.52	0.57
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54
WID-124-029	Paragon Stacking Door	3.26	0.45	0.43	0.47

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED 1	WID-101-012	W13	1460	3010	Awning	10	NW	None
bath	WID-101-012	W11	860	1210	Awning	90	SW	None
bed 2	WID-106-028	W09	1200	850	Fixed	0	SW	None
bed 2	WID-101-012	W08	1200	2410	Awning	10	SE	None
bed 3	WID-101-012	W14	1200	850	Awning	10	SE	None
bed 3	WID-101-012	W15	1200	850	Awning	10	SE	None
ens	WID-101-012	W12	860	1570	Awning	45	NW	None
entry	WID-101-012	W01	1030	850	Awning	90	SE	None
hallway	WID-106-028	W10	860	2050	Fixed	0	SW	None
kitchen/Living	WID-101-012	W04	600	2050	Awning	41	SW	None
kitchen/Living	WID-101-012	W05	2050	1570	Awning	30	NW	None
kitchen/Living	WID-124-029	W06	2510	2170	Sliding Door	61	NE	None
kitchen/Living	WID-124-029	W07	2510	2676	Sliding Door	61	NW	None
ldry	WID-122-017	W03	2120	900	Casement	90	SW	None



Window and glazed door schedule

Location	Window	Window	Height	Width	Window	Opening	Orient-	Shading
	ID	no.	(mm)	(mm)	type	%	ation	device*
pdr	WID-101-012	W02	860	850	Awning	90	SW	None

Roof window type and performance value

Default* roof windows

Window ID	ow ID Window Description Maximun	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
None						

Custom* roof windows

Window ID	Window Description	Maximum SHGC	SHGC substitution tolerance ranges		
	•	U-value*	lower limit upper limit		
None					

Roof window schedule

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
entry	2360	982	90	SE
garage	2265	2410	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-A	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	0.00	Yes

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 7, Lorikeet Grove, Warriewood, NSW, 2102



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-B	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	3.10	Yes

External wall schedule

BED 1Sekisui Nichiha Cladding Walls-B21854381NW228YesbathSekisui Nichiha Cladding Walls-B25102700SWYesbed 2Sekisui Nichiha Cladding Walls-B25102880SWYesbed 2Sekisui Nichiha Cladding Walls-B25104093SEYesbed 2Sekisui Nichiha Cladding Walls-B2510600NEYesbed 3Sekisui Nichiha Cladding Walls-B2510600NEYesensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B25102440SWYesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YeshalwaySekisui Nichiha Cladding Walls-B25101080SE581Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103181SE320Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW174Yes <th>Location</th> <th>Wall ID</th> <th>Height (mm)</th> <th>Width (mm)</th> <th>Orient- ation</th> <th>Horizontal shading feature* projection (mm)</th> <th>Vertical shading feature</th>	Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
bed 2Sekisui Nichiha Cladding Walls-B25102880SWYesbed 2Sekisui Nichiha Cladding Walls-B25104093SEYesbed 2Sekisui Nichiha Cladding Walls-B2510600NEYesbed 3Sekisui Nichiha Cladding Walls-B25103180SEYesensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B2510264SWYesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-A25103181SE320Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B2510	BED 1	Sekisui Nichiha Cladding Walls-B	2185	4381	NW	228	Yes
bed 2Sekisui Nichiha Cladding Walls-B25104093SEYesbed 2Sekisui Nichiha Cladding Walls-B2510600NEYesbed 3Sekisui Nichiha Cladding Walls-B25103180SEYesensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101800SE581YesentrySekisui Nichiha Cladding Walls-B25101800SE581YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YeshallwaySekisui Nichiha Cladding Walls-A25103181SE320Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B	bath	Sekisui Nichiha Cladding Walls-B	2510	2700	SW		Yes
bed 2Sekisui Nichiha Cladding Walls-B2510600NEYesbed 3Sekisui Nichiha Cladding Walls-B25103180SEYesensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YeshallwaySekisui Nichiha Cladding Walls-A25103181SE320Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekis	bed 2	Sekisui Nichiha Cladding Walls-B	2510	2880	SW		Yes
bed 3Sekisui Nichiha Cladding Walls-B25103180SEYesensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A25101080SE320YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshalwaySekisui Nichiha Cladding Walls-B25102179SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yes <tr <tr="">kitchen/Li</tr>	bed 2	Sekisui Nichiha Cladding Walls-B	2510	4093	SE		Yes
ensSekisui Nichiha Cladding Walls-B25102440SWYesensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101800SE1623YesentrySekisui Nichiha Cladding Walls-B25101000NE1623YesgarageSekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103011NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293YesldrySekisui Nichiha Cladding Walls-B25103010NE3175Yes	bed 2	Sekisui Nichiha Cladding Walls-B	2510	600	NE		Yes
ensSekisui Nichiha Cladding Walls-B21852880NW228YesentrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYesYesldrySekisui Nichiha Cladding Walls-B25101690SWYesYes<	bed 3	Sekisui Nichiha Cladding Walls-B	2510	3180	SE		Yes
entrySekisui Nichiha Cladding Walls-B25102264SWYesentrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A25101080SE581YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-A25103181SE320Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYesYes	ens	Sekisui Nichiha Cladding Walls-B	2510	2440	SW		Yes
entrySekisui Nichiha Cladding Walls-B25101800SE1781YesentrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25101690SWYes	ens	Sekisui Nichiha Cladding Walls-B	2185	2880	NW	228	Yes
entrySekisui Nichiha Cladding Walls-B25101200NE1623YesentrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYesYes	entry	Sekisui Nichiha Cladding Walls-B	2510	2264	SW		Yes
entrySekisui Nichiha Cladding Walls-B25101080SE581YesgarageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYes	entry	Sekisui Nichiha Cladding Walls-B	2510	1800	SE	1781	Yes
garageSekisui Nichiha Cladding Walls-A2510900SW1669YesgarageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25106480NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYesYes	entry	Sekisui Nichiha Cladding Walls-B	2510	1200	NE	1623	Yes
garageSekisui Nichiha Cladding Walls-A25103181SE320YeshallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103301NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25101690SWYes	entry	Sekisui Nichiha Cladding Walls-B	2510	1080	SE	581	Yes
hallwaySekisui Nichiha Cladding Walls-B25102279SWYeskitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103301NW3175Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25101690SWYes	garage	Sekisui Nichiha Cladding Walls-A	2510	900	SW	1669	Yes
kitchen/LivingSekisui Nichiha Cladding Walls-B25106481SW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103301NW3175YesldrySekisui Nichiha Cladding Walls-B25101690SWYes	garage	Sekisui Nichiha Cladding Walls-A	2510	3181	SE	320	Yes
kitchen/LivingSekisui Nichiha Cladding Walls-B25104080NW174Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103301NW3175YesIdrySekisui Nichiha Cladding Walls-B25101690SWYes	hallway	Sekisui Nichiha Cladding Walls-B	2510	2279	SW		Yes
kitchen/LivingSekisui Nichiha Cladding Walls-B25103001NE3293Yeskitchen/LivingSekisui Nichiha Cladding Walls-B25103301NW3175YesIdrySekisui Nichiha Cladding Walls-B25101690SWYes	kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	6481	SW	174	Yes
kitchen/Living Sekisui Nichiha Cladding Walls-B 2510 3301 NW 3175 Yes Idry Sekisui Nichiha Cladding Walls-B 2510 1690 SW Yes	kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	4080	NW	174	Yes
Idry Sekisui Nichiha Cladding Walls-B 2510 1690 SW Yes	kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3001	NE	3293	Yes
	kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3301	NW	3175	Yes
pdr Sekisui Nichiha Cladding Walls-B 2510 2281 SW Yes	ldry	Sekisui Nichiha Cladding Walls-B	2510	1690	SW		Yes
	pdr	Sekisui Nichiha Cladding Walls-B	2510	2281	SW		Yes



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
pdr	Sekisui Nichiha Cladding Walls-B	2510	1079	SE	580	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	81.5	0.00
INT-PB	Internal Plasterboard Stud Wall	18.0	2.70
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	2.3	3.10
PARTIWALL	PARTIWALL	48.8	4.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 1	TIMB-001: Suspended Timber Floor	17.8	N/A	6.00	Carpet
bath	TIMB-001: Suspended Timber Floor	7.9	N/A	6.00	Tile (8mm)
bed 2	TIMB-001: Suspended Timber Floor	7.2	N/A	6.00	Carpet
bed 2	TIMB-002: Suspended Timber Floor - Lined Below	4.7	N/A	6.00	Carpet
bed 3	TIMB-001: Suspended Timber Floor	10.1	N/A	6.00	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	1.0	N/A	6.00	Carpet
ens	TIMB-001: Suspended Timber Floor	7.0	N/A	6.00	Tile (8mm)
entry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	17.1	N/A	0.59	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	17.8	N/A	0.59	Exposed
hallway	TIMB-001: Suspended Timber Floor	12.0	N/A	6.00	Carpet
kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	39.8	N/A	0.59	Tile (8mm)
ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.9	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.5	N/A	0.59	Tile (8mm)
wir	TIMB-001: Suspended Timber Floor	5.9	N/A	6.00	Carpet



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
wir	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BED 1	3	Downlight	150	Sealed
bath	1	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 2	2	Downlight	150	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
entry	3	Downlight	150	Sealed
hallway	2	Downlight	150	Sealed
kitchen/Living	8	Downlight	150	Sealed
kitchen/Living	1	Exhaust Fan	200	Sealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
wir	1	Downlight	150	Sealed



Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1300
bed 2	1	1300
bed 3	1	1300

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

Appliance schedule

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

Cooling system

Туре	Location	Fu	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	Fi	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				-	
Hot water system					
		Hot	Minim		Assessed
Туре	Fuel type	Water	efficie	ncy /	daily load
		CER Zone	STC		[litres]
No Whole of Home Data					
Pool / spa equipment					
		Minimum		Recomm	nended
Туре	Fuel type	efficiency / performance	•	capacity	
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				
Туре	Orientatation		Generati	on Capacity [k	w]

Orientatation



Onsite Renewable Energy *schedule*

Type No Whole of Home Data Generation Capacity [kW]

Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

-	
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	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
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 7, Lorikeet Grove, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 8, Road NO.1, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401192	NatHERS Thermal Comfort and BASIX Assessment	JF/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 8, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-XS60BK-01

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Property

Address

Lot/DP

Lot 8, Road NO.1, Warriewood, NSW, 2102

NCC Class* Floor/all Floors Type

1a 1 of 2 floors New

8/unreg

Plans

Main Plan Prepared by

NM105620 SEKISUI HOUSE SERVICES

Construction and environment

Assessed floor a	rea (m²)*
Conditioned*	133.9
Unconditioned*	4.3
Total	158.2
Garage	20.0

Suburban NatHERS climate zone 56 - Mascot AMO

Exposure Type



ccredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficientliving
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting	HERA
Organisation	
Declaration of interest	No Conflict of Interest

Russo t Livina @efficientliving.com.au 9706181

NCC Requirements

вса	provi	sion	s	
State	e/Terri	tory	varia	ation

Volume 2 Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



The more stars

the more energy efficient

27.5 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.3	13.2
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area Outdoor living area ceiling fan N

> Whole of Home performance rating

No Whole of Home performance rating generated for this certificate

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com au/pdf/HR-XS60BK-01 When using either link. ensure you are visiting http://www.hero-software. com.au





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:





Cost:



7.3 Star Rating as of 13 Dec 2024



Certificate check	Approval stage		Construc stage	tion	
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	sent authority/ eyor checked	Builder checked	sent authority/ eyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Consent surveyor	Build	Consent surveyor	Occu
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor			'		
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof			·		
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.3 Star Rating as of 13 Dec 2024



Certificate check		Approval stage		Construction stage	
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging								
Does the dwelling meet the NCC requirement for thermal bridging?								
Insulation installation method								
Has the insulation been installed according to the NCC requirements?								
Building sealing								
Does the dwelling meet the NCC requirements for Building Sealing?								
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)				
Appliances								
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?								
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?								
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?								
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?								
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?								
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)						
Does the lighting meet the artificial lighting requirements specified in the NCC?								
Does the hot water system meet the additional requirements specified in the NCC?								
Provisional values* check								
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?								
Other NCC requirements								
Note: This Certificate only covers the energy efficiency requirements in the NCC. At include, but are not limited to: condensation, structural and fire safety requirements								

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
pdr	Day Time	2.14
store	Unconditioned	1.49
ldry	Unconditioned	2.82
hallway	Day Time	2.82
K/L/D/Entry/Stairs	Kitchen/Living	49.77
bed 3	Bedroom	12.02
bath	Day Time	8.19
ens	Night Time	6.85
Bed1	Bedroom	16.63
wir	Night Time	7.94
Bed2	Bedroom	12.13
study	Day Time	17.49
garage	Garage	20.00

Room schedule





Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
	P	U-value*		lower limit upper limit	

None

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit	upper limit
WID-101-032	Horizon Awning Window	3.97	0.58	0.55	0.61
WID-102-018	Horizon Sliding Window	3.96	0.61	0.58	0.64
WID-111-017	Ascend Stacking Door	3.79	0.62	0.59	0.66
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bed1	WID-101-032	W07	1460	2650	Awning	10	NW	None
Bed2	WID-101-032	W06	1200	2050	Awning	10	SE	None
K/L/D/Entry/Stairs	WID-101-032	W01	2050	2050	Awning	30	SE	None
K/L/D/Entry/Stairs	WID-111-017	W02	2510	3857	Sliding Door	45	NW	None
bed 3	WID-101-032	W04	1200	850	Awning	10	SE	None
bed 3	WID-101-032	W05	1200	850	Awning	10	SE	None
ens	WID-101-032	W08	860	2050	Awning	45	NW	None
ldry	WID-122-017	W03	2120	820	Casement	90	NW	None
study	WID-102-018	W09	1270	1200	Sliding	10	SE	None



Roof window type and performance value

Default* roof windows

Window ID Wi		Window Description			Maximum	SHGC*	SHGC substitution tolerance ranges		
		-				U-value*		lower limit	upper limit
None									
Custom* roof	windows							SHGC sub	stitution
Window ID	Windo	ow Description	I			Maximum	SHGC*	tolerance	
						U-value*		lower limit	upper limit
None									
Roof winc	low sch	nedule							
Location	Wind ID	wob	Window no.	Opening %	g Height (mm)	Width (mm)	Orient- ation	Outdoor shade	Indoor shade
None									
Skylight t	ype and	l performa	INCE Skylight de	scription					
None			Okylight de	Scription					
Skylight s									
LOCATION	Skylight ID	Skylight No.	Skylight shaft length (mm)		Orient- ation	Outdoor shade	Diffuse	r Shaft Reflee	ctance
None									
External c	loor scl	hedule							
Location			Height	(mm)	Width (m	m) Op	pening %	Orien	tation
K/L/D/Entry/Sta	iirs		2360		982	90		SE	
garage			2265		2410	90		SE	
External v	vall type	е							
Wall ID		Wall Type			Solar absoi		all blour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Walls-A	Cladding		na Cladding Walls Battened (Refl Ca		0.50	M	edium	3.10	Yes
Sekisui Nichiha Walls-B	Cladding		na Cladding Walls Battened (Refl Ca		0.50	M	edium	0.00	Yes

Wall

NATIONWIDE HOUSE DUELE REME

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bed1	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	179	Yes
Bed2	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1500	SE	1178	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	4681	NW	3012	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1201	NE	1332	Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	595	SW		Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	3180	SE		Yes
ens	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	175	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	1201	SW	1334	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	3180	SE	654	Yes
hallway	Sekisui Nichiha Cladding Walls-A	2510	1680	NW	3012	Yes
ldry	Sekisui Nichiha Cladding Walls-A	2510	1680	NW		Yes
study	Sekisui Nichiha Cladding Walls-A	2510	1375	SE		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	93.4	0.00
INT-PB	Internal Plasterboard Stud Wall	22.0	2.50
PARTIWALL	PARTIWALL	100.5	4.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed1	TIMB-001: Suspended Timber Floor	16.6	N/A	0.15	Carpet
Bed2	TIMB-001: Suspended Timber Floor	12.1	N/A	0.15	Carpet
K/L/D/Entry/Stairs	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	49.8	N/A	0.59	Tile (8mm)



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation	Covering
		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ventilation	(R-value)	
bath	TIMB-001: Suspended Timber Floor	8.2	N/A	4.00	Tile (8mm)
bed 3	TIMB-001: Suspended Timber Floor	10.1	N/A	4.00	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	1.9	N/A	4.00	Carpet
ens	TIMB-001: Suspended Timber Floor	6.8	N/A	0.15	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.0	N/A	0.59	Exposed
hallway	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.1	N/A	0.59	Tile (8mm)
store	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	1.5	N/A	0.59	Tile (8mm)
study	TIMB-001: Suspended Timber Floor	15.9	N/A	0.15	Carpet
study	TIMB-002: Suspended Timber Floor - Lined Below	1.7	N/A	4.00	Carpet
wir	TIMB-001: Suspended Timber Floor	7.9	N/A	0.15	Carpet

Ceiling type

Bed1ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesBed2ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesbathATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bed2Flat PB Ceiling6.00YesbathATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Bed1		6.00	Yes
bathFlat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Bed2		6.00	Yes
bed 3Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	bath		6.00	Yes
ens Flat PB Ceiling 6.00 Yes study ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling 6.00 Yes wir ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling 6.00 Yes	bed 3		6.00	Yes
study Flat PB Ceiling 6.00 Yes wir ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & 6.00 Yes	ens		6.00	Yes
wir $(1 - 1)^{1/2}$	study		6.00	Yes
	wir		6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bed1	2	Downlight	150	Sealed



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bed2	2	Downlight	150	Sealed
K/L/D/Entry/Stairs	8	Downlight	150	Sealed
K/L/D/Entry/Stairs	1	Exhaust Fan	200	Sealed
bath	2	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
hallway	1	Downlight	150	Sealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
store	1	Downlight	150	Sealed
study	3	Downlight	150	Sealed
wir	2	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bed1	1	1200
Bed2	1	1200
bed 3	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building alamant	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
Building element	(height x width, mm)	(mm)	(BMT mm)	(R-value)



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

None

Appliance schedule

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

Cooling system

Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system		Hot	Minim	um	Assessed
Туре	Fuel type	Water CER Zone	efficie STC	ncy /	daily load [litres]
No Whole of Home Data					
Pool / spa equipment					
Туре	Fuel type	Minimum efficiency performaı		Recomm capacity	
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				

Туре	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery schedule

 Type
 Storage Capacity [kWh]

 No Whole of Home Data
 Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)
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).
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Smal scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
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.
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Net zero home	a home that achieves a net zero energy value*.
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.
National Construction Code	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
Exposure category - protected 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.
Exposure category - suburban	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.
Exposure category - open	bush blocks, elevated units (e.g. above 3 floors).
Exposure category - exposed	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
Exposure	see exposure categories below
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.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Energy use	This is your homes rating without solar or batteries.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
СОР	garages. Coefficient of performance
Conditioned	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
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the
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
AFRC	Australian Fenestration Rating Council

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 8, Road NO.1, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 9, Road NO.1, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401193	NatHERS Thermal Comfort and BASIX Assessment	JF/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 9, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-YRBRW3-01

Lot 9. Road NO.1. Warriewood, NSW,

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Property

Address

2102 Lot/DP 9/unreg NCC Class* Floor/all Floors Type

1a 1 of 2 floors New

Plans

Main Plan Prepared by

NM105621 SEKISUI HOUSE SERVICES

Construction and environment

Assessed floor a	rea (m²)*
Conditioned*	134.0
Unconditioned*	4.3
Total	157.5
Garage	19.1

Suburban NatHERS climate zone 56 - Mascot AMO



ccredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficientliving
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

iela Russo ient Livina iela@efficientliving.com.au 299706181 70 RA

Exposure Type

NCC Requirements

BCA	, pro	visior	IS	
Stat	e/Tei	ritory	varia	ation

Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

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Thermal performance star rating



The more stars

27.4 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling		
Modelled	14.2	13.2		
Load limits	25	18		

Features determining load limits

Floor type (lowest conditioned area) NCC climate zone 1 or 2 Outdoor living area м Outdoor living area ceiling fan N

CSOG N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com au/pdf/HR-YRBRW3-01. When using either link. ensure you are visiting http://www.hero-software. com.au



HOUSE

About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:



Cost:



7.3 Star Rating as of 13 Dec 2024



Certificate check	Approva	l stage	Construction stage		and excitency and even
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asse	Consent surveyor	Builde	Consi surve	Occul
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>Window and glazed door</i> <i>schedule</i> ' and <i>'Roof window schedule</i> ' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the <i>'Roof type'</i> table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.3 Star Rating as of 13 Dec 2024



Certificate check	Approval stage		Construc stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
pdr	Day Time	2.14
store	Unconditioned	1.49
ldry	Unconditioned	2.82
hallway	Day Time	2.82
bed 3	Bedroom	12.02
bath	Day Time	8.19
ens	Night Time	6.85
Bed1	Bedroom	16.63
wir	Night Time	7.94
Bed2	Bedroom	12.13
study	Day Time	17.49
garage	Garage	19.12
K/L/D/Entry/Stairs	Kitchen/Living	49.77

Room schedule





Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum	SHGC	SHGC substitution tolerance ranges	
		U-value*	0	lower limit	upper limit

None

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC sub tolerance	
		U-value*		lower limit	upper limit
WID-101-032	Horizon Awning Window	3.97	0.58	0.55	0.61
WID-102-018	Horizon Sliding Window	3.96	0.61	0.58	0.64
WID-111-017	Ascend Stacking Door	3.79	0.62	0.59	0.66
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bed1	WID-101-032	W07	1460	2650	Awning	10	NW	None
Bed2	WID-101-032	W06	1200	2050	Awning	10	SE	None
K/L/D/Entry/Stairs	WID-101-032	W01	2050	2050	Awning	30	SE	None
K/L/D/Entry/Stairs	WID-111-017	W02	2510	3857	Sliding Door	45	NW	None
bed 3	WID-101-032	W04	1200	850	Awning	10	SE	None
bed 3	WID-101-032	W05	1200	850	Awning	10	SE	None
ens	WID-101-032	W08	860	2050	Awning	45	NW	None
ldry	WID-122-017	W03	2120	820	Casement	90	NW	None
study	WID-102-018	W09	1270	1200	Sliding	10	SE	None



Roof window type and performance value

Default* roof windows

								SHGC substitution		
Window ID	Windo	ow Description	ı			Maximum U-value*	SHGC*	tolerance ranges		
						0-value		lower limit	upper limi	
lone										
custom* roof	f windows							SHGC sub		
Window ID	Windo	ow Description	1			Maximum U-value*	SHGC*	tolerance		
lone										
Roof win	dow sch	nedule								
Location	Wind ID	dow	Window no.	Opening %	g Height (mm)	Width (mm)	Orient- ation	Outdoor shade	Indoor shade	
lone										
Skylight Skylight ID	type and	l performa	INCE Skylight de	scription						
None										
Skylight	schedule	2								
	Schedule	7								
	Skylight ID	ਤ Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Refle	ctance	
Location	Skylight	Skylight					Diffuser			
Location	Skylight ID	Skylight No.					Diffuser			
Location None	Skylight ID	Skylight No.		(m²)		shade	Diffuser	Reflec		
Location None External Location	Skylight ID door SCI	Skylight No.	length (mm)	(m²)	ation	shade		Reflec	ctance	
Location None External Location K/L/D/Entry/St garage	Skylight ID door SCI	Skylight No.	length (mm) Height	(m²)	ation Width (m	shade m) Op	bening %	Reflee	ctance	
Location None External Location K/L/D/Entry/St garage	Skylight ID door SCI	Skylight No.	length (mm) Height 2360	(m²)	ation Width (m 982	shade m) Op 90	bening %	Reflect Orien SE	ctance	
Location None External Location K/L/D/Entry/St garage External	Skylight ID door SCI	Skylight No.	length (mm) Height 2360	(m²)	ation Width (m 982 2410 Solar	shade m) Op 90	pening %	Reflect Orien SE	ctance ntation Reflectiv	
Location None External Location K/L/D/Entry/St	Skylight ID door sch tairs wall type	Skylight No. hedule e Wall Type Sekisui Nichil	length (mm) Height 2360	(m ²) (mm)	ation Width (m 982 2410 Solar abso	shade m) Op 90 90 • Wa rptance Co	ening %	Reflect Orien SE SE Bulk insulation	ctance ntation Reflectiv wall	



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bed1	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	179	Yes
Bed2	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	4681	NW	3012	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1202	NE	1330	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1497	SE	1178	Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	595	SW		Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	3180	SE		Yes
ens	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	175	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	923	SW	1334	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	3180	SE	932	Yes
hallway	Sekisui Nichiha Cladding Walls-A	2510	1680	NW	3012	Yes
ldry	Sekisui Nichiha Cladding Walls-A	2510	1680	NW		Yes
study	Sekisui Nichiha Cladding Walls-A	2510	1375	SE		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	93.4	0.00
INT-PB	Internal Plasterboard Stud Wall	20.4	2.50
PARTIWALL	PARTIWALL	82.7	4.00
PARTIWALL	PARTIWALL	17.1	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed1	TIMB-001: Suspended Timber Floor	16.6	N/A	0.15	Carpet
Bed2	TIMB-001: Suspended Timber Floor	12.1	N/A	0.15	Carpet



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
K/L/D/Entry/Stairs	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	49.8	N/A	0.59	Tile (8mm)
bath	TIMB-001: Suspended Timber Floor	8.2	N/A	4.00	Tile (8mm)
bed 3	TIMB-001: Suspended Timber Floor	9.2	N/A	4.00	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	2.8	N/A	4.00	Carpet
ens	TIMB-001: Suspended Timber Floor	6.8	N/A	0.15	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	19.1	N/A	0.59	Exposed
hallway	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.1	N/A	0.59	Tile (8mm)
store	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	1.5	N/A	0.59	Tile (8mm)
study	TIMB-001: Suspended Timber Floor	15.8	N/A	0.15	Carpet
study	TIMB-002: Suspended Timber Floor - Lined Below	1.7	N/A	4.00	Carpet
wir	TIMB-001: Suspended Timber Floor	7.9	N/A	0.15	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bed1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
Bed2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
study	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
wir	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bed1	2	Downlight	150	Sealed
Bed2	2	Downlight	150	Sealed
K/L/D/Entry/Stairs	8	Downlight	150	Sealed
K/L/D/Entry/Stairs	1	Exhaust Fan	200	Sealed
bath	2	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
hallway	1	Downlight	150	Sealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
store	1	Downlight	150	Sealed
study	3	Downlight	150	Sealed
wir	2	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bed1	1	1200
Bed2	1	1200
bed 3	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium


Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
	(height x width, mm)	(mm)	(BMT mm)	(R-value)

None

Appliance schedule

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

Cooling system

Туре	Location	F	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	F	uel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				-	
Hot water system					
Туре	Fuel type	Hot Water CER Zone	Minimu efficien STC		Assessed daily load [litres]
No Whole of Home Data					
Pool / spa equipment		Minimum			
Туре	Fuel type	efficiency / performance	9	Recomr capacity	
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				
Туре	Orientatation		Generatio	on Capacity [k	w]
No Whole of Home Data					
Rattory schedul	lo				

Battery schedule

Туре	Storage Capacity [kWh]	
No Whole of Home Data		



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

-	
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	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
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)

* Refer to glossary.

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NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 10, Road NO.1, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401195	NatHERS Thermal Comfort and BASIX Assessment	JF/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 10, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-EGS9CD-01

Lot 10, Road NO.1, Warriewood, NSW,

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Property

Address Lot/DP NCC Class* Floor/all Floors Туре

10/unreg 1a 1 of 2 floors New

2102

Plans

Main Plan Prepared by NM105622 SEKISUI HOUSE SERVICES PT LIMITED

Construction and environment

Assessed floor area (m ²)*							
Conditioned*	116.3						
Unconditioned*	14.1						
Total	148.2						
Garage	17.8						

Exposure Type Suburban NatHERS climate zone 56 - Mascot AMO



ccredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficie
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting	HERA
Organisation	

Efficient Living daniela@efficientliving.com.au +61 299706181 10270

Declaration of interest

No Conflict of Interest

NCC Requirements

BCA provisions

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

The more stars



the more energy efficient

Thermal performance

star rating

28.8 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Coolir	١g
Nodelled	15.9	12.9	
.oad limits	25	18	

Features determining load limits

Floor type (lowest conditioned area) CSOG NCC climate zone 1 or 2 N Outdoor living area Outdoor living area ceiling fan N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com

au/pdf/HR-EGS9CD-01. When using either link. ensure you are visiting http://www.hero-software. com.au



* Refer to glossary.

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Note, variations and additions to the NCC energy efficiency requirements Predicted Whole of Home annual may apply in some states and territories.

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB Standard: NatHERS heating and cooling load limits for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Enerav use:



Greenhouse gas emissions:



Cost:



7.1	Star	Rating	as of	f 13	Dec	2024
-----	------	--------	-------	------	-----	------



Certificate check	Approva	l stage	Construction stage		DORAL RUPO, RUPO
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asses	Conse survey	Builde	Conse survey	Occup
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>Window and glazed door</i> <i>schedule</i> ' and <i>'Roof window schedule</i> ' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.1 Star Rating as of 13 Dec 2024



Certificate check	Approval stage Construction stage		tion		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method	·		·	·	·
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Hom	e assessr	nent is no	ot conduc	cted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Room schedule

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
garage	Garage	17.75
ldry	Unconditioned	3.85
pdr	Unconditioned	2.46
entry	Day Time	17.07
kitchen/Living	Kitchen/Living	39.84
bed 3	Bedroom	11.07
wir	Night Time	5.89
BED 1	Bedroom	17.87
ens	Night Time	7.03
bath	Unconditioned	7.80
bed 2	Bedroom	11.79
hallway	Day Time	11.98

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit upper limit	





Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum SHG	SHGC substitution
		U-value*	lower limit upper limit
None			

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit	upper limit
WID-101-002	Horizon Awning Window	3.35	0.49	0.46	0.51
WID-106-020	Horizon Fixed Window	2.31	0.59	0.56	0.62
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54
WID-124-022	Paragon Stacking Door	3.44	0.49	0.46	0.51

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED 1	WID-101-002	W13	1200	3010	Awning	10	NW	None
bath	WID-101-002	W11	860	1210	Awning	90	NE	None
bed 2	WID-106-020	W09	1200	850	Fixed	0	NE	None
bed 2	WID-101-002	W08	1200	2410	Awning	10	SE	None
bed 3	WID-101-002	W14	1200	850	Awning	10	SE	None
bed 3	WID-101-002	W15	1200	850	Awning	10	SE	None
ens	WID-101-002	W12	860	1570	Awning	45	NW	None
entry	WID-101-002	W01	860	850	Awning	90	SE	None
hallway	WID-106-020	W10	860	2050	Fixed	0	NE	None
kitchen/Living	WID-101-002	W04	600	2050	Awning	41	NE	None
kitchen/Living	WID-101-002	W05	2050	1570	Awning	30	NW	None
kitchen/Living	WID-124-022	W06	2510	2170	Sliding Door	61	SW	None
kitchen/Living	WID-124-022	W07	2510	2649	Sliding Door	61	NW	None
ldry	WID-122-017	W03	2120	900	Casement	90	NE	None



Window and glazed door schedule

Location	Window	Window	Height	Width	Window	Opening	Orient-	Shading
	ID	no.	(mm)	(mm)	type	%	ation	device*
pdr	WID-101-002	W02	860	850	Awning	90	NE	None

Roof window type and performance value

Default* roof windows

Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
	U-value*		lower limit	upper limit
	Window Description	Window Description Maximum U-value*	Window Description Maximum U-value* SHGC*	Window Description Maximum U-value* SHGC* tolerance r

Custom* roof windows

Window ID	Window Description	Maximum SHGC*	SHGC substitution tolerance ranges	
		U-value*	lower limit upper limit	
None				

Roof window schedule

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
entry	2360	982	90	SE
garage	2265	2410	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-A	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	0.00	Yes

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 10, Road NO.1, Warriewood, NSW, 2102



External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-B	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	3.10	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 1	Sekisui Nichiha Cladding Walls-B	2185	4381	NW	228	Yes
bath	Sekisui Nichiha Cladding Walls-B	2510	2700	NE		Yes
bed 2	Sekisui Nichiha Cladding Walls-B	2510	2880	NE		Yes
bed 2	Sekisui Nichiha Cladding Walls-B	2510	4093	SE		No
bed 2	Sekisui Nichiha Cladding Walls-B	2510	600	SW		Yes
bed 3	Sekisui Nichiha Cladding Walls-B	2510	3180	SE		Yes
ens	Sekisui Nichiha Cladding Walls-B	2510	2440	NE		Yes
ens	Sekisui Nichiha Cladding Walls-B	2185	2880	NW	228	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	2264	NE		Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1800	SE	1781	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1200	SW	1623	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1080	SE	581	Yes
garage	Sekisui Nichiha Cladding Walls-A	2510	900	NE	1668	Yes
garage	Sekisui Nichiha Cladding Walls-A	2510	3181	SE	320	Yes
hallway	Sekisui Nichiha Cladding Walls-B	2510	2279	NE		Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	6481	NE	174	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	4080	NW	174	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3001	SW	3293	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3301	NW	3175	Yes
ldry	Sekisui Nichiha Cladding Walls-B	2510	1690	NE		Yes
pdr	Sekisui Nichiha Cladding Walls-B	2510	2281	NE		Yes



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
pdr	Sekisui Nichiha Cladding Walls-B	2510	1079	SE	580	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	81.5	0.00
INT-PB	Internal Plasterboard Stud Wall	18.0	2.50
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	2.3	3.10
PARTIWALL	PARTIWALL	14.0	0.00
PARTIWALL	PARTIWALL	34.8	4.00

Floor type

BED 1TIMB-001: Suspended Timber Floor17.8N/A0.15CarpetbathTIMB-001: Suspended Timber Floor7.9N/A0.15Tile (8mm)bed 2TIMB-001: Suspended Timber Floor7.2N/A0.15Carpetbed 3TIMB-001: Suspended Timber Floor - Lined Belov4.7N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor - Lined Belov1.0N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor - Lined Belov1.0N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor - Lined Belov1.0N/A0.15Tile (8mm)ensTIMB-001: Suspended Timber Floor - Lined Belov1.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)1.1N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.0N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor1.1N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor1.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor1.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor1.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor1.9N/A0.59Tile (8mm)hallway	Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
bed 2TIMB-001: Suspended Timber Floor7.2N/A0.15Carpetbed 2TIMB-002: Suspended Timber Floor - Lined Below4.7N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor10.1N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor - Lined Below1.0N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor1.0N/A4.00CarpetensTIMB-001: Suspended Timber Floor7.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor1.1N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.59Tile (8mm)forund (85mm)Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm) <td>BED 1</td> <td>TIMB-001: Suspended Timber Floor</td> <td>17.8</td> <td>N/A</td> <td>0.15</td> <td>Carpet</td>	BED 1	TIMB-001: Suspended Timber Floor	17.8	N/A	0.15	Carpet
bed 2TIMB-002: Suspended Timber Floor - Lined Below4.7N/A4.00Carpetbed 3TIMB-001: Suspended Timber Floor10.1N/A4.00Carpetbed 3TIMB-002: Suspended Timber Floor - Lined Below1.0N/A4.00CarpetensTIMB-001: Suspended Timber Floor7.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayMAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	bath	TIMB-001: Suspended Timber Floor	7.9	N/A	0.15	Tile (8mm)
bed 3TIMB-001: Suspended Timber Floor10.1N/A4.00Carpetbed 3TIMB-002: Suspended Timber Floor - Lined Below1.0N/A4.00CarpetensTIMB-001: Suspended Timber Floor7.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor1.1N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor10.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor39.8N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor39.8N/A0.59Tile (8mm)hallwayWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	bed 2	TIMB-001: Suspended Timber Floor	7.2	N/A	0.15	Carpet
bed 3TIMB-002: Suspended Timber Floor - Lined Below1.0N/A4.00CarpetensTIMB-001: Suspended Timber Floor7.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.59Tile (8mm)hallwayWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)idryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)idryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	bed 2	TIMB-002: Suspended Timber Floor - Lined Below	4.7	N/A	4.00	Carpet
ensTIMB-001: Suspended Timber Floor7.0N/A0.15Tile (8mm)entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.59Tile (8mm)hallwayTIMB-001: Suspended Timber Floor39.8N/A0.59Tile (8mm)kitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)pdrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	bed 3	TIMB-001: Suspended Timber Floor	10.1	N/A	4.00	Carpet
entryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15Carpetkitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)ndrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	bed 3	TIMB-002: Suspended Timber Floor - Lined Below	1.0	N/A	4.00	Carpet
entryGround (85mm)17.1N/A0.59Tile (8mm)garageWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15Carpetkitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)IdryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)IdryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	ens	TIMB-001: Suspended Timber Floor	7.0	N/A	0.15	Tile (8mm)
garageGround (85mm)17.8N/A0.59ExposedhallwayTIMB-001: Suspended Timber Floor1.1N/A4.00CarpethallwayTIMB-001: Suspended Timber Floor10.9N/A0.15Carpetkitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)pdrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	entry		17.1	N/A	0.59	Tile (8mm)
hallwayTIMB-001: Suspended Timber Floor10.9N/A0.15Carpetkitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)ldryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)pdrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	garage		17.8	N/A	0.59	Exposed
kitchen/LivingWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)39.8N/A0.59Tile (8mm)IdryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)pdrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	hallway	TIMB-001: Suspended Timber Floor	1.1	N/A	4.00	Carpet
kitchen/LivingGround (85mm)39.8N/A0.59Tile (8mm)IdryWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)pdrWAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)3.9N/A0.59Tile (8mm)	hallway	TIMB-001: Suspended Timber Floor	10.9	N/A	0.15	Carpet
Idry Ground (85mm) 3.9 N/A 0.59 Lile (8mm) odr WAFFLE-85: Concrete Waffle Pod Slab on 2.5 N/A 0.59 Tile (8mm)	kitchen/Living		39.8	N/A	0.59	Tile (8mm)
ndr 25 N/A () 59 Life (8mm)	ldry		3.9	N/A	0.59	Tile (8mm)
	pdr		2.5	N/A	0.59	Tile (8mm)



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
wir	TIMB-001: Suspended Timber Floor	5.9	N/A	4.00	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
wir	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BED 1	3	Downlight	150	Sealed
bath	1	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 2	2	Downlight	150	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
entry	3	Downlight	150	Sealed
hallway	2	Downlight	150	Sealed
kitchen/Living	8	Downlight	150	Sealed
kitchen/Living	1	Exhaust Fan	200	Sealed



Ceiling *penetrations**

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
wir	1	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1200
bed 2	1	1200
bed 3	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
	(height x width, mm)	(mm)	(BMT mm)	(R-value)
None				

Appliance schedule

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

Cooling system

Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				•	
Hot water system					
		Hot	Minim	um	Assessed
Туре	Fuel type	Water CER Zone	efficie STC	-	daily load [litres]

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 10, Road NO.1, Warriewood, NSW, 2102



Hot water system

Туре	Fuel type	Hot Fuel type Water CER Zone		Assessed daily load [litres]
No Whole of Home Data				
Pool / spa equipment				
Туре	Fuel type	Minimum efficiency / performance		Recommended capacity
No Whole of Home Data				

Onsite Renewable Energy schedule

Туре	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 10, Road NO.1, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 11, Road NO.1, Warriewood 2102

Issue	File Ref	Description	Author	Date
А	#2401204	NatHERS Thermal Comfort and BASIX Assessment	JF/DR	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au



13 December 2024 Lot 11, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS[®] Certificate No. #HR-AB1J1O-01

Lot 11, Road NO.1, Warriewood, NSW,

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Property

Address Lot/DP NCC Class* Floor/all Floors Туре

7/unreg 1a 1 of 2 floors New

2102

Plans

Main Plan Prepared by

NM105596 SEKISUI HOUSE SERVICES

Construction and environment

Assessed floor area (m²)* Conditioned* 116.5 Unconditioned* 14.1 Total 148.4 Garage 17.8

Accredited assessor

Name	Daniela Russo				
Business name	Efficient Living				
Email	daniela@efficientliving				
Phone	+61 299706181				
Accreditation No.	10270				
Assessor Accrediting	HERA				
Organisation					
Declaration of interest	No Conflict of Interest				

Daniela Russo Efficient Living daniela@efficientliving.com.au +61 299706181 10270 HERA

Exposure Type

56 - Mascot AMO

NatHERS climate zone

Suburban

NCC Requirements

BCA provisions State/Territory variation

Yes

Volume 2

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

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Thermal performance star rating



The more stars

the more energy efficient

29.0 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	18.3	10.7
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area) NCC climate zone 1 or 2 Outdoor living area Outdoor living area ceiling fan N

CSOG N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit http://www.hero-software.com.

au/pdf/HR-AB1J1O-01. When using either link. ensure you are visiting http://www.hero-software. com.au





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:



Cost:



#HR-AB1J1O-01 NatHERS Certificate



Certificate check	Approva	l stage	Construc stage	tion	CORD REPORT
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
Note: The boxes indicate when and who should check each item. It is not mandatory to complete this checklist.	Asses	Conse	Builde	Conse	Occup
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>Window and glazed door</i> <i>schedule</i> ' and <i>'Roof window schedule</i> ' tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the <i>'Window and glazed door type and performance'</i> and <i>'Roof window type and performance'</i> tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'External wall type table'</i> on this Certificate?					
Does the external wall shade (colour) match what is shown in the ' <i>External wall type</i> ' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.1 Star Rating as of 13 Dec 2024



Certificate check	Approval stage		Construction stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging						
Does the dwelling meet the NCC requirement for thermal bridging?						
Insulation installation method						
Has the insulation been installed according to the NCC requirements?						
Building sealing						
Does the dwelling meet the NCC requirements for Building Sealing?						
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)		
Appliances						
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?						
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?						
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?						
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?						
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?						
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)				
Does the lighting meet the artificial lighting requirements specified in the NCC?						
Does the hot water system meet the additional requirements specified in the NCC?						
Provisional values* check						
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?						
Other NCC requirements						
Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC						

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Room schedule

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
garage	Garage	17.75
ldry	Unconditioned	3.85
pdr	Unconditioned	2.46
entry	Day Time	17.07
kitchen/Living	Kitchen/Living	39.84
bed 3	Bedroom	11.07
wir	Night Time	5.89
BED 1	Bedroom	17.87
ens	Night Time	7.03
bath	Unconditioned	7.80
bed 2	Bedroom	11.79
hallway	Day Time	11.98

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum SH	SHGC substitution tolerance ranges	
	······	U-value*	lower limit upper limit	





Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum SHGC*	SHGC substitution tolerance ranges		
		U-value*	lower limit upper limit		
None					

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit	upper limit
WID-101-012	Horizon Awning Window	3.17	0.45	0.43	0.47
WID-106-028	Horizon Fixed Window	2.08	0.54	0.52	0.57
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54
WID-124-029	Paragon Stacking Door	3.26	0.45	0.43	0.47

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED 1	WID-101-012	W13	1200	3010	Awning	10	NW	None
bath	WID-101-012	W11	860	1210	Awning	90	SW	None
bed 2	WID-106-028	W09	1200	850	Fixed	0	SW	None
bed 2	WID-101-012	W08	1200	2410	Awning	10	SE	None
bed 3	WID-101-012	W14	1200	850	Awning	10	SE	None
bed 3	WID-101-012	W15	1200	850	Awning	10	SE	None
ens	WID-101-012	W12	860	1570	Awning	45	NW	None
entry	WID-101-012	W01	815	850	Awning	90	SE	None
hallway	WID-106-028	W10	860	2050	Fixed	0	SW	None
kitchen/Living	WID-101-012	W04	600	2050	Awning	41	SW	None
kitchen/Living	WID-101-012	W05	2050	1570	Awning	30	NW	None
kitchen/Living	WID-124-029	W06	2510	2170	Sliding Door	61	NE	None
kitchen/Living	WID-124-029	W07	2510	2649	Sliding Door	61	NW	None
ldry	WID-122-017	W03	2120	900	Casement	90	SW	None



Window and glazed door schedule

Location	Window	Window	Height	Width	Window	Opening	Orient-	Shading
	ID	no.	(mm)	(mm)	type	%	ation	device*
pdr	WID-101-012	W02	860	850	Awning	90	SW	None

Roof window type and performance value

Default* roof windows

Window ID Wi	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
		U-value*		lower limit upper limit	
None					

Custom* roof windows

Window ID Wind	Window Description	Maximum SHGC*	SHGC substitution tolerance ranges		
		U-value*	lower limit upper limit		
None					

Roof window schedule

Location	Window	Window	Opening	Height	Width	Orient-	Outdoor	Indoor
	ID	no.	%	(mm)	(mm)	ation	shade	shade
None								

Skylight type and performance

Skylight ID	Skylight description
None	

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation
entry	2360	982	90	SE
garage	2265	2410	90	SE

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-A	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	0.00	Yes

* Refer to glossary.

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External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cladding Walls-B	Sekisui Nichiha Cladding Walls - Fibre- Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	3.10	Yes

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 1	Sekisui Nichiha Cladding Walls-B	2185	4381	NW	228	Yes
bath	Sekisui Nichiha Cladding Walls-B	2510	2700	SW		Yes
bed 2	Sekisui Nichiha Cladding Walls-B	2510	2880	SW		Yes
bed 2	Sekisui Nichiha Cladding Walls-B	2510	4093	SE		Yes
bed 2	Sekisui Nichiha Cladding Walls-B	2510	600	NE		Yes
bed 3	Sekisui Nichiha Cladding Walls-B	2510	3180	SE		Yes
ens	Sekisui Nichiha Cladding Walls-B	2510	2440	SW		Yes
ens	Sekisui Nichiha Cladding Walls-B	2185	2880	NW	228	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	2264	SW		Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1800	SE	1743	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1200	NE	1624	Yes
entry	Sekisui Nichiha Cladding Walls-B	2510	1080	SE	543	Yes
garage	Sekisui Nichiha Cladding Walls-A	2510	900	SW	1669	Yes
garage	Sekisui Nichiha Cladding Walls-A	2510	3181	SE	320	Yes
hallway	Sekisui Nichiha Cladding Walls-B	2510	2279	SW		Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	6481	SW	174	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	4080	NW	174	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3001	NE	3293	Yes
kitchen/Living	Sekisui Nichiha Cladding Walls-B	2510	3301	NW	3175	Yes
ldry	Sekisui Nichiha Cladding Walls-B	2510	1690	SW		Yes
pdr	Sekisui Nichiha Cladding Walls-B	2510	2281	SW		Yes



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
pdr	Sekisui Nichiha Cladding Walls-B	2510	1079	SE	542	Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	81.5	0.00
INT-PB	Internal Plasterboard Stud Wall	18.0	2.70
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	2.3	3.10
PARTIWALL	PARTIWALL	48.8	4.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 1	TIMB-001: Suspended Timber Floor	17.8	N/A	6.00	Carpet
bath	TIMB-001: Suspended Timber Floor	7.9	N/A	6.00	Tile (8mm)
bed 2	TIMB-001: Suspended Timber Floor	7.2	N/A	6.00	Carpet
bed 2	TIMB-002: Suspended Timber Floor - Lined Below	4.7	N/A	6.00	Carpet
bed 3	TIMB-001: Suspended Timber Floor	10.1	N/A	6.00	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	1.0	N/A	6.00	Carpet
ens	TIMB-001: Suspended Timber Floor	7.0	N/A	6.00	Tile (8mm)
entry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	17.1	N/A	0.59	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	17.8	N/A	0.59	Exposed
hallway	TIMB-001: Suspended Timber Floor	12.0	N/A	6.00	Carpet
kitchen/Living	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	39.8	N/A	0.59	Tile (8mm)
ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	3.9	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.5	N/A	0.59	Tile (8mm)
wir	TIMB-001: Suspended Timber Floor	5.9	N/A	6.00	Carpet



Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BED 1	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bed 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
bed 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ens	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
hallway	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
wir	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BED 1	3	Downlight	150	Sealed
bath	1	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 2	2	Downlight	150	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
entry	3	Downlight	150	Sealed
hallway	2	Downlight	150	Sealed
kitchen/Living	8	Downlight	150	Sealed
kitchen/Living	1	Exhaust Fan	200	Sealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
wir	1	Downlight	150	Sealed



Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1300
bed 2	1	1300
bed 3	1	1300

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

Appliance schedule

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

Cooling system

Туре	Location	F	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location	F	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system					
_		Hot	Minim		Assessed
Туре	Fuel type	Water CER Zone	efficie STC	ncy /	daily load [litres]
No Whole of Home Data					
Pool / spa equipment					
Туре	Fuel type	Minimum efficiency /		Recomn	
		performanc	e	capacity	1
No Whole of Home Data					
Onsite Renewa	ble Energy schedule				
Туре	Orientatation		Generati	on Capacity [k\	/ /J



Onsite Renewable Energy *schedule*

TypeOrientatationNo Whole of Home Data

Generation Capacity [kW]

Battery schedule

Type No Whole of Home Data Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.		
AFRC	Australian Fenestration Rating Council		
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.		
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.		
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.		
COP	Coefficient of performance		
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.		
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.		
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input		
Energy use	This is your homes rating without solar or batteries.		
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).		
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.		
Exposure	see exposure categories below		
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).		
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).		
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.		
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.		
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.		
National Construction Code	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		
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.		
Net zero home	a home that achieves a net zero energy value*.		
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.		
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au		
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.		
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.		
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.		
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.		
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.		
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small- scale Renewable Energy Scheme operated by the Clean Energy Regulatory		
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.		
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).		
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)		

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 11, Road NO.1, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 12, Road NO.1, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401205	NatHERS Thermal Comfort and BASIX Assessment	JF/DR	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 12, Road NO.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS[®] Certificate No. #HR-UBPJ62-01

Lot 12, Road NO.1, Warriewood, NSW,

Generated on 13 Dec 2024 using Hero 4.1 (Chenath v3.23)

Property

Address Lot/DP NCC Class* Floor/all Floors Туре

12/unreg 1a 1 of 2 floors New

2102

Plans

Main Plan Prepared by NM105598 SEKISUI HOUSE SERVICES

Construction and environment

Assessed floor area (m²)* Conditioned* 133.9 Unconditioned* 4.3 158.2 Total 20.0 Garage

Exposure Type Suburban NatHERS climate zone

56 - Mascot AMO

ccredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficientliving
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

ela Russo ent Living ela@efficientliving.com.au 299706181 0

NCC Requirements

BCA provisions

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance star rating



The more stars

26.3 MJ/m²

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 (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	14.0	12.4
Load limits	25	18

Features determining load limits

Floor type (lowest conditioned area) NCC climate zone 1 or 2 Outdoor living area Outdoor living area ceiling fan N

CSOG N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

com.au

To verify this certificate, scan the QR code or visit http://www.hero-software.com. au/pdf/HR-UBPJ62-01 When using either link. ensure you are visiting http://www.hero-software.





About the ratings

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:



Greenhouse gas emissions:






#HR-UBPJ62-01 NatHERS Certificate

7.4 Star Rating as of 13 Dec 2024



Certificate check	Approva	l stage	Construc stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked. Note: The boxes indicate when and who should check each item.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other
It is not mandatory to complete this checklist.	Ass	Con	Buij	Con	000
Genuine certificate check					
Does this Certificate match the one available at the web address or QR code verification link on the front page?					
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?					
Thermal performance check					
Windows and glazed doors					
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?					
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?					
External walls					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?					
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?					
Floor					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?					
Ceiling penetrations*					
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?					
Ceiling					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?					
Roof					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?					
Apartment entrance doors (NCC Class 2 assessments only)					
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.					
Exposure*					
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".					
Heating and cooling load limits*					
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?					

7.4 Star Rating as of 13 Dec 2024



Certificate check	cate check Approval stage		Approval stage Construction stage		tion	INTER AUTOR STORM
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other	

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. Ad include, but are not limited to: condensation, structural and fire safety requirements					

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
pdr	Day Time	2.14
store	Unconditioned	1.49
ldry	Unconditioned	2.82
hallway	Day Time	2.82
K/L/D/Entry/Stairs	Kitchen/Living	49.77
bed 3	Bedroom	12.02
bath	Day Time	8.19
ens	Night Time	6.85
Bed1	Bedroom	16.63
wir	Night Time	7.94
Bed2	Bedroom	12.13
study	Day Time	17.49
garage	Garage	20.00

Room schedule





Window and glazed door type and performance

Default* windows

Window ID Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
	P	U-value*		lower limit upper limit	

None

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
WID-101-032	Horizon Awning Window	3.97	0.58	0.55	0.61	
WID-102-018	Horizon Sliding Window	3.96	0.61	0.58	0.64	
WID-111-017	Ascend Stacking Door	3.79	0.62	0.59	0.66	
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54	

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
Bed1	WID-101-032	W07	1200	2650	Awning	10	NW	None
Bed2	WID-101-032	W06	1200	2050	Awning	10	SE	None
K/L/D/Entry/Stairs	WID-101-032	W01	2050	2170	Awning	30	SE	None
K/L/D/Entry/Stairs	WID-111-017	W02	2510	3857	Sliding Door	60	NW	None
bed 3	WID-101-032	W04	1200	850	Awning	10	SE	None
bed 3	WID-101-032	W05	1200	850	Awning	10	SE	None
ens	WID-101-032	W08	860	2050	Awning	45	NW	None
ldry	WID-122-017	W03	2120	820	Casement	90	NW	None
study	WID-102-018	W09	1270	1200	Sliding	10	SE	None



Roof window type and performance value

Default* roof windows

Window ID	Windo	indow Description		Maximur	ⁿ SHGC*	SHGC substitution GC* tolerance ranges				
						U-value*	onee	lower limit	upper limit	
None										
Custom* roof win	dows						Movimu	~	SHGC sub	
Window ID	Windo	w Description	1				Maximur U-value*	SHGC*	tolerance	upper limit
None										
Roof windov	N sch	edule								
Location	Wind ID	ow	Window no.	Opening %		leight mm)	Width (mm)	Orient- ation	Outdoor shade	Indoor shade
None						,	()			
Skylight type	e and	performa								
Skylight ID None			Skylight de	scription						
Skylight sch Location Sky	edule rlight) Skylight No.	Skylight shaft length (mm)	Area (m²)	Orie		Outdoor shade	Diffuse	, Shaft Refle	ctance
None										
External doo	or sch	nedule								
Location			Height	(mm)	Wie	dth (mi	m) C	pening %	Orier	itation
K/L/D/Entry/Stairs			2360		982	2	9	0	SE	
garage			2265		241	0	9	0	SE	
External wa	II type	9								
Wall ID		Wall Type				Solar absor		Vall Colour	Bulk insulation (R-value)	Reflective wall wrap*
Sekisui Nichiha Cla Walls-A	ldding		na Cladding Walls Battened (Refl Ca			0.50	Ν	ledium	3.10	Yes
Sekisui Nichiha Cla			na Cladding Walls							



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bed1	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	179	Yes
Bed2	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1500	SE	1178	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	3481	SE		Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	4681	NW	3012	Yes
K/L/D/Entry/Stairs	Sekisui Nichiha Cladding Walls-A	2510	1201	NE	1332	Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	595	SW		Yes
bed 3	Sekisui Nichiha Cladding Walls-A	2510	3180	SE		Yes
ens	Sekisui Nichiha Cladding Walls-A	2510	4081	NW	175	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	1201	SW	1334	Yes
garage	Sekisui Nichiha Cladding Walls-B	2510	3180	SE	654	Yes
hallway	Sekisui Nichiha Cladding Walls-A	2510	1680	NW	3012	Yes
ldry	Sekisui Nichiha Cladding Walls-A	2510	1680	NW		Yes
study	Sekisui Nichiha Cladding Walls-A	2510	1375	SE		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	93.4	0.00
INT-PB	Internal Plasterboard Stud Wall	20.3	2.50
PARTIWALL	PARTIWALL	100.5	4.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bed1	TIMB-001: Suspended Timber Floor	16.6	N/A	0.15	Carpet
Bed2	TIMB-001: Suspended Timber Floor	12.1	N/A	0.15	Carpet
K/L/D/Entry/Stairs	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	49.8	N/A	0.59	Tile (8mm)



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
bath	TIMB-001: Suspended Timber Floor	8.2	N/A	4.00	Tile (8mm)
bed 3	TIMB-001: Suspended Timber Floor	10.1	N/A	4.00	Carpet
bed 3	TIMB-002: Suspended Timber Floor - Lined Below	1.9	N/A	4.00	Carpet
ens	TIMB-001: Suspended Timber Floor	6.8	N/A	0.15	Tile (8mm)
garage	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	20.0	N/A	0.59	Exposed
hallway	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
ldry	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
pdr	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.1	N/A	0.59	Tile (8mm)
store	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	1.5	N/A	0.59	Tile (8mm)
study	TIMB-001: Suspended Timber Floor	15.9	N/A	0.15	Carpet
study	TIMB-002: Suspended Timber Floor - Lined Below	1.7	N/A	4.00	Carpet
wir	TIMB-001: Suspended Timber Floor	7.9	N/A	0.15	Carpet

Ceiling type

Bed1ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesBed2ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesbathATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bed2Flat PB Ceiling6.00YesbathATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Bed1		6.00	Yes
bathFlat PB Ceiling6.00Yesbed 3ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	Bed2		6.00	Yes
bed 3Flat PB Ceiling6.00YesensATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YesstudyATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00YeswirATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling6.00Yes	bath		6.00	Yes
ens Flat PB Ceiling 6.00 Yes study ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling 6.00 Yes wir ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling 6.00 Yes	bed 3		6.00	Yes
study Flat PB Ceiling 6.00 Yes wir ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & 6.00 Yes	ens		6.00	Yes
wir 600 Yes	study		6.00	Yes
	wir		6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bed1	2	Downlight	150	Sealed

* Refer to glossary. Generated on 13 Dec 2024 using Hero 4.1 for Lot 12, Road NO.1, Warriewood, NSW, 2102



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
Bed2	2	Downlight	150	Sealed
K/L/D/Entry/Stairs	8	Downlight	150	Sealed
K/L/D/Entry/Stairs	1	Exhaust Fan	200	Sealed
bath	2	Downlight	150	Sealed
bath	1	Exhaust Fan	200	Sealed
bed 3	2	Downlight	150	Sealed
ens	1	Downlight	150	Sealed
ens	1	Exhaust Fan	200	Sealed
hallway	1	Downlight	150	Sealed
ldry	1	Downlight	150	Sealed
pdr	1	Downlight	150	Sealed
pdr	1	Exhaust Fan	200	Sealed
store	1	Downlight	150	Sealed
study	3	Downlight	150	Sealed
wir	2	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Bed1	1	1200
Bed2	1	1200
bed 3	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building alamant	Steel section dimensions	Frame spacing	Steel thickness	Thermal Break
Building element	(height x width, mm)	(mm)	(BMT mm)	(R-value)



Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

None

Appliance schedule

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

Cooling system

Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Heating system					
Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system		Hot	Minim	um	Assessed
Туре	Fuel type	Water CER Zone	efficie STC	ncy / o	daily load [litres]
No Whole of Home Data					
Pool / spa equipment					
Туре	Fuel type	Minimum efficiency performai	1	Recomm capacity	ended
No Whole of Home Data					
Onsite Renewa	ble Energy schedul	е			

Туре	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery schedule

 Type
 Storage Capacity [kWh]

 No Whole of Home Data
 Storage Capacity [kWh]



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
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.
COP	Coefficient of performance
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your homes rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure	see exposure categories below
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)

* Refer to glossary.

Generated on 13 Dec 2024 using Hero 4.1 for Lot 12, Road NO.1, Warriewood, NSW, 2102



NatHERS and BASIX Assessment



Sekisui House Proposed Residential Development

To be built at Lot 13, Road No.1, Warriewood NSW 2102

Issue	File Ref	Description	Author	Date
А	#2401206	NatHERS Thermal Comfort and BASIX Assessment	CB/SS	13/12/2024

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sekisui House. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.

If there is a change to this specification during design or construction phases, please contact Efficient Living and quote the above file reference for advice, and to obtain an updated Certificate if required.

Sustainable Building Consultants p. 02 9970 6181 e. admin@efficientliving.com.au





13 December 2024 Lot 13 Road No.1, Warriewood Sekisui House Services NSW Pty

BASIX Inclusions – extra notes:

There are a few inclusions set in the BASIX Portal which are not showing correctly in the BASIX Certificate. These items have been flagged with BASIX as errors. The correct inclusions should be as follows (shown in bold text):

Ventilation

At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: interlocked to light / timer off

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-F6KR03-01

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Property

Address

Lot 13, Road No.1, Warriewood, NSW 2102 Lot/DP Lot 13/unreg NCC Class* 1a Floor/all Floors

Туре

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1 of 2 floors
New
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Plans

Main Plan Prepared by NM105599 SEKISUI HOUSE SERVICES PTY LIMITED

Construction and environment

Assessed floor area (m²)* Conditioned* 128.9 **Unconditioned*** 2.8 Total 153.3 21.6 Garage

Exposure Type Suburban NatHERS climate zone 56 - Mascot AMO



Accredited assessor

Name	Daniela Russo
Business name	Efficient Living
Email	daniela@efficientliving.com.au
Phone	+61 299706181
Accreditation No.	10270
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions

State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

Volume 2

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.



Thermal performance (MJ/m²) Limits taken from ABCB Standard 2022

	Heating	Cooling			
Modelled	11.7	13.8			
Load limits	25	18			

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating

No Whole of Home performance rating generated for this certificate.

Verification

To verify this certificate, scan the QR code or visit

http://www.hero-software.com au/pdf/HR-F6KR03-01

When using either link. ensure you are visiting http://www.hero-software. com.au



* Refer to glossary.

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Thermal performance star rating

The more stars

the more energy efficient

NATIONWIDE



Note, variations and additions to the NCC energy efficiency requirements Predicted Whole of Home annual may apply in some states and territories.

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the ABCB Standard: NatHERS heating and cooling load limits for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

CSOG - Concrete Slab on Ground SF - Suspended Floor (or a mixture of CSOG and SF) NA - Not Applicable

NCC climate Zone 1 or 2:

Yes

No

NA - Not Applicable

Outdoor living area:

Yes

No

NA - Not Applicable

Outdoor living area ceiling fan:

Yes

No

NA - Not Applicable

Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Enerav use:



Greenhouse gas emissions:



Cost:



#HR-F6KR03-01 NatHERS Certificate

7.4 Star Rating as of 13 Dec 2024



Certificate check	Approva	Approval stage		Construction stage		
The checklist covers important items impacting the dwelling's ratings. It is recommended that the accuracy of the whole certificate is checked. Note: The boxes indicate when and who should check each item.	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other	
It is not mandatory to complete this checklist.	Ass	Con	Buij	Con	000	
Genuine certificate check						
Does this Certificate match the one available at the web address or QR code verification link on the front page?						
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?						
Thermal performance check						
Windows and glazed doors						
Does the window size, opening type and location shown on the NatHERS- stamped plans or as installed match what is shown in <i>'Window and glazed door</i> <i>schedule'</i> and <i>'Roof window schedule'</i> tables on this Certificate?						
Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?						
External walls						
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the ' <i>External wall type table</i> ' on this Certificate?						
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?						
Floor						
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Floor type'</i> table on this certificate?						
Ceiling penetrations*						
Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?						
Ceiling						
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the <i>'Ceiling type'</i> table on this Certifi cate?						
Roof						
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the ' <i>Roof type</i> ' table on this Certificate?						
Apartment entrance doors (NCC Class 2 assessments only)						
Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.						
Exposure*						
Has the appropriate exposure type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".						
Heating and cooling load limits*						
Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?						

7.4 Star Rating as of 13 Dec 2024



Certificate check	Approval stage		Construction stage		
Continued	Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging					
Does the dwelling meet the NCC requirement for thermal bridging?					
Insulation installation method					
Has the insulation been installed according to the NCC requirements?					
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?					
Whole of Home performance check (not applicable if a Whole of Home	e assessr	nent is no	ot conduc	ted)	
Appliances					
Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the ' <i>Appliance schedule</i> ' on this Certificate?					
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?					
Additional NCC Requirements for Services (not included in the NatHE	RS asses	ssment)			
Does the lighting meet the artificial lighting requirements specified in the NCC?					
Does the hot water system meet the additional requirements specified in the NCC?					
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?					
Other NCC requirements					
Note: This Certificate only covers the energy efficiency requirements in the NCC. A include, but are not limited to: condensation, structural and fire safety requirements	dditional re and any st	quirements ate or territ	that must ory variatio	also be sat	isfied ICC

energy efficiency requirements.

Additional Notes

Provisional Inclusions:

Roof default colour medium

Default colour modelled to external walls, windows frames and floor finishes Waffle pod 225mm thick

Sealed and insulated Downlights 1 per 5m2 ceiling penetration diameter 150mm

Sealed and insulated Exhaust fans ceiling penetration diameter 200mm

Windows modelled as a proxy to match window manufacturer U-value and SHGC

Floor coverings: bare concrete to garage, carpet to bedrooms and first floor living areas, tiles to remainder of the house Page 2 - Whole of home and Appliance check list on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

Insulation is applied to the conditioned envelope of the house; this includes; external walls of habitable rooms, the wall between the garage and the house and any vertical walls adjacent to roof space. Unless noted otherwise garage external walls do not require insulation.

- Windows areas may be split into varying sash types in the model
- Raked ceilings under 10 degrees are modelled as flat ceiling
- · Sisalation / sarking is only shown in certificate where it provides a reflective air-space
- No insulation clearance modeled as IC rated downlights are nominated

Room	Zone Type	Area (m²)
KITCHEN/LIVING/DINING/ENTRY	Kitchen/Living	53.29
LDRY	Unconditioned	2.82
PDR	Day Time	2.47
PASS	Day Time	2.48
GARAGE	Garage	21.61
BED 2	Bedroom	10.30
BATH	Day Time	6.56
STAIRS/PASS	Day Time	15.51
PRINCILAP SUITE	Bedroom	15.44
WIR	Night Time	7.47
ENS	Night Time	7.01
WIR	Night Time	2.08
BED 3	Bedroom	9.18

Room schedule





Window and glazed door type and performance

Default* windows

Window ID Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit upper limit	

None

Custom* windows

Window ID	Window Description	Maximum	SHGC*	SHGC substitution tolerance ranges		
		U-value*		lower limit	upper limit	
WID-101-032	Horizon Awning Window	3.97	0.58	0.55	0.61	
WID-102-018	Horizon Sliding Window	3.96	0.61	0.58	0.64	
WID-111-017	Ascend Stacking Door	3.79	0.62	0.59	0.66	
WID-122-017	Paragon Entry Door	3.92	0.51	0.49	0.54	

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient- ation	Shading device*
BED 2	WID-101-032	W10	1200	2410	Awning	10	SE	None
BED 3	WID-101-032	W09	1200	2410	Awning	10	SE	None
ENS	WID-101-032	W08	860	610	Awning	90	NE	None
KITCHEN/LIVING/DINING /ENTRY	WID-101-032	W03	835	1810	Awning	45	NE	None
KITCHEN/LIVING/DINING /ENTRY	WID-101-032	W04	835	1810	Awning	45	NE	None
KITCHEN/LIVING/DINING /ENTRY	WID-111-017	W02	2510	3576	Sliding Door	58	NW	None
LDRY	WID-122-017	W01	2120	820	Casement	90	NW	None
PASS	WID-101-032	W05	1030	850	Awning	90	SE	None
PRINCILAP SUITE	WID-102-018	W06	1200	3010	Sliding	10	NW	None
WIR	WID-101-032	W07	1200	610	Awning	10	NW	None



Roof window type and performance value

Default* roof windows

Window ID	Windo	w Description	1			Maximum U-value*	¹ SHGC*	SHGC sub tolerance	
None									
Custom* roof v	windows							SHGC sub	stitution
Window ID	Windo	w Description	1			Maximum U-value*	SHGC*	tolerance	
None									
Roof wind	ow sch	edule							
Location	Wind ID	ow	Window no.	Opening %	g Height (mm)	Width (mm)	Orient- ation	Outdoor shade	Indoor shade
None									
Skylight <i>t</i> y Skylight ID	/pe and	performa	INCE Skylight de	scription					
None									
Skylight s	chedule								
Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient- ation	Outdoor shade	Diffuse	r Shaft Reflec	ctance
None									
External d	loor sch	edule							
Location			Height	(mm)	Width (m	im) O	pening %	Orien	tation
GARAGE			2265		2410	90)	SE	
KITCHEN/LIVIN	IG/DINING/E	INTRY	2360		982	90)	SE	
External w	all type	,							
Wall ID		Wall Type			Solaı abso		/all olour	Bulk insulation (R-value)	Reflective wall wrap*
CONC-100-PB		Precast 100m Internally	nm Concrete - Pla	sterboard	0.50	М	edium	0.00	No
Sekisui Nichiha Walls-A	Cladding		na Cladding Walls Battened (Refl Ca		0.50	Μ	edium	3.10	Yes
Sekisui Nichiha Walls-B	Cladding		ha Cladding Walls Battened (Refl Ca		0.50	М	edium	0.00	Yes

NATIONWIDE HOUSE

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 2	Sekisui Nichiha Cladding Walls-A	2510	3053	SE		No
BED 3	Sekisui Nichiha Cladding Walls-A	1930	2779	NE		Yes
BED 3	Sekisui Nichiha Cladding Walls-A	2510	3044	SE		No
BED 3	Sekisui Nichiha Cladding Walls-A	2510	238	NE		Yes
ENS	Sekisui Nichiha Cladding Walls-A	1930	3775	NE		Yes
GARAGE	Sekisui Nichiha Cladding Walls-B	2850	3188	SE	605	Yes
GARAGE	Sekisui Nichiha Cladding Walls-B	2850	1494	NE	2982	Yes
GARAGE	CONC-100-PB	340	5283	NE		No
GARAGE	CONC-100-PB	340	3188	NW		No
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	922	NE	4684	Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	761	NW	2893	Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	3890	NE		Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	1200	NW		Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	5574	NE		Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	1665	SE	2053	Yes
KITCHEN/LIVING /DINING/ENTRY	Sekisui Nichiha Cladding Walls-A	2510	3740	NW	2893	Yes
LDRY	Sekisui Nichiha Cladding Walls-A	2510	1674	SW		No
LDRY	Sekisui Nichiha Cladding Walls-A	2510	1683	NW	184	Yes
LDRY	Sekisui Nichiha Cladding Walls-A	2510	1674	NE	4684	Yes
PASS	Sekisui Nichiha Cladding Walls-A	2510	1494	SW	4919	Yes
PASS	Sekisui Nichiha Cladding Walls-A	2510	1088	SE	559	Yes
PDR	Sekisui Nichiha Cladding Walls-A	2510	2283	NE		Yes
PDR	Sekisui Nichiha Cladding Walls-A	2510	1083	SE		Yes
PRINCILAP SUITE	Sekisui Nichiha Cladding Walls-A	1930	4085	NW	185	Yes
WIR	Sekisui Nichiha Cladding Walls-A	1930	1978	NW	185	Yes



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orient- ation	Horizontal shading feature* projection (mm)	Vertical shading feature
WIR	Sekisui Nichiha Cladding Walls-A	2510	3779	NE		Yes
WIR	Sekisui Nichiha Cladding Walls-A	1930	1619	NE		Yes

Internal wall type

Wall ID	Wall Type	Area (m²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	81.9	0.00
INT-PB	Internal Plasterboard Stud Wall	19.5	2.50
INT-PB-EXP1	Internal Plasterboard Stud Wall (exposed 1 side)	8.2	3.10
PARTIWALL	PARTIWALL	45.3	4.00
PARTIWALL	PARTIWALL	19.3	0.00

Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-001: Suspended Timber Floor	6.6	N/A	4.00	Tile (8mm)
BED 2	TIMB-001: Suspended Timber Floor	8.4	N/A	4.00	Carpet
BED 2	TIMB-002: Suspended Timber Floor - Lined Below	1.9	N/A	4.00	Carpet
BED 3	TIMB-001: Suspended Timber Floor	4.3	N/A	0.15	Carpet
BED 3	TIMB-001: Suspended Timber Floor	0.1	N/A	4.00	Carpet
BED 3	TIMB-002: Suspended Timber Floor - Lined Below	4.7	N/A	4.00	Carpet
ENS	TIMB-001: Suspended Timber Floor	7.0	N/A	0.15	Tile (8mm)
GARAGE	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	21.6	N/A	0.59	Exposed
KITCHEN/LIVING/DINING /ENTRY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	53.3	N/A	0.59	Tile (8mm)
LDRY	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.8	N/A	0.59	Tile (8mm)
PASS	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.5	N/A	0.59	Tile (8mm)
PDR	WAFFLE-85: Concrete Waffle Pod Slab on Ground (85mm)	2.5	N/A	0.59	Tile (8mm)
PRINCILAP SUITE	TIMB-001: Suspended Timber Floor	15.4	N/A	0.15	Carpet



Floor type

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
STAIRS/PASS	TIMB-001: Suspended Timber Floor	10.3	N/A	0.15	Carpet
STAIRS/PASS	TIMB-001: Suspended Timber Floor	5.1	N/A	4.00	Carpet
WIR	TIMB-001: Suspended Timber Floor	9.6	N/A	0.15	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
BED 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
KITCHEN/LIVING/DINING /ENTRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
LDRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PDR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
PRINCILAP SUITE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
STAIRS/PASS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes
WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	6.00	Yes

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
BATH	1	Downlight	150	Sealed
BATH	1	Exhaust Fan	200	Sealed
BED 2	2	Downlight	150	Sealed
BED 3	2	Downlight	150	Sealed
ENS	1	Downlight	150	Sealed
ENS	1	Exhaust Fan	200	Sealed
KITCHEN/LIVING/DINING/ENTRY	10	Downlight	150	Sealed



Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm)	Sealed /unsealed
KITCHEN/LIVING/DINING/ENTRY	1	Exhaust Fan	200	Sealed
LDRY	1	Downlight	150	Sealed
PASS	1	Downlight	150	Sealed
PDR	1	Downlight	150	Sealed
PDR	1	Exhaust Fan	200	Sealed
PRINCILAP SUITE	3	Downlight	150	Sealed
STAIRS/PASS	3	Downlight	150	Sealed
WIR	2	Downlight	150	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 2	1	1200
BED 3	1	1200
PRINCILAP SUITE	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.80	0.50	Medium

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)	
None					

Appliance schedule

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

Cooling system

Туре	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Da	ta			



Heating system

Туре	Location		Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data					
Hot water system		Hot	Minim	um	Assessed

		not		A3303300	
Туре	Fuel type	Water	efficiency /	daily load	
		CER Zone	STC	[litres]	
No Whole of Home Data					

Pool / spa equipment

		Minimum	Recommended	
Туре	Fuel type	efficiency /	capacity	
		performance		

No Whole of Home Data

Onsite Renewable Energy schedule

Туре	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Storage Capacity [kWh]

Battery schedule

Туре	
No Whole of Home Data	



Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the homes energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

Glossary

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

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Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.	
AFRC	Australian Fenestration Rating Council	
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents	
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, range hoods, chimneys and flues. Excludes fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.	
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.	
COP	Coefficient of performance	
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.	
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.	
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input	
Energy use	This is your homes rating without solar or batteries.	
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).	
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.	
Exposure	see exposure categories below	
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).	
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).	
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.	
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.	
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.	
National Construction Code	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	
(NCC) Class	Class 10a buildings. Definitions can be found at www.abcb.gov.au.	
Net zero home	a home that achieves a net zero energy value*.	
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.	
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional value of 'medium' must be modelled. Acceptable provisional values are outlined in the NatHERS Technical Note and can be found at www.nathers.gov.au	
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.	
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.	
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and generally does not have a diffuser.	
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.	
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.	
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Sma scale Renewable Energy Scheme operated by the Clean Energy Regulatory	
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials sur as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.	
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).	
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eq eaves and balconies)	

* Refer to glossary.

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