



### Tim Sims & Sally Elizabeth Rose Sims Proposed Residential Development

To be built at 14 Lentara Road, Bayview NSW 2104

Issue	File Ref	Description	Author	Date
A	23-5188R	NatHERS Thermal Comfort and BASIX Assessment	DG	06/12/2023

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Cadence & Co. 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.



Assessor: Dani Grumont  
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License Holder: Tracey Cools  
Accreditation Number: HERA10033

#### BASIX Details:

NatHERS Certificate Number: 0009112822-01

BASIX adjusted conditioned area: 513m<sup>2</sup>

BASIX adjusted un-conditioned area: 43m<sup>2</sup>

BASIX Certificate Number: BSX-46142

Area adjusted heating load: 18.80 MJ/ m<sup>2</sup>/pa

Area adjusted cooling load: 7.50MJ/ m<sup>2</sup>/pa

#### Specification

Heating and cooling loads for the development have been determined using BERS Pro Plus 5.0 thermal comfort simulation software, and assessed under the thermal simulation method of the BASIX Protocol.

The following specification was used to achieve the thermal performance values. Modelling proxies are used at times and if the buildings element details vary the thermal performance specification below shall take precedence.

If there is a change to this specification during design or construction phases, please contact Efficient Living for advice and if required an updated Certificate will be issued.

#### Floors

Concrete slab on ground with R2.3 (insulation only value) underslab insulation, and R1.0 (insulation only value) vertical slab insulation required to slab edges of Ground Floor only

Suspended concrete with R4.0 insulation (insulation only value) to open and enclosed suspended areas

Concrete between levels, no insulation required where habitable rooms are above and below

#### External Walls

Modelled with Aerated Concrete cavity wall (R-value of R1.54 for wall construction without the insulation) plus R3.0 insulation (insulation only value). The total wall construction value is RT-4.54; wall materials/construction and insulation types can be substituted with any type of wall construction that has a total wall construction value of minimum RT-4.54.

Garage: No insulation required to external walls of Garage

#### External Colour:

Medium ( $0.475 < SA < 0.7$ )

#### Walls within dwellings

Single skin brick. R2.0 insulation only required to walls between Garage and internal areas, and to Laundry, Bath and Change Room walls adjacent to other rooms.

#### Glazing Doors/Windows

Glazed windows and doors: high spec clear double glazing has been modelled using glazing by Aluplast. These are maximum U-values, and there is some flexibility of  $\pm 5\%$  either way with the SHGC value.

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 1.50 (equal to or lower than) SHGC: 0.50 ( $\pm 5\%$ )

**Group B** – sliding doors/windows + fixed glazing + double hung

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U-value: 1.50 (equal to or lower than) SHGC: 0.50 ( $\pm 5\%$ )

Given values are AFRC total window system values (glass and frame)

#### Skylights

Double glazed with timber or aluminum frame.

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#### Roof and Ceilings

Metal roof with foil backed blanket ( $R_{u1.3}$  and  $R_{d1.3}$ ) (ie. Bradfords Anticon 60 or any equivalent product)

Plasterboard ceiling with R6.0 insulation (insulation only value) where metal roof above (excluding Living Room)

Plasterboard ceiling with R4.0 insulation (insulation only value) to Lower Ground Floor (Garden Room and Change Room) where Terrace and Porch above

Living Room: plasterboard ceiling with R4.0 insulation (insulation only value) to pitched ceiling where roof above

Garage: Plasterboard ceiling with R4.0 insulation to garage ceiling where habitable rooms above. No insulation to garage required where roof above.

#### External Colour

Medium ( $0.475 < SA < 0.7$ )

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#### Ceiling Penetrations

Sealed LED downlights, one every 5.0m<sup>2</sup>

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#### Floor coverings

Tiles to wet areas, timber elsewhere

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#### External Shading

Shading as per stamped drawings

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#### Ventilation

All external doors have weather seals, all exhaust fans and chimneys have dampers, and down lights proposed will have capped fittings

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# Nationwide House Energy Rating Scheme®

## NatHERS® Certificate No. 0009112822-01

Generated on 06 Dec 2023 using BERS Pro v5.1.7 (3.22)

### Property

**Address** 14 Lentara Road,  
BAYVIEW, NSW, 2104

**Lot/DP** Lot 49 DP 204996

**NCC class\*** 1a

**Floor/all Floors** G of 2 floors

**Type** New Home

### Plans

**Main plan** Sims

**Prepared by** Cadence & Co

### Construction and environment

<b>Assessed floor area [m2]*</b>	<b>Exposure type</b>
Conditioned* 513.3	Open
Unconditioned* 43.5	<b>NatHERS climate zone</b>
Total 608.1	56 Mascot (Sydney Airport)
Garage 51.3	



### Accredited assessor

**Name** Tracey Cools

**Business name** Efficient Living Pty Ltd

**Email** admin@efficientliving.com.au

**Phone** (02) 9970 6181

**Accreditation No.** HERA10033

**Assessor Accrediting Organisation** HERA

**Declaration of interest** Declaration completed: no conflicts

### NCC Requirements

**NCC provisions** Volume Two

**Strate/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 J3D3 and J3D15 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](http://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



### Thermal performance [MJ/m<sup>2</sup>]

Limits taken from ABCB Standard 2022

	Heating	Cooling
<b>Modelled</b>	18.8	7.5
<b>Load limits</b>	N/A	N/A

### Features determining load limits

Floor Type (lowest conditioned area)	CSOG
NCC climate zone 1 or 2	No
Outdoor living area	No
Outdoor living area ceiling fan	No

### 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  
[hstar.com.au/QR/Generate?](http://hstar.com.au/QR/Generate?p=XTgBGanHZ)  
[p=XTgBGanHZ](http://hstar.com.au/QR/Generate?p=XTgBGanHZ).  
When using either link,  
ensure you are visiting  
[hstar.com.au](http://hstar.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 & 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 2022: 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

### Energy use

No Whole of Home performance assessment conducted for this certificate

### Greenhouse gas emissions

No Whole of Home performance assessment conducted for this certificate

### Cost

No Whole of Home performance assessment conducted for this certificate



## Certificate check

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 by whom each item should be checked. It is not mandatory to complete this checklist.

	Approval Stage		Construction Stage		Occupancy/Other
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	
<b>Genuine certificate check</b>					
Does this Certificate match the one available at the web address or QR code verification link on the front page?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Thermal performance check</b>					
<b>Windows and glazed doors</b>					
Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>External walls</b>					
Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the External wall type table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Floor</b>					
Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Ceiling penetrations*</b>					
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Ceiling</b>					
Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Roof</b>					
Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Apartment entrance doors (NCC Class 2 assessments only)</b>					
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.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>Exposure*</b>					
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".	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<b>Heating and cooling load limits*</b>					
Do the load limits settings (shown on page 1) match what is shown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Certificate check

Continued

	Approval Stage		Construction Stage		
	Assessor checked	Consent Authority/ Surveyor checked	Builder checked	Consent Authority Surveyor checked	

### 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?

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### Whole of Home performance check (not applicable if a Whole of Home performance assessment is not conducted)

#### 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 Appliance schedule on this Certificate?

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Does the heating 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 'Appliance schedule' on this Certificate?

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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 'Appliance schedule' on this Certificate?

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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?

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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?

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### Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?

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Does the hot water system meet the additional requirements specified in the NCC?

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#### Provisional values\* check

Have provisional values\* been used in the assessment and, if so, are they noted in 'Additional notes' table below?

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#### 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



## Room schedule

Room	Zone Type	Area [m <sup>2</sup> ]
Garage	Garage	51.3
Bath	Unconditioned	14.79
Bedroom 3	Bedroom	17.12
Bedroom 4	Bedroom	18.15
Linen	Daytime	7.28
Hall (GF)	Daytime	17.37
Hallway	Daytime	32.24
Garden Room	Daytime	62.21
Powder GF	Daytime	9.23
Gym	Daytime	22.69
Change Room	Unconditioned	11.02
Kitchen/Dining	Kitchen/Living	50.93
Living	Living	43.62
Winter Room	Living	33.41
Entry/Hall	Daytime	28.53
Lift GF	Daytime	3.37
Powder	Daytime	7.18
WIR Bed 2	Nighttime	7.92
Lift FF	Daytime	9.86
Study	Daytime	17.06
Bedroom 1	Bedroom	28.74
Ensuite 1	Nighttime	21.24
WIR	Nighttime	22.37
Upper Stair/Hall	Daytime	19.57
Linen Upper	Daytime	10.42
Laundry	Unconditioned	17.69
Bedroom 2	Bedroom	14.29
Ensuite 2	Nighttime	9.65





## Window and glazed door *type and performance*

### Default windows\*

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

### Custom windows\*

Window ID	Window Description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
ALU-012-05 A	IDEAL 2000 Fixed Window DG LightBridge_ClrSO_4-16-4	1.5	0.50	0.48	0.53

## Window and glazed door *schedule*

Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Bath	ALU-012-05 A	W8	2550	2000	Sliding	45	SE	No
Bedroom 3	ALU-012-05 A	W10	2550	3000	Sliding	30	SE	No
Bedroom 4	ALU-012-05 A	W11	2550	3000	Sliding	30	SE	No
Hallway	ALU-012-05 A	W9	2550	2000	Sliding	45	SE	No
Garden Room	ALU-012-05 A	W12	2550	6000	Bifold	90	SE	No
Garden Room	ALU-012-05 A	W33	1800	1890	Sliding	30	SW	No
Garden Room	ALU-012-05 A	W34	1800	1890	Sliding	30	SW	No
Change Room	ALU-012-05 A	W31	650	900	Fixed	00	SW	No
Change Room	ALU-012-05 A	W32	600	710	Fixed	00	SW	No
Kitchen/Dining	ALU-012-05 A	W25	1500	1700	Fixed	00	NE	No
Kitchen/Dining	ALU-012-05 A	W26	1500	1700	Fixed	00	NE	No
Kitchen/Dining	ALU-012-05 A	W1	2400	4000	Sliding	30	SE	No
Kitchen/Dining	ALU-012-05 A	W2	2400	2000	Sliding	45	SE	No
Living	ALU-012-05 A	W3	2700	6000	Sliding	45	SE	No
Living	ALU-012-05 A	W4	1000	6000	Fixed	00	SE	No
Winter Room	ALU-012-05 A	W22	1900	500	Fixed	00	W	No
Winter Room	ALU-012-05 A	W24	1900	2250	Fixed	00	NW	No
Winter Room	ALU-012-05 A	W23	1900	500	Fixed	00	N	No
Winter Room	ALU-012-05 A	W27	2100	1500	Casement	90	NE	No
Winter Room	ALU-012-05 A	W28	2100	1500	Casement	90	NE	No

\* Refer to glossary.



Location	Window ID	Window no.	Height [mm]	Width [mm]	Window type	Opening %	Orientation	Window shading device*
Winter Room	ALU-012-05 A	W29	500	1500	Fixed	00	NE	No
Winter Room	ALU-012-05 A	W30	500	1500	Fixed	00	NE	No
Entry/Hall	ALU-012-05 A	W19	1100	750	Casement	90	NW	No
Entry/Hall	ALU-012-05 A	W20	2700	500	Fixed	00	NW	No
Entry/Hall	ALU-012-05 A	W21	2700	500	Fixed	00	NW	No
Study	ALU-012-05 A	W5	2400	2000	Sliding	45	SE	No
Bedroom 1	ALU-012-05 A	W6	2400	4000	Sliding	30	SE	No
Ensuite 1	ALU-012-05 A	W7	1650	1500	Sliding	45	SE	No
Ensuite 1	ALU-012-05 A	W39	1600	600	Fixed	00	SW	No
Ensuite 1	ALU-012-05 A	W38	1700	800	Double Hung	45	SW	No
WIR	ALU-012-05 A	W37	1600	2300	Double Hung	30	SW	No
Upper Stair/Hall	ALU-012-05 A	W16	2150	1600	Fixed	00	NW	No
Linen Upper	ALU-012-05 A	W15	1500	800	Double Hung	45	NW	No
Laundry	ALU-012-05 A	W35	2000	900	Casement	90	SW	No
Laundry	ALU-012-05 A	W36	500	1100	Fixed	00	SW	No
Laundry	ALU-012-05 A	W13	1500	2200	Double Hung	45	NW	No
Laundry	ALU-012-05 A	W14	1500	800	Double Hung	45	NW	No
Bedroom 2	ALU-012-05 A	W18	2000	2300	Double Hung	30	NW	No
Ensuite 2	ALU-012-05 A	W17	2000	800	Double Hung	30	NW	No

## Roof window\* type and performance value

### Default roof windows\*

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

### Custom roof windows\*

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

## Roof window\* schedule

Location	Window ID	Window no.	Opening %	Height [mm]	Width [mm]	Orientation	Outdoor shade	Indoor shade
No Data Available								

## Skylight\* type and performance

Skylight ID	Skylight description	Skylight shaft reflectance
GEN-04-008a	Double-glazed clear, Timber and Aluminium Frame	0.5

## Skylight\* schedule

Location	Skylight ID	Skylight No.	Skylight shaft length [mm]	Area [m <sup>2</sup> ]	Orientation	Outdoor shade	Diffuser
Upper Stair/Hall	GEN-04-008a	S1	500	6.44	NW	None	No

## External door schedule

Location	Height [mm]	Width [mm]	Opening %	Orientation
Garage	2040	820	90	NW
Garage	2400	5600	90	NE
Change Room	2040	820	90	SW
Entry/Hall	940	750	90	NW

## External wall type

Wall ID	Wall type	Solar absorptance	Wall shade [colour]	Bulk insulation [R-value]	Reflective wall wrap*
EW-1	Autoclaved Aerated Concrete	0.496489411764706		No insulation	No
EW-2	Autoclaved Aerated Concrete	0.496489411764706		Bulk Insulation R3	No

## External wall schedule

Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Garage	EW-1	2700	7845	SE	2800	No
Garage	EW-1	2700	6045	NW	9500	No
Garage	EW-1	2700	900	NE	0	No
Garage	EW-1	2700	1800	NW	0	No



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Garage	EW-1	2700	6000	NE	800	No
Bath	EW-2	2700	3990	SE	4600	No
Bedroom 3	EW-2	2700	3490	SE	4600	No
Bedroom 4	EW-2	2700	3690	SE	4600	No
Hall (GF)	EW-2	2700	11390	NW	7650	No
Hallway	EW-2	2700	2490	SE	4600	No
Hallway	EW-2	2700	2545	NW	1900	No
Hallway	EW-2	2700	1200	NE	17600	No
Hallway	EW-2	2700	1800	NE	17600	No
Garden Room	EW-2	2700	545	SE	4600	No
Garden Room	EW-2	2700	900	NE	0	No
Garden Room	EW-2	2700	9100	SE	3450	No
Garden Room	EW-2	2700	7145	SW	2025	No
Powder GF	EW-2	2700	2790	NW	1900	No
Gym	EW-2	2700	4390	NW	1900	No
Change Room	EW-2	2700	3645	SW	2025	No
Change Room	EW-2	2700	1600	SW	2000	No
Change Room	EW-2	2700	2245	NW	1900	No
Kitchen/Dining	EW-2	2700	6895	NE	5100	No
Kitchen/Dining	EW-2	2700	7745	SE	1700	No
Living	EW-2	4200	7290	SE	4600	No
Winter Room	EW-2	2700	745	NW	2850	No
Winter Room	EW-2	2700	1097	W	3591	No
Winter Room	EW-2	2700	2250	NW	2050	No
Winter Room	EW-2	2700	1167	N	3360	No
Winter Room	EW-2	2700	500	NW	2850	No
Winter Room	EW-2	2700	6445	NE	2800	No
Entry/Hall	EW-2	2700	2690	NW	2850	No
Lift GF	EW-2	2700	2200	NW	3100	No
Lift GF	EW-2	2700	1700	NE	15300	No
Lift GF	EW-2	2700	2200	SE	13300	No



Location	Wall ID	Height [mm]	Width [mm]	Orientation	Horizontal shading feature* maximum projection [mm]	Vertical shading feature [yes/no]
Study	EW-2	2700	3090	SE	4600	No
Bedroom 1	EW-2	2700	5390	SE	1750	No
Ensuite 1	EW-2	2700	2045	SE	1750	No
Ensuite 1	EW-2	2700	1350	SW	1800	No
Ensuite 1	EW-2	2700	1500	SE	3100	No
Ensuite 1	EW-2	2700	4895	SW	300	No
WIR	EW-2	2700	3595	SW	300	No
WIR	EW-2	2700	1500	NW	6000	No
Upper Stair/Hall	EW-2	2700	2490	NW	3200	No
Linen Upper	EW-2	2700	2090	NW	3225	No
Laundry	EW-2	3200	3495	SW	3450	No
Laundry	EW-2	2700	3800	NW	2425	No
Laundry	EW-2	2700	800	NE	0	No
Laundry	EW-2	2700	2145	NW	3225	No
Bedroom 2	EW-2	2700	1050	SW	17700	No
Bedroom 2	EW-2	2700	3800	NW	1750	No
Bedroom 2	EW-2	2700	1100	NE	10750	No
Ensuite 2	EW-2	2700	345	NW	3600	No
Ensuite 2	EW-2	2700	800	SW	14650	No
Ensuite 2	EW-2	2700	2995	NW	2800	No

## Internal wall type

Wall ID	Wall type	Area [m <sup>2</sup> ]	Bulk insulation
IW-001	Single Skin Brick	73.85	Bulk Insulation, No Air Gap R2
IW-002	Single Skin Brick	380.97	No insulation
IW-003	Concrete Block	21.60	No insulation

## Floor type

Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Garage	Concrete Slab on Ground 100mm	51.30	None	No Insulation	Bare





Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bath	Concrete Slab on Ground 100mm	14.79	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Bedroom 3	Concrete Slab on Ground 100mm	17.12	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Bedroom 4	Concrete Slab on Ground 100mm	18.15	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Linen	Concrete Slab on Ground 100mm	7.28	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Hall (GF)	Concrete Slab on Ground 100mm	17.37	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Hallway	Concrete Slab on Ground 100mm	32.24	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Garden Room	Concrete Slab on Ground 100mm	62.21	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Powder GF	Concrete Slab on Ground 100mm	9.23	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
Gym	Concrete Slab on Ground 100mm	22.69	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Change Room	Concrete Slab on Ground 100mm	11.02	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Kitchen/Dining / Garage	Concrete Timber Framed Above Plasterboard 150mm	22.40		Bulk Insulation R4	Ceramic Tiles 8mm
Kitchen/Dining / Bath	Concrete Timber Framed Above Plasterboard 150mm	13.83		No Insulation	Ceramic Tiles 8mm
Kitchen/Dining / Linen	Concrete Timber Framed Above Plasterboard 150mm	18.56		No Insulation	Ceramic Tiles 8mm
Kitchen/Dining / Hall (GF)	Concrete Timber Framed Above Plasterboard 150mm	6.46		No Insulation	Ceramic Tiles 8mm
Living / Bedroom 3	Concrete Timber Framed Above Plasterboard 150mm	16.95		No Insulation	Cork Tiles or Parquetry 8mm
Living / Bedroom 4	Concrete Timber Framed Above Plasterboard 150mm	17.93		No Insulation	Cork Tiles or Parquetry 8mm
Living / Hall (GF)	Concrete Timber Framed Above Plasterboard 150mm	7.75		No Insulation	Cork Tiles or Parquetry 8mm
Winter Room	Suspended Concrete Slab 150mm	33.41	Enclosed	Bulk Insulation in Contact with Floor R4	Cork Tiles or Parquetry 8mm
Entry/Hall / Hall (GF)	Concrete Timber Framed Above Plasterboard 100mm	7.58		No Insulation	Cork Tiles or Parquetry 8mm
Entry/Hall	Concrete Slab on Ground 100mm	25.35	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Lift GF	Concrete Slab on Ground 100mm	3.37	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Powder	Concrete Slab on Ground 100mm	7.18	None	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm
WIR Bed 2	Concrete Slab on Ground 100mm	7.92	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Lift FF / Lift GF	Concrete Timber Framed Above Plasterboard 150mm	10.73		No Insulation	Cork Tiles or Parquetry 8mm
Study / Hallway	Concrete Timber Framed Above Plasterboard 150mm	13.91		No Insulation	Cork Tiles or Parquetry 8mm
Study / Garden Room	Concrete Timber Framed Above Plasterboard 150mm	6.01		No Insulation	Cork Tiles or Parquetry 8mm



Location	Construction	Area [m <sup>2</sup> ]	Sub-floor ventilation	Added insulation [R-value]	Covering
Bedroom 1 / Hallway	Concrete Timber Framed Above Plasterboard 150mm	5.85		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1 / Garden Room	Concrete Timber Framed Above Plasterboard 150mm	26.14		No Insulation	Cork Tiles or Parquetry 8mm
Bedroom 1 / Gym	Concrete Timber Framed Above Plasterboard 150mm	9.17		No Insulation	Cork Tiles or Parquetry 8mm
Ensuite 1 / Garden Room	Concrete Timber Framed Above Plasterboard 150mm	20.93		No Insulation	Ceramic Tiles 8mm
WIR / Gym	Concrete Timber Framed Above Plasterboard 150mm	14.17		No Insulation	Cork Tiles or Parquetry 8mm
WIR / Change Room	Concrete Timber Framed Above Plasterboard 150mm	7.47		No Insulation	Cork Tiles or Parquetry 8mm
Upper Stair/Hall / Hallway	Concrete Timber Framed Above Plasterboard 150mm	13.60		No Insulation	Cork Tiles or Parquetry 8mm
Upper Stair/Hall / Powder GF	Concrete Timber Framed Above Plasterboard 150mm	0.00		No Insulation	Cork Tiles or Parquetry 8mm
Upper Stair/Hall	Suspended Concrete Slab 150mm	5.38	Enclosed	Bulk Insulation in Contact with Floor R4	Cork Tiles or Parquetry 8mm
Linen Upper / Powder GF	Concrete Timber Framed Above Plasterboard 150mm	8.63		No Insulation	Cork Tiles or Parquetry 8mm
Linen Upper	Suspended Concrete Slab 150mm	6.23	Enclosed	Bulk Insulation in Contact with Floor R4	Cork Tiles or Parquetry 8mm
Laundry / Gym	Concrete Timber Framed Above Plasterboard 150mm	8.13		No Insulation	Ceramic Tiles 8mm
Laundry / Change Room	Concrete Timber Framed Above Plasterboard 150mm	67.20		No Insulation	Ceramic Tiles 8mm
Laundry	Suspended Concrete Slab 150mm	9.72	Enclosed	Bulk Insulation in Contact with Floor R4	Ceramic Tiles 8mm
Bedroom 2	Concrete Slab on Ground 100mm	14.29	None	Bulk Insulation in Contact with Floor R2.3	Cork Tiles or Parquetry 8mm
Ensuite 2	Suspended Concrete Slab 150mm	9.65	Enclosed	Bulk Insulation in Contact with Floor R2.3	Ceramic Tiles 8mm



## Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Garage	Concrete, Plasterboard with Timber Frame	No insulation	
Garage	Concrete Timber Framed Above Plasterboard	Bulk Insulation R4	
Bath	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Bath	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 3	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Bedroom 3	Concrete Timber Framed Above Plasterboard	No Insulation	
Bedroom 4	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Bedroom 4	Concrete Timber Framed Above Plasterboard	No Insulation	
Linen	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Linen	Concrete Timber Framed Above Plasterboard	No Insulation	
Hall (GF)	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Hall (GF)	Concrete Timber Framed Above Plasterboard	No Insulation	
Hallway	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Hallway	Concrete Timber Framed Above Plasterboard	No Insulation	
Garden Room	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Garden Room	Concrete Timber Framed Above Plasterboard	No Insulation	
Powder GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Powder GF	Concrete Timber Framed Above Plasterboard	No Insulation	
Gym	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Gym	Concrete Timber Framed Above Plasterboard	No Insulation	
Change Room	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Change Room	Concrete Timber Framed Above Plasterboard	No Insulation	
Kitchen/Dining	Plasterboard on Timber	Bulk Insulation R6	
Living	Plasterboard on Timber	Bulk Insulation R4	
Winter Room	Plasterboard on Timber	Bulk Insulation R6	
Entry/Hall	Plasterboard on Timber	Bulk Insulation R6	
Lift GF	Concrete, Plasterboard with Timber Frame	Bulk Insulation R4	
Lift GF	Concrete Timber Framed Above Plasterboard	No Insulation	
Powder	Plasterboard on Timber	Bulk Insulation R6	
WIR Bed 2	Plasterboard on Timber	Bulk Insulation R6	

\* Refer to glossary.



Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap* [yes/no]
Lift FF	Plasterboard on Timber	Bulk Insulation R6	
Study	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 1	Plasterboard on Timber	Bulk Insulation R6	
Ensuite 1	Plasterboard on Timber	Bulk Insulation R6	
WIR	Plasterboard on Timber	Bulk Insulation R6	
Upper Stair/Hall	Plasterboard on Timber	Bulk Insulation R6	
Linen Upper	Plasterboard on Timber	Bulk Insulation R6	
Laundry	Plasterboard on Timber	Bulk Insulation R6	
Bedroom 2	Plasterboard on Timber	Bulk Insulation R6	
Ensuite 2	Plasterboard on Timber	Bulk Insulation R6	

### Ceiling penetrations\*

Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Bath	3	Downlights - LED	150	Sealed
Bath	1	Exhaust Fans	300	Sealed
Bedroom 3	4	Downlights - LED	150	Sealed
Bedroom 4	4	Downlights - LED	150	Sealed
Linen	1	Downlights - LED	150	Sealed
Hall (GF)	4	Downlights - LED	150	Sealed
Hallway	7	Downlights - LED	150	Sealed
Garden Room	13	Downlights - LED	150	Sealed
Powder GF	2	Downlights - LED	150	Sealed
Powder GF	1	Exhaust Fans	300	Sealed
Gym	5	Downlights - LED	150	Sealed
Change Room	2	Downlights - LED	150	Sealed
Change Room	1	Exhaust Fans	300	Sealed
Kitchen/Dining	11	Downlights - LED	150	Sealed
Kitchen/Dining	1	Exhaust Fans	300	Sealed
Kitchen/Dining	1	Chimneys	0	Sealed
Living	9	Downlights - LED	150	Sealed
Living	1	Chimneys	0	Sealed
Winter Room	7	Downlights - LED	150	Sealed

\* Refer to glossary.





Location	Quantity	Type	Diameter [mm]	Sealed/unsealed
Winter Room	1	Chimneys	0	Sealed
Entry/Hall	6	Downlights - LED	150	Sealed
Powder	1	Downlights - LED	150	Sealed
Powder	1	Exhaust Fans	300	Sealed
WIR Bed 2	1	Downlights - LED	150	Sealed
Study	4	Downlights - LED	150	Sealed
Bedroom 1	6	Downlights - LED	150	Sealed
Ensuite 1	4	Downlights - LED	150	Sealed
Ensuite 1	1	Exhaust Fans	300	Sealed
WIR	5	Downlights - LED	150	Sealed
Upper Stair/Hall	4	Downlights - LED	150	Sealed
Linen Upper	2	Downlights - LED	150	Sealed
Laundry	3	Downlights - LED	150	Sealed
Laundry	1	Exhaust Fans	300	Sealed
Bedroom 2	3	Downlights - LED	150	Sealed
Ensuite 2	2	Downlights - LED	150	Sealed
Ensuite 2	1	Exhaust Fans	300	Sealed

## Ceiling fans

Location	Quantity	Diameter [mm]
No Data Available		

## Roof type

Construction	Added insulation [R-value]	Solar absorptance	Roof shade[colour]
Waterproofing Membrane	No Added Insulation, No air Gap	0.496489411764706	Medium
Corrugated Iron Timber Frame	Bulk, Reflective Side Down, No Air Gap Above R1.3	0.5	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]
No Data Available				

## Appliance schedule



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

Note: A flat assumption of 5W/m<sup>2</sup> is used for lighting, therefore lighting is not included in the appliance schedule.

#### Cooling system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

#### Heating system

Appliance/ system type	Location	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available				

#### Hot water system

Appliance/ system type	Fuel type	Hot Water CER Zone	Minimum efficiency /STC	Zone 3 STC	Zone 3 Substitution tolerance ranges		Assessed daily load [litres]
					lower limit	upper limit	
No Data Available							

#### Pool/spa equipment

Appliance/ system type	Fuel type	Minimum efficiency/ performance	Recommended capacity
No Data Available			

### Onsite Renewable Energy Schedule

System Type	Orientation	System Size Or Generation Capacity
No Data Available		

### Battery Schedule

System Type	Size [Battery Storage Capacity]
No Data Available	



## 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 home's 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

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.

## Glossary

<b>AFRC</b>	Australian Fenestration Rating Council
<b>Annual energy load</b>	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
<b>Assessed floor area</b>	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.
<b>Ceiling penetrations</b>	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.
<b>COP</b>	Coefficient of performance
<b>Conditioned</b>	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.
<b>Custom windows</b>	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
<b>Default windows</b>	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
<b>EER</b>	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
<b>Energy use</b>	This is your home's rating without solar or batteries.
<b>Energy value</b>	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).
<b>Entrance door</b>	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.
<b>Exposure</b>	see exposure categories below.
<b>Exposure category – exposed</b>	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
<b>Exposure category – open</b>	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).
<b>Exposure category – protected</b>	terrain with numerous, closely spaced obstructions below 10m e.g. suburban housing, heavily vegetated bushland areas.
<b>Exposure category – suburban</b>	terrain with numerous, closely spaced obstructions over 10 m e.g. city and industrial areas.
<b>Horizontal shading feature</b>	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
<b>National Construction Code (NCC) Class</b>	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 <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> .
<b>Net zero home</b>	a home that achieves a net zero energy value*.
<b>Opening percentage</b>	the operability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
<b>Provisional value</b>	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 <a href="http://www.nathers.gov.au">www.nathers.gov.au</a>
<b>Recommended capacity</b>	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.
<b>Reflective wrap</b> (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
<b>Roof window</b>	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.
<b>Shading features</b>	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
<b>Skylight</b> (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.
<b>Solar heat gain coefficient (SHGC)</b>	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.
<b>STCs</b>	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 Regulator (CER)
<b>Thermal breaks</b>	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 or continuous thermal breaks such as polystyrene insulation sheathing or plastic strips
<b>U-value</b>	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
<b>Unconditioned</b>	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
<b>Vertical shading features</b>	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).
<b>Window shading device</b>	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.

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Single Dwelling

Certificate number: 1729647S

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Monday, 11 December 2023

To be valid, this certificate must be lodged within 3 months of the date of issue.



### Project summary

Project name	14 Lentara Road, Bayview
Street address	14 LENTARA Road BAYVIEW 2104
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP204996
Lot no.	49
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	4

### Project score

Water	✓ 42	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 80	Target 72
Materials	✓ -100	Target n/a

### Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 623 289 976

# Description of project

## Project address

Project name	14 Lentara Road, Bayview
Street address	14 LENTARA Road BAYVIEW 2104
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP204996
Lot no.	49
Section no.	-

## Project type

Project type	dwelling house (detached)
No. of bedrooms	4

## Site details

Site area (m <sup>2</sup> )	4089
Roof area (m <sup>2</sup> )	614
Conditioned floor area (m <sup>2</sup> )	513.0
Unconditioned floor area (m <sup>2</sup> )	43.0
Total area of garden and lawn (m <sup>2</sup> )	1500
Roof area of the existing dwelling (m <sup>2</sup> )	0

## Assessor details and thermal loads

Assessor number	HERA10033
Certificate number	0009112822-01
Climate zone	56
Area adjusted cooling load (MJ/ m <sup>2</sup> .year)	8
Area adjusted heating load (MJ/ m <sup>2</sup> .year)	19

## Project score

Water	✓ 42	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 80	Target 72
Materials	✓ -100	Target n/a



## Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 4 star (> 6 but <= 7.5 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
Rainwater tank			
The applicant must install a rainwater tank of at least 12000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 500 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> <li>all toilets in the development</li> <li>the cold water tap that supplies each clothes washer in the development</li> <li>at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)</li> </ul>		✓ ✓ ✓	✓ ✓ ✓
<b>Swimming Pool</b>			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must not have a volume greater than 60 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Simulation Method</b>			
Assessor details and thermal loads			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate and the "Construction" and "Glazing" tables below.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Construction			
The applicant must construct the floors, walls, roofs, ceilings and glazing of the dwelling in accordance with the specifications listed in the tables below.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m <sup>2</sup>	Insulation
floor - concrete slab on ground.	289	polystyrene
floor - suspended floor above enclosed subfloor, concrete - suspended; frame: no frame.	51	fibreglass batts or roll
floor - above habitable rooms or mezzanine, concrete - suspended; frame: no frame..	222	none
floor - suspended floor above garage, concrete - suspended; frame: no frame.	25	fibreglass batts or roll
garage floor - concrete slab on ground.	51	none
external wall: cavity brick; frame: timber - H2 treated softwood.	all external walls	fibreglass batts or roll
external garage wall: AAC veneer; frame: please select.	1	fibreglass batts or roll
external garage wall: AAC veneer; frame: please select.	1	none
internal wall: single skin masonry; frame: timber - H2 treated softwood.	18	fibreglass batts or roll
internal wall: single skin masonry; frame: no frame.	352	none
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, timber - H2 treated softwood.	556	ceiling: fibreglass batts or roll; roof: foil backed blanket.
ceiling and roof - raked ceiling / pitched or skillion roof, framed - metal roof, timber - H2 treated softwood.	58	ceiling: fibreglass batts or roll; roof: foil backed blanket.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazing			
The applicant must install windows, glazed doors and skylights as described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓

Frames	Maximum area - m2
aluminium	148
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	148
triple	0





Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Hot water</b>			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric instantaneous.	✓	✓	✓
<b>Cooling system</b>			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
<b>Heating system</b>			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
<b>Ventilation</b>			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
<b>Artificial lighting</b>			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
<b>Natural lighting</b>			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
<b>Swimming pool</b>			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): electric heat pump		✓	
The applicant must install the following pump for the swimming pool in the development, or a pump with a higher energy rating: dual speed with a performance of 5 stars.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
<b>Alternative energy</b>			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of:			
• one set of photovoltaic collectors with the capacity to generate at least 4 peak kilowatts of electricity, installed at an angle between 10 degrees and 25 degrees to the horizontal facing north	✓	✓	✓
• another set of photovoltaic collectors with the capacity to generate at least 2 peak kilowatts of electricity, installed at an angle between 10 degrees and 25 degrees to the horizontal facing west	✓	✓	✓
<b>Other</b>			
The applicant must install a gas cooktop & gas oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

## Legend

In these commitments, "applicant" means the person carrying out the development.

Commitments identified with a  in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).

Commitments identified with a  in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.