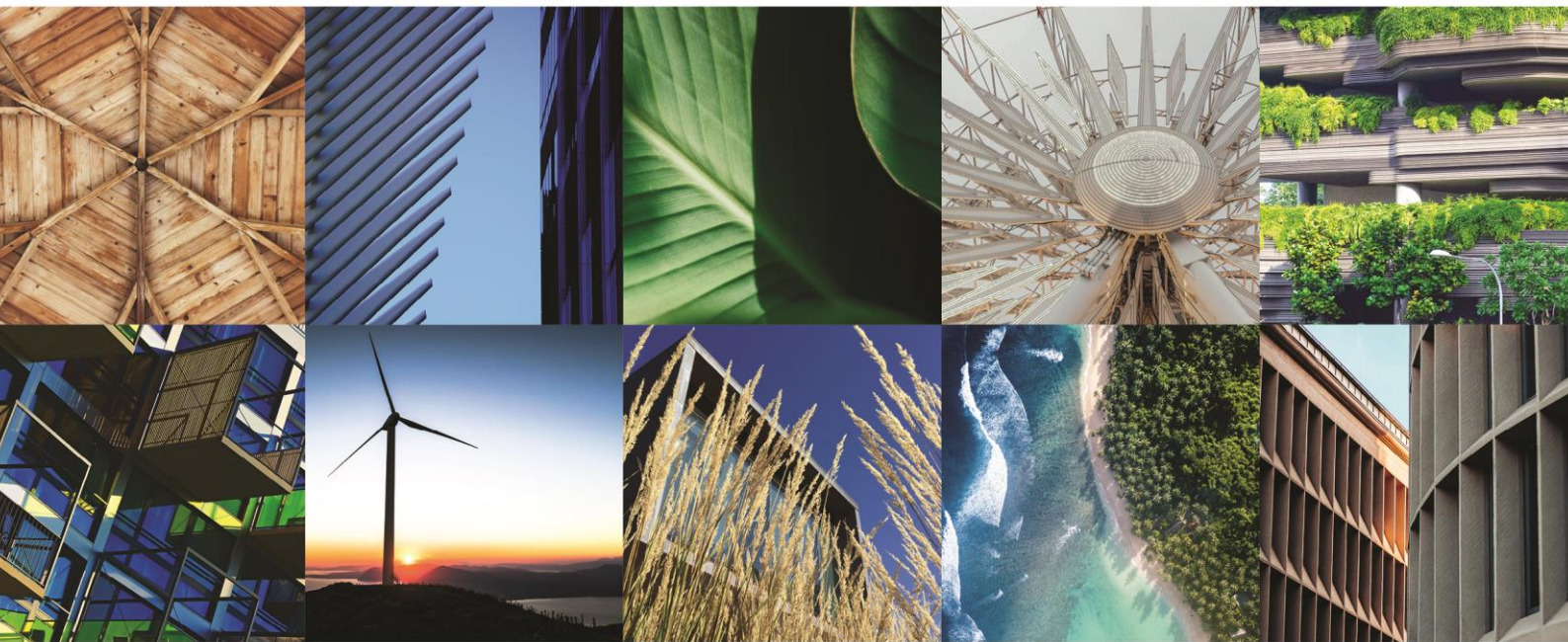




NatHERS and BASIX Assessment

14 Stewart St, Curl Curl 2096 NSW

Client	Simon Ingram c/o Andrew Collins Architecture		
Contact	Andrew Collins	andrew@acarchitecture.com.au	0403607339

Report Contact		Stefanie Simpson	stefanie@efficientliving.com.au		
Project History					
Issue	File Ref	Description	Author	Checked	Date
A	2501807	NatHERS Thermal Comfort and BASIX Assessment	RF/SS	SS	28/08/2025



Introduction

This report, prepared by Efficient Living on behalf of our client Simon Ingram accompanies the Development Application for a proposed Class 1 residential dwelling at 14 Stewart St, Curl Curl. NatHERS ratings for the development have been completed using HERO home energy rating software V4.1. NatHERS and BASIX Thermal Modelling protocol have been applied to ensure the project meets sustainability and energy efficiency standards.

If design or building specifications change contact Efficient Living for advice. Changes that do not align with the NatHERS stamped plans are required to be updated before construction.

Disclaimer:

Provisional modelling assumptions have been included where information and inclusions have not yet been determined. All assumptions are disclosed on the NatHERS certificate.

The NatHERS and BASIX certificates take precedence over this document.

NatHERS Inclusions Summary

Insulation Notes

- All insulations listed are product-only values
- All insulation and vapour membranes must be installed in accordance with Part 10.8 Condensation Management and NSW H6P1 (Part 13.2) Building Fabric, NSW H6P2 (Part 13.4) Building Sealing, NSW H6P3 (Part 13.7) Services.
- Class 3 vapour permeable membrane to external walls in NCC climate zones 4 & 5.

External Walls

100mm Lightweight foam cladding timber stud with R2.7 bulk insulation and plasterboard lining, total system R value Rt5.47

External Colour

Light (SA < 0.475)

Internal walls

Plasterboard on studs with R2.7 insulation to garage, walls to roof cavity, bathroom and laundry

Plasterboard on studs no insulation required elsewhere

External Floor

Concrete slab on ground, R1.3 underslab insulation

Internal Floor

Suspended concrete floor, R2.3 rigid board insulation where garage below

Floor coverings

Tiles to wet areas, bare to garage, timber elsewhere

Roof and Ceilings

Metal roof with R6.0 insulation and plasterboard lining

External Colour

Light (SA < 0.475)

Ceiling Penetrations

Sealed IC rated LED downlights, one every 5.0m²

Ceiling Fans

1200mm ceiling fans to Bedrooms and Living, 1500mm to Kitchen/Living

Glazing Doors and Windows

Hinged glazed door

U-value: 4.3 (equal to or lower than) SHGC: 0.47 (±5%)

Tilt and turn

U-value: 2.43 (equal to or lower than) SHGC: 0.43 (±5%)

Sliding

U-value: 2.50 (equal to or lower than) SHGC: 0.50 (±5%)

Fixed

U-value: 2.49 (equal to or lower than) SHGC: 0.42 (±5%)

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

Frame colour:

Light (SA < 0.475)

Skylights

Fixed - U value 2.58 SHGC 0.24

BASIX Inclusions Summary

Water Commitments

Fixtures

Showerheads 4 stars (medium flow >6.0 and ≤ 7.5 litres/min)

Toilet flushing system 4 stars

Kitchen taps 5 stars rating

Bathroom taps 5 stars rating

Alternative water – if required

180m² of harvested roof area connected to rainwater tank, minimum capacity, 2,000L

Rain tank connected to at least one outdoor tap

BASIX Energy Commitments

Hot water system

Electric heat pump

HVAC Heating and cooling

Cooling Single phase air-conditioning to living areas and bedrooms: EER 3.0-3.5

Heating Single phase air-conditioning to living areas and bedrooms: EER 3.0-3.5

Ventilation

Bathrooms – individual fan, externally ducted connected to light, timer off

Kitchen – individual fan, externally ducted manual on/off switch

Laundry room – individual fan, externally ducted manual on/off switch

Other

Induction cooktop, electric oven

Alternative energy – if required

4kW Solar Photovoltaic system

Positioned on Western roof at 2-degree pitch

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-Y6YDX5-01

Thermal performance
star rating

Generated on 22 Aug 2025 using Hero 4.1 (Chenath v3.23)

Property

Address 14 Stewart Avenue, Curl Curl, NSW,
2096
Lot/DP 7/DP6260
NCC Class* 1a
Floor/all Floors 1 of 2 floors
Type New

Plans

Main Plan DA11 - P1
Prepared by Andrew Collins Architecture

Construction and environment

Assessed floor area (m²)*	Exposure Type
Conditioned* 295.1	Suburban
Unconditioned* 15.3	NatHERS climate zone
Total 353.2	56 - Mascot AMO
Garage 42.8	



Accredited assessor

Name Stefanie Simpson
Business name Efficient Living
Email stefanie@efficientliving.com.au
Phone +61 299706181
Accreditation No. 10035
Assessor Accrediting Organisation HERA
Declaration of interest No Conflict of Interest

NCC Requirements

BCA provisions Volume 2
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.

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 (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	15.4	14.1
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-Y6YDX5-01>.

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



* Refer to glossary.



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 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:

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.



Predicted onsite renewable energy impact

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 who should check each item.

It is not mandatory to complete this checklist.

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

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 'Window and glazed door schedule' and 'Roof window schedule' 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 'External wall type table' 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 'Floor type' 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 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

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?

☐☐☐☐☐

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?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
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?		☐	☐	☐	☐
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			☐	☐	☐
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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 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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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 NatHERS assessment)

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?	☐	☐			
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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

Additional Notes / Provisional inclusions:

Page 2 - Whole of home and Appliance checklist on this NatHERS Certificate is not applicable in NSW as energy is covered by BASIX.

- Concrete slab on ground
- Light colour modeled to roof, external walls, windows frames and floor finishes
- Downlights ceiling penetration diameter 150mm where IC downlights are not nominated
- Exhaust fans ceiling penetration 200mm diameter
- Ceiling insulation performance has been modelled at a reduced level of R3.0 to the roof perimeter to account for insulation compression. No change in product required.
- 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
- Where the nominated window manufactures product is not in NatHERS, proxy windows maybe selected to closely match the manufacturer's U-value and SHGC

*Provisional values represent average practice or worst-case scenario, and the rating may be adversely affected.

Room schedule

Room	Zone Type	Area (m ²)
K/L/D	Kitchen/Living	79.47
L'DRY	Unconditioned	5.00
ENTRY	Day Time	22.74
STAIRS	Day Time	16.61
LIVING ROOM	Living	17.07
GUEST BEDROOM	Bedroom	10.75
ENSUITE	Night Time	4.74
POWDER RM	Day Time	3.52
GARAGE	Garage	42.82
BED 1	Bedroom	19.20
ROBE	Night Time	11.90
ENSUITE	Night Time	9.98
ROOF ACCESS	Day Time	4.85
HALLWAY	Day Time	32.50
STORE	Day Time	5.36
STUDY ROOM	Day Time	7.56

Room schedule

Room	Zone Type	Area (m²)
BED 2	Bedroom	14.98
BED 3	Bedroom	14.58
BATHROOM 1	Unconditioned	5.14
BATHROOM 2	Unconditioned	5.12
BED 4	Bedroom	15.06
BED 5	Bedroom	15.14

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
ALM-003-03 A	Aluminium A DG Air Fill High Solar Gain low-E -Clear	4.3	0.47	0.45	0.49
HASDD-025-050	Housing Aluminium Sliding Door Double Glazed	2.5	0.50	0.47	0.52
HBFWD-025-041	Housing Thermally Broken Aluminium Fixed Window Double Glazed	2.5	0.42	0.40	0.44
HPTWD-025-041	Housing uPVC Tilt & Turn Window Double Glazed	2.4	0.43	0.41	0.45

Custom* windows

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

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATHROOM 1	HPTWD-025-041	W1-14	1850	700	Tilt & Turn	90	W	None
BATHROOM 2	HPTWD-025-041	W1-03	1850	700	Tilt & Turn	90	E	None
BED 1	HASDD-025-050	W1-09	2550	3000	Sliding Door	45	N	None
BED 2	HPTWD-025-041	W1-13	1850	830	Tilt & Turn	10	N	None
BED 2	HPTWD-025-041	W1-12	1850	700	Tilt & Turn	10	W	None
BED 3	HPTWD-025-041	W1-05	1850	700	Tilt & Turn	10	N	None

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BED 3	HPTWD-025-041	W1-04	1850	800	Tilt & Turn	10	N	None
BED 4	HASDD-025-050	W1-01	2550	1775	Sliding Door	45	S	None
BED 5	HASDD-025-050	W1-02	900	1775	Sliding Door	45	S	None
ENSUITE	HPTWD-025-041	W1-01	1850	700	Tilt & Turn	90	W	None
ENTRY	HBFW-025-041	WG13	2900	1200	Fixed	0	W	None
ENTRY	HPTWD-025-041	WG12	2300	700	Tilt & Turn	90	W	None
ENTRY	HBFW-025-041	WG14	2900	1180	Fixed	0	S	None
ENTRY	ALM-003-03 A	WG14	2900	1000	Hinged Door	90	S	None
GARAGE	HBFW-025-041	WG02	2900	700	Fixed	0	E	None
GARAGE	HBFW-025-041	WG01	2900	700	Fixed	0	E	None
GUEST BEDROOM	HPTWD-025-041	WG11	2300	700	Tilt & Turn	90	W	None
GUEST BEDROOM	HBFW-025-041	WG11	2300	1400	Fixed	0	W	None
HALLWAY	HBFW-025-041	W1-06	2550	3990	Fixed	0	E	None
K/L/D	HASDD-025-050	WG08	2900	8360	Sliding Door	70	N	None
K/L/D	HBFW-025-041	WG07	2900	3360	Fixed	0	E	None
K/L/D	HASDD-025-050	WG06	2900	3840	Sliding Door	45	S	None
L'DRY	ALM-003-03 A	WG09	2900	1020	Hinged Door	90	W	None
LIVING ROOM	HPTWD-025-041	WG04	2900	818	Tilt & Turn	90	N	None
LIVING ROOM	HBFW-025-041	WG04	2900	1700	Fixed	0	N	None
LIVING ROOM	HBFW-025-041	WG03	2900	700	Fixed	0	E	None
ROBE	HPTWD-025-041	W1-10	2550	890	Tilt & Turn	10	N	None
STAIRS	HBFW-025-041	WG10	2900	4010	Fixed	0	W	None
STAIRS	HASDD-025-050	WG05	2900	4000	Sliding Door	45	E	None
STUDY ROOM	HPTWD-025-041	W1-08	1850	900	Tilt & Turn	10	E	None
STUDY ROOM	HBFW-025-041	W1-07	2550	900	Fixed	0	S	None

* Refer to glossary.



Roof window type and performance value

Default* roof windows

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

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
VEL-011-01 W	FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
BED 1	VEL-011-01 W	SKYRW 04	0	1527	1005	W	None	None
BED 1	VEL-011-01 W	SKYRW 05	0	1527	1005	W	None	None
BED 1	VEL-011-01 W	SKYRW 06	0	1527	1005	W	None	None
HALLWAY	VEL-011-01 W	SKYRW 01	0	1800.00	1800.00	W	None	None
HALLWAY	VEL-011-01 W	SKYRW 02	0	1160	625	W	None	None
HALLWAY	VEL-011-01 W	SKYRW 03	0	1160	626	W	None	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
GARAGE	2700	5108	90	S

External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
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External wall type

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
100mm L/W Foam Cladding	Lightweight foam cladding timber stud	0.30	Light	2.70	No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATHROOM 1	100mm L/W Foam Cladding	2550	1726	W		Yes
BATHROOM 2	100mm L/W Foam Cladding	2550	1726	E		Yes
BED 1	100mm L/W Foam Cladding	2550	3267	N	579	Yes
BED 1	100mm L/W Foam Cladding	2550	601	W	2916	Yes
BED 1	100mm L/W Foam Cladding	2550	1231	N		Yes
BED 1	100mm L/W Foam Cladding	2550	4511	E		Yes
BED 2	100mm L/W Foam Cladding	2550	1055	N		Yes
BED 2	100mm L/W Foam Cladding	2550	2927	W		Yes
BED 2	100mm L/W Foam Cladding	2550	1746	WSW		Yes
BED 2	100mm L/W Foam Cladding	2550	113	W		Yes
BED 3	100mm L/W Foam Cladding	2550	3177	N		Yes
BED 3	100mm L/W Foam Cladding	2550	2821	E		Yes
BED 3	100mm L/W Foam Cladding	2550	1058	N		Yes
BED 3	100mm L/W Foam Cladding	2550	89	E		Yes
BED 3	100mm L/W Foam Cladding	2550	1767	SE		Yes
BED 4	100mm L/W Foam Cladding	2550	4481	W		Yes
BED 4	100mm L/W Foam Cladding	2550	324	S		Yes
BED 4	100mm L/W Foam Cladding	2550	572	W	1766	Yes
BED 4	100mm L/W Foam Cladding	2550	2286	S	616	Yes
BED 4	100mm L/W Foam Cladding	2550	572	E	1766	Yes
BED 4	100mm L/W Foam Cladding	2550	1222	S		Yes
BED 5	100mm L/W Foam Cladding	2550	4481	E		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
BED 5	100mm L/W Foam Cladding	2550	1231	S		Yes
BED 5	100mm L/W Foam Cladding	2550	572	W	1716	Yes
BED 5	100mm L/W Foam Cladding	2550	2233	S	616	Yes
BED 5	100mm L/W Foam Cladding	2550	572	E	1716	Yes
BED 5	100mm L/W Foam Cladding	2550	388	S		Yes
ENSUITE	100mm L/W Foam Cladding	2900	2104	W		Yes
ENSUITE	100mm L/W Foam Cladding	2550	3096	W		Yes
ENTRY	100mm L/W Foam Cladding	2900	1431	W	1716	Yes
ENTRY	100mm L/W Foam Cladding	2900	1759	S	3016	Yes
ENTRY	100mm L/W Foam Cladding	2900	2601	W		Yes
ENTRY	100mm L/W Foam Cladding	2900	2299	S	1585	Yes
ENTRY	100mm L/W Foam Cladding	2900	565	N		Yes
GARAGE	100mm L/W Foam Cladding	2900	1634	W	4128	Yes
GARAGE	100mm L/W Foam Cladding	2900	7458	E		Yes
GARAGE	100mm L/W Foam Cladding	2900	5741	S		Yes
GUEST BEDROOM	100mm L/W Foam Cladding	2900	3523	W		Yes
GUEST BEDROOM	100mm L/W Foam Cladding	2900	1055	N		Yes
HALLWAY	100mm L/W Foam Cladding	2550	4018	W		Yes
HALLWAY	100mm L/W Foam Cladding	2550	4472	E		Yes
K/L/D	100mm L/W Foam Cladding	2900	7027	W		Yes
K/L/D	100mm L/W Foam Cladding	2900	9267	N	3966	Yes
K/L/D	100mm L/W Foam Cladding	2900	775	W	9181	Yes
K/L/D	100mm L/W Foam Cladding	2900	546	N	3191	Yes
K/L/D	100mm L/W Foam Cladding	2900	6001	E		Yes
K/L/D	100mm L/W Foam Cladding	2900	743	S		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
K/L/D	100mm L/W Foam Cladding	2900	3628	E		Yes
K/L/D	100mm L/W Foam Cladding	2900	4067	S		Yes
L'DRY	100mm L/W Foam Cladding	2900	1836	W		Yes
L'DRY	100mm L/W Foam Cladding	2900	1055	S		Yes
LIVING ROOM	100mm L/W Foam Cladding	2900	4277	N		Yes
LIVING ROOM	100mm L/W Foam Cladding	2900	3992	E		Yes
ROBE	100mm L/W Foam Cladding	2550	4088	W		Yes
ROBE	100mm L/W Foam Cladding	2550	383	N		Yes
ROBE	100mm L/W Foam Cladding	2550	601	E	866	Yes
ROBE	100mm L/W Foam Cladding	2550	1387	N	616	Yes
ROBE	100mm L/W Foam Cladding	2550	601	W	866	Yes
ROBE	100mm L/W Foam Cladding	2550	1346	N		Yes
ROBE	100mm L/W Foam Cladding	2550	601	E	2916	Yes
ROOF ACCESS	100mm L/W Foam Cladding	2550	1505	W		Yes
STAIRS	100mm L/W Foam Cladding	2900	4096	W		Yes
STAIRS	100mm L/W Foam Cladding	2900	4299	E		Yes
STORE	100mm L/W Foam Cladding	2550	1687	E		Yes
STUDY ROOM	100mm L/W Foam Cladding	2550	2379	E		Yes
STUDY ROOM	100mm L/W Foam Cladding	2550	3177	S		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	154.7	0.00
INT-PB	Internal Plasterboard Stud Wall	82.6	2.70

Floor *type*

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
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Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATHROOM 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	5.2	N/A	0.00	Tile (8mm)
BATHROOM 2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	5.1	N/A	2.30	Tile (8mm)
BED 1	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	19.2	N/A	0.00	Timber (12mm)
BED 2	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	15.0	N/A	0.00	Timber (12mm)
BED 3	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	13.9	N/A	0.00	Timber (12mm)
BED 3	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	0.7	N/A	2.30	Timber (12mm)
BED 4	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	10.4	N/A	0.00	Timber (12mm)
BED 4	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	2.2	N/A	2.30	Timber (12mm)
BED 4	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	2.5	N/A	2.30	Timber (12mm)
BED 5	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	15.1	N/A	2.30	Timber (12mm)
ENSUITE	CSOG-150: Concrete Slab on Ground (150mm)	4.7	N/A	1.30	Tile (8mm)
ENSUITE	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	9.9	N/A	0.00	Tile (8mm)
ENTRY	CSOG-150: Concrete Slab on Ground (150mm)	22.7	N/A	1.30	Timber (12mm)
GARAGE	CSOG-150: Concrete Slab on Ground (150mm)	42.8	N/A	1.30	Exposed
GUEST BEDROOM	CSOG-150: Concrete Slab on Ground (150mm)	10.7	N/A	1.30	Timber (12mm)
HALLWAY	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	30.2	N/A	0.00	Timber (12mm)
HALLWAY	SUSP-CONC-150-LINED: Suspended Concrete Slab Floor (150mm) - Lined Below	2.3	N/A	2.30	Timber (12mm)
K/L/D	CSOG-150: Concrete Slab on Ground (150mm)	79.5	N/A	1.30	Timber (12mm)
L'DRY	CSOG-150: Concrete Slab on Ground (150mm)	5.0	N/A	1.30	Tile (8mm)
LIVING ROOM	CSOG-150: Concrete Slab on Ground (150mm)	17.1	N/A	1.30	Timber (12mm)
POWDER RM	CSOG-150: Concrete Slab on Ground (150mm)	3.5	N/A	1.30	Tile (8mm)
ROBE	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	11.9	N/A	0.00	Timber (12mm)
ROOF ACCESS	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	4.8	N/A	0.00	Timber (12mm)
STAIRS	CSOG-150: Concrete Slab on Ground (150mm)	16.6	N/A	1.30	Timber (12mm)

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
STORE	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	5.4	N/A	0.00	Timber (12mm)
STUDY ROOM	SUSP-CONC-150: Suspended Concrete Slab Floor (150mm)	7.6	N/A	0.00	Timber (12mm)

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATHROOM 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BATHROOM 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BED 1	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BED 2	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BED 3	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BED 4	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
BED 5	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENSUITE	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ENTRY	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
GARAGE	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	0.00	No
GUEST BEDROOM	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
HALLWAY	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
K/L/D	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
L'DRY	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
LIVING ROOM	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ROBE	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
ROOF ACCESS	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
STORE	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No
STUDY ROOM	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	6.00	No

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATHROOM 1	1	Downlight	250	Sealed
BATHROOM 1	1	Exhaust Fan	300	Sealed
BATHROOM 2	1	Downlight	250	Sealed
BATHROOM 2	1	Exhaust Fan	300	Sealed
BED 1	4	Downlight	250	Sealed
BED 2	3	Downlight	250	Sealed
BED 3	3	Downlight	250	Sealed
BED 4	3	Downlight	250	Sealed
BED 5	3	Downlight	250	Sealed
ENSUITE	3	Downlight	250	Sealed
ENSUITE	2	Exhaust Fan	300	Sealed
ENTRY	5	Downlight	250	Sealed
GUEST BEDROOM	2	Downlight	250	Sealed
HALLWAY	6	Downlight	250	Sealed
K/L/D	14	Downlight	250	Sealed
K/L/D	1	Exhaust Fan	300	Sealed
L'DRY	1	Downlight	250	Sealed
L'DRY	1	Exhaust Fan	300	Sealed
LIVING ROOM	3	Downlight	250	Sealed
POWDER RM	1	Downlight	250	Sealed
POWDER RM	1	Exhaust Fan	300	Sealed
ROBE	2	Downlight	250	Sealed
ROOF ACCESS	1	Downlight	250	Sealed
STAIRS	2	Downlight	250	Sealed

* Refer to glossary.

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
STORE	1	Downlight	250	Sealed
STUDY ROOM	1	Downlight	250	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
BED 1	1	1200
BED 2	1	1200
BED 3	1	1200
BED 4	1	1200
BED 5	1	1200
GUEST BEDROOM	1	1200
K/L/D	1	1500
LIVING ROOM	1	1200

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	0.00	0.30	Light

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

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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* Refer to glossary.



Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
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No Whole of Home Data

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
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No Whole of Home Data

Onsite Renewable Energy *schedule*

Type	Orientation	Generation Capacity [kW]
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No Whole of Home Data

Battery *schedule*

Type	Storage Capacity [kWh]
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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 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

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 home's 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.

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Single Dwelling

Certificate number: 1809712S

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.planningportal.nsw.gov.au/definitions

Secretary

Date of issue: Friday, 22 August 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate HR-Y6YBX5-01.

Project summary

Project name	14 Stewart Avenue, Curl Curl NSW 2096
Street address	14 STEWART Avenue CURL CURL 2096
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP6260
Lot no.	7
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	6

Project score

Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 96	Target 72
Materials	✓ -98	Target n/a

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable):

Description of project

Project address	
Project name	14 Stewart Avenue, Curl Curl NSW 2096
Street address	14 STEWART Avenue CURL CURL 2096
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan DP6260
Lot no.	7
Section no.	-
Project type	
Project type	dwelling house (detached)
No. of bedrooms	6
Site details	
Site area (m ²)	602
Roof area (m ²)	206
Conditioned floor area (m ²)	295.1
Unconditioned floor area (m ²)	15.3
Total area of garden and lawn (m ²)	130
Roof area of the existing dwelling (m ²)	0

Assessor details and thermal loads		
NatHERS assessor number	HERA10035	
NatHERS certificate number	HR-Y6YBX5-01	
Climate zone	56	
Area adjusted cooling load (MJ/ m².year)	14	
Area adjusted heating load (MJ/ m².year)	15	
Project score		
Water	40	Target 40
Thermal Performance	Pass	Target Pass
Energy	96	Target 72
Materials	-98	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
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 90 square metres of the site.	✓	✓	
Fixtures			
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 5 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 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 180 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: 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.)		✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
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 ²	Insulation
floor - concrete slab on ground, conventional slab.	202.7	not specified
floor - suspended floor above open subfloor, concrete - suspended; frame: no frame.	2.5	not specified
floor - above habitable rooms or mezzanine, concrete - suspended; frame: no frame..	131.3	none
floor - suspended floor above garage, concrete - suspended; frame: no frame.	27.7	not specified
garage floor - concrete slab on ground.	42.8	not specified
external wall: framed (fibre cement sheet or boards); frame: timber - untreated softwood.	all external walls	not specified
external garage wall: framed (fibre cement sheet or boards); frame: no frame.	44.5	not specified
internal wall: plasterboard; frame: timber - untreated softwood.	199.4	none
internal wall: plasterboard; frame: timber - untreated softwood.	58.7	not specified
ceiling and roof - flat ceiling / flat roof, framed - metal roof, timber - H2 treated softwood.	205.6	ceiling: not specified; roof: none.

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	143.9
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	143.9
triple	0

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric heat pump.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; 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: 1-phase airconditioning - ducted; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; 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: 1-phase airconditioning - ducted; Energy rating: EER 3.0 - 3.5		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: please select		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Alternative energy			
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: • photovoltaic collectors with the capacity to generate at least 4 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing west	✓	✓	✓
Other			
The applicant must install an induction cooktop & electric oven in the kitchen of the dwelling.		✓	

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.