

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 710786S_06

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

This certificate is a revision of certificate number 710786S lodged with the consent authority or certifier on 03 June 2016 with application DA2016/0545.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Monday, 22 February 2021

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



Planning,
Industry &
Environment

Project summary

Project name	Carroll_06
Street address	93 Headland Road North Curl Curl 2099
Local Government Area	Warringah Council
Plan type and plan number	deposited 10571
Lot no.	4
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

Project score

Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 43	Target 40

Certificate Prepared by

Name / Company Name: GARTNER TROVATO ARCHITECTS

ABN (if applicable): 51673668317

Description of project

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Site details

Site area (m ²)	550
Roof area (m ²)	175
Conditioned floor area (m2)	225.0
Unconditioned floor area (m2)	19.2
Total area of garden and lawn (m2)	200

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m ² .year)	n/a
Area adjusted heating load (MJ/m ² .year)	n/a

Other

none	n/a
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Project score

Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 43	Target 40

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 10 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 6 but <= 7.5 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 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.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 5500 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 50 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 configure the rainwater tank so that overflow is diverted to a stormwater tank.		✓	✓
The applicant must connect the rainwater tank to: - all toilets in the development - the cold water tap that supplies each clothes washer in the development - a tap that is located within 10 metres of the swimming pool in the development		✓ ✓ ✓	✓ ✓ ✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Stormwater tank			
The applicant must install a stormwater tank with a capacity of at least 6000 litres on the site. This stormwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the stormwater tank to collect overflow from the rainwater tank.		✓	✓
The applicant must configure the stormwater tank to collect runoff from: • at least 25 square metres of impervious areas • at least 25 square metres of garden and lawn		✓ ✓	✓ ✓
The applicant must connect the stormwater tank to: • a sub-surface or non-aerosol irrigation system, or if the stormwater has been appropriately treated in accordance with applicable regulatory requirements, to at least one outdoor tap in the development (Note: NSWHealth does not recommend that stormwater be used to irrigate edible plants which are consumed raw.)		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 44.8 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Floor, walls and ceiling/roof			
The applicant must construct the floor(s), walls, and ceiling/roof of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground	nil	
floor - suspended floor above garage, concrete	nil	
external wall - external insulated façade system (EIFS) (façade panel:50mm)	0.17 (or 1.90 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
external wall - concrete block/plasterboard	1.38 (or 1.90 including construction)	
internal wall shared with garage - single skin masonry	nil	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 0.74 (up), roof: foil backed blanket (100mm)	framed; medium (solar absorptance 0.475-0.70)
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 0.58 (up), roof: foil backed blanket (100mm)	framed; medium (solar absorptance 0.475-0.70)

Note	Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
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Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed doors and skylights			
The applicant must install the windows, glazed doors and shading devices described in the table below, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) and up to 2 windows/glazed doors (<0.7 square metres) which are not listed in the table.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:	✓	✓	✓
Except where the glass is 'single clear' or 'single toned', each window and glazed door must have a U-value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) +/-10% of that listed. Total system U-values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.			✓
The leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 millimetres above the head of the window or glazed door, except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table.	✓	✓	✓
Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.		✓	✓
Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.		✓	✓
Unless they have adjustable shading, pergolas must have fixed battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.		✓	✓
Overshadowing buildings/vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column.	✓	✓	✓
The applicant must install the skylights described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓
The following requirements must also be satisfied in relation to each skylight:		✓	✓
External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed		✓	✓

Skylight no.	Maximum area (square metres)	Type	Shading
S1	10.00	timber, low-E/double/argon fill	adjustable awning or blind

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W01, W02	N	7.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	none	not overshadowed
W03, W04, W05, W06	W	8.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	none	>4m high, 2-5 m away
W07	S	8.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/ pergola/balcony 1,500-2,000 mm	not overshadowed
W4	S	8.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/ pergola/balcony 1,500-2,000 mm	not overshadowed
W09, W10, W11, W12, W13, W14	E	8.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	2-4m high, 2-5 m away
W15	S	10.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/ pergola/balcony 1,500-2,000 mm	not overshadowed
W16, W18	N	6.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	eave/verandah/ pergola/balcony 450 mm	not overshadowed
W17, W19, W20, W21	W	4.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	not overshadowed
W22	S	5.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	not overshadowed
W23	S	9.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	not overshadowed
W24	E	7.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	vertical external louvre/blind (fixed)	not overshadowed
W25	N	2.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	none	not overshadowed
W27	S	2.00	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	not overshadowed
W26, W28, W29	N	7.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	none	not overshadowed
W30, W31, W32	N	14.00	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	vertical external louvre/blind (adjustable)	not overshadowed

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: gas instantaneous with a performance of 6 stars.	✓	✓	✓
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; Energy rating: 4 Star (old label)		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: 4 Star (old label)		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
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; Energy rating: 4 Star (old label)		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: 4 Star (old label)		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
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: manual switch on/off		✓	✓
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 the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
at least 4 of the bedrooms / study; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
- at least 2 of the living / dining rooms; dedicated - the kitchen; dedicated - all bathrooms/toilets; dedicated - the laundry; dedicated - all hallways; dedicated		    	    
Natural lighting			
The applicant must install a window and/or skylight in the kitchen of the dwelling for natural lighting.			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.			
Swimming pool			
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): solar only			
The applicant must install a timer for the swimming pool pump in the development.			
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.			
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.			
The applicant must install a fixed outdoor clothes drying line as part of the development.			
The applicant must install a fixed indoor or sheltered 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.