

BASIX[®]Certificate

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

Alterations and Additions

Certificate number: A439165

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 Alterations and Additions Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Thursday, 25, November 2021

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



Planning,
Industry &
Environment

Description of project

Project address	
Project name	44 Kooloora Ave Freshwater
Street address	44 Kooloora Avenue Freshwater 2096
Local Government Area	Northern Beaches Council
Plan type and number	Deposited Plan 171852
Lot number	1
Section number	
Project type	
Dwelling type	Separate dwelling house
Type of alteration and addition	My renovation work is valued at \$50,000 or more, and does not include a pool (and/or spa).

Certificate Prepared by (please complete before submitting to Council or PCA)

Name / Company Name: Flavio Antonio Gerbolini Rivero

ABN (if applicable): N/A

Fixtures and systems	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: solar (electric-boosted) system that is eligible to create Renewable Energy Certificates under the (Commonwealth) Renewable Energy (Electricity) Regulations 2001 (incorporating Amendment Regulations 2005 (No. 2)).	✓	✓	✓
Lighting			
The applicant must ensure a minimum of 40% of new or altered light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Fixtures			
The applicant must ensure new or altered showerheads have a flow rate no greater than 9 litres per minute or a 3 star water rating.		✓	✓
The applicant must ensure new or altered toilets have a flow rate no greater than 4 litres per average flush or a minimum 3 star water rating.		✓	✓
The applicant must ensure new or altered taps have a flow rate no greater than 9 litres per minute or minimum 3 star water rating.		✓	

Construction			Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Insulation requirements					
The applicant must construct the new or altered construction (floor(s), walls, and ceilings/roofs) in accordance with the specifications listed in the table below, except that a) additional insulation is not required where the area of new construction is less than 2m ² , b) insulation specified is not required for parts of altered construction where insulation already exists.			✓	✓	✓
Construction	Additional insulation required (R-value)	Other specifications			
concrete slab on ground floor.	nil				
suspended floor above garage: framed (R0.7).	nil				
floor above existing dwelling or building.	nil				
external wall: framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)				
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external wall: framed (weatherboard, fibro, metal clad)	R1.30 (or R1.70 including construction)				
internal wall shared with garage: plasterboard (R0.36)	nil				
flat ceiling, flat roof: framed	ceiling: R1.82 (up), roof: foil/sarking	light (solar absorptance < 0.475)			

Glazing requirements						Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Windows and glazed doors								
<p>The applicant must install the windows, glazed doors and shading devices, in accordance with the specifications listed in the table below. Relevant overshadowing specifications must be satisfied for each window and glazed door.</p> <p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <p>Each window or glazed door with improved frames, or pyrolytic low-e glass, or clear/air gap/clear glazing, or toned/air gap/clear glazing must have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below. Total system U-values and SHGCs must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. The description is provided for information only. Alternative systems with complying U-value and SHGC may be substituted.</p> <p>For projections described in millimetres, the leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 mm above the head of the window or glazed door and no more than 2400 mm above the sill.</p> <p>For projections described as a ratio, the ratio of the projection from the wall to the height above the window or glazed door sill must be at least that shown in the table below.</p> <p>Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.</p> <p>Pergolas with fixed battens must have 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.</p> <p>Pergolas with adjustable shading may have adjustable blades or removable shade cloth (not less than 80% shading ratio). Adjustable blades must overlap in plan view.</p> <p>Overshadowing buildings or 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 in the table below.</p>						✓	✓	✓
Windows and glazed doors glazing requirements								
Window / door no.	Orientation	Area of glass inc. frame (m ²)	Overshadowing		Shading device	Frame and glass type		
			Height (m)	Distance (m)				
W1	SW	15.81	0	0	pergola (adjustable shade) >=900 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)	✓	✓
W2	SW	2.23	0	0	projection/height above sill ratio	timber or uPVC, single Lo-Tsol low-e,	✓	✓

Glazing requirements						Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type		
			Height (m)	Distance (m)				
					>=0.23	(U-value: 3.7, SHGC: 0.36)		
W3	SE	2.41	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W4	SE	2.41	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W5	SE	1.41	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W6	SE	1.41	2000	1.9	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W7	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W8	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W9	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W10	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W11	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W12	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W13	SE	1.4	2000	1.7	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W14	SE	0.84	2000	1.7	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W15	SE	1.4	2000	1.7	eave/verandah/ pergola/balcony	timber or uPVC, single Lo-Tsol low-e,		

Glazing requirements							Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Window / door no.	Orientation	Area of glass inc. frame (m2)	Overshadowing		Shading device	Frame and glass type			
			Height (m)	Distance (m)					
					>=450 mm	(U-value: 3.7, SHGC: 0.36)			
W16	NE	1.41	0	0	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W17	NE	5.44	5.88	5.55	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W18	NW	11.6	0	0	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W19	NW	13.43	0	0	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W20	NE	5.11	5.88	5.55	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W21	SE	4.5	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W22	SE	0.71	0	0	projection/height above sill ratio >=0.29	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W23	SE	1.6	5000	1.7	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W24	SE	1.6	5000	1.7	eave/verandah/ pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W25	SE	0.71	5000	1.7	eave/verandah/ pergola/balcony >=750 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W26	SE	0.71	5000	1.7	eave/verandah/ pergola/balcony >=750 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W27	SE	1.6	5000	1.7	eave/verandah/ pergola/balcony >=750 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)			
W28	NE	1.35	0	0	eave/verandah/ pergola/balcony	timber or uPVC, single Lo-Tsol low-e,			

Glazing requirements						Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Window / door no.	Orientation	Area of glass inc. frame (m ²)	Overshadowing		Shading device	Frame and glass type		
			Height (m)	Distance (m)				
					>=450 mm	(U-value: 3.7, SHGC: 0.36)		
W29	NE	1.35	0	0	eave/verandah/pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W30	NE	8.31	0	0	eave/verandah/pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W31	SW	4.61	0	0	none	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W32	NW	14.58	0	0	eave/verandah/pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
W33	NE	4.92	2.98	5.55	none	timber or uPVC, double Lo-Tsol/air gap/clear, (U-value: 2.3, SHGC: 0.19)		
W34	NW	3.33	5.5	1.66	eave/verandah/pergola/balcony >=450 mm	timber or uPVC, single Lo-Tsol low-e, (U-value: 3.7, SHGC: 0.36)		
Skylights								
The applicant must install the skylights in accordance with the specifications listed in the table below.							✓	✓
The following requirements must also be satisfied in relation to each skylight:							✓	✓
Each skylight may either match the description, or, have a U-value and a Solar Heat Gain Coefficient (SHGC) no greater than that listed in the table below.							✓	✓
Skylights glazing requirements								
Skylight number	Area of glazing inc. frame (m ²)	Shading device		Frame and glass type				
S1 (Kitec)	2.14	no shading		timber, low-E internal/argon fill/clear external, (or U-value: 2.5, SHGC: 0.456)				

Glazing requirements				Show on DA Plans	Show on CC/CDC Plans & specs	Certifier Check
Skylight number	Area of glazing inc. frame (m2)	Shading device	Frame and glass type			
S2 (PTRY))	0.94	no shading	timber, low-E internal/argon fill/clear external, (or U-value: 2.5, SHGC: 0.456)			
S3 (St2)	5.7	no shading	timber, low-E internal/argon fill/clear external, (or U-value: 2.5, SHGC: 0.456)			
S4 (EnSh)	0.36	no shading	timber, double clear/air fill, (or U-value: 4.3, SHGC: 0.5)			
S5 (EnVa)	0.77	no shading	timber, low-E internal/argon fill/clear external, (or U-value: 2.5, SHGC: 0.456)			

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 & 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 for the development may be issued.