

BASIX Certificate

Certificate number: 321726S

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General
Date of issue: Tuesday, 20 July 2010



Score

- ✓ Water: 44 (Target 40)
- ✓ Thermal comfort: pass (Target pass)
- ✓ Energy: 56 (Target 40)

Description of project

Project address		
Project name		136 Anzac Avenue - Lot 3
Street address		136 Anzac Avenue Collaroy 2097
Local Government Area		Warringah Council
Plan type and plan number		Deposited Plan 235748
Lot no.		Lot 3
Section no.		0
Project type		
Project type		separate dwelling house
No. of bedrooms		4
Site details		
Site area (m ²)		575
Roof area (m ²)		193
Conditioned floor area (m ²)		181
Unconditioned floor area (m ²)		18
Total area of garden and lawn (m ²)		228
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

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 75.2 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star 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 5000 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 193 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"> • all toilets in the development • 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 Comfort CommitmentsShow on
DA plansShow on CC/CDC
plans & specsCertifier
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	
external wall - brick veneer	1.36 (or 1.90 including construction)	
external wall - brick veneer	1.36 (or 1.90 including construction)	
external wall - brick veneer	1.36 (or 1.90 including construction)	
external wall - brick veneer	1.36 (or 1.90 including construction)	
ceiling and roof - flat ceiling / pitched roof	ceiling: 2.5 (up), roof: foil/sarking	unventilated; 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.

Thermal Comfort Commitments

Show on DA plans	Show on CC/CDC plans & specs	Certifier check
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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.
- 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.
- 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.
- 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.

✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓
✓	✓	✓

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
WG.12 (G)	E	7.16	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 901-1,200 mm	not overshadowed
WG.01 (J), WG.02 (P), WG.03 (O)	N	9.79	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	>4m high, 8-12 m away
WG.04 (Q)	W	13.31	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	pergola (adjustable shade) 1,000-2,000 mm	not overshadowed
WG.05 (L)	S	3.07	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
WG.06 (J)	E	4.59	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	>4m high, 2-5 m away
WG.07 (M), WG.08 (K)	S	6.13	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	>4m high, 2-5 m away
WG.09 (J)	W	4.59	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	>4m high, 2-5 m away
WG.10 (N)	N	0.85	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	none	not overshadowed
WG.11 (H)	N	1.65	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 901-1,200 mm	>4m high, 2-5 m away
W1.10 (A), W1.08 (F)	E	10.51	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 1,201-1,500 mm	not overshadowed
W1.01 (N), W1.02 (N)	N	1.69	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 601-750 mm	2-4m high, 5-8 m away
W1.03 (E), W1.04 (E)	W	7.37	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
W1.05 (C)	E	4.07	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 451-600 mm	2-4m high, 2-5 m away
W1.06 (D), W1.07 (D)	S	5.45	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 601-750 mm	2-4m high, 2-5 m away
W1.09 (D)	N	2.72	timber or uPVC, single pyrolytic low-e (U-value:3.99, SHGC:0.4)	eave/verandah/pergola/balcony 901-1,200 mm	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: solar (gas boosted) with a performance of 26 to 30 RECs or better.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: ceiling fans + 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: ceiling fans + 3-phase airconditioning; 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: 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		✓	✓
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: interlocked to light		✓	✓
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		✓	✓
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		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓
• all bathrooms/toilets; dedicated		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> • the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> • 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 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
<i>The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.</i>		✓	
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.		✓	

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.