

# BASIX Certificate

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

Certificate number: 211820S

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 29/06/2006, published by the Department of Planning. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Director-General  
Date of issue: Friday, 22 August 2008



NSW GOVERNMENT  
Department of Planning

## Score

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

## Description of project

Project address	
Project name	Narrabeen7
Street address	1196 Pittwater Road Narrabeen 2101
Local Government Area	Warringah Council
Plan type and plan number	Deposited Plan 312655
Lot no.	B
Section no.	0.0
Project type	
Project type	separate dwelling house
No. of bedrooms	6
Site details	
Site area (m <sup>2</sup> )	560
Roof area (m <sup>2</sup> )	207
Conditioned floor area (m <sup>2</sup> )	263
Unconditioned floor area (m <sup>2</sup> )	24
Total area of garden and lawn (m <sup>2</sup> )	302
Assessor details and thermal loads	
Assessor number	n/a
Certificate number	n/a
Cooling load (MJ/m <sup>2</sup> .year)	n/a
Heating load (MJ/m <sup>2</sup> .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
<b>Fixtures</b>			
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 1 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 950 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 95 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: <ul style="list-style-type: none"> <li>the cold water tap that supplies each clothes washer in the development</li> </ul>		✓	✓
<b>Stormwater tank</b>			
The applicant must install a stormwater tank with a capacity of at least 40000 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: <ul style="list-style-type: none"> <li>at least 90 square metres of roof area of the development (excluding the area of the roof which drains to any rainwater tank or private dam)</li> </ul>		✓	✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>at least 40 square metres of impervious areas</li> </ul>		✓	✓
<p>The applicant must connect the stormwater tank to:</p> <ul style="list-style-type: none"> <li>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.)</li> </ul>		✓	✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Floor, walls and ceiling/roof</b>			
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 - cavity brick	nil	
external wall - AAC external, brick internal (AAC: 75mm)	0.67 (or 1.70 including construction)	
external wall - AAC external, brick internal (AAC: 100mm)	0.52 (or 1.70 including construction)	
external wall - AAC external, brick internal (AAC: 125mm)	0.37 (or 1.70 including construction)	
internal wall shared with garage - single skin masonry	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 2.5 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 0.70)
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 2.5 (up), roof: foil/sarking	framed; dark (solar absorptance > 0.70)
ceiling and roof - flat ceiling / flat roof, concrete/plasterboard internal	ceiling: 2.5 (up), roof: foil/sarking	concrete/plasterboard internal; dark (solar absorptance > 0.70)

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Windows, glazed doors and skylights</b>			
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:	✓	✓	✓
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	✓	✓	✓
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	✓	✓	✓
<ul style="list-style-type: none"> <li>• Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.</li> </ul>		✓	✓
<ul style="list-style-type: none"> <li>• Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.</li> </ul>		✓	✓
<ul style="list-style-type: none"> <li>• 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.</li> </ul>		✓	✓
<ul style="list-style-type: none"> <li>• 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.</li> </ul>	✓	✓	✓
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:		✓	✓
<ul style="list-style-type: none"> <li>• External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed</li> </ul>		✓	✓

Skylight no.	Maximum area (square metres)	Type	Shading
Attic	0.8	aluminium, moulded plastic single clear	adjustable louvre
Bath/Toilet	0.6	aluminium, moulded plastic single clear	no shading

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
GND-L, B1, D,& 1st R,L	N	28.2	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	vertical external louvre/blind (adjustable)	not overshadowed
GND-Stained glass	N	1.7	standard aluminium, single toned (or U-value:7.57, SHGC:0.57)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
GND-courtyard bedroom	N	3.7	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 901-1,200 mm	not overshadowed
1 - Lobby South	S	1.3	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 1,500-2,000 mm	not overshadowed
1-WC/Bath	N	1.1	standard aluminium, single toned (or U-value:7.57, SHGC:0.57)	none	2-4m high, 5-8 m away
1-Dry	N	1.5	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	none	2-4m high, 5-8 m away
Attic	N	8.8	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
GND-E	E	17.6	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 901-1,200 mm	not overshadowed
1,Attic-E	E	16.2	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 901-1,200 mm	not overshadowed
1, study & lobby	N	5.0	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 451-600 mm	not overshadowed
South-laundry	S	1.5	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	none	not overshadowed
South-obscure	S	5.2	standard aluminium, single toned (or U-value:7.57, SHGC:0.57)	none	not overshadowed
West GND&1st	W	5.6	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed
West-1st top of stair	W	0.8	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	none	not overshadowed
West-attic	W	0.9	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 601-750 mm	not overshadowed

**Thermal Comfort Commitments**

Show on  
DA plans

Show on CC/CDC  
plans & specs

Certifier  
check

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: solar (electric boosted) with a performance of 31 to 35 RECs or better.	✓	✓	✓
<b>Cooling system</b>			
The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
<b>Heating system</b>			
The living areas must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Kitchen: no mechanical ventilation (ie. natural); Operation control: n/a</p> <p>Laundry: natural ventilation only, or no laundry; Operation control: n/a</p>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Artificial lighting</b>			
<p>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:</p> <ul style="list-style-type: none"> <li>• at least 1 of the living / dining rooms;</li> </ul>		✓	✓
<b>Natural lighting</b>			
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 4 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
<b>Other</b>			



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