

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 980313S

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 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Wednesday, 30 January 2019

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



Project summary

Project name	Dargaville LOT 1
Street address	7 Trentwood Park Avalon Beach 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 202857
Lot no.	1
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

Project score

Water	✓ 45	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 53	Target 50

Certificate Prepared by

Name / Company Name: Gartner Trovato Architects

ABN (if applicable): 51673668317

Description of project

Project address

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Site details

Site area (m ²)	848
Roof area (m ²)	243
Conditioned floor area (m2)	206.0
Unconditioned floor area (m2)	24.0
Total area of garden and lawn (m2)	536

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

Project score

Water	 45	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 53	Target 50

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 450 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) 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 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 243 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:			
• 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 Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
The dwelling must not have more than 2 storeys.	✓	✓	✓
The conditioned floor area of the dwelling must not exceed 300 square metres.	✓	✓	✓
The dwelling must not contain open mezzanine area exceeding 25 square metres.	✓	✓	✓
The dwelling must not contain third level habitable attic room.	✓	✓	✓
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 - suspended floor above enclosed subfloor, 72 square metres, framed	1.10 (or 1.8 including construction) (down)	
floor - above habitable rooms or mezzanine, 158 square metres, framed	nil	
floor - suspended floor above garage, framed	nil	
external wall - framed (weatherboard, fibre cement, metal clad)	3.00 (or 3.40 including construction)	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 5 (up), roof: foil backed blanket (100 mm)	framed; medium (solar absorptance 0.475-0.70)
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 5 (up), roof: foil backed blanket (100 mm)	framed; medium (solar absorptance 0.475-0.70)

Note	<ul style="list-style-type: none"> Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.
Note	<ul style="list-style-type: none"> In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

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) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> Aluminium single clear Aluminium double (air) clear Timber/uPVC/fibreglass single clear Timber/uPVC/fibreglass double (air) clear For other glass or frame types, each window and glazed door must be accompanied with certification showing a U value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) within the range of those listed. Total system U values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. Frame and glass types shown in the table below are for reference only. Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed. 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.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North facing					
2	1800	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
3	1800	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
9	1800	450	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
10	2400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
11	2400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
12	2400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
29	700	8000	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
East facing					
4	1500	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
5	1200	1650	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
6	1500	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
13	2400	3600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 2700 mm, 0 mm above head of window or glazed door	not overshadowed
14	1400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
15a	1400	2500	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
13a	2400	1200	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 2700 mm, 0 mm above head of window or glazed door	not overshadowed
South facing					
7	1500	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
15b	1400	2000	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
16	1400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
17	1400	1500	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
18	1500	1700	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
19	1500	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
20	1500	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
21	2400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
32	900	8000	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
West facing					
23	2400	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	>4 m high, 8-12 m away


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
24	2400	600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	>4 m high, 8-12 m away
25	2400	3600	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
37	1300	4000	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	external louvre/vertical blind (adjustable)	>4 m high, 8-12 m away


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: ceiling fans; Energy rating: n/a		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans; Energy rating: n/a		✓	✓
Heating system			
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.		✓	✓
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: 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		✓	✓


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