

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 980180S

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: Tuesday, 18 December 2018

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



Project summary

Project name	Dargaville LOT 3
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	3

Project score

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

Certificate Prepared by

Name / Company Name: Gartner Trovato Architects

ABN (if applicable): 51673668317

Description of project

Project address

Project name	Dargaville LOT 3
Street address	7 Trentwood Park Avalon Beach 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 202857
Lot no.	1
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	3

Site details

Site area (m ²)	1390
Roof area (m ²)	320
Conditioned floor area (m2)	236.0
Unconditioned floor area (m2)	20.0
Total area of garden and lawn (m2)	1030

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	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	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 850 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 320 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 - concrete slab on ground, 55 square metres	nil	
floor - suspended floor above enclosed subfloor, 180 square metres, framed	1.10 (or 1.8 including construction) (down)	
floor - above habitable rooms or mezzanine, 21 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)	
external wall - concrete block/plasterboard	2.88 (or 3.40 including construction)	
internal wall shared with garage - 200 mm AAC block	nil	
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. 	✓	✓	✓ ✓ ✓
The applicant must install the skylights described in the table below, in accordance with the specifications listed in the table. Total skylight area must not exceed 3 square metres (the 3 square metre limit does not include the optional additional skylight of less than 0.7 square metres that does not have to be listed in the table).	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each skylight:</p> <ul style="list-style-type: none"> 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 device
S01	1.00	timber, low-E/double/argon fill	adjustable awning or blind

Skylight no.	Maximum area (square metres)	Type	Shading device
S02	1.00	timber, low-E/double/argon fill	adjustable awning or blind

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North facing					
W01	700	850	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	none	not overshadowed
W02	1200	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	none	not overshadowed
W04	1800	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	none	not overshadowed
W06	1800	2000	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	external louvre/vertical blind (adjustable)	not overshadowed
W09	700	1500	U-value: 5.4, SHGC: 0.369 - 0.451 (timber/UPVC/fibreglass, single, tint)	eave 1600 mm, 1700 mm above head of window or glazed door	not overshadowed
W11	2400	2400	U-value: 4.3, SHGC: 0.378 - 0.462 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	eave 4550 mm, 0 mm above head of window or glazed door	not overshadowed
W26	1800	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	solid overhang 600 mm, 0 mm above head of window or glazed door	not overshadowed
North-East facing					
W05	2400	3600	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
East facing					
W07	1800	2000	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	external louvre/vertical blind (adjustable)	not overshadowed
W10	2400	2100	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	eave 4900 mm, 250 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
W12	2700	2700	U-value: 4.3, SHGC: 0.378 - 0.462 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	eave 2400 mm, 0 mm above head of window or glazed door	not overshadowed
W13	2700	2700	U-value: 4.3, SHGC: 0.378 - 0.462 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	eave 2400 mm, 0 mm above head of window or glazed door	not overshadowed
W15	2400	1400	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 1000 mm, 300 mm above head of window or glazed door	not overshadowed
W16	1800	1500	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 1000 mm, 300 mm above head of window or glazed door	not overshadowed
W18	2400	800	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 500 mm, 0 mm above head of window or glazed door	not overshadowed
W29	800	2850	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 4900 mm, 0 mm above head of window or glazed door	not overshadowed
South facing					
W14	2400	600	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	eave 650 mm, 500 mm above head of window or glazed door	not overshadowed
W17	1800	2000	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 750 mm, 500 mm above head of window or glazed door	not overshadowed
W19	1800	1950	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 750 mm, 100 mm above head of window or glazed door	not overshadowed
W30	600	2400	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 550 mm, 400 mm above head of window or glazed door	not overshadowed
W32	600	4300	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
W22	1800	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 6800 mm, 600 mm above head of window or glazed door	not overshadowed
West facing					
W20	2400	900	U-value: 5.4, SHGC: 0.369 - 0.451 (timber/UPVC/fibreglass, single, tint)	eave 2100 mm, 870 mm above head of window or glazed door	>4 m high, 2-5 m away
W21	2400	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	eave 2100 mm, 870 mm above head of window or glazed door	>4 m high, 2-5 m away


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W23	2400	2400	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	>4 m high, 2-5 m away
W24	2400	1200	U-value: 5.4, SHGC: 0.369 - 0.451 (timber/UPVC/fibreglass, single, tint)	eave 1500 mm, 870 mm above head of window or glazed door	>4 m high, 2-5 m away
W25	1200	1800	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	solid overhang 600 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 m away
W27	2400	600	U-value: 5.4, SHGC: 0.441 - 0.539 (timber/UPVC/fibreglass, single, tint)	solid overhang 600 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 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 + 1-phase airconditioning; Energy rating: 4 Star		✓	✓
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 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		✓	✓
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: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
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 3 of the bedrooms / study; dedicated		✓	✓
• at least 3 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 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.