

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 1252557S

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 10/09/2020 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Friday, 29 October 2021

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



Planning,
Industry &
Environment

Project summary

Project name	16 Fairlight Crescent - SECTION 4.55
Street address	16 Fairlight Crescent Manly 2095
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 3742
Lot no.	9
Section no.	F
Project type	separate dwelling house
No. of bedrooms	5

Project score

Water	✓ 42	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 50

Certificate Prepared by

Name / Company Name: Vaughan Architects Vaughan

ABN (if applicable): N/A

Description of project

Project address

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Site details

Site area (m ²)	613
Roof area (m ²)	279
Conditioned floor area (m2)	300.0
Unconditioned floor area (m2)	33.62
Total area of garden and lawn (m2)	168

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
Ceiling fan in at least one bedroom	n/a
Ceiling fan in at least one living room or other conditioned area	n/a

Project score

Water	✓ 42	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 110 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 4.5 but <= 6 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 5 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 5 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 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 250 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: - 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.) - a tap that is located within 10 metres of the swimming pool in the development		✓ ✓	✓ ✓
Swimming pool			
The swimming pool must not have a volume greater than 35 kilolitres.	✓	✓	

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

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, 169 square metres	nil	
floor - above habitable rooms or mezzanine, 140 square metres, concrete	nil	
floor - suspended floor above garage, concrete	nil	in-slab heating system
external wall - brick veneer	1.86 (or 2.40 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	2.00 (or 2.40 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
ceiling and roof - flat ceiling / flat roof, concrete/plasterboard internal	ceiling: 4.5 (up), roof: foil backed blanket (100 mm)	concrete/plasterboard internal; dark (solar absorptance > 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.
Note	• 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.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door: - For the following glass and frame types, the certifier check can be performed by visual inspection. - 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).	✓	✓	✓
The following requirements must also be satisfied in relation to each skylight: 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	0.20	timber, low-E/double/argon fill	adjustable louver

Skylight no.	Maximum area (square metres)	Type	Shading device
S02	0.50	timber, low-E/double/argon fill	adjustable louvre

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North-East facing					
G11	2400	600	U-value: 2, SHGC: 0.279 - 0.341 (timber/UPVC/fibreglass, double (argon), Hi-Tsol Low-e/clear)	none	>4 m high, 2-5 m away
F10	700	2400	aluminium, single, clear	solid overhang 900 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 m away
G6	1800	2000	U-value: 2.2, SHGC: 0.351 - 0.429 (composite, double (argon), Lo-Tsol Low-e/clear)	external louvre/vertical blind (fixed)	>4 m high, 2-5 m away
G4	2400	3400	U-value: 2, SHGC: 0.207 - 0.253 (timber/UPVC/fibreglass, double (argon), Lo-Tsol Low-e/clear)	solid overhang 5000 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 m away
G8	2160	500	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	none	>4 m high, 2-5 m away
F8	700	1400	aluminium, single, clear	solid overhang 900 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 m away
G7	2505	500	U-value: 2.2, SHGC: 0.351 - 0.429 (composite, double (argon), Lo-Tsol Low-e/clear)	external louvre/vertical blind (adjustable)	>4 m high, 2-5 m away
G10	600	1700	U-value: 2, SHGC: 0.279 - 0.341 (timber/UPVC/fibreglass, double (argon), Hi-Tsol Low-e/clear)	none	>4 m high, 2-5 m away
G9	2100	900	U-value: 2.2, SHGC: 0.288 - 0.352 (composite, double (argon), Lo-Tsol Low-e/clear)	solid overhang 500 mm, 0 mm above head of window or glazed door	>4 m high, 2-5 m away
F5	1550	1200	aluminium, single, clear	eave 1200 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
South-East facing					
G3	2000	550	U-value: 2, SHGC: 0.279 - 0.341 (timber/UPVC/fibreglass, double (argon), Hi-Tsol Low-e/clear)	solid overhang 1200 mm, 0 mm above head of window or glazed door	not overshadowed
G2	2000	3100	U-value: 2.2, SHGC: 0.351 - 0.429 (composite, double (argon), Lo-Tsol Low-e/clear)	solid overhang 1200 mm, 0 mm above head of window or glazed door	not overshadowed
F11	1550	700	aluminium, single, clear	eave 1200 mm, 0 mm above head of window or glazed door	not overshadowed
F3	1800	500	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	solid overhang 1300 mm, 0 mm above head of window or glazed door	not overshadowed
F7	1550	700	aluminium, single, clear	eave 1200 mm, 0 mm above head of window or glazed door	not overshadowed
F2	2400	3200	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	solid overhang 1350 mm, 0 mm above head of window or glazed door	not overshadowed
F9	1550	700	aluminium, single, clear	eave 1200 mm, 0 mm above head of window or glazed door	not overshadowed
G5	2400	4600	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	solid overhang 5000 mm, 0 mm above head of window or glazed door	not overshadowed
F6	1550	700	aluminium, single, clear	eave 1200 mm, 0 mm above head of window or glazed door	not overshadowed
G1	2200	350	U-value: 2.2, SHGC: 0.351 - 0.429 (composite, double (argon), Lo-Tsol Low-e/clear)	solid overhang 2600 mm, 0 mm above head of window or glazed door	not overshadowed
F4	1800	4300	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	solid overhang 1300 mm, 0 mm above head of window or glazed door	not overshadowed
F1	1600	1100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	solid overhang 1700 mm, 0 mm above head of window or glazed door	not overshadowed
South-West facing					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
F17	950	2300	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 1550 mm, 0 mm above head of window or glazed door	not overshadowed
F20	1800	1100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 5000 mm, 0 mm above head of window or glazed door	not overshadowed
G14	2700	1500	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
F16	2500	600	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	not overshadowed
F15	2500	3000	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
G13	2700	2700	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
F19	1600	1200	aluminium, single, clear	eave 670 mm, 0 mm above head of window or glazed door	not overshadowed
North-West facing					
G12	2200	800	U-value: 5.4, SHGC: 0.441 - 0.539 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
G16	2700	4800	U-value: 4.3, SHGC: 0.450 - 0.550 (timber/UPVC/fibreglass, single, Hi-Tsol Low-e)	solid overhang 4300 mm, 0 mm above head of window or glazed door	not overshadowed
F18	2400	3800	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	solid overhang 2400 mm, 0 mm above head of window or glazed door	not overshadowed
F13	2400	500	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 1400 mm, 0 mm above head of window or glazed door	not overshadowed
F14	1500	2200	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	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: gas instantaneous.	✓	✓	✓
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: 5 Star (old label)		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans + 1-phase airconditioning; Energy rating: 5 Star (old label)		✓	✓
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: 5 Star (old label)		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: 6 Star (old label)		✓	✓
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 on / timer off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual on / timer off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual on / timer off		✓	✓
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 7 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
all bathrooms/toilets; dedicated		✓	✓
the laundry; dedicated		✓	✓
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 6 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): gas		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 1 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
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.