

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 1315145S

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: Tuesday, 05 July 2022

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



Planning,
Industry &
Environment

Project summary

Project name	23 Coles road Freshwater 2096
Street address	23 Coles Road Freshwater 2096
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 7912
Lot no.	32
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 56	Target 50

Certificate Prepared by

Name / Company Name: Paul & C associates

ABN (if applicable): 26634614848

Description of project

Project address

Project name	23 Coles road Freshwater 2096
Street address	23 Coles Road Freshwater 2096
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 7912
Lot no.	32
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m ²)	552
Roof area (m ²)	280
Conditioned floor area (m2)	250.0
Unconditioned floor area (m2)	16.8
Total area of garden and lawn (m2)	185

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	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 56	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
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 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 3000 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 150 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 • the cold water tap that supplies each clothes washer 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.) 		✓ ✓ ✓	✓ ✓ ✓
Swimming pool			
The swimming pool must not have a volume greater than 28.5 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must be outdoors.	✓	✓	
Outdoor Spa			
The spa must not have a volume greater than 5.5 kilolitres.	✓	✓	

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, 125 square metres	nil	
floor - above habitable rooms or mezzanine, 120 square metres, framed	nil	
external wall - framed (weatherboard, fibre cement, metal clad)	3.00 (or 3.40 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4.5 (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.
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.	✓	✓	✓
<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. 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).	✓	✓	✓

























Skylight no.	Maximum area (square metres)	Type	Shading device
S01	1.50	timber, double clear/air fill	no shading
S02	1.50	timber, double clear/air fill	no shading

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North facing					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W9	2400	4200	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	verandah 5000 mm, 3500 mm above base of window or glazed door	not overshadowed
W10	2400	4200	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	verandah 5000 mm, 3500 mm above base of window or glazed door	not overshadowed
W9A	4100	300	timber/UPVC/fibreglass, single, clear	verandah 5000 mm, 3500 mm above base of window or glazed door	not overshadowed
W10A	4100	300	timber/UPVC/fibreglass, single, clear	verandah 5000 mm, 3500 mm above base of window or glazed door	not overshadowed
W19	1350	2950	timber/UPVC/fibreglass, single, clear	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
W20	950	750	timber/UPVC/fibreglass, single, clear	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
W21	1350	1950	timber/UPVC/fibreglass, single, clear	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
East facing					
W3	2000	900	timber/UPVC/fibreglass, single, clear	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W4	2000	900	timber/UPVC/fibreglass, single, clear	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W5	1350	2000	timber/UPVC/fibreglass, single, clear	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W6	1350	2000	timber/UPVC/fibreglass, single, clear	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W7	1950	900	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W8	1950	900	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W16	1350	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 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
W17	1350	3000	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	not overshadowed
W18	550	4000	timber/UPVC/fibreglass, single, clear	eave 600 mm, 100 mm above head of window or glazed door	not overshadowed
South facing					
W1	2400	1250	timber/UPVC/fibreglass, single, clear	verandah 2000 mm, 2650 mm above base of window or glazed door	not overshadowed
W2	2400	3000	timber/UPVC/fibreglass, single, clear	verandah 2000 mm, 2650 mm above base of window or glazed door	not overshadowed
W12	1350	1450	timber/UPVC/fibreglass, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W13	2400	1800	timber/UPVC/fibreglass, single, clear	eave 2000 mm, 300 mm above head of window or glazed door	not overshadowed
W14	2400	1800	timber/UPVC/fibreglass, single, clear	eave 2000 mm, 300 mm above head of window or glazed door	not overshadowed
W15	1350	1450	timber/UPVC/fibreglass, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
West facing					
W11	550	5250	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	none	2-4 m high, 2-5 m away
W22	1350	1450	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W23	2350	1700	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W24	1350	1700	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 m high, 2-5 m away
W25	1350	2400	U-value: 3.7, SHGC: 0.342 - 0.418 (timber/UPVC/fibreglass, single, Lo-Tsol Low-e)	eave 600 mm, 100 mm above head of window or glazed door	2-4 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: 1-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: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
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: 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: 1-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
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 switch on/off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/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 4 of the bedrooms / study; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> • at least 2 of the living / dining rooms; dedicated • the kitchen; dedicated • 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 2 bathroom(s)/toilet(s) in the development for natural lighting.			
Swimming pool			
The development must not incorporate any heating system for the swimming pool.			
The applicant must install a timer for the swimming pool pump in the development.			
Outdoor spa			
The development must not incorporate any heating system for the spa.			
The applicant must install a timer for the spa pump in the development.			
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 2 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.			


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.		✓	

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.