

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 1178175S

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: Wednesday, 17 March 2021

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



Planning,
Industry &
Environment

Project summary

Project name	DA Miller House
Street address	27 Walworth Avenue Newport Beach 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 9877
Lot no.	24
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 91	Target 50

Certificate Prepared by

Name / Company Name: Jodie Dang

ABN (if applicable): N/A

Description of project

Project address

Project name	DA Miller House
Street address	27 Walworth Avenue Newport Beach 2107
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 9877
Lot no.	24
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	4

Site details

Site area (m ²)	654
Roof area (m ²)	207
Conditioned floor area (m2)	300.0
Unconditioned floor area (m2)	20.0
Total area of garden and lawn (m2)	214

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	✓ 91	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 195 square metres of the site.	✓	✓	
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 6 but <= 7.5 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 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 15000 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 200 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"> 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 		✓ ✓	✓ ✓
Stormwater tank			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must install a stormwater tank with a capacity of at least 15000 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"> at least 200 square metres of roof area of the development (excluding the area of the roof which drains to any rainwater tank or private dam) 		✓	✓
The applicant must connect the stormwater tank to: <ul style="list-style-type: none"> 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.) 		✓	✓
Swimming pool			
The swimming pool must not have a volume greater than 40 kilolitres.	✓	✓	
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, 160 square metres	nil	
floor - suspended floor above enclosed subfloor, 65 square metres, concrete	0.70 (or 1.3 including construction) (down)	
floor - above habitable rooms or mezzanine, 65 square metres, framed	nil	
floor - suspended floor above garage, concrete	nil	
external wall - framed (weatherboard, fibre cement, metal clad)	3.00 (or 3.40 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 5 (up), roof: foil backed blanket (55 mm)	framed; medium (solar absorptance 0.475-0.70)
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 5 (up), roof: foil backed blanket (55 mm)	framed; 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. Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35. Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed. Pergolas with adjustable shading may have adjustable blades or removable shade cloth (not less than 80% shading ratio). Adjustable blades must overlap in plan view. 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	aluminium, moulded plastic single clear	no shading
S02	1.00	aluminium, moulded plastic single clear	adjustable louvre

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North facing					
W02	2600	1000	U-value: 4.9, SHGC: 0.297 - 0.363 (aluminium, double (air), Lo-Tsol Low-e/clear)	eave 2600 mm, 50 mm above head of window or glazed door	not overshadowed
W03	2600	4400	U-value: 4.9, SHGC: 0.297 - 0.363 (aluminium, double (air), Lo-Tsol Low-e/clear)	pergola (adjustable battens) 2500 mm, 50 mm above head of window or glazed door	not overshadowed
W01	2600	1400	U-value: 4.9, SHGC: 0.297 - 0.363 (aluminium, double (air), Lo-Tsol Low-e/clear)	eave 650 mm, 50 mm above head of window or glazed door	not overshadowed
W04	2000	3800	U-value: 4.9, SHGC: 0.297 - 0.363 (aluminium, double (air), Lo-Tsol Low-e/clear)	eave 1500 mm, 1300 mm above head of window or glazed door	not overshadowed
W33	2600	3250	U-value: 4.9, SHGC: 0.297 - 0.363 (aluminium, double (air), Lo-Tsol Low-e/clear)	eave 450 mm, 50 mm above head of window or glazed door	2-4 m high, 2-5 m away
East facing					
W11	1600	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	2-4 m high, 2-5 m away
W12	2600	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	2-4 m high, 2-5 m away
W13	1600	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	2-4 m high, 2-5 m away
W14	1600	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	2-4 m high, 2-5 m away
W15	2600	1000	U-value: 5.4, SHGC: 0.441 - 0.539 (aluminium, single, Hi-Tsol Low-e)	none	2-4 m high, 2-5 m away

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W16	1300	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W17	1300	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W18	1300	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W19	1300	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W34	2600	2300	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	2-4 m high, 2 m away
W35	900	2000	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
South facing					
W05	2600	4400	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	pergola (adjustable battens) 2700 mm, 50 mm above head of window or glazed door	not overshadowed
W06	2600	1000	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	not overshadowed
W07	2600	3100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
W08	1500	1500	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	not overshadowed
W31	2600	1500	U-value: 5.4, SHGC: 0.441 - 0.539 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
W32	2600	490	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
West facing					
W20	2200	800	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	>4 m high, 2-5 m away
W21	2600	900	U-value: 5.4, SHGC: 0.441 - 0.539 (aluminium, single, Hi-Tsol Low-e)	none	>4 m high, <2 m away
W22	1100	3000	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	none	>4 m high, <2 m away


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W24	2600	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
W25	2600	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
W26	2600	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 450 mm, 50 mm above head of window or glazed door	not overshadowed
W27	1300	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W28	1300	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W29	1300	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W30	1300	900	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W36	900	2000	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	external louvre/vertical blind (adjustable)	not overshadowed
W37	900	2000	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 with a performance of 5 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: 6 star (average zone)		✓	✓
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: 5.5 star (average zone)		✓	✓
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: 6.5 star (average zone)		✓	✓
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: 5.5 star (average zone)		✓	✓
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 switch on/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 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:			
<ul style="list-style-type: none"> 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 4 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.			
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 7 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.			

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.