

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Single Dwelling

Certificate number: 893041S\_03

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](http://www.basix.nsw.gov.au)

Secretary  
Date of issue: Monday, 07 October 2019  
To be valid, this certificate must be lodged within 3 months of the date of issue.






Project summary		
Project name	Birkley Road Revised 2_03	
Street address	68 Birkley Road Manly 2095	
Local Government Area	Northern Beaches Council	
Plan type and plan number	deposited 334786	
Lot no.	A	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	1	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 54	Target 50

Certificate Prepared by
Name / Company Name: alice.cutcliffe
ABN (if applicable): 20658738193

# Description of project

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Plan type and plan number	Deposited Plan 334786
Lot no.	A
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Project type	
Project type	separate dwelling house
No. of bedrooms	1
Site details	
Site area (m <sup>2</sup> )	342
Roof area (m <sup>2</sup> )	70
Conditioned floor area (m <sup>2</sup> )	38.0
Unconditioned floor area (m <sup>2</sup> )	6.0
Total area of garden and lawn (m <sup>2</sup> )	84

Assessor details and thermal loads		
Assessor number	n/a	
Certificate number	n/a	
Climate zone	n/a	
Area adjusted cooling load (MJ/m <sup>2</sup> .year)	n/a	
Area adjusted heating load (MJ/m <sup>2</sup> .year)	n/a	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 54	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
<b>Landscape</b>			
The applicant must plant indigenous or low water use species of vegetation throughout 5 square metres of the site.	✓	✓	
<b>Fixtures</b>			
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 6 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 6 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 6 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 1800 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 70 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"> <li>the cold water tap that supplies each clothes washer in the development</li> <li>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.)</li> </ul>		✓ ✓	✓ ✓
<b>Swimming pool</b>			
The swimming pool must not have a volume greater than 15 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
<b>General features</b>			
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.	✓	✓	✓
<b>Floor, walls and ceiling/roof</b>			
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	nil	
floor - suspended floor above garage, framed	nil	
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)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 3.76 (up), roof: foil backed blanket (100 mm)	framed; light (solar absorptance < 0.475)

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

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Windows, glazed doors and skylights</b>			
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"> <li>For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> <li>Aluminium single clear</li> <li>Aluminium double (air) clear</li> <li>Timber/uPVC/fibreglass single clear</li> <li>Timber/uPVC/fibreglass double (air) clear</li> </ul> </li> <li>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.</li> <li>Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.</li> </ul>	✓	✓	✓ ✓ ✓
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"> <li>External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed</li> </ul>		✓ ✓	✓ ✓

Skylight no.	Maximum area (square metres)	Type	Shading device
S01	1.50	timber, low-E/double/argon fill	adjustable awning or blind
S02	1.50	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
<b>North facing</b>					
WD2.02	1700	1300	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (adjustable)	not overshadowed
WD2.01	1000	900	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (fixed)	not overshadowed
WD2.03	1000	450	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (fixed)	not overshadowed
WD2.04	1000	450	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (fixed)	not overshadowed
<b>East facing</b>					
WD2.05	1400	4500	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 200 mm, 300 mm above head of window or glazed door	not overshadowed
<b>West facing</b>					
WD2.06	1600	900	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (fixed)	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Hot water</b>			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: solar (gas boosted, flat plate).	✓	✓	✓
<b>Cooling system</b>			
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		✓	✓
<b>Heating system</b>			
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.		✓	✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, not ducted; Operation control: manual switch on/off</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Laundry: natural ventilation only, or no laundry; Operation control: n/a</p>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Artificial lighting</b>			
<p>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:</p> <ul style="list-style-type: none"> <li>• at least 1 of the bedrooms / study; dedicated</li> <li>• at least 1 of the living / dining rooms; dedicated</li> <li>• the kitchen; dedicated</li> </ul>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>





Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>all bathrooms/toilets; dedicated</li> <li>all hallways; dedicated</li> </ul>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Natural lighting</b>			
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 1 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
<b>Swimming pool</b>			
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): solar only		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 0.3 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
<b>Other</b>			
The applicant must install a gas cooktop & gas oven in the kitchen of the dwelling.		✓	
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.