

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1091053S

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, 06 April 2020

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Warriewood Dwelling
Street address	59 Loikeet Grove Warriewood 2102
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 271139
Lot no.	5
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

### Project score

Water	✓ 42	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 54	Target 50

### Certificate Prepared by

Name / Company Name: Building Energy Assessments

ABN (if applicable): 48231301167

# Description of project

## Project address

Project name	Warriewood Dwelling
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## Site details

Site area (m <sup>2</sup> )	304
Roof area (m <sup>2</sup> )	137
Conditioned floor area (m2)	153.2
Unconditioned floor area (m2)	16.7
Total area of garden and lawn (m2)	109

## 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	 42	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>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 3 star (> 6 but <= 7.5 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 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.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 1500 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>all toilets in the development</li> <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>		✓ ✓ ✓	✓ ✓ ✓

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, 86.7 square metres	nil	
floor - above habitable rooms or mezzanine, 66.7 square metres, framed	nil	
floor - suspended floor above garage, framed	nil	
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 - other/undecided	2.40 ( including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 3.5 (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
<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> </ul>	✓	✓	<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North-East facing</b>					
W5	2050	2170	U-value: 6.6, SHGC: 0.369 - 0.451 (aluminium, single, tint)	eave 550 mm, 200 mm above head of window or glazed door	not overshadowed
W13	1460	1570	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W14	1460	1570	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W17	610	1460	U-value: 6.6, SHGC: 0.369 - 0.451 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
SD1	2410	3576	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 550 mm, 200 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
<b>South-East facing</b>					
W1	4500	860	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W6	2050	2170	U-value: 6.6, SHGC: 0.369 - 0.451 (aluminium, single, tint)	eave 550 mm, 200 mm above head of window or glazed door	not overshadowed
W7	2050	610	U-value: 6.6, SHGC: 0.369 - 0.451 (aluminium, single, tint)	none	not overshadowed
W15	850	1800	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W16	850	1800	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W18	1800	850	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
<b>South-West facing</b>					
W2	2100	860	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	none	not overshadowed
W8	1200	1570	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W9	1554	610	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W10	1554	2410	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
<b>North-West facing</b>					
W3	600	2650	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 550 mm, 200 mm above head of window or glazed door	not overshadowed
W4	1810	1430	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 550 mm, 200 mm above head of window or glazed door	not overshadowed
W11	1570	610	U-value: 6.6, SHGC: 0.369 - 0.451 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	not overshadowed
W12	1460	1570	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 700 mm, 0 mm above head of window or glazed door	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: gas instantaneous with a performance of 5 stars.	✓	✓	✓
<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: 1-phase airconditioning; Energy rating: 5 star (average zone)		✓	✓
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: 5 star (average zone)		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Heating system</b>			
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 (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 star (average zone)		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Ventilation</b>			
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: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
<b>Artificial lighting</b>			
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"> <li>at least 4 of the bedrooms / study;</li> </ul>		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>• at least 2 of the living / dining rooms;</li> <li>• the kitchen;</li> <li>• all bathrooms/toilets;</li> <li>• the laundry;</li> <li>• all hallways;</li> </ul>		    	    
<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 3 bathroom(s)/toilet(s) in the development for natural lighting.			
<b>Other</b>			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.			
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.