

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1041519S\_02




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: Tuesday, 03 September 2019

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



Project summary		
Project name	Jon & Laura Ducker_02	
Street address	3 Lumeah Avenue Elanora Heights 2101	
Local Government Area	Northern Beaches Council	
Plan type and plan number	deposited 24360	
Lot no.	108	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	2	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 52	Target 50

Certificate Prepared by
Name / Company Name: W.P.O'Brien & co
ABN (if applicable): 94 517 511 283

# Description of project

## Project address

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## Site details

Site area (m <sup>2</sup> )	976
Roof area (m <sup>2</sup> )	87
Conditioned floor area (m2)	55.0
Unconditioned floor area (m2)	5.0
Total area of garden and lawn (m2)	595

## 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	 52	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 300 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 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.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 4000 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 87 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 - suspended floor above enclosed subfloor, framed	0.60 (or 1.3 including construction) (down)	
external wall - framed (weatherboard, fibre cement, metal clad)	3.00 (or 3.40 including construction)	
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 4 (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
<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>	✔	✔	✔  ✔        ✔

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North facing</b>					
W08	2100	1800	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	verandah 2100 mm, 2400 mm above base of window or glazed door	not overshadowed
<b>East facing</b>					
W04	600	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W06	600	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W05	600	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
<b>South facing</b>					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W07	900	1200	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
<b>West facing</b>					
W02	900	1200	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W07	1200	1800	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	verandah 2700 mm, 2400 mm above base of window or glazed door	not overshadowed
W01	1200	2100	U-value: 5.4, SHGC: 0.522 - 0.638 (aluminium, single, Hi-Tsol Low-e)	eave 600 mm, 300 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.	✓	✓	✓
<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 bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
<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>			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
Kitchen: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
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 2 of the bedrooms / study; dedicated</li> <li>at least 1 of the living / dining rooms; dedicated</li> <li>the kitchen; dedicated</li> </ul>		✓ ✓ ✓	✓ ✓ ✓

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> </ul>		✓	✓
<ul style="list-style-type: none"> <li>• the laundry; dedicated</li> </ul>		✓	✓
<ul style="list-style-type: none"> <li>• all hallways;</li> </ul>		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & gas 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.