

# BASIX<sup>®</sup> Certificate

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

## Single Dwelling

Certificate number: 728354S

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 18/09/2014 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 June 2016

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



Planning &  
Environment

### Project summary

Project name	No. 106-118 Mayfair Road, Mulgoa
Street address	106-118 Mayfair Road Mulgoa 2745
Local Government Area	Penrith City Council
Plan type and plan number	deposited 260373
Lot no.	1
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

### Project score

Water	✓ 78	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 44	Target 40

### Certificate Prepared by

Name / Company Name: Justin Cunningham

ABN (if applicable): N/A

# Description of project

## Project address

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## Site details

Site area (m <sup>2</sup> )	101170
Roof area (m <sup>2</sup> )	248
Conditioned floor area (m <sup>2</sup> )	111.88
Unconditioned floor area (m <sup>2</sup> )	47.39
Total area of garden and lawn (m <sup>2</sup> )	350

## 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

## Other

none	n/a
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## Project score

Water	✓ 78	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 44	Target 40

## 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 30 square metres of the site.	✓	✓	
<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 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.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
The applicant must install a rainwater tank of at least 100000 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 248 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> <li>all hot water systems in the development</li> </ul>		✓ ✓ ✓ ✓	✓ ✓ ✓ ✓

## Water Commitments

Show on  
DA plans

Show on CC/CDC  
plans & specs

Certifier  
check

- all indoor cold water taps (not including taps that supply clothes washers) in the development



**Thermal Comfort Commitments**Show on  
DA plansShow on CC/CDC  
plans & specsCertifier  
check**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, 61.5 square metres	nil	
floor - suspended floor above enclosed subfloor, 114 square metres, concrete	1.10 (or 1.7 including construction) (down)	
external wall - brick veneer	1.66 (or 2.20 including construction)	
external wall - brick veneer	1.66 (or 2.20 including construction)	
external wall - brick veneer	1.66 (or 2.20 including construction)	
external wall - brick veneer	1.66 (or 2.20 including construction)	
internal wall shared with garage - single skin masonry	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.





















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) and up to 2 windows/glazed doors (<0.7 square metres) which are not listed in the table.	✓	✓	✓
The following requirements must also be satisfied in relation to each window and glazed door:	✓	✓	✓
<ul style="list-style-type: none"> <li>Except where the glass is 'single clear' or 'single toned', each window and glazed door must have a U-value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) +/-10% of that listed. Total system U-values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions.</li> </ul>			✓
<ul style="list-style-type: none"> <li>The leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 millimetres above the head of the window or glazed door, except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table.</li> </ul>	✓	✓	✓
<ul style="list-style-type: none"> <li>Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.</li> </ul>		✓	✓
<ul style="list-style-type: none"> <li>Unless they have adjustable shading, pergolas must have fixed battens parallel to the window or glazed door above which they are situated, unless the pergola also shades a perpendicular window. The spacing between battens must not be more than 50 mm.</li> </ul>		✓	✓

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1	N	3.24	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W2	N	1.62	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W3	N	1.62	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W4	N	1.62	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W5	N	1.62	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W6	N	1.62	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W7	N	3.24	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W8	W	1.44	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W9	W	1.44	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W10	S	1.80	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W11	S	1.35	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W12	S	2.16	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
W13	S	2.16	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 450 mm	not overshadowed
D1	S	4.41	standard aluminium, single clear (or U-value:7.63, SHGC:0.75)	eave/verandah/ pergola/ balcony 751-900 mm	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: electric heat pump - air sourced with a performance of 21 to 25 RECs or better.	✓	✓	✓
<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: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans + 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
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: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
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: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
Kitchen: individual fan, not ducted; 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: • at least 4 of the bedrooms / study;		✓	✓





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 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.