

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1002734S\_04

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 January 2020  
To be valid, this certificate must be lodged within 3 months of the date of issue.



Project summary		
Project name	19-03 Delipetar_04	
Street address	44a Mayfair Road Mulgoa 2745	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 610186	
Lot no.	12	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	5	
Project score		
Water	✔ 63	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 100	Target 50

Certificate Prepared by
Name / Company Name: Wayne Ryan
ABN (if applicable): N/A

# Description of project

## Project address

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## Project type

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## Site details

Site area (m <sup>2</sup> )	45500
Roof area (m <sup>2</sup> )	555
Conditioned floor area (m2)	298.51
Unconditioned floor area (m2)	18.35
Total area of garden and lawn (m2)	750

## 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	✓ 63	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 100	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 50 square metres of the site.	✓	✓	
<b>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but ≤ 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 3 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 3 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 3 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 246 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 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	
external wall - single skin autoclaved aerated concrete (AAC) (AAC:110 mm)	2.70 (or 3.60 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 4.25 (up), roof: foil/sarking	6 wind-driven ventilator(s) + eave vents; light (solar absorptance < 0.475)

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> </ul>	✓	✓	✓ ✓






















Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North facing</b>					
W07	900	1000	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W02	1200	2400	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W06	900	1000	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W01	1200	2400	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W04	1800	1800	aluminium, single, clear	eave 2200 mm, 300 mm above head of window or glazed door	not overshadowed
W03	1800	1800	aluminium, single, clear	eave 2800 mm, 300 mm above head of window or glazed door	not overshadowed
W05	1800	1800	aluminium, single, clear	eave 2200 mm, 300 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>East facing</b>					
W09	600	1500	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W10	600	2100	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
D11	2100	1800	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W08	1000	1500	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
<b>South facing</b>					
W18	1200	1800	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W15	1100	1800	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
D17	2100	3600	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W19	1200	2400	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
D13	2100	1800	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
D16	2100	3600	aluminium, single, clear	eave 4600 mm, 300 mm above head of window or glazed door	not overshadowed
W12	1200	2400	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W14	1200	600	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
<b>West facing</b>					
W20	600	2100	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
D24	2100	1800	aluminium, single, clear	eave 600 mm, 300 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
W22	900	600	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W21	600	1500	aluminium, single, clear	eave 600 mm, 300 mm above head of window or glazed door	not overshadowed
W23	600	900	aluminium, single, clear	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: solar (electric boosted) with a performance of 31 to 35 STCs 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 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
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 3.0 - 3.5		✓	✓
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 3.0 - 3.5		✓	✓
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: interlocked to light		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: interlocked to light		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: interlocked to light		✓	✓
<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 6 of the bedrooms / study; dedicated</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; dedicated</li> <li>the kitchen; dedicated</li> <li>all bathrooms/toilets; dedicated</li> <li>the laundry; dedicated</li> <li>all hallways; dedicated</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 4 bathroom(s)/toilet(s) in the development for natural lighting.			
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 6.6 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 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.