

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1311858S\_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 10/09/2020 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Wednesday, 29 June 2022

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Nahlous & Mulcahy with pool_02
Street address	5 Arncliffe Road Earlwood 2206
Local Government Area	Canterbury-Bankstown Council
Plan type and plan number	deposited 13914
Lot no.	128
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 90	Target 50

### Certificate Prepared by

Name / Company Name: Peter John O'Brien & Associates

ABN (if applicable): 49511228067

# Description of project

## Project address

Project name	Nahlous & Mulcahy with pool_02
Street address	5 Arncliffe Road Earlwood 2206
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Plan type and plan number	Deposited Plan 13914
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Section no.	-

## Project type

Project type	separate dwelling house
No. of bedrooms	4

## Site details

Site area (m <sup>2</sup> )	518
Roof area (m <sup>2</sup> )	260
Conditioned floor area (m2)	279.35
Unconditioned floor area (m2)	19.95
Total area of garden and lawn (m2)	141

## 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
Ceiling fan in at least one bedroom	n/a
Ceiling fan in at least one living room or other conditioned area	n/a

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 90	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 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 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 3000 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 134.21 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>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 36 kilolitres.	✓	✓	
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, 143.4 square metres	nil	
floor - above habitable rooms or mezzanine, 155.9 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)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 3.5 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 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>Overshadowing buildings/vegetation must be of the height and distance from the centre and the base of the window and glazed door, as specified in the 'overshadowing' column.</li> </ul>	✓	✓	✓ ✓
	✓	✓	✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North-East facing</b>					
W02	2057	850	aluminium, double (air), clear	verandah 1390 mm, 2572 mm above base of window or glazed door	not overshadowed
D03	2400	1200	timber/UPVC/fibreglass, single, clear	verandah 2470 mm, 2572 mm above base of window or glazed door	not overshadowed
W01	2057	850	aluminium, double (air), clear	none	not overshadowed
W09	1200	2770	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
W10	1200	1450	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
<b>South-East facing</b>					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W16	857	1810	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	>4 m high, <2 m away
W19	600	2410	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
W18	857	1450	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
W07	1029	1810	aluminium, double (air), clear	eave 1200 mm, 3173 mm above head of window or glazed door	>4 m high, <2 m away
W17	1200	1810	aluminium, double (air), clear	eave 1350 mm, 0 mm above head of window or glazed door	>4 m high, <2 m away
W15	857	730	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	>4 m high, <2 m away
W06	857	2410	aluminium, double (air), clear	eave 750 mm, 3387 mm above head of window or glazed door	>4 m high, <2 m away
W08	857	2410	aluminium, double (air), clear	eave 750 mm, 2873 mm above head of window or glazed door	not overshadowed
<b>South-West facing</b>					
W14	1200	2170	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	>4 m high, 8-12 m away
D05	2100	6250	aluminium, double (air), clear	verandah 3450 mm, 2615 mm above base of window or glazed door	>4 m high, 8-12 m away
W13	1200	2170	aluminium, double (air), clear	eave 750 mm, 0 mm above head of window or glazed door	>4 m high, 8-12 m away
<b>North-West facing</b>					
W11	1200	1810	aluminium, single, clear	eave 1350 mm, 0 mm above head of window or glazed door	not overshadowed
W12	1200	2170	aluminium, single, clear	eave 750 mm, 0 mm above head of window or glazed door	not overshadowed
W04	857	1810	aluminium, single, clear	eave 750 mm, 3559 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 3.5 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: 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: 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: individual fan, not ducted; Operation control: manual switch on/off		✓	✓
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 5 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 3 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>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 15 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 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.