

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1184759S

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: Monday, 07 June 2021

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



Planning,  
Industry &  
Environment

### Project summary

Project name	41 Coasters Retreat
Street address	41 Coasters Retreat Coasters Retreat 2108
Local Government Area	Northern Beaches Council
Plan type and plan number	deposited 25653
Lot no.	5
Section no.	-
Project type	separate dwelling house
No. of bedrooms	3

### Project score

Water	✓ 76	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 98	Target 50

### Certificate Prepared by

Name / Company Name: Graham Midgley

ABN (if applicable): N/A

# Description of project

## Project address

Project name	41 Coasters Retreat
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Section no.	-

## Project type

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## Site details

Site area (m <sup>2</sup> )	2226
Roof area (m <sup>2</sup> )	216
Conditioned floor area (m2)	163.0
Unconditioned floor area (m2)	41.5
Total area of garden and lawn (m2)	100

## 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	✔ 76	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 98	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 (> 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 1 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 30000 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 200 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> <li>all indoor cold water taps (not including taps that supply clothes washers) in the development</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, 49.3 square metres, framed	0.60 (or 1.3 including construction) (down)	
floor - suspended floor above open subfloor, 96 square metres, framed	0.8 (or 1.5 including construction) (down)	
floor - above habitable rooms or mezzanine, 59.2 square metres, framed	nil	
external wall - framed (weatherboard, fibre cement, metal clad)	2.00 (or 2.40 including construction)	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 2.24 (up), roof: foil/sarking	framed; medium (solar absorptance 0.475-0.70)
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 2.08 (up), roof: foil/sarking	framed; medium (solar absorptance 0.475-0.70)

Note	<ul style="list-style-type: none"> <li>Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.</li> </ul>
Note	<ul style="list-style-type: none"> <li>In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.</li> </ul>

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> <li>Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.</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>	✓	✓	✓ ✓ ✓
The applicant must install the skylights described in the table below, in accordance with the specifications listed in the table. Total skylight area must not exceed 3 square metres (the 3 square metre limit does not include the optional additional skylight of less than 0.7 square metres that does not have to be listed in the table).	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each skylight:</p> <ul style="list-style-type: none"> <li>External awnings and louvres must fully shade the skylight above which they are situated when fully drawn or closed</li> </ul>		✓ ✓	✓ ✓

Skylight no.	Maximum area (square metres)	Type	Shading device
S01	0.79	timber, low-E/double/argon fill	adjustable awning or blind

Skylight no.	Maximum area (square metres)	Type	Shading device
S02	0.54	timber, low-E/double/argon fill	adjustable awning or blind



















Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North facing</b>					
W3 L1	1030	1090	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
<b>East facing</b>					
W7 L1	1440	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 200 mm above head of window or glazed door	>4 m high, 8-12 m away
D3 L1	2100	1810	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	external louvre/vertical blind (adjustable)	>4 m high, 8-12 m away
<b>South-East facing</b>					
W8 L1	2100	1210	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 2900 mm, 700 mm above head of window or glazed door	>4 m high, 8-12 m away
W9 L1	450	1090	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 3600 mm, 900 mm above head of window or glazed door	>4 m high, 8-12 m away
W15 L1	944	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 2700 mm, 600 mm above head of window or glazed door	>4 m high, 8-12 m away
W10 L1	600	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 100 mm above head of window or glazed door	>4 m high, 8-12 m away
W11 L1	600	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 100 mm above head of window or glazed door	>4 m high, 8-12 m away

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W12 L1	600	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 100 mm above head of window or glazed door	>4 m high, 8-12 m away
W13 L1	600	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 100 mm above head of window or glazed door	>4 m high, 8-12 m away
W14 L1	2100	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 300 mm, 300 mm above head of window or glazed door	>4 m high, 8-12 m away
W7 GF	600	1810	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 5000 mm, 700 mm above head of window or glazed door	not overshadowed
<b>South facing</b>					
W4 L1	2400	850	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
W6 L1	1100	850	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
<b>South-West facing</b>					
W5 GF	1370	610	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
W6 GF	1370	610	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
<b>West facing</b>					
W2 L1	600	1570	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
W16 L1	1030	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	none	not overshadowed
<b>North-West facing</b>					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W1 L1	944	2170	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 3700 mm, 500 mm above head of window or glazed door	not overshadowed
W1 GF	1370	2170	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 1800 mm, 600 mm above head of window or glazed door	not overshadowed
W2 GF	600	1810	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 950 mm, 550 mm above head of window or glazed door	not overshadowed
W3 GF	1370	1570	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 950 mm, 550 mm above head of window or glazed door	not overshadowed
W4 GF	1370	1570	U-value: 2.9, SHGC: 0.396 - 0.484 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	solid overhang 950 mm, 550 mm above head of window or glazed door	not overshadowed
D1 L1	2400	3224	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 3700 mm, 300 mm above head of window or glazed door	not overshadowed
D2 L1	2400	3224	U-value: 2.9, SHGC: 0.459 - 0.561 (aluminium: thermally broken, double (argon), Hi-Tsol Low-e/clear)	eave 3700 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: electric storage.	✓	✓	✓
<b>Cooling system</b>			
The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
<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: wood heater; Energy rating: n/a		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
The wood heater must have a compliance plate confirming that it complies with the relevant Australian standards, and must be installed in accordance with the requirements of all applicable regulatory authorities.			✓
<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:			
• at least 4 of the bedrooms / study;		✓	✓
• at least 2 of the living / dining rooms;		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <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>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 5 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 an induction cooktop & electric oven in the kitchen of the dwelling.			

## 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.