

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1264988S

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, 01 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	001_1162PR	
Street address	1162 Pittwater Road Collaroy 2097	
Local Government Area	Northern Beaches Council	
Plan type and plan number	deposited 302895	
Lot no.	B	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 63	Target 50




### Certificate Prepared by

Name / Company Name: Complete Thought PTY LTD

ABN (if applicable): 17651556142

# Description of project

Project address	
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Lot no.	B
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m <sup>2</sup> )	566
Roof area (m <sup>2</sup> )	205
Conditioned floor area (m2)	218.5
Unconditioned floor area (m2)	17.69
Total area of garden and lawn (m2)	188

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	 63	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 70 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 5 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 6 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 1500 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 175 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>the cold water tap that supplies each clothes washer 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 - concrete slab on ground, 141.4 square metres	1 (slab edge)	in-slab heating system
floor - above habitable rooms or mezzanine, 87.8 square metres, framed	nil	
floor - suspended floor above garage, framed	nil	
external wall - brick veneer	2.86 (or 3.40 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	3.00 (or 3.40 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - raked ceiling / pitched or skillion roof, framed	ceiling: 4.5 (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	1.50	aluminium, moulded plastic single clear	fixed awning or blind

Skylight no.	Maximum area (square metres)	Type	Shading device
S02	1.50	aluminium, moulded plastic single clear	fixed awning or blind

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North facing</b>					
DG.08	2600	820	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	solid overhang 515 mm, 3150 mm above head of window or glazed door	not overshadowed
DG.10	2100	810	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	1-2 m high, <1.5 m away
WG.03	2600	2080	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	solid overhang 515 mm, 3150 mm above head of window or glazed door	2-4 m high, 2 m away
W1.09	2000	3000	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 545 mm, 0 mm above head of window or glazed door	not overshadowed
W1.11	900	700	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	external louvre/vertical blind (fixed)	not overshadowed
W1.13	900	700	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	external louvre/vertical blind (fixed)	not overshadowed
WG.06	1500	600	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	none	>4 m high, 2-5 m away
<b>North-East facing</b>					
WR.04	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 mm above head of window or glazed door	not overshadowed
WR.05	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 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
WR.06	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 mm above head of window or glazed door	not overshadowed
<b>East facing</b>					
DG.06	2600	5822	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	awning (adjustable) 3000 mm, 2000 mm above base of window or glazed door	not overshadowed
WG.04	2600	500	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	none	>4 m high, 2-5 m away
WG.05	2600	500	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	none	>4 m high, 2-5 m away
DG.09	2600	1400	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	>4 m high, 2-5 m away
W1.02	720	511	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	2-4 m high, 2 m away
W1.04	1620	600	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	2-4 m high, 2 m away
W1.05	1550	450	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	not overshadowed
W1.06	1100	5822	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 1900 mm, 0 mm above head of window or glazed door	not overshadowed
W1.07	1620	600	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	not overshadowed
W1.10	1620	1270	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	none	2-4 m high, 2-5 m away

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W1.12	900	550	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	2-4 m high, 2 m away
D1.01	2050	5822	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	verandah 3650 mm, 2900 mm above base of window or glazed door	not overshadowed
<b>South-East facing</b>					
WR.01	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 mm above head of window or glazed door	not overshadowed
WR.02	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 mm above head of window or glazed door	not overshadowed
WR.03	630	1030	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 185 mm, 0 mm above head of window or glazed door	not overshadowed
<b>South facing</b>					
DG.04	2100	820	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	2-4 m high, 2 m away
DG.05	2100	820	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	2-4 m high, 2 m away
<b>West facing</b>					
WG.01	500	1100	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 7000 mm, 2100 mm above head of window or glazed door	not overshadowed
WG.02	1000	500	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	>4 m high, 2-5 m away
DG.07	2100	1400	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	>4 m high, 2-5 m away




Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W1.01	2100	960	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	external louvre/vertical blind (fixed)	not overshadowed
W1.03	500	511	U-value: 3.6, SHGC: 0.486 - 0.594 (aluminium: thermally broken, double (air), clear)	eave 800 mm, 0 mm above head of window or glazed door	2-4 m high, 2 m away
W1.08	910	910	U-value: 3.6, SHGC: 0.423 - 0.517 (aluminium: thermally broken, double (air), clear)	none	2-4 m high, 2-5 m away


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: ground source heat pump (closed loop) only. No other hot water systems must be installed.	✓	✓	✓
<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: ground source heat pump (closed loop); Energy rating: EER < 2.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ground source heat pump (closed loop); Energy rating: EER < 2.5		✓	✓
A certificate of specifications issued by the supplier or installer must be attached with the BASIX certificate. Information contained in the certificate must be consistent with ground source heat pump installed in the development.			✓
<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: heat pump hydronic system; Energy rating: n/a		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: heat pump hydronic system; Energy rating: n/a		✓	✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p>		<p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<b>Artificial lighting</b>			
<p>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:</p> <ul style="list-style-type: none"> <li>• at least 4 of the bedrooms / study;</li> <li>• at least 2 of the living / dining rooms;</li> </ul>		<p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p>


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 5 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 1 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 & electric oven in the kitchen of the dwelling.			
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.