

BASIX[®]Certificate

Building Sustainability Index www.basix.nsw.gov.au

Single Dwelling

Certificate number: 1740045S

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

Secretary

Date of issue: Friday, 15 March 2024

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



Project summary

Project name	11 The Lakes Way
Street address	11 THE LAKES WAY ELIZABETH BEACH 2428
Local Government Area	Mid-Coast Council
Plan type and plan number	Deposited Plan DP22434
Lot no.	219
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	3

Project score

Water	✓ 42	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 98	Target 70
Materials	✓ -30	Target n/a





Certificate Prepared by

Name / Company Name: K.L BARROW & R.J BARROW

ABN (if applicable): 33 518 201 874

Description of project

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Site details	
Site area (m ²)	570
Roof area (m ²)	263
Conditioned floor area (m ²)	163.0
Unconditioned floor area (m ²)	17.0
Total area of garden and lawn (m ²)	149
Roof area of the existing dwelling (m ²)	0

Assessor details and thermal loads		
Assessor number	n/a	
Certificate number	n/a	
Climate zone	n/a	
Area adjusted cooling load (MJ/ m².year)	n/a	
Area adjusted heating load (MJ/ m².year)	n/a	
Project score		
Water	 42	Target 40
Thermal Performance	 Pass	Target Pass
Energy	 98	Target 70
Materials	 -30	Target n/a

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
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 50 square metres of the site.	✓	✓	
Fixtures			
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.		✓	
Alternative water			
Rainwater tank			
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 263 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"> all toilets in the development the cold water tap that supplies each clothes washer in the development 		✓ ✓	✓ ✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> 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.) 		✓	✓
Swimming Pool			
The swimming pool must not have a volume greater than 25 kilolitres.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Do-it-yourself Method			
General features			
The dwelling must be a Class 1 dwelling according to the National Construction Code, and 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.	✓	✓	✓
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.	✓	✓	✓
The applicant must adopt one of the options listed in the tables below to address thermal bridging in metal framed floor(s), walls and ceiling/roof of the dwelling.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m ²	Additional insulation required	Options to address thermal bridging	Other specifications
floor - concrete slab on ground, conventional slab.	62	nil;not specified	nil	
floor - suspended floor above enclosed subfloor, particle board; frame: laminated veneer lumber (LVL).	113	2 (or 2.7 including construction) (down);polystyrene	nil	subfloor wall insulation: None
floor - suspended floor above garage, particle board; frame: laminated veneer lumber (LVL).	62	nil;polystyrene	nil	

Construction	Area - m ²	Additional insulation required	Options to address thermal bridging	Other specifications
garage floor - concrete slab on ground.	57	none	nil	
external wall: framed (fibre cement sheet or boards); frame: timber - H2 treated softwood.	135	3.00 (or 3.50 including construction);rockwool batts, roll or pump-in + reflective foil in the cavity	nil	wall colour: Dark (solar absorptance 0.71-0.85)
external wall: cavity brick; frame: timber - H2 treated softwood.	25	0.50 (or 1.20 including construction);rockwool batts, roll or pump-in + reflective foil in the cavity	nil	wall colour: Medium (solar absorptance 0.48-0.7)
external garage wall: concrete block/plasterboard; frame: timber - H2 treated softwood.	74	none	nil	
internal wall shared with garage: plasterboard; frame: timber - H2 treated softwood.	15	nil;rockwool batts, roll or pump-in	nil	
internal wall: plasterboard; frame: timber - H2 treated softwood.	98	none	nil	
ceiling and roof - raked ceiling / pitched or skillion roof, framed - metal roof, laminated veneer lumber (LVL).	263	ceiling: 5 (up), roof: foil backed blanket ;ceiling: rockwool batts, roll or pump-in; roof: foil backed blanket.	nil	roof colour: medium (solar absorptance 0.6-0.7); ceiling area fully insulated

Note	<ul style="list-style-type: none"> Insulation specified in this Certificate must be installed in accordance with the ABCB Housing Provisions (Part 13.2.2) of the National Construction Code.
Note	<ul style="list-style-type: none"> If the additional ceiling insulation listed in the table above is greater than R3.0, refer to the ABCB Housing Provisions (Part 13.2.3 (6)) of the National Construction Code.
Note	<ul style="list-style-type: none"> In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.
Note	<ul style="list-style-type: none"> Thermal breaks must be installed in metal framed walls and applicable roofs in accordance with the ABCB Housing Provisions of the National Construction Code.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Ceiling fans			
The applicant must install at least one ceiling fan in at least one daytime habitable space, such as living room.	✓	✓	✓
The applicant must install at least one ceiling fan in each bedroom.	✓	✓	✓
<ul style="list-style-type: none"> The minimum number and diameter of ceiling fans in a daytime habitable space must be installed in accordance with the ABCB Housing Provisions (Part 13.5.2) of the National Construction Code . 	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazed windows, doors and skylights			
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 glazed window and door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is 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"> The applicant must install windows and glazed doors in accordance with the height and width, frame and glazing types listed in the table. 	✓	✓	✓
<ul style="list-style-type: none"> Each window and glazed door must have a U- value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) within the range listed. Total system U values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. 		✓	✓
<ul style="list-style-type: none"> Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35. 	✓	✓	✓
<ul style="list-style-type: none"> 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 exceed the height of the battens. 	✓	✓	✓
<ul style="list-style-type: none"> 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. 	✓	✓	✓
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).	✓	✓	✓

Glazed window/door no.	Orientation	Maximum height (mm)	Maximum width (mm)	Frame and glass specification	Shading device (Dimension within 10%)	Overshadowing
13	N	1500.00	600.00	aluminium, double glazed (U-value: <=2.5, SHGC: 0.22 - 0.27)	eave 600 mm, 300 mm above head of window or glazed door	2-4 m high, 5-8 m away

Glazed window/door no.	Orientation	Maximum height (mm)	Maximum width (mm)	Frame and glass specification	Shading device (Dimension within 10%)	Overshadowing
14	N	1500.00	600.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.22 - 0.27)	eave 600 mm, 300 mm above head of window or glazed door	2-4 m high, 5-8 m away
17	N	2100.00	4000.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.60 - 0.74)	verandah 6400 mm, 3200 mm above base of window or glazed door	not overshadowed
19	N	400.00	1500.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
20	N	400.00	1500.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
21	N	400.00	1500.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
22	N	400.00	1500.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
23	N	400.00	1500.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.22 - 0.27)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
08	E	2100.00	1800.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 1200 mm above head of window or glazed door	not overshadowed
09	E	2100.00	800.00	aluminium, single glazed (U-value: ≤ 2.5 , SHGC: 0.40 - 0.49)	eave 600 mm, 1200 mm above head of window or glazed door	not overshadowed

Glazed window/door no.	Orientation	Maximum height (mm)	Maximum width (mm)	Frame and glass specification	Shading device (Dimension within 10%)	Overshadowing
10	E	600.00	1600.00	aluminium, single glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	eave 600 mm, 1800 mm above head of window or glazed door	not overshadowed
11	E	1000.00	2200.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.22 - 0.27)	eave 600 mm, 1200 mm above head of window or glazed door	not overshadowed
12	E	1000.00	2200.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.22 - 0.27)	eave 600 mm, 1200 mm above head of window or glazed door	not overshadowed
01	S	600.00	2200.00	aluminium, single glazed (U-value: ≤ 5 , SHGC: 0.40 - 0.49)	eave 600 mm, 3200 mm above head of window or glazed door	not overshadowed
02	S	600.00	1200.00	aluminium, single glazed (U-value: ≤ 5 , SHGC: 0.40 - 0.49)	eave 600 mm, 3200 mm above head of window or glazed door	not overshadowed
04	S	600.00	3000.00	aluminium, double glazed (U-value: ≤ 3 , SHGC: 0.40 - 0.49)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
05	S	1000.00	600.00	aluminium, double glazed (U-value: ≤ 5 , SHGC: 0.40 - 0.49)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
06	S	600.00	800.00	aluminium, single glazed (U-value: ≤ 5 , SHGC: 0.40 - 0.49)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
07	S	600.00	2200.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.22 - 0.27)	eave 600 mm, 200 mm above head of window or glazed door	not overshadowed
15	W	2300.00	4000.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.33 - 0.40)	verandah 5000 mm, 3200 mm above base of window or glazed door	not overshadowed


Glazed window/door no.	Orientation	Maximum height (mm)	Maximum width (mm)	Frame and glass specification	Shading device (Dimension within 10%)	Overshadowing
18	W	1500.00	2400.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.40 - 0.49)	pergola (fixed battens) 900 mm, 200 mm above head of window or glazed door	not overshadowed
16	NW	2300.00	700.00	aluminium, double glazed (U-value: ≤ 2.5 , SHGC: 0.40 - 0.49)	verandah 4000 mm, 3200 mm above base of window or glazed door	not overshadowed


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: electric storage.	✓	✓	✓
Cooling system			
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.		✓	✓
Heating system			
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.			✓
Ventilation			
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: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓ ✓ ✓	✓ ✓ ✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
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.	✓	✓	✓
Swimming pool			
The development must not incorporate any heating system for the swimming pool.		✓	
The applicant must install a pump for the swimming pool in the development.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of: <ul style="list-style-type: none"> • photovoltaic collectors with the capacity to generate at least 7 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing north 	✓	✓	✓
Other			
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.