BASIX® Certificate

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

Single Dwelling

Certificate number: 1737642S

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: Tuesday, 27 February 2024
To be valid, this certificate must be lodged within 3 months of the date of issue.

Project summary	
Project name	51 Beech Street EVANS HEAD
Street address	51 BEECH Street EVANS HEAD 2473
Local Government Area	Richmond Valley Council
Plan type and plan number	Deposited Plan DP758403
Lot no.	10
Section no.	33
Project type	dwelling house (detached) - secondary dwelling
No. of bedrooms	4

Project score		
Water	✔ 41	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 76	Target 69
Materials	✔ -15	Target n/a

Senica consultancy group

For any required changes to this BASIX certificate
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Certificate Prepared by
Name / Company Name: SENICA CONSULTANCY GROUP PTY LIMITED
ABN (if applicable): 48612864249

Description of project

Project address	
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Site details	
Site area (m²)	800
Roof area (m²)	140
Conditioned floor area (m²)	171.4
Unconditioned floor area (m²)	13.8
Total area of garden and lawn (m²)	80
Roof area of the existing dwelling (m²)	110
Number of bedrooms in the existing dwelling	3

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	✔	41	Target 40
Thermal Performance	✔	Pass	Target Pass
Energy	✔	76	Target 69
Materials	✔	-15	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
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 6 but <= 7.5 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 5 star in the kitchen in the development.		✔	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✔	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2000 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 80 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:			
• all toilets in the development		✔	✔
• 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.)		✔	✔
• a tap that is located within 10 metres of the swimming pool in the development		✔	✔
Swimming Pool			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must not have a volume greater than 18 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 - m²	Additional insulation required	Options to address thermal bridging	Other specifications
floor - concrete slab on ground, conventional slab.	98	nil;not specified	nil	
floor - above habitable rooms or mezzanine, particle board; frame: timber - H2 treated softwood..	59.1	nil;none	nil	
floor - suspended floor above garage, particle board; frame: timber - H2 treated softwood.	28.1	nil;none	nil	

Construction	Area - m²	Additional insulation required	Options to address thermal bridging	Other specifications
garage floor - concrete slab on ground.	36	none	nil	
external wall: brick veneer; frame: timber - H2 treated softwood.	97.35	1.64 (or 2.20 including construction);fibreglass batts or roll + reflective foil in the cavity	nil	wall colour: Medium (solar absorptance 0.48-0.7)
external wall: framed (fibre cement sheet or boards); frame: timber - H2 treated softwood.	95.3	1.70 (or 2.20 including construction);fibreglass batts or roll + reflective foil in the cavity	nil	wall colour: Medium (solar absorptance 0.48-0.7)
external garage wall: brick veneer; frame: timber - H2 treated softwood.	33.35	none + reflective foil in the cavity	nil	
internal wall shared with garage: plasterboard; frame: timber - H2 treated softwood.	31	nil;none	nil	
internal wall: plasterboard; frame: timber - H2 treated softwood.	152.3	none	nil	
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, timber - H2 treated softwood.	139.5	ceiling: 3 (down), roof: foil/ sarking ;ceiling: fibreglass batts or roll; roof: foil/sarking.	nil	roof space ventilation: unventilated; roof colour: medium (solar absorptance 0.48-0.59); 0.5 to $\leq$ 1.0% of ceiling area uninsulated

Note	• 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	• 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	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.
Note	• 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.	✔	✔	✔
• 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:	✔	✔	✔
• The applicant must install windows and glazed doors in accordance with the height and width, frame and glazing types listed in the table.	✔	✔	✔
• 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.		✔	✔
• 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
1021SW	NE	1000.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 500 mm above head of window or glazed door	not overshadowed
2142SD	NE	2100.00	4200.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 4450 mm, 950 mm above head of window or glazed door	not overshadowed
1806DH	NE	1800.00	600.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 4450 mm, 550 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
0924SW	NE	900.00	2400.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1809DH	SE	1800.00	900.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1809DH	SE	1800.00	900.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1209DH	SE	1200.00	900.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 400 mm, 650 mm above head of window or glazed door	not overshadowed
1209DH	SE	1200.00	900.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 400 mm, 650 mm above head of window or glazed door	not overshadowed
2X12.450AW	SE	900.00	1200.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1209DH	SE	1200.00	900.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1206DH	SE	1200.00	600.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1206DH	SE	1200.00	600.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1206DH	SE	1200.00	600.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1015SW	SW	1000.00	1500.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 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
0621SW	SW	600.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
0621SW	SW	600.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
0906SW	NW	900.00	600.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1221SW	NW	1200.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1221SW	NW	1200.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1221SW	NW	1200.00	2100.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 400 mm above head of window or glazed door	not overshadowed
1024SW	NW	1000.00	2400.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1024SW	NW	1000.00	2400.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head of window or glazed door	not overshadowed
1024SW	NW	1000.00	2400.00	aluminium, single glazed (U-value: <=7, SHGC: 0.74 - 0.90)	eave 750 mm, 200 mm above head 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 heat pump with a performance of 21 to 25 STCs or better.	✔	✔	✔
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; Energy rating: 5 star (average zone)		✔	✔
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: 5 star (average zone)		✔	✔
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; Energy rating: 5 star (average zone)		✔	✔
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: 5 star (average zone)		✔	✔
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: natural ventilation only, or no laundry; Operation control: n/a		✔	✔
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			
The applicant must install a window and/or skylight in the kitchen of the dwelling for 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 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 the following pump for the swimming pool in the development, or a pump with a higher energy rating: multi-speed with a performance of 4 stars.		✔	
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 photovolatic system must consist of: • photovolatic collectors with the capacity to generate at least 1.5 peak kilowatts of electricity, installed at an angle between 10 degrees and 25 degrees to the horizontal facing north west	✔	✔	✔
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.