BASIX® Report

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

Project summary	
Project name	MAIN HOUSE
Street address	118 HARCOURT CLOSE SUTTON 2620
Local Government Area	Yass Valley Council
Plan type and plan number	Deposited Plan
Lot no.	63
Section no.	-
Project type	dwelling house (detached)
No. of bedrooms	5

Project score		
Water	91	Target 40
Thermal Performance	Pass	Target Pass
Energy	100	Target 63
Materials	-78	Target n/a

Description of project

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Site details	
Site area (m²)	13086
Roof area (m²)	338
Conditioned floor area (m²)	298.0
Unconditioned floor area (m²)	39.54
Total area of garden and lawn (m²)	333
Roof area of the existing dwelling (m²)	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	91	Target 40
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Energy	100	Target 63
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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 333 square metres of the site.	✔	✔	
Fixtures			
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 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 100000 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 333 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		✔	✔
• 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
• 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.)		✔	✔
• all hot water systems in the development		✔	✔
• all indoor cold water taps (not including taps that supply clothes washers) in the development		✔	✔
• a tap that is located within 10 metres of the swimming pool in the development		✔	✔
Swimming Pool			
The swimming pool must not have a volume greater than 60 kilolitres.	✔	✔	
The swimming pool must have a pool cover.		✔	
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, waffle pod slab.	337.54	nil;not specified	nil	
external wall: brick veneer; frame: light steel frame.	44	3.44 (or 4.00 including construction) with one of the measures to address thermal bridging;fibreglass batts or roll + reflective foil in the cavity	• Install reflective foil outside the frame to create a minimum 20 mm reflective airspace between frame and veneer, or • Install continuous insulation layer with at least R0.3 on the inside or outside of the frame	wall colour: Medium (solar absorptance 0.48-0.7)

Construction	Area - m²	Additional insulation required	Options to address thermal bridging	Other specifications
external wall: framed (fibre cement sheet or boards); frame: light steel frame.	33	3.50 (or 4.00 including construction) with one of the measures to address thermal bridging;fibreglass batts or roll + reflective foil in the cavity	• Install reflective foil outside the frame to create a minimum 20 mm reflective airspace between frame and veneer, or • Install continuous insulation layer with at least R0.3 on the inside or outside of the frame	wall colour: Medium (solar absorptance 0.48-0.7)
internal wall: plasterboard; frame: light steel frame.	44	fibreglass batts or roll	nil	
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, light steel frame.	300	ceiling: 5.5 (up), roof: foil backed blanket with one of the measures to address thermal bridging;ceiling: fibreglass batts or roll; roof: foil backed blanket.	• Install additional R0.5 (up) (or R6 (up) including the additional insulation), or • Install continuous ceiling insulation layer with at least R0.13 above or below the ceiling joists or the bottom chords of the trusses, or • Install two layers of insulation immediately on top of each other, with the top layer of at least R0.5 oriented to cover the ceiling joists or bottom chords of the trusses	roof space ventilation: unventilated; roof colour: medium (solar absorptance 0.6-0.7); ceiling area fully insulated
ceiling and roof - raked ceiling / pitched or skillion roof, framed - metal roof, light steel frame.	37.54	ceiling: 5.5 (up), roof: foil backed blanket with the measure to address thermal bridging;ceiling: fibreglass batts or roll; roof: foil backed blanket.	• Install continuous insulation layer with at least R0.6 above or below the roof frame members	roof colour: medium (solar absorptance 0.6-0.7); ceiling area fully insulated

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
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
W01	N	2400.00	3000.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W02	N	2400.00	3000.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W03	N	2400.00	6000.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 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
W04	N	2400.00	820.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 5000 mm, 400 mm above head of window or glazed door	2-4 m high, 2-5 m away
W05	N	2400.00	1500.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W06	N	2400.00	4200.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W07	E	2400.00	400.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W08	E	2400.00	400.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W09	E	2100.00	1200.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W10	E	2100.00	1200.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W11	E	2100.00	400.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W12	E	2100.00	400.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W13	S	2400.00	820.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W14	S	2100.00	1800.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 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
W15	S	2100.00	1800.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W16	S	600.00	1500.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W17	S	2100.00	1800.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W18	W	2100.00	600.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W19	W	2100.00	2100.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W20	W	2100.00	900.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W21	W	2400.00	4000.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 5000 mm, 400 mm above head of window or glazed door	2-4 m high, 2-5 m away
W22	W	2400.00	1500.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
W23	W	2400.00	1500.00	aluminium, double glazed (U-value: <=3.5, SHGC: >0.6)	eave 450 mm, 400 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 boosted solar with a performance of 31 to 35 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: 3-phase airconditioning; Energy rating: EER > 4.0		✔	✔
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 > 4.0		✔	✔
Heating system			
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 > 4.0		✔	✔
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 > 4.0		✔	✔
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			
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 5 bathroom(s)/toilet(s) in the development for natural lighting.	✔	✔	✔
Swimming pool			
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 (electric boosted)		✔	
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 5 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 25 peak kilowatts of electricity, installed at an angle between 10 degrees and 25 degrees to the horizontal facing north	✔	✔	✔
Other			
The applicant must install an induction 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.