

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 608571S

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 18/09/2014 published by Planning & Infrastructure. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 12 February 2015

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



Project summary		
Project name	DS/22 Medinah Avenue, LUDDENHAM NSW 2745	
Street address	22 Medinah Avenue Luddenham 2745	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 270417	
Lot no.	236	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	5	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 40	Target 40

Certificate Prepared by

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ABN (if applicable): 68011730976

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Site details

Site area (m ²)	4303
Roof area (m ²)	520
Conditioned floor area (m ²)	577
Unconditioned floor area (m ²)	16
Total area of garden and lawn (m ²)	250

Assessor details and thermal loads

Assessor number	n/a
Certificate number	n/a
Climate zone	n/a
Area adjusted cooling load (MJ/m ² .year)	n/a
Area adjusted heating load (MJ/m ² .year)	n/a

Other

none	n/a
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Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 40	Target 40

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
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 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 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.		✓	
Rainwater tank			
The applicant must install a rainwater tank of at least 4000 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 300 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 • 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.) 		✓ ✓ ✓	✓ ✓ ✓
The swimming pool must not have a volume greater than 45 kilolitres.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Comfort Commitments

Show on
DA plans

Show on CC/CDC
plans & specs

Certifier
check

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	nil	
floor - suspended floor above garage, framed	0.3 (or 1 including construction) (down)	
external wall - AAC veneer (AAC: 75mm)	1.39 (or 2.20 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	1.80 (or 2.20 including construction)	
external wall - brick veneer	1.66 (or 2.20 including construction)	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 3 (up), roof: foil/sarking	unventilated; medium (solar absorptance 0.475-0.70)

Note Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
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) and up to 2 windows/glazed doors (<0.7 square metres) which are 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"> Except where the glass is 'single clear' or 'single toned', each window and glazed door must have a U-value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) +/-10% of that 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"> The leading edge of each eave, pergola, verandah, balcony or awning must be no more than 500 millimetres above the head of the window or glazed door, except that a projection greater than 500 mm and up to 1500 mm above the head must be twice the value in the table. 	✓	✓	✓
<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 be more than 50 mm. 		✓	✓

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W1, W23, W24, W25, W26, W28	N	13.05	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	none	not overshadowed
W2,W7,W9,W31,W32	E	12.40	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	none	not overshadowed
W3	E	7.73	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/pergola/balcony 901-1,200 mm	not overshadowed
W4,W5,W6,W29	E	13.80	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/pergola/balcony >2,000 mm	not overshadowed
W8,W10,W11,W12,W13	S	15.70	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	none	not overshadowed
W14, W22, W27, W43, W44, W45, W47	W	22.80	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	none	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W15	N	12.72	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/ pergola/balcony >2,000 mm	not overshadowed
W16, W17, W18, W19, W42, W46	W	35.90	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/ pergola/balcony >2,000 mm	not overshadowed
W20,W21	S	15.84	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/ pergola/balcony >2,000 mm	not overshadowed
W33,W48,W49,W50	N	9.00	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/ pergola/balcony 451-600 mm	not overshadowed
W34,W35,W36,W37,W38	E	22.00	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/ pergola/balcony 450 mm	not overshadowed
W39,W40,W41	S	4.21	standard aluminium, single pyrolytic low-e (U-value:5.7, SHGC:0.47)	eave/verandah/ pergola/balcony 451-600 mm	not overshadowed

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 5.5 stars.	✓	✓	✓
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 2.5 - 3.0		✓	✓
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 2.5 - 3.0		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
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 2.5 - 3.0		✓	✓
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 2.5 - 3.0		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Laundry: natural ventilation only, or no laundry; Operation control: n/a</p>		<p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p>
<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"> at least 6 of the bedrooms / study; dedicated 		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> • at least 5 of the living / dining rooms; dedicated • the kitchen; dedicated • all bathrooms/toilets; dedicated • the laundry; dedicated • all hallways; dedicated 		✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
The applicant must install a window and/or skylight in 5 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
The development must not incorporate any heating system for the swimming pool.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
The applicant must install a photovoltaic system with the capacity to generate at least 2 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
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.		✓	

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.