

# BASIX® Certificate

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

## Single Dwelling

Certificate number: 619462S

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](http://www.basix.nsw.gov.au)

Director-General

Date of issue: Tuesday, 24 March 2015

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



### Project summary

Project name	Michael - ref 1601	
Street address	9-13 garswood Road glenmore park 2745	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 1150762	
Lot no.	4210	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 41	Target 40

### Certificate Prepared by

Name / Company Name: Distinct Innovations Pty Ltd

ABN (if applicable): 62135759796

# Description of project

Project address	
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Plan type and plan number	Deposited Plan 1150762
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Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m <sup>2</sup> )	8575
Roof area (m <sup>2</sup> )	667
Conditioned floor area (m <sup>2</sup> )	461
Unconditioned floor area (m <sup>2</sup> )	63
Total area of garden and lawn (m <sup>2</sup> )	400

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	
Other		
none	n/a	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 41	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
<b>Fixtures</b>			
The applicant must install showerheads with a minimum rating of 3 star (> 6 but <= 7.5 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 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.		✓	
<b>Alternative water</b>			
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 600 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>all toilets in the development</li> <li>a tap that is located within 10 metres of the swimming pool in the development</li> </ul>		✓	✓
Private dam			
The applicant must connect the development to a private dam with a surface area no greater than 200 square metres, and a volume of at least 200 cubic metres. The connection must meet the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the dam to collect runoff from: <ul style="list-style-type: none"> <li>at least 1000 square metres of pervious catchment area</li> </ul>		✓	✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<p>The applicant must connect the dam to:</p> <ul style="list-style-type: none"> <li>at least one outdoor tap in the development (Note: NSWHealth does not recommend that private dam water be used to irrigate edible plants which are consumed raw.)</li> </ul>		✓	✓
<b>Swimming pool</b>			
The swimming pool must not have a volume greater than 95 kilolitres.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<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	nil	
external wall - external insulated façade system (EIFS) (façade panel:75mm)	nil	
internal wall shared with garage - plasterboard	nil	
ceiling and roof - flat ceiling / flat roof, framed	ceiling: 2.08 (up), roof: foil backed blanket (55mm)	framed; 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
<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) 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"> <li>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.</li> <li>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.</li> <li>Pergolas with polycarbonate roof or similar translucent material must have a shading coefficient of less than 0.35.</li> <li>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.</li> </ul>	✓	✓	✓
The applicant must install the skylights described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓
The following requirements must also be satisfied in relation to each skylight:		✓	✓
<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
S1	0.72	timber, double clear/air fill	adjustable awning or blind

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W18,23,24,25,30	N	20.16	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed

Window/glazed door no.	Orientation	Maximum area (square metres)	Type	Shading	Overshadowing
W20,22	N	24.24	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/pergola/balcony >2,000 mm	not overshadowed
W1,2,3,6,8,9,10,11	S	29.19	improved aluminium, single clear (U-value:6.44, SHGC:0.75)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W4,5	S	11.34	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/pergola/balcony 1,201-1,500 mm	not overshadowed
W7,12.13.14.15.16.17	E	14.58	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W19,26,27,28,29,30	W	14.64	improved aluminium, single pyrolytic low-e (U-value:4.48, SHGC:0.46)	eave/verandah/pergola/balcony 450 mm	not overshadowed
W21	W	9.12	improved aluminium, double clear (U-value:4.12, SHGC:0.66)	eave/verandah/pergola/balcony 1,500-2,000 mm	not overshadowed

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: gas storage with a performance of 4 stars.	✓	✓	✓
<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: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
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 3.0 - 3.5		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<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: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
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 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
<b>Ventilation</b>			
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		✓	✓
<b>Artificial lighting</b>			
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:			
• at least 5 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"> <li>• at least 2 of the living / dining rooms; dedicated</li> <li>• the kitchen; dedicated</li> <li>• all bathrooms/toilets; dedicated</li> <li>• the laundry; dedicated</li> <li>• all hallways; dedicated</li> </ul>		✓	✓
		✓	✓
		✓	✓
		✓	✓
		✓	✓
Natural lighting			
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 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 only		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 2.6 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
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.