

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 1352255S

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

Secretary

Date of issue: Tuesday, 01 November 2022

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



Planning,  
Industry &  
Environment

Project summary		
Project name	New Dwelling for farm house	
Street address	120 Rissler Road Stubbo 2852	
Local Government Area	Mid-Western Regional Council	
Plan type and plan number	deposited DP119409	
Lot no.	62	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✔ 78	Target 30
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 93	Target 45

### Certificate Prepared by

Name / Company Name: Lee Sparks

ABN (if applicable): N/A

# Description of project

## Project address

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## Site details

Site area (m <sup>2</sup> )	231
Roof area (m <sup>2</sup> )	141
Conditioned floor area (m2)	231.0
Unconditioned floor area (m2)	0.0
Total area of garden and lawn (m2)	100

## 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
Ceiling fan in at least one bedroom	n/a
Ceiling fan in at least one living room or other conditioned area	n/a

## Project score

Water	 78	Target 30
Thermal Comfort	 Pass	Target Pass
Energy	 93	Target 45

## 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 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 6 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 6 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 6 star in each bathroom in the development.		✓	
<b>Alternative water</b>			
<b>Rainwater tank</b>			
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 141 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>• the cold water tap that supplies each clothes washer in the development</li> <li>• all hot water systems in the development</li> <li>• all indoor cold water taps (not including taps that supply clothes washers) in the development</li> </ul>		✓ ✓ ✓ ✓	✓ ✓ ✓ ✓
<b>Private dam</b>			
The applicant must connect the development to a private dam with a surface area no greater than 500 square metres, and a volume of at least 800 cubic metres. The connection must meet the requirements of all applicable regulatory authorities.	✓	✓	✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The applicant must configure the dam to collect runoff from: <ul style="list-style-type: none"> <li>at least 10000 square metres of pervious catchment area</li> </ul>		✓	✓
The applicant must connect the dam to: <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>		✓	✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>General features</b>			
The dwelling 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.	✓	✓	✓
<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	1 (slab edge)	in-slab heating system
external wall - cavity brick	1.00 (or 1.67 including construction)	
external wall - framed (weatherboard, fibre cement, metal clad)	3.20 (or 3.60 including construction)	
internal wall shared with garage - cavity brick wall	nil	
ceiling and roof - flat ceiling / pitched roof	ceiling: 2.2 (up), roof: foil backed blanket (100 mm)	2 wind-driven ventilator(s) + eave vents; light (solar absorptance < 0.475)

Note	<ul style="list-style-type: none"> <li>Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.</li> </ul>
Note	<ul style="list-style-type: none"> <li>In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.</li> </ul>

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) 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"> <li>For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> <li>- Aluminium single clear</li> <li>- Aluminium double (air) clear</li> <li>- Timber/uPVC/fibreglass single clear</li> <li>- Timber/uPVC/fibreglass double (air) clear</li> </ul> </li> <li>For other glass or frame types, each window and glazed door must be accompanied with certification showing a U value no greater than that listed and a Solar Heat Gain Coefficient (SHGC) within the range of those listed. Total system U values and SHGC must be calculated in accordance with National Fenestration Rating Council (NFRC) conditions. Frame and glass types shown in the table below are for reference only.</li> <li>Vertical external louvres and blinds must fully shade the window or glazed door beside which they are situated when fully drawn or closed.</li> <li>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.</li> </ul>	✓	✓	✓ ✓ ✓
	✓	✓	✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
<b>North facing</b>					
W01	1050	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W02	1050	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
SD2	2250	2850	U-value: 3.6, SHGC: 0.270 - 0.330 (aluminium: thermally broken, double (air), tint)	solid overhang 2000 mm, 100 mm above head of window or glazed door	1-2 m high, <1.5 m away
SD3	2250	2850	U-value: 3.6, SHGC: 0.270 - 0.330 (aluminium: thermally broken, double (air), tint)	solid overhang 2000 mm, 100 mm above head of window or glazed door	1-2 m high, <1.5 m away
W05	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W06	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W07	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W08	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W09	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W10	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
<b>East facing</b>					
W11	1650	880	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W12	2250	880	U-value: 3.6, SHGC: 0.270 - 0.330 (aluminium: thermally broken, double (air), tint)	external louvre/vertical blind (adjustable)	not overshadowed
HD1	2250	920	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
<b>South facing</b>					

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
W14	600	2850	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W15	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W16	1650	1500	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
W17	900	600	U-value: 3.6, SHGC: 0.207 - 0.253 (aluminium: thermally broken, double (air), tint)	eave 600 mm, 50 mm above head of window or glazed door	not overshadowed
<b>West facing</b>					
W19	1650	1340	U-value: 3.6, SHGC: 0.270 - 0.330 (aluminium: thermally broken, double (air), tint)	external louvre/vertical blind (adjustable)	not overshadowed
W20	1050	720	U-value: 3.6, SHGC: 0.270 - 0.330 (aluminium: thermally broken, double (air), tint)	eave 800 mm, 50 mm above head of window or glazed door	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: solar (gas boosted, flat plate) with a performance of 41 to 45 STCs or better.	✓	✓	✓
<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: 1-phase airconditioning; Energy rating: 9 star (cold zone)		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: airconditioning ducting only; Energy rating: n/a		✓	✓
<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: wood heater; Energy rating: n/a		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: airconditioning ducting only; Energy rating: n/a		✓	✓
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.			✓
<b>Ventilation</b>			
<p>The applicant must install the following exhaust systems in the development:</p> <p>At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual on / timer off</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual on / timer off</p> <p>Laundry: individual fan, ducted to façade or roof; Operation control: manual on / timer off</p>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Artificial lighting</b>			
<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"> <li>• at least 4 of the bedrooms / study; dedicated</li> <li>• at least 2 of the living / dining rooms; dedicated</li> </ul>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> <li>the kitchen; dedicated</li> <li>all bathrooms/toilets; dedicated</li> <li>the laundry; dedicated</li> <li>all hallways; dedicated</li> </ul>		<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>	<p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p> <p style="text-align: center;">✓</p>
<b>Natural lighting</b>			
The applicant must install a window and/or skylight in 3 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 10 peak kilowatts of electricity as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
<b>Other</b>			
The applicant must install a gas cooktop & gas 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.