

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 949207S_03

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 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 949207S_02 lodged with the consent authority or certifier on 19 November 2018 with application DA-866/2018.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Monday, 25 February 2019

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



Project summary

Project name	Abraham Main_03
Street address	46 Goonaroi Street villawood 2163
Local Government Area	Canterbury-Bankstown Council
Plan type and plan number	deposited dp 36608
Lot no.	830
Section no.	-
Project type	separate dwelling house
No. of bedrooms	5

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 52	Target 50

Certificate Prepared by

Name / Company Name: A. Boulos

ABN (if applicable): 44770966495

Description of project

Project address

Project name	Abraham Main_03
Street address	46 Goonaroi Street villawood 2163
Local Government Area	Canterbury-Bankstown Council
Plan type and plan number	Deposited Plan dp 36608
Lot no.	830
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	5




Site details

Site area (m ²)	550
Roof area (m ²)	329
Conditioned floor area (m2)	243.0
Unconditioned floor area (m2)	30.0
Total area of garden and lawn (m2)	110

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

Project score

Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 52	Target 50

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 3 square metres of the site.	✓	✓	
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 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.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2500 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 85 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.) 		✓ ✓ ✓	✓ ✓ ✓
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 48 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be shaded.	✓	✓	
The swimming pool must be indoors.	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
General features			
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.	✓	✓	✓
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.	✓	✓	✓

Construction	Additional insulation required (R-Value)	Other specifications
floor - concrete slab on ground	nil	
external wall - cavity brick	0.50 (or 1.17 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
external wall - cavity brick	0.50 (or 1.17 including construction)	
ceiling and roof - flat ceiling / pitched roof	ceiling: 3.5 (up), roof: foil/sarking	unventilated; dark (solar absorptance > 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.
Note	• In some climate zones, insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Windows, glazed 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 window and glazed door.	✓	✓	✓
The dwelling may have 1 skylight (<0.7 square metres) which is not listed in the table.	✓	✓	✓
<p>The following requirements must also be satisfied in relation to each window and glazed door:</p> <ul style="list-style-type: none"> For the following glass and frame types, the certifier check can be performed by visual inspection. <ul style="list-style-type: none"> - Aluminium single clear - Aluminium double (air) clear - Timber/uPVC/fibreglass single clear - Timber/uPVC/fibreglass double (air) clear 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. 	✓	✓	<ul style="list-style-type: none"> ✓ ✓

Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
North facing					
WG15	850	1200	aluminium, single, clear	none	not overshadowed
WG16	850	600	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 450 mm, 400 mm above head of window or glazed door	not overshadowed
WG17	600	2170	aluminium, single, clear	none	not overshadowed
WG18	1200	2170	aluminium, single, clear	none	not overshadowed
WF09	850	600	aluminium, single, clear	eave 450 mm, 0 mm above head of window or glazed door	not overshadowed
WF10	850	600	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 450 mm, 0 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
WF11	850	2170	aluminium, single, clear	eave 450 mm, 0 mm above head of window or glazed door	not overshadowed
North-East facing					
WG02	1450	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WG01	1450	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
East facing					
WG03	1450	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WG06	1200	2770	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WF02	1200	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WF03	1200	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WF04	1200	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WF01	1450	2000	aluminium, single, clear	eave 1000 mm, 300 mm above head of window or glazed door	not overshadowed
WG09	2340	4400	aluminium, single, clear	verandah 9500 mm, 3000 mm above base of window or glazed door	not overshadowed
South-East facing					
WG05	1450	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
WG04	1450	600	aluminium, single, clear	eave 450 mm, 300 mm above head of window or glazed door	not overshadowed
South facing					
WG07	2340	1400	aluminium, single, clear	verandah 5000 mm, 600 mm above base of window or glazed door	not overshadowed


Window/glazed door no.	Maximum height (mm)	Maximum width (mm)	Type	Shading Device (Dimension within 10%)	Overshadowing
WG08	850	1810	aluminium, single, clear	verandah 5000 mm, 600 mm above base of window or glazed door	not overshadowed
WF05	850	600	aluminium, single, clear	eave 1050 mm, 0 mm above head of window or glazed door	not overshadowed
WF12	1450	1800	aluminium, single, clear	eave 450 mm, 0 mm above head of window or glazed door	not overshadowed
WG13	1200	1800	aluminium, single, clear	verandah 9000 mm, 3000 mm above base of window or glazed door	not overshadowed
West facing					
WG10	1450	1800	aluminium, single, clear	verandah 4400 mm, 2800 mm above base of window or glazed door	not overshadowed
WG11	2340	2400	aluminium, single, clear	verandah 4400 mm, 2800 mm above base of window or glazed door	not overshadowed
WG12	1200	2400	aluminium, single, clear	verandah 4400 mm, 2800 mm above base of window or glazed door	not overshadowed
WG14	1200	1200	aluminium, single, clear	eave 1450 mm, 600 mm above head of window or glazed door	not overshadowed
WF06	850	2170	aluminium, single, clear	eave 450 mm, 0 mm above head of window or glazed door	not overshadowed
WF07	850	2170	aluminium, single, clear	eave 450 mm, 0 mm above head of window or glazed door	not overshadowed
WF08	850	1800	U-value: 6.6, SHGC: 0.441 - 0.539 (aluminium, single, tint)	eave 450 mm, 0 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: gas instantaneous with a performance of 5 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: airconditioning ducting only; Energy rating: n/a		✓	✓
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		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: airconditioning ducting only; 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		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, not ducted; 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 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 4 of the bedrooms / study; dedicated		✓	✓
• at least 2 of the living / dining rooms; dedicated		✓	✓
• the kitchen; dedicated		✓	✓


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> all bathrooms/toilets; dedicated 		✓	✓
<ul style="list-style-type: none"> the laundry; dedicated 		✓	✓
<ul style="list-style-type: none"> all hallways; dedicated 		✓	✓
Natural lighting			
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 (gas boosted)		✓	
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 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.		✓	

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.