

# BASIX<sup>®</sup>Certificate

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

## Single Dwelling

Certificate number: 675020S\_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](http://www.basix.nsw.gov.au)

This certificate is a revision of certificate number 675020S lodged with the consent authority or certifier on 17 November 2015 with application 269/2015.

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: Saturday, 26 May 2018

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



Project summary		
Project name	77 Bower Street, Manly_03	
Street address	77 Bower Street Manly 2095	
Local Government Area	Manly Council	
Plan type and plan number	deposited 8075	
Lot no.	74	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	5	
Project score		
Water	✓ 43	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 86	Target 40

### Certificate Prepared by

Name / Company Name: GRS Building Reports

ABN (if applicable): 33 077 900 497

# Description of project

Project address	
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Street address	77 Bower Street Manly 2095
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Plan type and plan number	Deposited Plan 8075
Lot no.	74
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	5
Site details	
Site area (m <sup>2</sup> )	699
Roof area (m <sup>2</sup> )	214
Conditioned floor area (m2)	513.0
Unconditioned floor area (m2)	76.0
Total area of garden and lawn (m2)	210

Assessor details and thermal loads		
Assessor number	BDAV/12/1473	
Certificate number	0001692474-01	
Climate zone	56	
Area adjusted cooling load (MJ/m <sup>2</sup> .year)	21	
Area adjusted heating load (MJ/m <sup>2</sup> .year)	50	
Other		
none	n/a	
Project score		
Water	 43	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 86	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>Landscape</b>			
The applicant must plant indigenous or low water use species of vegetation throughout 100 square metres of the site.	✓	✓	
<b>Fixtures</b>			
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 5 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>			
<b>Stormwater tank</b>			
The applicant must install a stormwater tank with a capacity of at least 5000 litres on the site. This stormwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the stormwater tank to collect runoff from: <ul style="list-style-type: none"> <li>at least 210 square metres of roof area of the development (excluding the area of the roof which drains to any rainwater tank or private dam)</li> </ul>		✓	✓
The applicant must connect the stormwater tank to: <ul style="list-style-type: none"> <li>all toilets in the development</li> <li>a sub-surface or non-aerosol irrigation system, or if the stormwater has been appropriately treated in accordance with applicable regulatory requirements, to at least one outdoor tap in the development (Note: NSWHealth does not recommend that stormwater be used to irrigate edible plants which are consumed raw.)</li> </ul>		✓ ✓	✓ ✓
<b>Swimming pool</b>			

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
The swimming pool must not have a volume greater than 47 kilolitres.	✓	✓	
The swimming pool must have a pool cover.		✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<b>Simulation Method</b>			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
Where there is an in-slab heating or cooling system, the applicant must install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab, and underneath the slab if it is a suspended floor.	✓	✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Floor and wall construction	Area
floor - concrete slab on ground	236.0 square metres
floor - suspended floor/enclosed subfloor	46.0 square metres

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) with a performance of 31 to 35 RECs 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: 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans + 3-phase airconditioning; Energy rating: EER 3.5 - 4.0		✓	✓
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: gas hydronic system; 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: gas hydronic system; Energy rating: n/a		✓	✓
<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 switch on/off</p> <p>Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off</p> <p>Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/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 5 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>		   	   
<b>Natural lighting</b>			
The applicant must install a window and/or skylight in 4 bathroom(s)/toilet(s) in the development for natural lighting.			
<b>Swimming pool</b>			
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.			
<b>Alternative energy</b>			
The applicant must install a photovoltaic system with the capacity to generate at least 5.5 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 & 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.