

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 995326S_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

Secretary

Date of issue: Thursday, 03 October 2019

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



Project summary		
Project name	28 Seaview Avenue_03	
Street address	Seaview Avenue Curl Curl 2096	
Local Government Area	Northern Beaches Council	
Plan type and plan number	deposited 14366	
Lot no.	16	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	4	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 53	Target 50




Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

Description of project

Project address	
Project name	28 Seaview Avenue_03
Street address	n/a Seaview Avenue Curl Curl 2096
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan 14366
Lot no.	16
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m ²)	506
Roof area (m ²)	253
Conditioned floor area (m2)	280.0
Unconditioned floor area (m2)	40.0
Total area of garden and lawn (m2)	182

Assessor details and thermal loads		
Assessor number	BDAV/12/1473	
Certificate number	0003649761-01	
Climate zone	56	
Area adjusted cooling load (MJ/m ² .year)	23	
Area adjusted heating load (MJ/m ² .year)	43	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 53	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
Fixtures			
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 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 2400 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 200 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"> 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			
The swimming pool must not have a volume greater than 39 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
Simulation Method			
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.		✓	✓
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	20.0 square metres
floor - suspended floor/open subfloor	82.0 square metres
floor - suspended floor/enclosed subfloor	25.0 square metres
floor - suspended floor above garage	All or part of floor area


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 6 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: ceiling fans + 1-phase airconditioning; Energy rating: 2.5 Star		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: ceiling fans + 1-phase airconditioning; Energy rating: 2.5 Star		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: 2.5 Star		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning; Energy rating: 2.5 Star		✓	✓
Ventilation			
<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>
Artificial lighting			
<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 5 of the bedrooms / study; • at least 2 of the living / dining rooms; • the kitchen; 		<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>


Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
<ul style="list-style-type: none"> • all bathrooms/toilets; • the laundry; • all hallways; 		  	  
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 5 bathroom(s)/toilet(s) in the development for natural lighting.			
Swimming pool			
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.			
Alternative energy			
The applicant must install a photovoltaic system with the capacity to generate at least 1 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.



efficient
LIVING

NatHERS and BASIX Assessment



Action Plans Proposed Residential Development

To be built at 26 Seaview Avenue, Curl Curl NSW 2096

Issue	File Ref	Description	Author	Date
A	19-0098	NatHERS and BASIX Assessment	NM	28/02/19
B	19-0846	NatHERS and BASIX Assessment update to reflect layout changes	AM	03/10/19

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Action plans. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



Sustainable Building Consultants

p. 02 9970 6181 e. admin@efficientliving.com.au
www.efficientliving.com.au



Assessor: Niall Madden
Email: niall@efficientliving.com.au

License Holder: Tracey Cools
Accreditation Number: VIC/BDAV/12/1473

BASIX Details:

NatHERS Certificate Number: 0003649761-01

BASIX adjusted conditioned area: 261 m²

BASIX adjusted un-conditioned area: 30 m²

Area adjusted heating load: 43.2 MJ/ m²/pa

Area adjusted cooling load: 23.2 MJ/ m²/pa

Specification

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.3 thermal comfort simulation software, and assessed under the thermal simulation method of the BASIX Protocol.

The following specification was used to achieve the thermal performance values. Modelling proxies are used at times and if the buildings element details vary the thermal performance specification below shall take precedence.

If there is a change to this specification during design or construction phases, please contact Efficient Living for advice and if required an updated Certificate will be issued.

Floors

Concrete slab on ground no insulation required

Suspended concrete with a minimum R2.0 insulation (insulation only value)

Concrete between basement and ground, no insulation required

Timber between ground and first floor, no insulation required

Suspended timber floor with R2.5 insulation

External Walls

Brick veneer with R1.5 insulation (insulation only value)

Lightweight frame with a minimum R 2.5 insulation (insulation only value)

Blueboard with minimum Total System R value Rt = 2.78

Existing Cavity Brick no insulation

Cavity brick with AIR-CELL Permicav insulation Minimum Total system R-Value of Rt 1.79

Note: No insulation is required to Garage walls

External Colour

Default colour modelled

Walls within dwellings

Masonry walls as per plans no insulation required

Plasterboard on stud as per plan with R2.0 insulation to internal walls adjacent to garage, storage rooms & other unconditioned zones (including bathrooms and WC).



Glazing Doors/Windows

Aluminium framed double clear glazing to Kitchen/Living area (window 12 excepted):

Group A – awning + bifold + casement windows + hinged glazed doors

U-value: 6.70 (equal to or lower than) SHGC: 0.57 ($\pm 10\%$)

Aluminium framed performance glazing elsewhere:

Group A – awning + hinged glazed doors

U-value: 4.80 (equal to or lower than) SHGC: 0.51 ($\pm 10\%$)

Group B – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.80 (equal to or lower than) SHGC: 0.59 ($\pm 10\%$)

Given values are AFRC total window system values (glass and frame)

Note: Openability modelled as per BASIX Thermal Protocol – 4.14.2 and NatHERS Technical Note 1.2 – 10.11 with regards to restricted openings

Skylights

Double glazed with timber or aluminium frame

Roof

Metal roof with foil backed blanket ($R_u 1.3$ and $R_d 1.3$)

External Colour

Light ($SA < 0.75$)

Ceilings

Lined ceiling, with an R. 3.0 insulation (insulation value only) where metal roof is above.

Lined ceiling, with an R. 3.0 insulation (insulation value only) where balcony/deck above.

Lined ceiling with R2.0 insulation to service room and garage where habitable rooms above.

Ceiling Penetrations

Loss of ceiling insulation has been accounted for in accordance with BASIX Thermal Protocol 4.13.1 and NatHERS Technical Note 1.2

Assumed sealed LED downlights, one every 5m²

Floor coverings

Carpet to bedrooms and study, tiles to bathrooms and laundry, timber elsewhere

External Shading

Shading as per stamped documentation

Ventilation



efficient
LIVING

3 October 2019

Action Plans
26 Seaview Avenue

All external door have weather seals, all exhaust fans and chimneys have dampers, and down lights proposed will have capped fittings