

BASIX[®]Certificate

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

Single Dwelling

Certificate number: 501637S

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Friday, 20 September 2013

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



Project summary		
Project name	Lot 49 Arora Close, Caddens	
Street address	Arora Close Caddens 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 1166546	
Lot no.	49	
Section no.	-	
Project type	separate dwelling house	
No. of bedrooms	3	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 40	Target 40

Certificate Prepared by

Name / Company Name: Building & Energy Consultants Australia

ABN (if applicable): 92 122 407 783

Description of project

Project address

Project name	Lot 49 Arora Close, Caddens
Street address	n/a Arora Close Caddens 2747
Local Government Area	Penrith City Council
Plan type and plan number	Deposited Plan 1166546
Lot no.	49
Section no.	-

Project type

Project type	separate dwelling house
No. of bedrooms	3

Site details

Site area (m ²)	471
Roof area (m ²)	248
Conditioned floor area (m2)	136
Unconditioned floor area (m2)	11
Total area of garden and lawn (m2)	139

Assessor details and thermal loads

Assessor number	BDAV/12/1456
Certificate number	14560241
Climate zone	28
Area adjusted cooling load (MJ/m ² .year)	26
Area adjusted heating load (MJ/m ² .year)	72

Other

none	n/a
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Project score

Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 40	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
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 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.		✓	
Alternative water			
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 150 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 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.) 		✓ ✓	✓ ✓

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	All or part of floor area square metres

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 4 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: 3-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
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 2.5 - 3.0		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Heating system			
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 2.5 - 3.0		✓	✓
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 2.5 - 3.0		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Ventilation			
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: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 1 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	

Energy Commitments

The applicant must install a fixed outdoor clothes drying line as part of the development.

Show on
DA plans

Show on CC/CDC
plans & specs

Certifier
check



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).

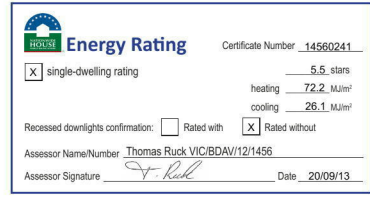
Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.

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.



NatHERS - THERMAL COMFORT SUMMARY



Project Address: Lot 49 Arora Close Caddens NSW 2747		 <p>Energy Rating Certificate Number <u>14560241</u> <input checked="" type="checkbox"/> single-dwelling rating <u>5.5 stars</u> heating <u>72.2 MJ/m²</u> cooling <u>26.1 MJ/m²</u> Recessed downlights confirmation: <input type="checkbox"/> Rated with <input checked="" type="checkbox"/> Rated without Assessor Name/Number <u>Thomas Ruck VIC/BDAV/12/1456</u> Assessor Signature <u>[Signature]</u> Date <u>20/09/13</u></p>
Accreditation # : BDAV/12/1456	Certificate # : 14560241	
Software: BERS 4.2 V110811/A	Date: 20/09/2013	
Heating load (MJ/m ²): 72.2 Cooling load (MJ/m ²): 26.1 Star rating: 5.5		
Conditioned area (m ²) : 136.0 Unconditioned area (m ²) : 11.0		
Building Elements	Material	Detail
External walls	Brick Veneer	R1.5 Bulk insulation
Internal walls	Plasterboard on studs	R1.5 bulk insulation between garage and living areas
Ceiling	Plasterboard	R2.5 bulk insulation to ceilings with roof above
Floors	Concrete	-
Roof	Roof tiles – colour Dark	Foil (sisalation) to underside of roof
Windows	Aluminium frame, single glazed	U value 6.57 or less and SHGC of 0.74 +/- 10%
<i>Lighting: This dwelling has been rated without downlights</i>		
<i>Note: Insulation specified must be installed in accordance with Part 3.12.1.1 of the BCA</i>		