

BASIX Certificate

Building Sustainability Index

www.basix.nsw.gov.au

Certificate number: 226235M

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 29/06/2006, published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Tuesday, 09 December 2008



NSW GOVERNMENT
Department of Planning

Score

- ✓ Water: 42 (Target 40)
- ✓ Thermal comfort: pass (Target pass)
- ✓ Energy: 20 (Target 20)

Description of project

Project address	
Project name	61-77 Hall St Bondi (Revised DA)
Street address	61-77 Hall Street Bondi 2026
Local Government Area	Waverley Council
Plan type and plan number	deposited 959661
Lot no.	2
Section no.	-
Project type	
No. of unit buildings	1
No. of units in unit buildings	34
No. of attached dwelling houses	0
No. of separate dwelling houses	0
Site details	
Site area (m ²)	3536
Roof area (m ²)	1459
Non-residential floor area (m ²)	9345
Residential car spaces	31
Non-residential car spaces	151
Common area landscape	
Common area lawn (m ²)	0
Common area garden (m ²)	0
Area of indigenous or low water use species (m ²)	-
Assessor details	
Assessor number	20460
Certificate number	16282057

Description of project

The tables below describe the dwellings and common areas within the project

Unit building - Building1, 34 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species: (min area m2)
301	2	87.6	8.3	0	0
305	2	101.3	7.0	0	0
401	3	121.0	9.0	0	0
405	3	145.6	10.0	0	0
504	2	98.0	9.0	0	0
508	2	78.6	9.9	0	0
512	2	99.0	9.0	0	0
603	3	146.8	11.2	0	0
702	2	164.8	11.6	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species: (min area m2)
302	2	87.6	8.3	0	0
306	2	101.3	7.0	0	0
402	1	87.0	5.0	0	0
501	2	101.6	6.9	0	0
505	2	98.0	9.0	0	0
509	3	145.3	10.1	0	0
513	2	99.0	9.0	0	0
604	2	78.7	9.9	0	0
703	2	188.0	4.9	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species: (min area m2)
303	2	95.7	8.3	0	0
307	2	116.4	5.6	0	0
403	3	119.8	9.5	0	0
502	3	136.0	5.6	0	0
506	2	98.0	9.0	0	0
510	2	151.0	9.0	0	0
601	3	123.0	9.5	0	0
605	3	145.7	10.1	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species: (min area m2)
304	1	70.0	10.0	0	0
308	1	70.3	8.2	0	0
404	2	78.9	9.0	0	0
503	3	123.5	13.1	0	0
507	2	98.0	9.0	0	0
511	2	129.0	9.0	0	0
602	2	106.0	9.0	0	0
701	2	169.0	6.8	0	0

Description of project

The tables below describe the dwellings and common areas within the project

Common areas of unit building - Building1

Common area	Floor area (m²)
Car park area	7454
Switch room	188
Plant Rooms	785
Hallway/lobby L5	103
Hallway/lobby type L4	49

Common area	Floor area (m²)
Lift car (No. 1)	-
Garbage room	89
Ground floor lobby type	79
Hallway/lobby L6	49

Common area	Floor area (m²)
Lift car (No. 2)	-
Substation	132
Hallway/lobby L7	100
Hallway/lobby type L3	92

Schedule of BASIX commitments

1. Commitments for unit building - Building1

(a) Dwellings

- (i) Water
- (ii) Energy
- (iii) Thermal Comfort

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for attached dwelling houses

3. Commitments for separate dwelling houses

4. Commitments for common areas and central systems/facilities for the development (non-building specific)

- (i) Water
- (ii) Energy

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.

1. Commitments for unit building - Building1

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on-demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "Hot water recirculation" column of the table below.		✓	✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	Hot water recirculation	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star	3 star	4 star	4 star	-	-	4 star	-	-	-	-	-	-	-

Dwelling no.	Alternative water source							
	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection	Laundry connection	Pool top-up	Spa top-up
All dwellings	on-site recycled water system (no. 1)	See central systems	See central systems	-	yes	-	-	-
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and		✓	✓
(cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓	
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan into central duct + VSD	interlocked to light	individual fan into central duct + VSD	interlocked to light	individual fan into central duct + VSD	interlocked to light

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central heating system 1 (zoned)	central heating system 1 (zoned)	0	0	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	4 star	-	4 star	yes	-

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol 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.			
(e) 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.			
(f) 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.		✓	✓
(g) Commitment (h) below, applies to the rooms or areas of a dwelling which are listed in the "Cross Ventilation" table below as comprising a breeze path for the dwelling.			
(h) The applicant must construct the dwelling so that at least one ventilation opening is provided in each such room or area. (If only one room or area of a dwelling is mentioned for a breeze path, then that room or area must have at least two ventilation openings).		✓	✓
(i) The two ventilation openings referred to in (h), must meet the following specifications: (aa) be located as specified for the breeze path in the table; (bb) not be more than 15 metres apart; (cc) if the dwelling is below the 10th storey of the building, be at least 1 square metre in size, or if the dwelling is on or above the 10th storey, be at least 0.5 square metres in size and be located above door head level in the room; and (dd) have only 1 doorway, or opening less than 2 square metres in size, located in the direct path between them.			

Thermal loads			
Dwelling no.	Heating load (in mJ/m ² /yr)	Cooling load (in mJ/m ² /yr)	Corrected Cooling load (in mJ/m ² /yr)
303	63.1	26.9	26.9

	Thermal loads		
Dwelling no.	Heating load (in mJ/m ² /yr)	Cooling load (in mJ/m ² /yr)	Corrected Cooling load (in mJ/m ² /yr)
304	121.7	21	21.0
307	124.6	20.7	20.7
308	49.7	26.6	26.6
402	126.9	26.8	26.8
501	83.4	22.4	22.4
502	129.4	19.6	19.6
503	85.4	23.1	23.1
510	118.5	34.6	34.6
511	118	57.7	57.7
602	111.4	17.1	17.1
701	126.8	21.8	21.8
702	61.3	36.7	36.7
703	92.7	26.9	26.9
301, 302	54.4	26.1	26.1
305, 306	117.9	22.1	22.1
401, 601	69.7	22.8	22.8
403, 603	43.8	26.8	26.8
512, 513	59.2	33.2	33.2
404, 508, 604	87.2	26.9	26.9
405, 509, 605	126.4	13.7	13.7
All other dwellings	73.4	17.7	17.7

	Cross ventilation			
Dwelling no.	Breeze path 1	Breeze path 2	Breeze path 3	Breeze path 4
403, 404, 405	within main living area Ventilation openings: opposite external walls	-	-	-

	Cross ventilation			
Dwelling no.	Breeze path 1	Breeze path 2	Breeze path 3	Breeze path 4
All other dwellings	-	-	-	-

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central on-site recycled/alternative water supply (No. 1)	To supply at least 1100 litres of recycled water per day to the development (over and above the system's committed capacity, if any)	-	-
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Central cooling system (No. 1)	-	Private water meter on make-up line connected to building management system. Conductivity controller installed in the cooling tower.	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	motion sensors	Yes
Lift car (No. 1)	-	-	compact fluorescent	connected to lift call button	Yes
Lift car (No. 2)	-	-	compact fluorescent	connected to lift call button	Yes
Switch room	ventilation exhaust only	interlocked to light	fluorescent	manual on / manual off	Yes
Garbage room	ventilation (supply + exhaust)	-	fluorescent	manual on / manual off	Yes
Substation	ventilation (supply + exhaust)	interlocked to light	fluorescent	manual on / manual off	Yes
Plant Rooms	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	Yes
Ground floor lobby type	air conditioning system	time clock or BMS controlled	compact fluorescent	time clocks	Yes
Hallway/lobby L7	ventilation supply only	time clock or BMS controlled	compact fluorescent	time clocks	Yes
Hallway/lobby L5	ventilation supply only	time clock or BMS controlled	compact fluorescent	time clocks	Yes
Hallway/lobby L6	ventilation supply only	time clock or BMS controlled	compact fluorescent	time clocks	Yes
Hallway/lobby type L3	ventilation supply only	time clock or BMS controlled	compact fluorescent	time clocks	Yes
Hallway/lobby type L4	ventilation supply only	time clock or BMS controlled	compact fluorescent	time clocks	Yes

Central energy systems	Type	Specification
Central hot water system (No. 1)	solar - gas boosted	Solar collector area (minimum, in square metres): 60 Piping insulation (ringmain & supply risers): (b) Piping internal to building: R0.75 (~32 mm)
Central cooling system (No. 1)	chilled water fan coil units	Energy source: electric driven compressor Heat rejection method: cooling tower Unit efficiency (min): high - COP > 4.5
Central heating system (No. 1)	water source packaged units + heated water	Energy source: gas boiler Unit efficiency: high - COP > 4.5
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 7
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 7

4. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. 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).
2. 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.
3. Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

Assessor Certificate

Multiple Dwellings

Certificate Version 6.1. Prior versions not valid after 1 March 2006

Issued in accordance with
BASIX Thermal Comfort Simulation Method.



Assessor							
Name:	Hugh Thornton	Company:	Shack	ABSA #:	20460		
Address:	Level 1 / 181 Harris St. Pyrmont 2009						
Phone:	02 8507 0294	Fax:	02 9552 3856	Email:	contact@shack.net.au		
Declaration of interest:	none						
Client							
Name:	Lester Partridge	Company:	Bassetts				
Address:							
Phone:		Fax:		Email:			
Project							
Address:	61-77 Hall St. Bondi						
Applicant:	N/A		LGA:	Waverly			
Assessment							
Date:	4/12/08	File ref:	BON147	Software:	Accurate	Version:	1.1.4.1
Documentation							

All details, upon which this assessment has been based, are included in the project documentation that has been stamped and signed by the Assessor issuing this certificate, as identified below:

Affix assessor stamp

Thermal Performance Spec: AR DA 1_01;
Attached, Affixed to drawings Page#: Site Plan

Drawings: (Title, Ref.#, Revision, Issue date, etc)

DA101,201-213,501-504,601-607

Building Specifications: (Title, Ref.#, Revision, Issue date, etc)

N/A

ABSA Assessor Certificate		Assessor # 20460		Certificate # 18187160		Issued: 09-Dec-08	
Thermal performance specifications						Page 1 of 3	
Unit number(s)	Certificate number	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Concessions	Qualify for ventilation bonus
		Cond.	Uncond.	Heat	Cool (Sens & Lat)		
301	37175627	87.6	8.3	54.4	26.1		no
302	See 301						no
303	32331772	95.7	8.3	37.3	29.2		no
304	88885911	70	10	121.7	21		no
305	82773602	101.3	7	117.9	22.1		no
306	See 305						no
307	98711961	116.4	5.6	36.1	50.3		no
308	32825475	70.3	8.2	49.7	26.6		no
401	85451115	125	1	90.2	29.9		no
402	25742777	87	5	126.9	26.8		no
403	82631105	119.8	9.5	43.8	26.8		no
404	33354605	78.9	9	87.2	26.9		no
405	29336324	145.6	10	126.4	26.8		no

Thermal Performance Specifications

These are the Specifications upon which the Certified Assessment is based. If details included in these Specifications vary from other drawings or written specifications, these Specifications shall take precedence. If only one specification option is detailed for a building element, that specification must apply to all instances of that element for the project. If alternate specifications are detailed for a building element, the location and extent of alternate specifications must be detailed below and / or clearly indicated on referenced documents

Windows	Product ID	Glass	Frame	U value	SHGC	Area M ²	Detail
generic		Single clear	Aluminium	7.63	0.75		As per plans
generic		Low 'e'	Alum./thermal break	4.22	0.47		As per plans
generic		Double clear	Alum./thermal break	3.58	0.68		As per plans

Skylights	Product ID	Glass	Frame	U value	SHGC	Area M ²	Detail
-----------	------------	-------	-------	---------	------	---------------------	--------

Window and skylight U and SHGC values, if specified, are according to ANAC 2005. Alternate products or specifications may be used if their U value is lower, and the SHGC value is less than 10% higher or lower, than the U and SHGC values of the product specified above.

External walls	Construction	Insulation	Colour – solar abs.	Detail
Concrete block 190mm		R1.5	Medium – SA 0.475-0.7	

Internal walls	Construction	Insulation	Detail
Brick plastered			
Plasterboard on studs			

Floors	Construction	Insulation	Covering	Detail
Concrete		none	Carpet	
concrete		None	tile	

Ceilings	Construction	Insulation	Detail
plasterboard		None	
platerboard		R3.0	Under roof

Roof	Construction	Insulation	Colour – solar abs.	Detail
Tiled concrete		none	Light SA <0.475	

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Open weave		

Fixed shading	Eaves (width - inc. gutters, h't above windows)	Verandahs, Pergolas (type, description)
	varies	As per details on plans

Overshadowing	Overshadowing structures	Overshadowing trees
---------------	--------------------------	---------------------

Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north:	45	ABSA Assessor stamp
Terrain category:	suburban	
Roof ventilation:	Unventilated	
Cross ventilation:	Standard	
Subfloor:	Elevated	
Living area open to entry:	Yes	
Doors separate living areas:	No	
Stair open to heated areas:	Varies	
Seals to windows and doors:	Yes	
Exhaust fans without dampers:	No	
Ventilated skylights:	No	
Open fire, unflued gas heat:	No	
Vented downlights:	No	
Wall and ceiling vents:	no	

