

BASIX Certificate

Certificate number: 283321M_02

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: Thursday, 03 December 2009



Score

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

Description of project

Project address	
Project name	Avon Road Development Stage 1_02
Street address	1 &1a Avon Road Pymble 2073
Local Government Area	Ku-ring-gai Council
Plan type and plan number	deposited 8602
Lot no.	16
Section no.	-
Project type	
No. of unit buildings	1
No. of units in unit buildings	50
No. of attached dwelling houses	0
No. of separate dwelling houses	0
Site details	
Site area (m ²)	3020
Roof area (m ²)	1384
Non-residential floor area (m ²)	0
Residential car spaces	86
Non-residential car spaces	0
Common area landscape	
Common area lawn (m ²)	78
Common area garden (m ²)	563.1
Area of indigenous or low water use species (m ²)	280
Assessor details	
Assessor number	20860
Certificate number	85072402
Climate zone	56

Description of project

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

Unit building - Stage 1, 50 dwellings, 6 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 (m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (m ²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (m ²)
1_01	2	91.0	0.0	0	0	1_02	1	56.0	0.0	0	0	1_03	2	86.0	0.0	0	0	1_04	1	55.0	0.0	0	0
1_05	3	132.0	0.0	0	0	1_06	2	91.0	0.0	0	0	1_07	1	56.0	0.0	0	0	1_08	2	86.0	0.0	6.5	6.5
1_09	1	55.0	0.0	7.0	7.0	1_10	2	86.0	0.0	18.1	18.1	1_11	1	46.0	0.0	0	0	2_01	2	91.0	0.0	0	0
2_02	1	56.0	0.0	0	0	2_03	2	86.0	0.0	0	0	2_04	1	55.0	0.0	0	0	2_05	3	132.0	0.0	0	0
2_06	2	91.0	0.0	0	0	2_07	1	56.0	0.0	0	0	2_08	2	86.0	0.0	0	0	2_09	1	55.0	0.0	0	0
2_10	1	86.0	0.0	0	0	2_11	2	46.0	0.0	0	0	3_01	2	91.0	0.0	0	0	3_02	1	56.0	0.0	0	0
3_03	2	86.0	0.0	0	0	3_04	1	55.0	0.0	0	0	3_05	3	132.0	0.0	0	0	3_06	2	91.0	0.0	0	0
3_07	1	56.0	0.0	0	0	3_08	2	86.0	0.0	0	0	3_09	1	55.0	0.0	0	0	3_10	2	86.0	0.0	0	0
3_11	1	46.0	0.0	0	0	4_01	2	91.0	0.0	0	0	4_02	1	56.0	0.0	0	0	4_03	2	86.0	0.0	0	0
4_04	1	55.0	0.0	0	0	4_05	3	146.0	0.0	45.9	45.9	4_06	3	147.0	0.0	28.7	28.7	4_07	2	86.0	0.0	0	0
4_08	1	46.0	0.0	0	0	5_01	3	152.0	0.0	46.2	46.2	5_02	3	147.0	0.0	31.2	31.2	g_01	2	78.0	0.0	25.0	25.0
g_02	1	56.0	0.0	11.0	11.0	g_03	2	86.0	0.0	11.9	11.9	g_04	1	55.0	0.0	4.0	4.0	g_05	3	132.0	0.0	29.8	29.8
g_06	2	91.0	0.0	25.8	25.8	g_07	1	57.0	0.0	2.5	2.5												

Description of project

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

Common areas of unit building - Stage 1

Common area	Floor area (m ²)	Common area	Floor area (m ²)	Common area	Floor area (m ²)
Car park area (No. 1)	3482	Lift car (No. 1)	-	Lift car (No. 2)	-
Switch room (No. 1)	23.5	Garbage room (No. 1)	50.66	Community room (No. 1)	61
Plant or service room (No. 1)	98.9	Ground floor lobby type (No. 1)	117.6	Hallway/lobby type (No. 1)	199.8

Schedule of BASIX commitments

1. Commitments for unit building - Stage 1
 - (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 - Stage 1

(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 "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(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.	✓	✓	✓

Dwelling no.	Fixtures					Appliances			Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded	
1_08	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
1_09	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
1_10	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
4_05	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
4_06	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
5_01	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
5_02	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_01	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_02	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_03	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_04	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_05	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_06	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
g_07	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	

Dwelling no.	Fixtures						Appliances		Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded	
1_01,	3 star	3 star	3 star	3 star	no	3 star	2 star	-	-	-	-	-	-	-	
1_02,															
1_03,															
1_04,															
1_05,															
1_06,															
1_07,															
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4_01,															
4_02,															
4_03,															
4_04,															
4_07,															
4_08															

Alternative water source

Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
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".			✓	

Dwelling no.	Hot water			Kitchen ventilation system			Laundry ventilation system	
	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control	
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

Dwelling no.	Cooling			Heating				Artificial lighting				Natural lighting	
	living areas	bedroom 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
1_05, 2_05, 3_05, g_05	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central heating system 1 (zoned)	central heating system 1 (zoned)	3	1	yes	yes	yes	yes	0	no
4_05, 4_06, 5_01, 5_02	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central heating system 1 (zoned)	central heating system 1 (zoned)	3	2	yes	yes	yes	yes	0	no

	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
1_01, 1_03, 1_06, 1_08, 1_10, 2_01, 2_03, 2_06, 2_08, 2_11, 3_01, 3_03, 3_06, 3_08, 3_10, 4_01, 4_03, 4_07, 9_01, 9_03, 9_06	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central heating system 1 (zoned)	central heating system 1 (zoned)	2	1	yes	yes	yes	yes	0	no

	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	
1_02, 1_04, 1_07, 1_09, 1_11, 2_02, 2_04, 2_07, 2_09, 2_10, 3_02, 3_04, 3_07, 3_09, 3_11, 4_02, 4_04, 4_08, g_02, g_04, g_07	central cooling system 1 (zoned)	central cooling system 1 (zoned)	central heating system 1 (zoned)	central heating system 1 (zoned)	1	1	yes	yes	yes	yes	0	no	

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	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	3 star	yes	3 star	3 star	2 star	yes	no

(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) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.		✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.		✓	✓	✓

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
1_08	32.5
1_09	14.0
1_10	31.3
1_11	48.4
3_06	54.8
Area adjusted cooling load (in mJ/m ² /yr)	
	16.8
	13.7
	12.0
	16.5
	20.2

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
3_07	54.5	20.5
4_03	59.0	31.1
4_04	44.3	12.9
4_05	62.7	25.3
4_06	61.9	29.5
5_01	63.0	40.3
5_02	49.5	27.4
g_01	66.0	25.1
g_02	37.9	22.0
g_03	54.5	33.3
g_04	41.2	12.7
g_05	59.5	13.1
g_06	62.7	16.5
g_07	65.1	19.7
1_06, 2_06	55.5	23.9
1_07, 2_07	23.6	15.7
2_08, 3_08	22.6	16.3
2_09, 3_09	10.0	13.1
1_03, 2_03, 3_03	47.6	32.5
1_04, 2_04, 3_04	31.7	12.5
1_05, 2_05, 3_05	43.8	16.7
2_10, 3_10, 4_07	28.3	12.3
2_11, 3_11, 4_08	64.2	22.9
1_01, 2_01, 3_01, 4_01	45.3	21.5
All other dwellings	20.2	21.3

(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 water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 600 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 641 square metres of common landscaped area on the site - car washing in 2 car washing bays on the site
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(ii) Energy					
(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	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area (No. 1)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	time clocks	No
Lift car (No. 1)			compact fluorescent	connected to lift call button	No
Lift car (No. 2)			compact fluorescent	connected to lift call button	No
Switch room (No. 1)	ventilation (supply + exhaust)	thermostatically controlled	compact fluorescent	manual on / manual off	No
Garbage room (No. 1)	ventilation (supply + exhaust)	-	compact fluorescent	motion sensors	No
Community room (No. 1)	air conditioning system	time clock or BMS controlled	compact fluorescent	time clock and motion sensors	No
Plant or service room (No. 1)	no mechanical ventilation		compact fluorescent	manual on / manual off	No
Ground floor lobby type (No. 1)	no mechanical ventilation		compact fluorescent	time clocks	No
Hallway/lobby type (No. 1)	no mechanical ventilation		compact fluorescent	time clock and motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	solar - gas boosted	Solar collector area (minimum, in square metres): 10 Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.75 (~32 mm); (b) Piping internal to building: R0.75 (~32 mm)
Central cooling system (No. 1)	variable refrigerant volume units	Energy source: electric driven compressor Heat rejection method: air cooled condenser Unit efficiency (min): low - COP < 3.5
Central heating system (No. 1)	variable refrigerant volume units	Energy source: electric driven compressor + air sourced evaporator Unit efficiency: low - COP < 3.5
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 8
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 8

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: David Gradwell **Company:** Gradwell Consulting **ABSA #:** 20860
Address: PO Box 4, Pymble NSW 2073
Phone: 0408 964 139 **Fax:** **Email:** david@gradwellconsulting.com

Declaration of interest: The Assessor has provided design advice to the Applicant.

Client

Name: Jim Neale **Company:**
Address: 35 Fox Valley Road, Wahroonga NSW 2076
Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project

Address: 1 & 1a Avon Road, Pymble NSW 2073
Applicant: Jim Neale **LGA:** Ku-Ring-Gai

Assessment

Date: 2 Dec 2009 **File ref:** AM1 **Software:** BERS Pro **Version:** 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:

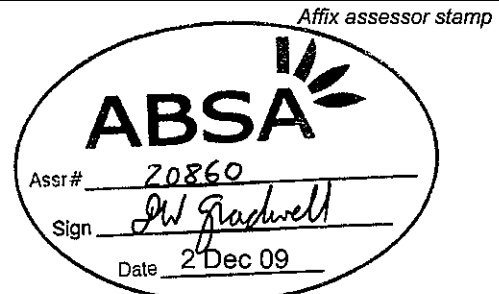
Thermal Performance Spec:

Attached, Affixed to drawing PA101-103

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

PA101-101, PA101-102, PA101-103 all Rev A 1-Dec-09

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



ABSA Assessor Certificate Assessor # 20860 Certificate # 85072402 Issued: 2-Dec-09

Thermal performance specifications

Page 1 of 2

Unit number(s)	Certificate number	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Low E	Insulation
		Cond.	Uncond.	Heat	Cool (Sens & Lat)		
g_01	85072402	78.2	0.0	66.0	25.1		To car park: foil sided bulk R1.5
g_02	16435052	56.1	0.0	37.9	22.0		To car park: foil sided bulk R1.5
g_03	51551884	86.9	0.0	54.5	33.3		To car park: foil sided bulk R1.5
g_04	58535172	55.3	0.0	41.2	12.7		To car park: foil sided bulk R1.5
g_05	51669584	132.6	0.0	59.5	13.1		To car park: foil sided bulk R1.5
g_06	62202157	91.2	0.0	62.7	16.5	X	To car park: foil sided bulk R1.5
g_07	22712638	57.6	0.0	65.1	19.7	X	To car park: foil sided bubble wrap and bulk R4.0 Corridor wall: foil sided bubble wrap and bulk R3.0
1_01,2_01 3_01,4_01	25113067	91.2	0.0	45.3	21.5		
1_02,2_02 3_02,4_02	46412865	56.1	0.0	20.2	21.3		
1_03,2_03 3_03	81684241	86.9	0.0	47.6	32.5		

Thermal Performance Specifications - BASIX THERMAL COMFORT - Simulation Method

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 M2	Detail
GGG-05-001a		Single clear	Aluminium	6.46	0.76		As per plans
GGG-05-013a		Single Low E	Aluminium	4.54	0.64		As per plans

Skylights	Product ID	Glass	Frame	U value	SHGC	Area M2
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Any U and SHGC values specified on Certificates Issued after 1 May 2007 are according to NFRC 100. All values prior to this date are ANAC. Alternate products may be used if their U value is lower, and the SHGC value is less than 10% higher or lower.

External walls	Construction	Insulation	Colour - Solar absorptancy	Detail
Precast concrete panel	None		Medium - SA 0.475 - 0.7	As per plans
Cavity Brick	None		Medium - SA 0.475 - 0.7	As per plans
AAC 200mm system	R1.54 system		Medium - SA 0.475 - 0.7	Neighbour and hallways

Internal walls	Construction	Insulation	Detail
Cavity Brick p'board	None		Throughout

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet/Tile in wet+kitchen	Levels 1 to 5
Concrete	Foil + R1.5 Batts		Carpet/Tile in wet+kitchen	Level g - refer plans for g_07
Concrete	Foil/R2.0		Carpet/Tile in wet+kitchen	External floor 1_08,1_09,1_11

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete	Foil + R1.0 Batts		Medium - SA 0.475 - 0.7	As per plans (all levels)

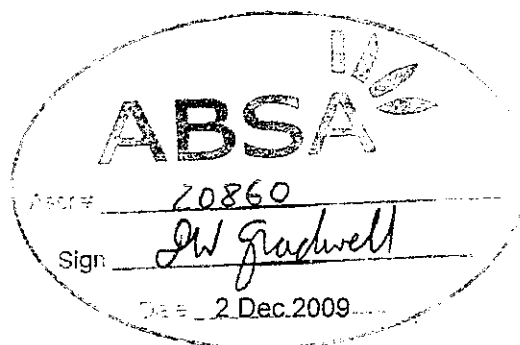
Window cover	Internal (curtains)	External (awnings, shutters, etc)
None		None

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration	
Orientation of nominal north elevation	9
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Open
Living area open to entry:	Yes
Living areas separated by doors:	Yes
Stair open to heated areas:	No
Weather seals to windows and doors:	Yes
Exhaust fans without dampers:	No
Ventilated skylights:	No
Open fireplace or unflued gas heater:	No
Vented downlights:	No
Wall and ceiling vents:	No

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor		
Name: David Gradwell	Company: David W Gradwell	Assr #: 20860
Address: PO Box 4 PYMBLE NSW 2073		
Phone:	Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Jim Neale	Company: Jim Neale	
Address: 35 Fox Valley Road WAHROONGA NSW 2076		
Phone: 02 9489 6112	Fax:	Email: jimnea@optusnet.com.au

Project		
Address: g_01 1 & 1a Avon Road PYMBLE NSW 2073		
Lot / DP: 16 / 8602	LGA: Ku-ring-gai Council	
Applicant: Jim Neale		

Assessment			
Date: 1/12/2009	Job ID: AM1	Filename: AM1 Avon	Run # 0
Software: BERS	Version: 4.1	Climate Zone: 56	

Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 85072402	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 78

Net Unconditioned Floor Area 0

Concessions / Ventilation Bonus
--

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	66
Cooling:	25
(sensible + latent)	
Total:	91

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:	PO Box 4 PYMBLE NSW 2073		
Phone:		Fax:	
		Email:	david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Jim Neale	Company:	Jim Neale
Address:	35 Fox Valley Road WAHROONGA NSW 2076		
Phone:	02 9489 6112	Fax:	
		Email:	jimnea@optusnet.com.au

Project			
Address: g_02 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			

Assessment			
Date:	1/12/2009	Job ID:	AM1
Software:	BERS	Version:	4.1
		Filename:	AM1 Avon
		Climate Zone:	56
		Run #	0

Referenced documents	
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>	
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor	
Drawings:	PA-PLANS
Specifications: Only specifications, detailed on Drawings identified above, have been referenced	

ABSA Assessor Certificate	Assessor # 20860	Certificate # 16435052	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 56	Net Unconditioned Floor Area: 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	38
Cooling:	22
(sensible + latent)	
Total:	60

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #:
Phone:		Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:	02 9489 6112	Fax:	Email: jimnea@optusnet.com.au

Project			
Address: g_03 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:		16 / 8602	LGA: Ku-ring-gai Council
Applicant: Jim Neale			

Assessment			
Date:	1/12/2009	Job ID: AM1	Filename: AM1 Avon
Software: BERS		Version: 4.1	Run # 0
		Climate Zone: 56	

Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 51551884	Issued: 01-Dec-09
----------------------------------	-------------------------	-------------------------------	--------------------------

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 87	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	54
Cooling:	33
(sensible + latent)	
Total:	87

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #:
Phone:		Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:		02 9489 6112	Email: jimnea@optusnet.com.au
Project			
Address: g_04 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:		16 / 8602	LGA: Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID:	AM1
Software:		BERS	Version: 4.1
Filename:		AM1 Avon	
Run #		0	
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings: PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 58535172** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 55	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	41
Cooling:	13
(sensible + latent)	
Total:	54

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor				
Name:	David Gradwell	Company:	David W Gradwell	
Address:	PO Box 4 PYMBLE NSW 2073			
Phone:		Fax:		
Email:		david@gradwell.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant				
Client				
Name:	Jim Neale	Company:	Jim Neale	
Address:	35 Fox Valley Road WAHROONGA NSW 2076			
Phone:	02 9489 6112	Fax:		
Email:		jimnea@optusnet.com.au		
Project				
Address:	g_05 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council	
Applicant: Jim Neale				
Assessment				
Date:	1/12/2009	Job ID:	AM1	
Filename:	AM1 Avon		Run #	0
Software:	BERS		Version:	4.1
Climate Zone:		56		
Referenced documents				
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>				
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor				
Drawings:	PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced				

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 51669584** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 133	Net Unconditioned Floor Area: 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	60
Cooling:	13
(sensible + latent)	
Total:	73

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor					
Name:	David Gradwell	Company:	David W Gradwell		
Address:	PO Box 4 PYMBLE NSW 2073				
Phone:		Fax:			
Email:		david@gradwell.com.au			
Declaration of Interest: The Assessor has provided design advice to the Applicant					
Client					
Name:	Jim Neale	Company:	Jim Neale		
Address:	35 Fox Valley Road WAHROONGA NSW 2076				
Phone:	02 9489 6112	Fax:			
Email:		jimnea@optusnet.com.au			
Project					
Address:	g_06 1 & 1a Avon Road PYMBLE NSW 2073				
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council		
Applicant: Jim Neale					
Assessment					
Date:	1/12/2009	Job ID:	AM1		
Filename:	AM1 Avon		Run #	0	
Software:	BERS	Version:	4.1	Climate Zone:	56
Referenced documents					
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>					
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor					
Drawings:	PA-PLANS				
Specifications: Only specifications, detailed on Drawings identified above, have been referenced					

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 62202157** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 91	Net Unconditioned Floor Area: 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	63
Cooling:	17
(sensible + latent)	
Total:	80

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:	PO Box 4 PYMBLE NSW 2073		
Phone:		Fax:	
		Email:	david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Jim Neale	Company:	Jim Neale
Address:	35 Fox Valley Road WAHROONGA NSW 2076		
Phone:	02 9489 6112	Fax:	
		Email:	jimnea@optusnet.com.au

Project			
Address:	g_07 1 & 1a Avon Road PYMBLE NSW 2073		
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			

Assessment			
Date:	1/12/2009	Job ID:	AM1
Software:	BERS	Version:	4.1
		Filename:	AM1 Avon
		Climate Zone:	56
		Run #	0

Referenced documents			
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate Assessor # 20860 Certificate # 22712638 Issued: 01-Dec-09

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
-------------------------------	--

Net Conditioned Floor Area: 58

Net Unconditioned Floor Area 0

Concessions / Ventilation Bonus	
--	--

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads	
--------------------------------------	--

Heating:	65
Cooling:	20
(sensible + latent)	
Total:	85

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client

Name:	Jim Neale	Company:	Jim Neale
--------------	-----------	-----------------	-----------

Address:	35 Fox Valley Road WAHROONGA NSW 2076
-----------------	---------------------------------------

Phone:	02 9489 6112	Fax:		Email:	jimnea@optusnet.com.au
---------------	--------------	-------------	--	---------------	------------------------

Project

Address:	1_01,2_01,3_01,4_01 1 & 1A Avon Road PYMBLE NSW 2073
-----------------	--

Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
------------------	-----------	-------------	---------------------

Applicant:	Jim Neale
-------------------	-----------

Assessment

Date:	1/12/2009	Job ID:	AM1	Filename:	AM1 Avon	Run #	0
--------------	-----------	----------------	-----	------------------	----------	--------------	---

Software:	BERS	Version:	4.1	Climate Zone:	56
------------------	------	-----------------	-----	----------------------	----

Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 25113067	Issued: 02-Dec-09
----------------------------------	-------------------------	-------------------------------	--------------------------

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 91	Net Unconditioned Floor Area 0
---------------------------------------	---------------------------------------

Concessions / Ventilation Bonus
--

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	45
-----------------	-----------

Cooling:	22
-----------------	-----------

(sensible + latent)

Total:	67
---------------	-----------

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		
Address: PO Box 4 PYMBLE NSW 2073			
Phone:		Fax:	
Email:		david@gradwell.com.au	
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address: 35 Fox Valley Road WAHROONGA NSW 2076			
Phone:	02 9489 6112	Fax:	
Email:		jimnea@optusnet.com.au	
Project			
Address: 1_02,2_02,3_02,4_02 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:	AM1 Avon	Run #	0
Software:	BERS	Version:	4.1
Climate Zone:		56	
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 46412865** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 56	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	20
Cooling:	21
(sensible + latent)	
Total:	41

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #:
Phone:		Fax:	
Email: david@gradwell.com.au			
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:	02 9489 6112	Fax:	
		Email: jimnea@optusnet.com.au	
Project			
Address: 1_03,2_03, 3_03 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:		AM1 Avon	
Run #		0	
Software:	BERS	Version:	4.1
Climate Zone:		56	
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 81684241** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 87	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	48
Cooling:	33
(sensible + latent)	
Total:	81

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #: 20860
Phone:		Fax:	
Email: david@gradwell.com.au			
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:	02 9489 6112	Fax:	
Email:		jimnea@optusnet.com.au	
Project			
Address: 1_04,2_04,3_04 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:	AM1 Avon	Run #	0
Software:	BERS	Version:	4.1
Climate Zone:		56	
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 94389775** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 55	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	32
Cooling:	13
(sensible + latent)	
Total:	45

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor				
Name:	David Gradwell	Company:	David W Gradwell	
Address:	PO Box 4 PYMBLE NSW 2073			
Phone:		Fax:		
Email:		david@gradwell.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant				
Client				
Name:	Jim Neale	Company:	Jim Neale	
Address:	35 Fox Valley Road WAHROONGA NSW 2076			
Phone:	02 9489 6112	Fax:		
Email:		jimnea@optusnet.com.au		
Project				
Address:	1_05,2_05, 3_05 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council	
Applicant: Jim Neale				
Assessment				
Date:	1/12/2009	Job ID:	AM1	
Filename:	AM1 Avon		Run #	0
Software:	BERS		Version:	4.1
Climate Zone:		56		
Referenced documents				
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>				
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor				
Drawings:	PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced				

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 63823884** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area:	133
Net Unconditioned Floor Area	0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	44
Cooling:	17
(sensible + latent)	
Total:	61

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client	
Name:	Jim Neale
Company:	Jim Neale

Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project	
Address: 1_06,2_06 1 & 1A Avon Road PYMBLE NSW 2073	

Lot / DP: 16 / 8602 **LGA:** Ku-ring-gai Council

Applicant: Jim Neale

Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:	AM1 Avon		
Run #	0		

Software: BERS **Version:** 4.1 **Climate Zone:** 56

Referenced documents	
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 55704398	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
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Net Conditioned Floor Area: 91 **Net Unconditioned Floor Area** 0

Concessions / Ventilation Bonus	
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

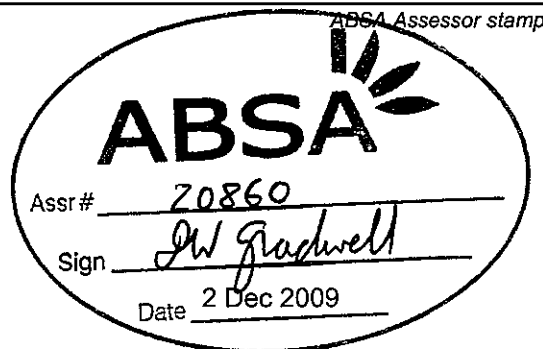
Predicted annual energy loads	
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Heating: 56

Cooling: 24

(sensible + latent)

Total: 80



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor				
Name:	David Gradwell	Company:	David W Gradwell	
Address:	PO Box 4 PYMBLE NSW 2073			
Phone:		Fax:		
Email:		david@gradwell.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant				
Client				
Name:	Jim Neale	Company:	Jim Neale	
Address:	35 Fox Valley Road WAHROONGA NSW 2076			
Phone:	02 9489 6112	Fax:		
Email:		jimnea@optusnet.com.au		
Project				
Address:	1_07,2_07 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council	
Applicant: Jim Neale				
Assessment				
Date:	1/12/2009	Job ID:	AM1	
Filename:	AM1 Avon		Run #	0
Software:	BERS		Version:	4.1
Climate Zone:		56		
Referenced documents				
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>				
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor				
Drawings:	PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced				

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 53442953** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 56	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	24
Cooling:	16
(sensible + latent)	
Total:	40

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:	PO Box 4 PYMBLE NSW 2073		Assr #: 20860
Phone:		Fax:	
Email: david@gradwell.com.au			
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:	35 Fox Valley Road WAHROONGA NSW 2076		
Phone:	02 9489 6112	Fax:	
Email: jimnea@optusnet.com.au			
Project			
Address:	1_08 1 & 1A Avon Road PYMBLE NSW 2073		
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID: AM1	Filename: AM1 Avon
Software:	BERS	Version: 4.1	Run # 0
Climate Zone: 56			
Referenced documents			
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 63112468** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 87	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	33
Cooling:	17
(sensible + latent)	
Total:	50

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #:
Phone:		Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:		02 9489 6112	Email: jimnea@optusnet.com.au
Project			
Address: 1_09 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:		16 / 8602	LGA: Ku-ring-gai Council
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID: AM1	Filename: AM1 Avon
Software: BERS		Version: 4.1	Run # 0
Climate Zone: 56			
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings: PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 20588843** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 55	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	14
Cooling:	14
(sensible + latent)	
Total:	28

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client			
---------------	--	--	--

Name:	Jim Neale	Company:	Jim Neale
--------------	-----------	-----------------	-----------

Address:	35 Fox Valley Road WAHROONGA NSW 2076		
-----------------	---------------------------------------	--	--

Phone:	02 9489 6112	Fax:		Email:	jimnea@optusnet.com.au
---------------	--------------	-------------	--	---------------	------------------------

Project			
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Address:	1_10 1 & 1a Avon Road PYMBLE NSW 2073		
-----------------	---------------------------------------	--	--

Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
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Applicant:	Jim Neale
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Assessment			
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Date:	1/12/2009	Job ID:	AM1	Filename:	AM1 Avon	Run #	0
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Software:	BERS	Version:	4.1	Climate Zone:	56
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Referenced documents			
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 62877434	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
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Net Conditioned Floor Area:	87
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Net Unconditioned Floor Area	0
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Concessions / Ventilation Bonus	
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads	
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Heating:	31
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Cooling:	12
-----------------	-----------

(sensible + latent)

Total:	43
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ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:	PO Box 4 PYMBLE NSW 2073		Assr #: 20860
Phone:		Fax:	
Email: david@gradwell.com.au			
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Jim Neale	Company:	Jim Neale
Address:	35 Fox Valley Road WAHROONGA NSW 2076		
Phone:	02 9489 6112	Fax:	
Email: jimnea@optusnet.com.au			

Project			
Address: 1_11 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			

Assessment			
Date:	1/12/2009	Job ID:	AM1
Software:	BERS	Version:	4.1
Filename:	AM1 Avon	Climate Zone:	56
Run #	0		

Referenced documents	
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>	
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor	
Drawings:	PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 81937232	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 46	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	48
Cooling:	17
(sensible + latent)	
Total:	65

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #: 20860
Phone:	Fax:	Email: david@gradwell.com.au	
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:	02 9489 6112	Fax:	Email: jimnea@optusnet.com.au
Project			
Address: 2_08,3_08 1 & 1A Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA: Ku-ring-gai Council	
Applicant: Jim Neale			
Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:		AM1 Avon	
Run #		0	
Software:	BERS	Version:	4.1
Climate Zone:		56	
Referenced documents			
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:			
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor			
Drawings:	PA-PLANS		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 77846586** **Issued: 02-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 87	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	23
Cooling:	16
(sensible + latent)	
Total:	39

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
		Assr #:	20860

Address: PO Box 4 PYMBLE NSW 2073

Phone: Fax: Email: david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client	
---------------	--

Name: Jim Neale Company: Jim Neale

Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 Fax: Email: jimnea@optusnet.com.au

Project	
----------------	--

Address: 2_09,3_09 1 & 1A Avon Road PYMBLE NSW 2073

Lot / DP: 16 / 8602 LGA: Ku-ring-gai Council

Applicant: Jim Neale

Assessment			
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Date: 1/12/2009 Job ID: AM1 Filename: AM1 Avon Run # 0

Software: BERS Version: 4.1 Climate Zone: 56

Referenced documents	
-----------------------------	--

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 28043331	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
-------------------------------	--

Net Conditioned Floor Area: 55 Net Unconditioned Floor Area 0

Concessions / Ventilation Bonus	
--	--

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads	
--------------------------------------	--

Heating:	10
Cooling:	13
(sensible + latent)	
Total:	23

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor		
Name: David Gradwell	Company: David W Gradwell	Assr #: 20860

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client

Name: Jim Neale **Company:** Jim Neale

Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project

Address: 2_10,3_10, 4_07 1 & 1A Avon Road PYMBLE NSW 2073

Lot / DP: 16 / 8602 **LGA:** Ku-ring-gai Council

Applicant: Jim Neale

Assessment

Date: 1/12/2009 **Job ID:** AM1 **Filename:** AM1 Avon **Run #** 0

Software: BERS **Version:** 4.1 **Climate Zone:** 56

Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 98118111	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 87 **Net Unconditioned Floor Area** 0

Concessions / Ventilation Bonus
--

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	28
Cooling:	12
(sensible + latent)	
Total:	40

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client

Name:	Jim Neale	Company:	Jim Neale
--------------	-----------	-----------------	-----------

Address:	35 Fox Valley Road WAHROONGA NSW 2076
-----------------	---------------------------------------

Phone:	02 9489 6112	Fax:		Email:	jimnea@optusnet.com.au
---------------	--------------	-------------	--	---------------	------------------------

Project

Address:	2_11,3_11, 4_08 1 & 1A Avon Road PYMBLE NSW 2073
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Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
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Applicant:	Jim Neale
-------------------	-----------

Assessment

Date:	1/12/2009	Job ID:	AM1	Filename:	AM1 Avon	Run #	0
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Software:	BERS	Version:	4.1	Climate Zone:	56
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Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 36515382	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 46	Net Unconditioned Floor Area 0
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Concessions / Ventilation Bonus
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	64
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Cooling:	23
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(sensible + latent)

Total:	87
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ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor				
Name:	David Gradwell	Company:	David W Gradwell	
Address:	PO Box 4 PYMBLE NSW 2073		Assr #: 20860	
Phone:		Fax:		
Email: david@gradwell.com.au				
Declaration of Interest: The Assessor has provided design advice to the Applicant				
Client				
Name:	Jim Neale	Company:	Jim Neale	
Address:	35 Fox Valley Road WAHROONGA NSW 2076			
Phone:	02 9489 6112	Fax:		
Email: jimnea@optusnet.com.au				
Project				
Address:	3_06 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council	
Applicant: Jim Neale				
Assessment				
Date:	1/12/2009	Job ID:	AM1	
Filename:	AM1 Avon		Run #	0
Software:	BERS		Version:	4.1
Climate Zone: 56				
Referenced documents				
<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>				
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor				
Drawings:	PA-PLANS			
Specifications: Only specifications, detailed on Drawings identified above, have been referenced				

ABSA Assessor Certificate **Assessor # 20860** **Certificate # 57334792** **Issued: 01-Dec-09**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 91	Net Unconditioned Floor Area 0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	55
Cooling:	20
(sensible + latent)	
Total:	75

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor		
Name: David Gradwell	Company: David W Gradwell	Assr #: 20860
Address: PO Box 4 PYMBLE NSW 2073		
Phone:	Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Jim Neale	Company: Jim Neale	
Address: 35 Fox Valley Road WAHROONGA NSW 2076		
Phone: 02 9489 6112	Fax:	Email: jimnea@optusnet.com.au

Project		
Address: 3_07 1 & 1a Avon Road PYMBLE NSW 2073		
Lot / DP: 16 / 8602	LGA: Ku-ring-gai Council	
Applicant: Jim Neale		

Assessment			
Date: 1/12/2009	Job ID: AM1	Filename: AM1 Avon	Run # 0
Software: BERS	Version: 4.1	Climate Zone: 56	

Referenced documents	
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate Assessor # 20860 Certificate # 37121272 Issued: 01-Dec-09

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
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Net Conditioned Floor Area: 56 **Net Unconditioned Floor Area** 0

Concessions / Ventilation Bonus
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	55
Cooling:	21
(sensible + latent)	
Total:	76

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client

Name:	Jim Neale	Company:	Jim Neale
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Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project

Address: 4_03 1 & 1a Avon Road PYMBLE NSW 2073

Lot / DP: 16 / 8602 **LGA:** Ku-ring-gai Council

Applicant: Jim Neale

Assessment

Date:	1/12/2009	Job ID:	AM1	Filename:	AM1 Avon	Run #	0
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Software:	BERS	Version:	4.1	Climate Zone:	56
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Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 85381280	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 87	Net Unconditioned Floor Area 0
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Concessions / Ventilation Bonus
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	59
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Cooling:	31
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(sensible + latent)

Total:	90
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ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor		
Name: David Gradwell	Company: David W Gradwell	Assr #: 20860

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client	
Name: Jim Neale	Company: Jim Neale

Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project	
Address: 4_04 1 & 1a Avon Road PYMBLE NSW 2073	

Lot / DP: 16 / 8602 **LGA:** Ku-ring-gai Council

Applicant: Jim Neale

Assessment			
Date: 1/12/2009	Job ID: AM1	Filename: AM1 Avon	Run # 0

Software: BERS **Version:** 4.1 **Climate Zone:** 56

Referenced documents	
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 40892033	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
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Net Conditioned Floor Area: 55 **Net Unconditioned Floor Area** 0

Concessions / Ventilation Bonus	
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Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads	
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Heating:	44
Cooling:	13
(sensible + latent)	
Total:	57

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address:	PO Box 4 PYMBLE NSW 2073		
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Phone:	Fax:	Email:	david@gradwell.com.au
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Declaration of Interest:	The Assessor has provided design advice to the Applicant		
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Client			
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Name:	Jim Neale	Company:	Jim Neale
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Address:	35 Fox Valley Road WAHROONGA NSW 2076		
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Phone:	02 9489 6112	Fax:	Email: jimnea@optusnet.com.au
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Project			
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Address:	4_05 1 & 1a Avon Road PYMBLE NSW 2073		
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Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
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Applicant:	Jim Neale		
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Assessment			
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Date:	1/12/2009	Job ID:	AM1
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Filename:	AM1 Avon	Run #	0
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Software:	BERS	Version:	4.1
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Climate Zone:	56		
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Referenced documents			
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<i>All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:</i>			
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Thermal Performance Specification / Commitments attached and affixed to drawings, page:	1 or ground floor		
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Drawings:	PA-PLANS		
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Specifications:	Only specifications, detailed on Drawings identified above, have been referenced		
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ABSA Assessor Certificate	Assessor # 20860	Certificate # 91131869	Issued: 01-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
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Net Conditioned Floor Area:	146	Net Unconditioned Floor Area	0
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Concessions / Ventilation Bonus			
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Eligible Concessions:	None		
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The dwelling has the required shading to qualify for BASIX cross ventilation bonus:	N/A		
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Predicted annual energy loads			
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		<i>ABSA Assessor stamp</i>	
Heating:	63		
Cooling:	25		
(sensible + latent)			
Total:	88		

Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor		
Name: David Gradwell	Company: David W Gradwell	Assr #: 20860
Address: PO Box 4 PYMBLE NSW 2073		
Phone:	Fax:	Email: david@gradwell.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Jim Neale	Company: Jim Neale	
Address: 35 Fox Valley Road WAHROONGA NSW 2076		
Phone: 02 9489 6112	Fax:	Email: jimnea@optusnet.com.au

Project		
Address: 4_06 1 & 1a Avon Road PYMBLE NSW 2073		
Lot / DP: 16 / 8602	LGA: Ku-ring-gai Council	
Applicant: Jim Neale		

Assessment			
Date: 1/12/2009	Job ID: AM1	Filename: AM1 Avon	Run # 0
Software: BERS	Version: 4.1	Climate Zone: 56	

Referenced documents	
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All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate Assessor # 20860 Certificate # 20228622 Issued: 01-Dec-09

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 147

Net Unconditioned Floor Area 0

Concessions / Ventilation Bonus

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating: 62

Cooling: 30
(sensible + latent)

Total: 92

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Address:		PO Box 4 PYMBLE NSW 2073	Assr #:
Phone:		Fax:	
Email:		david@gradwell.com.au	
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Jim Neale	Company:	Jim Neale
Address:		35 Fox Valley Road WAHROONGA NSW 2076	
Phone:	02 9489 6112	Fax:	
Email:		jimnea@optusnet.com.au	

Project			
Address: 5_01 1 & 1a Avon Road PYMBLE NSW 2073			
Lot / DP:	16 / 8602	LGA:	Ku-ring-gai Council
Applicant: Jim Neale			

Assessment			
Date:	1/12/2009	Job ID:	AM1
Filename:	AM1 Avon	Run #	0
Software:	BERS	Version:	4.1
Climate Zone:		56	

Referenced documents	
All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:	
Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor	
Drawings:	PA-PLANS
Specifications: Only specifications, detailed on Drawings identified above, have been referenced	

ABSA Assessor Certificate	Assessor # 20860	Certificate # 81028489	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area:	153
Net Unconditioned Floor Area	0
Concessions / Ventilation Bonus	
Eligible Concessions: None	
The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A	

Predicted annual energy loads

Heating:	63
Cooling:	40
(sensible + latent)	
Total:	103

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

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

Issued in accordance with the requirements of
BASIX THERMAL COMFORT - Simulation Method



Assessor			
Name:	David Gradwell	Company:	David W Gradwell
Assr #:	20860		

Address: PO Box 4 PYMBLE NSW 2073

Phone: **Fax:** **Email:** david@gradwell.com.au

Declaration of Interest: The Assessor has provided design advice to the Applicant

Client

Name:	Jim Neale	Company:	Jim Neale
--------------	-----------	-----------------	-----------

Address: 35 Fox Valley Road WAHROONGA NSW 2076

Phone: 02 9489 6112 **Fax:** **Email:** jimnea@optusnet.com.au

Project

Address: 5_02 1 & 1a Avon Road PYMBLE NSW 2073

Lot / DP: 16 / 8602 **LGA:** Ku-ring-gai Council

Applicant: Jim Neale

Assessment

Date:	1/12/2009	Job ID:	AM1	Filename:	AM1 Avon	Run #	0
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Software: BERS **Version:** 4.1 **Climate Zone:** 56

Referenced documents

All details, upon which this Assessment has been based, are included in the project documentation which has been stamped and signed by the Assessor issuing this Certificate, as detailed below:

Thermal Performance Specification / Commitments attached and affixed to drawings, page: 1 or ground floor

Drawings: PA-PLANS

Specifications: Only specifications, detailed on Drawings identified above, have been referenced

ABSA Assessor Certificate	Assessor # 20860	Certificate # 36781230	Issued: 02-Dec-09
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)

Net Conditioned Floor Area: 147

Net Unconditioned Floor Area 0

Concessions / Ventilation Bonus

Eligible Concessions: None

The dwelling has the required shading to qualify for BASIX cross ventilation bonus: N/A

Predicted annual energy loads

Heating:	50
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Cooling:	27
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(sensible + latent)

Total:	77
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ABSA Assessor stamp

