

Certificate number: 309478M_05

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, 14 April 2011



Planning

Project summary	
Project name	Lindfield Retail & Residential Devel_05
Street address	23-37 Lindfield Avenue Lindfield 2070
Local Government Area	Ku-ring-gai Council
Plan type and plan number	deposited 1067930
Lot no.	101
Section no.	-
No. of unit buildings	2
No. of units in unit buildings	91
No. of attached dwelling houses	0
No. of separate dwelling houses	0
Project score	
Water	✓ 40 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 31 Target 30

Certificate Prepared by (please complete before submitting to Council or PCA)	
Name / Company Name:	
ABN (if applicable):	

Description of project

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Lot no.	101
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Project type	
No. of unit buildings	2
No. of units in unit buildings	91
No. of attached dwelling houses	0
No. of separate dwelling houses	0
Site details	
Site area (m²)	3099
Roof area (m²)	1754
Non-residential floor area (m²)	4658
Residential car spaces	113
Non-residential car spaces	93

Common area landscape	
Common area lawn (m²)	0
Common area garden (m²)	315
Area of indigenous or low water use species (m²)	315
Assessor details	
Assessor number	20776
Certificate number	12714371
Climate zone	56
Project score	
Water	✓ 40 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 31 Target 30

Description of project

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

Unit building - Building 1, 34 dwellings, 5 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1	2	80.8	11.0	0	0
5	1	63.9	6.0	0	0
9	1	47.7	5.0	0	0
13	1	46.1	6.0	0	0
17	1	46.7	6.0	0	0
21	2	80.8	11.0	0	0
25	2	80.8	11.0	0	0
29	1	47.7	5.0	0	0
33	3	109.7	19.0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2	1	46.7	6.0	0	0
6	1	61.7	6.0	0	0
10	2	80.8	11.0	0	0
14	1	47.7	5.0	0	0
18	1	67.1	6.0	0	0
22	1	46.7	6.0	0	0
26	2	80.8	11.0	0	0
30	2	80.8	11.0	0	0
34	3	112.1	18.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
3	1	67.1	6.0	0	0
7	1	46.9	6.0	0	0
11	2	80.8	11.0	0	0
15	2	80.8	11.0	0	0
19	1	47.7	5.0	0	0
23	1	67.1	6.0	0	0
27	1	46.7	6.0	0	0
31	3	112.1	18.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
4	1	47.7	5.0	0	0
8	1	67.1	6.0	0	0
12	1	46.7	6.0	0	0
16	2	80.8	11.0	0	0
20	2	80.8	11.0	0	0
24	1	47.7	5.0	0	0
28	1	67.1	6.0	0	0
32	3	109.7	19.0	0	0

Unit building - Building 2, 57 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 (min area m ²)
1	2	84.4	11.0	0	0
5	1	48.0	6.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2	2	84.6	12.0	0	0
6	2	77.6	8.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
3	1	45.9	7.0	0	0
7	1	53.4	5.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
4	1	57.6	7.0	0	0
8	1	53.4	5.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
9	1	46.6	6.0	0	0
13	2	81.6	12.0	0	0
17	1	53.4	5.0	0	0
21	1	61.6	6.0	0	0
25	2	80.8	11.0	0	0
29	1	46.6	6.0	0	0
33	2	84.6	12.0	0	0
37	1	59.2	5.0	0	0
42	2	84.4	11.0	0	0
46	2	77.6	8.0	0	0
50	1	47.8	6.0	0	0
55	2	80.8	11.0	0	0
59	2	67.5	13.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
10	1	66.7	5.0	0	0
14	2	80.8	11.0	0	0
18	1	53.4	5.0	0	0
22	2	84.4	11.0	0	0
26	2	77.6	8.0	0	0
30	1	70.8	5.0	0	0
34	2	80.8	11.0	0	0
38	3	105.1	6.0	0	0
43	2	84.6	12.0	0	0
47	1	44.7	7.0	0	0
52	2	84.4	11.0	0	0
56	2	77.6	8.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
11	1	61.6	6.0	0	0
15	2	80.8	11.0	0	0
19	1	46.6	6.0	0	0
23	2	84.6	12.0	0	0
27	1	59.2	5.0	0	0
31	1	61.6	6.0	0	0
35	2	80.8	11.0	0	0
39	1	47.8	6.0	0	0
44	2	80.8	11.0	0	0
48	3	105.1	6.0	0	0
53	1	56.4	6.0	0	0
57	1	46.0	6.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
12	2	84.4	11.0	0	0
16	2	77.6	8.0	0	0
20	1	70.8	5.0	0	0
24	2	80.8	11.0	0	0
28	1	53.4	5.0	0	0
32	2	84.4	11.0	0	0
36	2	77.6	8.0	0	0
40	1	47.8	6.0	0	0
45	2	80.8	11.0	0	0
49	1	47.8	6.0	0	0
54	2	80.8	11.0	0	0
58	3	98.8	18.0	0	0

Description of project

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

Common areas of unit building - Building 1

Common area	Floor area (m²)	Common area	Floor area (m²)	Common area	Floor area (m²)
Lift car (No. 1)	-	Lift car (No. 2)	-	Garbage room (No. 1)	14.48
Garbage room (No. 2)	10.2	Storage L2	16	Storage B2	114
Fire Stairs (No. 1)	10	Fire Stairs (No. 2)	12	Hallway/lobby L1 B1	68
Hallway/lobby L2 B1, RHS	20	Hallway/lobby L2, B1, LHS	20	Hallway/lobby L3, B1, RHS	20
Hallway/lobby L3, B1, LHS	20	Hallway/lobby L4, B1, RHS	20	Hallway/lobby L4, B1, LHS	20
Hallway/lobby L5, B1, RHS	20	Hallway/lobby L5, B1, LHS	20		

Common areas of unit building - Building 2

Common area	Floor area (m²)	Common area	Floor area (m²)	Common area	Floor area (m²)
Lift car (No. 3)	-	Lift car (No. 4)	-	Garbage room (No. 3)	32
Garbage room (No. 4)	23	Fire Stairs (No. 3)	10	Fire Stairs (No. 4)	10
Storage B3	245	Hallway/lobby L2, B2	72	Hallway/lobby L3, B2, RHS	27
Hallway/lobby L3, B2, LHS	15	Hallway/lobby L4, B2, RHS	27	Hallway/lobby L4, B2, LHS	15
Hallway/lobby L5, B2, RHS	28	Hallway/lobby L5, B2, LHS	15	Hallway/lobby L6, B2, RHS	28
Hallway/lobby L6, B2, LHS	15	Hallway/lobby L7, B2, RHS	23	Hallway/lobby L7, B2, LHS	15

Common areas of the development (non-building specific)

Common area	Floor area (m²)	Common area	Floor area (m²)
Car park area Basement 2	1109	Car park area Basement 3	2837

Schedule of BASIX commitments

1. Commitments for unit building - Building 1

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

2. Commitments for unit building - Building 2

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

3. Commitments for attached dwelling houses

4. Commitments for separate dwelling houses

5. 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 - Building 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	
All dwellings	3 star (> 7.5 but <= 9 L/min)	4 star	5 star	5 star	no	-	-	-	-	-	-	-	-	-	-

Alternative water source												
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up				
All dwellings	on-site recycled water system (no. 1)	See central systems	See central systems	no	yes	no	no	no				
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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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; (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.	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	interlocked to light	individual fan, ducted to façade or roof	manual switch on/off	natural ventilation only, or no laundry
						-

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	
31, 32, 33, 34	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no	
1, 10, 11, 15, 16, 20, 21, 25, 26, 30	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no	
2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 14, 17, 18, 19, 22, 23, 24, 27, 28, 29	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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	-	-	-	-	electric cooktop & electric oven	-	yes	-	-	-	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)	Area adjusted cooling load (in mJ/m ² /yr)
5	18	18
6	53	24
31, 34	53	56
32, 33	43	53
1, 11, 20, 21, 30	32	51

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
10, 15, 16, 25, 26	22	25
2, 7, 12, 17, 22, 27	7	39
3, 8, 13, 18, 23, 28	23	24
All other dwellings	14	27

(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.		✓	✓	✓

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No. 1)	-	-	compact fluorescent	connected to lift call button	Yes
Lift car (No. 2)	-	-	compact fluorescent	connected to lift call button	Yes
Garbage room (No. 1)	ventilation exhaust only	-	fluorescent	motion sensors	Yes
Garbage room (No. 2)	ventilation exhaust only	-	fluorescent	motion sensors	Yes
Storage L2	no mechanical ventilation	-	fluorescent	motion sensors	Yes
Storage B2	no mechanical ventilation	-	fluorescent	motion sensors	Yes
Fire Stairs (No. 1)	ventilation supply only	none ie. continuous	fluorescent	motion sensors	Yes
Fire Stairs (No. 2)	ventilation supply only	none ie. continuous	fluorescent	motion sensors	Yes
Hallway/lobby L1 B1	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L2 B1, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L2, B1, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L3, B1, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L3, B1, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L4, B1, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L4, B1, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L5, B1, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L5, B1, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes

Central energy systems		Specification
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

2. Commitments for unit building - Building 2

(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	
All dwellings	3 star (> 7.5 but <= 9 L/min)	4 star	5 star	5 star	no	-	-	-	-	-	-	-	-	-	

Alternative water source														
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up						
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58	on-site recycled water system (no. 1)	See central systems	See central systems	no	yes	no	no	no						

(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.	✓	✓	✓

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

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

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	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
59	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
38, 48, 58	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
3, 4, 5, 7, 8, 9, 10, 11, 17, 18, 19, 20, 21, 27, 28, 29, 30, 31, 37, 39, 40, 47, 49, 50, 53, 57	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Cooling		Heating		Artificial lighting							Natural lighting	
	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, 2, 6, 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 32, 33, 34, 35, 36, 42, 43, 44, 45, 46, 52, 54, 55, 56	ceiling fans + 1-phase airconditioning 4 Star (new rating)	ceiling fans	1-phase airconditioning 4 Star (new rating)	-	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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
59	-	-	-	-	electric cooktop & electric oven	-	yes	-	-	-	-	-

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58	-	-	-	-	electric cooktop & electric oven	-	yes	-	-	-	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.						

(iii) Thermal Comfort		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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)	Area adjusted cooling load (in mJ/m ² /yr)
3	22	33
4	20	43
5	14	33
18	21	36
28	32	26
47	32	28
53	35	27
57	46	56

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
58	60	43
59	54	38
7, 17	32	36
20, 30	20	23
38, 48	45	45
40, 50	13	28
2, 13, 23, 33, 43	36	26
8, 19, 29, 39, 49	12	28
6, 16, 26, 36, 46, 56	11	21
9, 11, 21, 27, 31, 37	21	28
1, 10, 12, 22, 32, 42, 52	19	20
All other dwellings	22	25

(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.	✓		✓	✓

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No. 3)	-	-	compact fluorescent	connected to lift call button	Yes
Lift car (No. 4)	-	-	compact fluorescent	connected to lift call button	Yes
Garbage room (No. 3)	ventilation exhaust only	-	fluorescent	motion sensors	Yes
Garbage room (No. 4)	ventilation exhaust only	-	fluorescent	motion sensors	Yes
Fire Stairs (No. 3)	ventilation supply only	none ie. continuous	fluorescent	motion sensors	Yes
Fire Stairs (No. 4)	ventilation supply only	none ie. continuous	fluorescent	motion sensors	Yes
Storage B3	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L2, B2	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L3, B2, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L3, B2, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L4, B2, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L4, B2, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L5, B2, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L5, B2, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L6, B2, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L6, B2, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L7, B2, RHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes
Hallway/lobby L7, B2, LHS	no mechanical ventilation	-	compact fluorescent	motion sensors	Yes

Central energy systems		Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 10

5. 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

Central systems	Size	Configuration	Connection (to allow for...)
Central on-site recycled/alternative water supply (No. 1)	To supply at least 1200 litres of recycled water per day to the development (over and above the system's committed capacity, if any)	-	- Irrigation of 0 square metres of common landscape area on the site - car washing in 0 car washing bays on the site

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

Common area ventilation system				Common area lighting	
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area Basement 2	ventilation exhaust only	carbon monoxide monitor + VSD fan	fluorescent	motion sensors	Yes
Car park area Basement 3	-	-	fluorescent	motion sensors	Yes

Central energy systems		Specification
Type	Specification	
Central hot water system (No. 1)	solar - gas boosted	Solar collector area (minimum, in square metres): 40 Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)

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:	Katherine Gregory	Company:	GHD Pty Ltd
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com		
Declaration of interest:	The Assessor has provided design advice to the Applicant		
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10, 263 Clarence Street SYDNEY NSW 2000		
Phone:	(02) 9283 0860	Fax:	(02) 9283 0870
Email:	peter@ptigroup.com.au		
Project			
Address:	23-37 Lindfield Avenue LINDFIELD NSW 2070		
Applicant:	JBA Urban Planning	LGA:	Ku-ring-gai Council
Assessment			
Date:	14/04/2011	File ref:	15047
Software:	AccuRate		Version:
1.1.4.1			
Documentation			

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

Thermal Performance Spec:

Attached, Affixed to drawings Page#: DA00-DA16

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

DA07

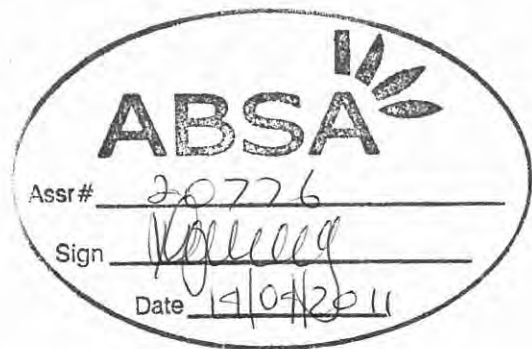
Building Specifications: (Title, Ref.#, Revision, Issue date, etc)

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



ABSA Assessor Certificate		Assessor # 20776		Certificate # 12714371		Issued: 14/04/2011	
Thermal performance specifications						Page 1 of 1	
Unit number(s)	Certificate number	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Concessions	Qualify for ventilation bonus
		Cond.	Uncond.	Heat	Cool (Sens & Lat)		
Type A	12714371	83	11	32	51	None	N/A
Type A1	26295782	87	11	22	25	None	N/A
Type B	61011973	51	7	32	36	None	N/A
Type B1	16208148	60	7	21	28	None	N/A
Type C	74542839	67	6	23	24	None	N/A
Type D	89018515	84	9	19	20	None	N/A
Type E	73578791	78	7	11	21	None	N/A
Type F	24944817	84	8	36	26	None	N/A
Type G	78567714	46	6	12	28	None	N/A
Type G1	51498659	46	6	32	28	None	N/A
Type H	72764855	63	9	20	23	None	N/A
Type I	63318226	54	8	34	27	None	N/A
Type J	16817541	45	7	46	57	None	N/A
Type K	85409648	74	11	54	38	None	N/A

Type L	83254026	104	13	60	43	None	N/A
Type M	51434566	62	6	53	24	None	N/A
Type N	77626089	61	8	18	18	None	N/A
Type O	37229450	109	19	46	53	None	N/A
Type O1	18970382	112	18	53	56	None	N/A
Type P	63557735	46	6	14	27	None	N/A
Type P1	44400565	46	6	7	39	None	N/A
Type Q	87329332	58	7	20	44	None	N/A
Type R	56817254	46	7	2	33	None	N/A
Type S	45210562	48	6	14	32	None	N/A
Type T	38146262	105	6	45	45	None	N/A



Assessor # 20776

Certificate # 12714371

Issued: 14/04/2011

Thermal Performance Specifications

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

Windows	Product ID	Glass	Frame	U value	SHGC	Area M ²	Detail
Generic 10		Single glazed Low-e	Aluminium	5.70	0.47		As per detail on plans
Generic 11		Single glazed Low-e	Improve Aluminium	4.32	0.47		As per detail on plans

Skylights	Product ID	Glass	Frame	U value	SHGC	Area M ²	Detail
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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 abs.	Detail
Concrete		R1.5	Medium – SA 0.475-0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per detail on plans
Concrete Block & Plasterboard		None	As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard		None	Throughout

Roof	Construction	Insulation	Colour – solar abs.	Detail
Concrete		R3.0	Medium – SA 0.475-0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

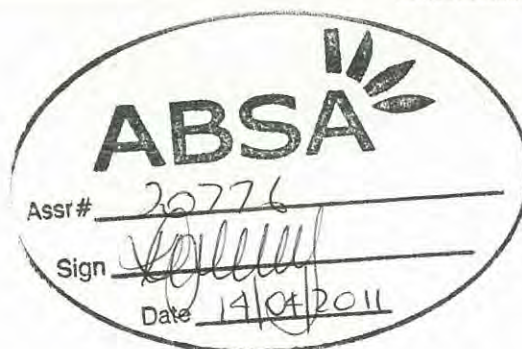
Fixed shading	Eaves (width - inc. gutters, h't above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north:	45
Terrain category:	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor:	Enclosed
Living area open to entry:	Yes
Doors separate living areas:	No
Stair open to heated areas:	No
Seals to windows and doors:	Yes
Exhaust fans without dampers:	No
Ventilated skylights:	No
Open fire, unflued gas heat:	No
Vented downlights:	No
Wall and ceiling vents:	No

ABSA Assessor stamp



Assessor Certificate

Single Dwelling

Certificate Version 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type A 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 12714371	Issued: 19-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 83	Net Unconditioned Floor Area: 11
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:	51
(sensible + latent)	
Total:	83

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	28.11	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type A1 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 26295782	Issued: 20-Oct-10
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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: 11
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:	22	
Cooling:	25	
(sensible + latent)		
Total:	47	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	28.11	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type B 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 61011973	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 51	Net Unconditioned Floor Area: 7
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:	36
(sensible + latent)	
Total:	68

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	18.63	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type B1 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant:	JBA Urban Planning		
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 16208148** **Issued: 20-Oct-10**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 60	Net Unconditioned Floor Area: 7
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:	21
Cooling:	28
(sensible + latent)	
Total:	49

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	11.7	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type C 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 74542839	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 67	Net Unconditioned Floor Area: 6
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:	24	
(sensible + latent)		
Total:	47	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	16.20	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None
		As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0	As per detail on plans

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type D 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 89018515** **Issued: 20-Oct-10**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 86	Net Unconditioned Floor Area: 9
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:	19
Cooling:	20
(sensible + latent)	
Total:	39

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	28.08	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type E 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant:	JBA Urban Planning		
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 73578791** **Issued: 20-Oct-10**

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: 7
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:	11
Cooling:	21
(sensible + latent)	
Total:	32

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	21.6	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type F 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 24944817	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 84	Net Unconditioned Floor Area: 8
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:	36
Cooling:	26
(sensible + latent)	
Total:	62

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	24.03	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type G 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant:			
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 78567714** **Issued: 20-Oct-10**

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: 6
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:	12
Cooling:	28
(sensible + latent)	
Total:	40

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	11.34	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type G1 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930		LGA: Ku-ring-gai
Applicant:			
Assessment			
Date:	7/04/2011	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 1		
Software:	AccuRate	Version:	1.1.4.1
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: DA07

Drawings: DA00-DA16

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

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 51498659** **Issued: 14-Apr-11**

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: 6
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:	28
(sensible + latent)	
Total:	60

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	11.34	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per detail on plans
Concrete Block & Plasterboard		None	As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard		None	Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type H 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 72764855	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 63	Net Unconditioned Floor Area: 9
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:	23	
(sensible + latent)		
Total:	43	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	13.34	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type I 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 63318226	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 54	Net Unconditioned Floor Area: 8
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:	34	
Cooling:	27	
(sensible + latent)		
Total:	61	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	13.5	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type J 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor #** 20776 **Certificate #** 16817541 **Issued:** 20-Oct-10

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 45	Net Unconditioned Floor Area 7
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:	46
Cooling:	57
(sensible + latent)	
Total:	103

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	20.25	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type K 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant:	JBA Urban Planning		
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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>			
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Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 85409648** **Issued: 20-Oct-10**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 74	Net Unconditioned Floor Area: 11
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:	38
(sensible + latent)	
Total:	92

ABSA Assessor stamp



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
Generic 11		Single glazed low e	Alum. / thermal break	4.32	0.47	43.47	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type L 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
Climate Zone:	56		

Referenced documents			
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Thermal Performance Specification / Commitments attached and affixed to drawings, page: DA07			
Drawings:	DA00-DA16		

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 83254026	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 104	Net Unconditioned Floor Area: 13
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:	43
(sensible + latent)	
Total:	103

ABSA Assessor stamp



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
Generic 1		Single glazed low e	Aluminium	5.32	0.47	26.19	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
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Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type M 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant:	JBA Urban Planning		
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor # 20776** **Certificate # 51434566** **Issued: 20-Oct-10**

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 62	Net Unconditioned Floor Area: 6
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:	53
Cooling:	24
(sensible + latent)	
Total:	77

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	25.38	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type N 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 77626089	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 61	Net Unconditioned Floor Area: 8
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:	18	
Cooling:	18	
(sensible + latent)		
Total:	36	

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
Generic 10		Single glazed low e	Aluminium	5.7	0.47	22.68	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type O 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 37229450	Issued: 20-Oct-10
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THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area:	109
Net Unconditioned Floor Area	19
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:	46
Cooling:	53
(sensible + latent)	
Total:	99

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.7	0.47	60.21	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			
Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		
Project			
Address:	Type O1 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			
Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		
Specifications: Only specifications, detailed on Drawings identified above, have been referenced			

ABSA Assessor Certificate **Assessor #** 20776 **Certificate #** 18970382 **Issued:** 20-Oct-10

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 112	Net Unconditioned Floor Area: 18
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:	53
Cooling:	56
(sensible + latent)	
Total:	109

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.7	0.47	60.21	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type P 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 63557735	Issued: 20-Oct-10
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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: 6
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:	27
(sensible + latent)	
Total:	41

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.7	0.47	16.47	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor			
Name:	Katherine Gregory	Company:	GHD
Address:	GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone:	(02) 4979 9986	Fax:	(02) 4979 9988
Email:	katy.gregory@ghd.com.au		
Declaration of Interest: The Assessor has provided design advice to the Applicant			

Client			
Name:	Peter Israel	Company:	PTI Group
Address:	Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone:	0292830860	Fax:	0292830870
Email:	peter@ptigroup.com.au		

Project			
Address:	Type P1 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP:	101-103 / 1067930	LGA:	Ku-ring-gai
Applicant: JBA Urban Planning			

Assessment			
Date:	10/06/2010	Job ID:	2215047
Filename:	G:\22\15047\Technical\AccuR Run # 3		
Software:	AccuRate	Version:	1.1.4.1
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: DA07			
Drawings:	DA00-DA16		

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

ABSA Assessor Certificate	Assessor # 20776	Certificate # 44400565	Issued: 20-Oct-10
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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: 6
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:	7
Cooling:	39
(sensible + latent)	
Total:	46

ABSA Assessor stamp



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
Generic 10		Single glazed low e	Aluminium	5.7	0.47	18.63	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs	None		As per detail on plans
Concrete Block & Plasterboard	None		As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete	None		Carpet	As per detail on plans
Concrete	None		Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard	None		Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor		
Name: Katherine Gregory	Company: GHD	Assr #: 20776
Address: GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone: (02) 4979 9986	Fax: (02) 4979 9988	Email: kathy.gregory@ghd.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Peter Israel	Company: PTI Group	
Address: Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone: 0292830860	Fax: 0292830870	Email: peter@ptigroup.com.au

Project		
Address: Type Q 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP: 101-103 / 1067930	LGA: Ku-ring-gai	
Applicant: JBA Urban Planning		

Assessment			
Date: 7/04/2011	Job ID: 2215047	Filename: G:\22\15047\Technical\AccuR	Run # 1
Software: AccuRate	Version: 1.1.4.1	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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate Assessor # 20776 Certificate # 87329332 Issued: 14-Apr-11

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 7
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:	44	
(sensible + latent)		
Total:	64	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	15.4	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per detail on plans
Concrete Block & Plasterboard		None	As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard		None	Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None
		As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0	As per detail on plans

Overshadowing	Overshadowing structures	Overshadowing trees
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Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor		
Name: Katherine Gregory	Company: GHD	Assr #: 20776
Address: GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone: (02) 4979 9986	Fax: (02) 4979 9988	Email: kathy.gregory@ghd.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Peter Israel	Company: PTI Group	
Address: Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone: 0292830860	Fax: 0292830870	Email: peter@ptigroup.com.au

Project		
Address: Type R 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP: 101-103 / 1067930	LGA: Ku-ring-gai	
Applicant: JBA Urban Planning		

Assessment			
Date: 7/04/2011	Job ID: 2215047	Filename: G:\22\15047\Technical\AccuR	Run # 1
Software: AccuRate	Version: 1.1.4.1	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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate Assessor # 20776 Certificate # 56817254 Issued: 14-Apr-11

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 7
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:	2	
Cooling:	33	
(sensible + latent)		
Total:	35	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	8.9	As per detail on 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. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per detail on plans
Concrete Block & Plasterboard		None	As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard		None	Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0 As per detail on plans	

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

Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor		
Name: Katherine Gregory	Company: GHD	Assr #: 20776
Address: GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone: (02) 4979 9986	Fax: (02) 4979 9988	Email: kathy.gregory@ghd.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Peter Israel	Company: PTI Group	
Address: Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone: 0292830860	Fax: 0292830870	Email: peter@ptigroup.com.au

Project		
Address: Type S 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP: 101-103 / 1067930	LGA: Ku-ring-gai	
Applicant: JBA Urban Planning		

Assessment			
Date: 7/04/2011	Job ID: 2215047	Filename: G:\2215047\Technical\AccuR	Run # 1
Software: AccuRate	Version: 1.1.4.1	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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate Assessor # 20776 Certificate # 45210562 Issued: 14-Apr-11

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 48	Net Unconditioned Floor Area 6
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	 ABSA Assessor stamp
Cooling:	32	
(sensible + latent)		
Total:	46	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	9.7	As per detail on plans

Skylights	Product ID	Glass	Frame	U value	SHGC	Area M2
-----------	------------	-------	-------	---------	------	---------

Any U and SHGC values specified on Certificates Issued after 1 May 2007 are according to NFRC. 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
Concrete		R1.5	Medium - SA 0.475 - 0.7	Throughout

Internal walls	Construction	Insulation	Detail
Plasterboard on Studs		None	As per detail on plans
Concrete Block & Plasterboard		None	As per detail on plans

Floors	Construction	Insulation	Covering	Detail
Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

Ceilings	Construction	Insulation	Detail
Plasterboard		None	Throughout

Roof	Construction	Insulation	Colour - Solar absorptancy	Detail
Concrete		R3.0	Medium - SA 0.475 - 0.7	Throughout

Window cover	Internal (curtains)	External (awnings, shutters, etc)
Holland blinds	Throughout	None
		As per detail on plans

Fixed shading	Eaves (width - inc. gutters, height above windows)	Verandahs, Pergolas (type, description)
0	0	As per detail on plans

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

Orientation, Exposure, Ventilation and Infiltration

Orientation of nominal north elevation	45
Terrain category	Suburban
Roof ventilation:	Unventilated
Cross ventilation:	None
Subfloor ventilation:	Enclosed
Living area open to entry:	Yes
Living areas separated by doors:	No
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 6.1.1. Prior versions not valid after 1 March 2006

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



Assessor		
Name: Katherine Gregory	Company: GHD	Assr #: 20776
Address: GHD Level 3, 24 Honeysuckle Drive NEWCASTLE NSW 2300		
Phone: (02) 4979 9986	Fax: (02) 4979 9988	Email: katy.gregory@ghd.com.au
Declaration of Interest: The Assessor has provided design advice to the Applicant		

Client		
Name: Peter Israel	Company: PTI Group	
Address: Level 10 263 Clarence Street SYDNEY NSW 2000		
Phone: 0292830860	Fax: 0292830870	Email: peter@ptigroup.com.au

Project		
Address: Type T 23-37 Lindfield Avenue LINDFIELD NSW 2070		
Lot / DP: 101-103 / 1067930	LGA: Ku-ring-gai	
Applicant: JBA Urban Planning		

Assessment			
Date: 12/04/2011	Job ID: 2215047	Filename: G:\2215047\Technical\AccuR	Run # 1
Software: AccuRate	Version: 1.1.4.1	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: DA07	
Drawings:	DA00-DA16

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

ABSA Assessor Certificate Assessor # 20776 Certificate # 38146262 Issued: 14-Apr-11

THERMAL COMFORT - Simulation Method

The details must be entered into your BASIX Assessment

Area calculations (M2)	
Net Conditioned Floor Area: 105	Net Unconditioned Floor Area 6
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:	45	
(sensible + latent)		
Total:	90	

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
Generic 10		Single glazed low e	Aluminium	5.70	0.47	50.37	As per detail on plans

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-----------	------------	-------	-------	---------	------	---------

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Concrete		None	Carpet	As per detail on plans
Concrete		None	Ceramic Tile	As per detail on plans

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Overshadowing	Overshadowing structures	Overshadowing trees
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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





LINDFIELD RETAIL & RESIDENTIAL DEVELOPMENT

23-37 LINDFIELD AVE
LINDFIELD, NSW



PREPARED FOR
ANKA PROPERTY GROUP
P194.2



NOTE
1. This drawing is a preliminary design and is not to be used for construction purposes.
2. This drawing is a preliminary design and is not to be used for construction purposes.
3. This drawing is a preliminary design and is not to be used for construction purposes.

REVISIONS
REV. DESCRIPTION DATE
A DEVELOPMENT APPROVAL 15/05/10
B DEVELOPMENT APPROVAL 15/05/10
C DEVELOPMENT APPROVAL 15/05/10

REV.	DESCRIPTION	DATE
A	DEVELOPMENT APPROVAL	15/05/10
B	DEVELOPMENT APPROVAL	15/05/10
C	DEVELOPMENT APPROVAL	15/05/10

ANKA PROPERTY GROUP

PROJECT
LINDFIELD RETAIL & RESIDENTIAL DEVELOPMENT

COVER SHEET & LOCATION PLAN

DATE 13/04/2011
DRAWN BY VD
CHECKED BY VD
REVISIONS P194.2

DRAWING SCHEDULE	
NUMBER	CONTENT
DA 00	COVER PAGE
DA 01	SITE ANALYSIS
DA 02	SITE PLAN
DA 03	BASEMENT 3 PLAN
DA 04	BASEMENT 2 PLAN
DA 05	BASEMENT 1 PLAN
DA 06	GROUND FLOOR PLAN
DA 07	LEVEL 1 PLAN
DA 08	LEVEL 2 PLAN
DA 09	LEVEL 3 PLAN
DA 10	LEVEL 4 PLAN
DA 11	LEVEL 5 PLAN
DA 12	LEVEL 6 PLAN
DA 13	LEVEL 7 PLAN
DA 14	ROOF LEVEL PLAN
DA 15	ELEVATIONS SHEET 1
DA 16	ELEVATIONS SHEET 2
DA 17	ELEVATIONS SHEET 3
DA 18	SECTIONS SHEET 1
DA 19	SECTIONS SHEET 2
DA 20	SHADOW DIAGRAMS - MARCH
DA 21	SHADOW DIAGRAMS - JUNE
DA 22	SHADOW DIAGRAMS - SEPTEMBER
DA 23	SHADOW DIAGRAMS - DECEMBER
DA 24	MISCELLANEOUS
DA 25	PHOTOMONTAGE 1
DA 26	PHOTOMONTAGE 2
DA 27	PHOTOMONTAGE 3
DA 28	PHOTOMONTAGE 4
DA 29	PHOTOMONTAGE 5
DA 30	PHOTOMONTAGE 6
DA 31	PHOTOMONTAGE 7
DA 32	PHOTOMONTAGE 8
DA 33	MATERIALS AND FINISHES SCHEDULE
DA 34	POSSIBLE FUTURE EXTENSION

APARTMENT SCHEDULE			
APARTMENTS	BUILDING A	BUILDING B	TOTAL
STUDIO	20	1	21
1 BEDS	10	25	35
2 BEDS	4	28	32
3 BEDS	3	3	6
TOTAL	34	57	91

RETAIL SCHEDULE			
RETAIL	LEVEL 1	LEVEL 2	TOTAL
RETAIL 1	1	1	2
RETAIL 2	1	1	2
RETAIL 3	1	1	2
RETAIL 4	1	1	2
RETAIL 5	1	1	2
RETAIL 6	1	1	2
RETAIL 7	1	1	2
RETAIL 8	1	1	2
RETAIL 9	1	1	2
RETAIL 10	1	1	2
RETAIL 11	1	1	2
RETAIL 12	1	1	2
RETAIL 13	1	1	2
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RETAIL 94	1	1	2
RETAIL 95	1	1	2
RETAIL 96	1	1	2
RETAIL 97	1	1	2
RETAIL 98	1	1	2
RETAIL 99	1	1	2
RETAIL 100	1	1	2

CAR PARKING SCHEDULE			
CAR SPACES	BASEMENT 1	BASEMENT 2	TOTAL
RETAIL	46	47	93
RETAIL VISITORS	27	27	54
ADJOINING LOT	25	16	41
TOTAL	98	90	188

1. Contractor to verify all dimensions on site before any shop drawings or work is commenced.
2. Figured dimension to be taken as preference to scaled dimension.
3. The drawing is to be read in conjunction with the specification and engineers drawings.

REVISIONS				
REV	DESCRIPTION	BY	CHK	DATE
1	DEVELOPMENT APPLICATION	VS		22/07/10
2	SHOW CAMERA LOCATION FOR PHOTOGRAPH	DF		07/10/10
3	VEHICLE CROSSOVER AT HAZLEHURST AERODROME	NE		11/02/11
4	ORIGINAL AMENDMENTS	VS		13/04/11

IV	DESCRIPTION	BY	CHK	DATE
	DEVELOPMENT APPLICATION	VS		22.07.10
	SHOW CAMERA LOCATIONS FOR PHOTOGRAPH	NE		07.10.10
	VEHICLE CROSSOVER AT WATKINS LAKE AND BRIDGE	DA		11.02.11
	CRIBBELL AND BOND	VS	VS	13.04.11



COMMERCIAL & DESIGN ARCHITECTS
INTERIOR DESIGNERS
PROPERTY DEVELOPMENT ANALYSIS & ADVISORS

PROJECT: LINCOLNFIELD RETAIL & RESIDENTIAL DEVELOPMENT

SITE PLAN



SCALE 1:500 @ A1, 1:1000 @ A3

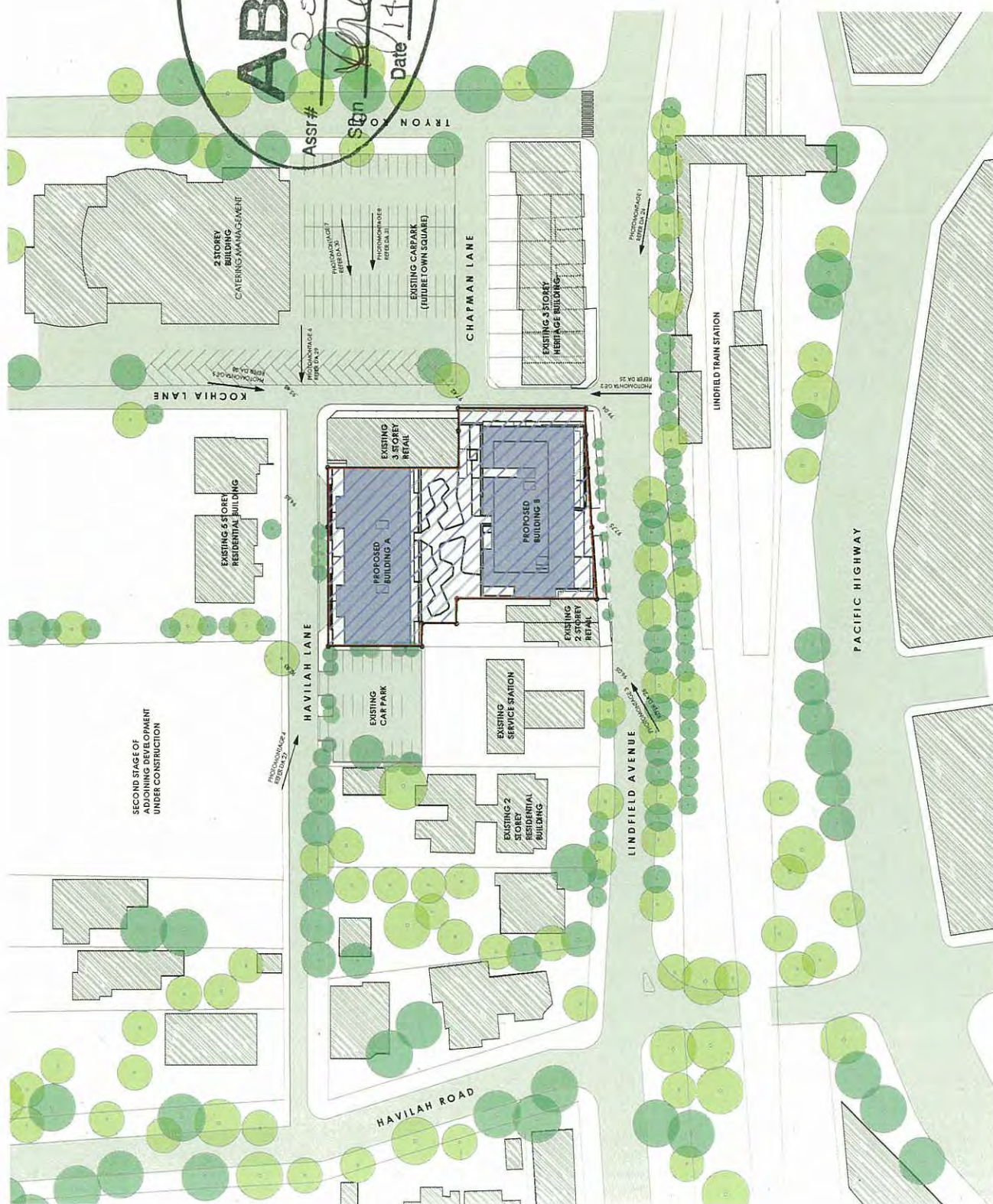
EXPIRY DATE	13/04/2011	13/04/2011
ISSUED BY	MD	MD

CHECKED BY:	VD
	VD

OBJECT No. P194.2

A DA 32 D

doc	stage	dwg no.	revision
A	DA	02	1



1 SITE PLAN

