BASIX® Certificate

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

Single Dwelling

Certificate number: 527325S

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: Monday, 03 February 2014
To be valid, this certificate must be lodged within 3 months of the date of issue.

NSW GOVERNMENT Planning & Infrastructure

Project summary	
Project name	TPH141023
Street address	17 Adina Street Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	deposited 1168992
Lot no.	2184
Section no.	-
Project type	separate dwelling house
No. of bedrooms	4

Project score		
Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 40

Certificate Prepared by
Name / Company Name: T P House Pty Ltd
ABN (if applicable): 81110120315

Description of project

Project address	
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Plan type and plan number	Deposited Plan 1168992
Lot no.	2184
Section no.	-
Project type	
Project type	separate dwelling house
No. of bedrooms	4
Site details	
Site area (m²)	510
Roof area (m²)	234
Conditioned floor area (m2)	127
Unconditioned floor area (m2)	13
Total area of garden and lawn (m2)	275

Assessor details and thermal loads		
Assessor number	BDAV/12/1452	
Certificate number	14521023	
Climate zone	28	
Area adjusted cooling load (MJ/m².year)	25	
Area adjusted heating load (MJ/m².year)	60	
Other		
none	n/a	
Project score		
Water	✓ 41	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 50	Target 40

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 233 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to:			
• all toilets in the development		✓	✓
• the cold water tap that supplies each clothes washer in the development		✓	✓
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✓	✓

Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓

Floor and wall construction	Area
floor - concrete slab on ground	All or part of floor area square metres

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 5 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning; Energy rating: EER 2.5 - 3.0		✓	✓
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a		✓	✓
Kitchen: individual fan, not ducted; Operation control: manual switch on/off		✓	✓
Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓	✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:			
• at least 4 of the bedrooms / study;		✓	✓
• at least 2 of the living / dining rooms;		✓	✓
• the kitchen;		✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
• all bathrooms/toilets; • the laundry; • all hallways;		✓ ✓ ✓	✓ ✓ ✓
Natural lighting			
The applicant must install a window and/or skylight in 2 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

Legend
In these commitments, "applicant" means the person carrying out the development.
Commitments identified with a ✓ in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
Commitments identified with a ✓ in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
Commitments identified with a ✓ in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate(either interim or final) for the development may be issued.

NatHERS Certificate
New Dwelling

6.0 Stars

Simulation Software

Software Name	BERS Pro 4.2
Software Version	Release 110811/A
Engine Version	CHENATH V2.13

Simulation Details

Project Name	tph141023_1
Date	3/02/2014
Location	KINGSWOOD PC 2747
Climate file	climat28.TXT
Adjusted Star Rating	6.0 Stars
Conditioned Area	127.39 m²
Unconditioned Area	43.66 m²
Adjusted Cooling	25.3 MJ/m²
Adjusted Heating	60.3 MJ/m²
Adjusted Total	85.5 MJ/m²

Dwelling Address

DP Number	1168992
Unit Number	BDAV#14521023
Lot Number	2184
House Number	
Street Name	Adina Street
Development Name	
Suburb	Jordan Springs NSW 2747

Client Details

Name	Mc Donald Jones Homes Sydney
Phone	Fax
Email	
Postal Address	P.O. Box 7994, Baulkham Hills NSW 2153
Street Details	Suite 1 , 62 Norwest Boulevard, Baulkham Hills NSW 2153

Assessor Details

Name	Stephen Hardy
Phone	02 42858216 Fax
Email	stephen@tphouse.com.au
Postal Address	T P House Pty Ltd
Street Details	24 Duncan Street, Balgownie. NSW 2519

Signed by the Assessor.....

Tilted roof windows with blinds cannot be modelled using this version of BERSPro.
All windows are modelled with Holland Blinds for regulatory purposes.

Building Element Details

Project tph141023 Run 1
KINGSWOOD PC 2747 Lat -33.70 Long 150.70 Climate File climat28.TXT

Summary

Conditioned Area	127.4 m²
Unconditioned Area	43.7 m²
Total Floor Area	171.1 m²
Total Glazed Area	30.7 m²
Total External Solid door Area	12.2 m²
Glass to Floor Area	18.0 %
Gross External Wall Area	154.1 m²
Net External Wall Area	111.2 m²

Window
30.7 m² GGG-05-001a Generics Uval 6.57 SHGC 0.74
Glass Single Glazed Clear
Frame Aluminium

External Wall
18.2 m² Brick Veneer No Insulation
3.0 m² Cavity Brick No Insulation
90.0 m² Brick Veneer Bulk Insulation R 1.5

Internal Wall
139.0 m² Cavity Panel 70mm gap No Insulation

External Floor
30.8 m² Concrete Slab on Ground Bare Bulk Insulation in Contact with Floor R 0.5
59.9 m² Concrete Slab on Ground Carpet+Rubber Underlay 18mm Bulk Insulation in Contact with Floor R 0.5
80.3 m² Concrete Slab on Ground Ceramic Tiles 8mm Bulk Insulation in Contact with Floor R 0.5

External Ceiling
30.8 m² Plasterboard No Insulation Unventilated roofspace
140.3 m² Plasterboard Bulk Insulation R3.0 Unventilated roofspace

Roof (Horizontal area)
171.0 m² Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R 1.0 26° slope Hip roof

Details

Zone 1 Garage 1 Garage Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	No	Yes	No	No	0	0	0	No

External Floor				Area	Covering Type Insulation
				30.80	Bare Concrete Slab on Ground Bulk Insulation in Contact with Floor R0.50

Ceiling	Slope		Area	Type Above Ceiling
	0		30.80	Plasterboard No Insulation Unventilated roofspace cavity

Roof	Slope	Shape	Type Solar Abs Insulation
	26	Hip	Corrugated Iron 0.30 Bulk, Reflective Side Down, Anti-glare Up R1.00

Partition Wall	Length	Height	AdjZ	Area	Type
Wall P 2	2.80	2.40	6	6.72	Cavity Panel 70mm gap No Insulation
Wall P 3	1.30	2.40	7	1.55	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(3, 1)	0.77	2.04	7	1.57	Hollow core door
Wall P 4	4.90	2.40	7	11.76	Cavity Panel 70mm gap No Insulation

External Wall	Length	Height	Eaves	Orient	Area	Type Abs Insulation
Wall E 1	1.50	2.40	0.70	285	3.60	Brick Veneer 0.50 No Insulation
Wall E 5	0.60	2.40	5.40	15	1.44	Brick Veneer 0.50 No Insulation
Wall E 6	5.60	2.40	0.70	105	2.98	Cavity Brick 0.50 No Insulation
Door Ext	Width	Height	Eaves	Orient	Area	Type
Door E(6, 1)	4.92	2.13	0.70	105	10.46	Steel door
Wall E 7	5.50	2.40	0.70	195	13.20	Brick Veneer 0.50 No Insulation

Zone 2 Living 1 Living Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor				Area	Covering Type Insulation
				12.60	Carpet+Rubber Underlay 18mm Concrete Slab on Ground Bulk Insulation in Contact with Floor R0.50

Ceiling	Slope		Area	Type Insulation Above Ceiling
	0		12.60	Plasterboard Bulk Insulation R3.00 Unventilated roofspace cavity

Roof	Slope	Shape	Type Solar Abs Insulation
	26	Hip	Corrugated Iron 0.30 Bulk, Reflective Side Down, Anti-glare Up R1.00

Partition Wall	Length	Height	AdjZ	Area	Type
Wall P 1	3.50	2.40	7	5.81	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(1, 1)	1.20	2.15	7	2.59	Opening in wall
Wall P 2	3.60	2.40	10	8.64	Cavity Panel 70mm gap No Insulation
Wall P 4	2.10	2.40	4	5.04	Cavity Panel 70mm gap No Insulation
Wall P 5	1.50	2.40	3	3.60	Cavity Panel 70mm gap No Insulation

External Wall	Length	Height	Eaves	Orient	Area	Type Abs Insulation
Wall E 3	3.50	2.40	0.60	15	6.78	Brick Veneer 0.50 Bulk Insulation R1.50

Window	Width	Height	Eaves	Orient	Area	Name Glass Frame Opening Covering Shading
Window(3, 1)	2.70	0.60	0.60	15	1.62	GGG-05-001a Single Glazed Clear Aluminium 45% Opening Sliding, Two Lites Holland Blind No Shading

Zone 3 Sleeping 1 Sleeping Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor				Area	Covering Type Insulation
				15.60	Carpet+Rubber Underlay 18mm Concrete Slab on Ground Bulk Insulation in Contact with Floor R0.50

Ceiling	Slope		Area	Type Insulation
				Above Ceiling
	0		15.60	Plasterboard Bulk Insulation R3.00 Unventilated roofspace cavity

Roof	Slope	Shape	Type Solar Abs Insulation
	26	Hip	Corrugated Iron 0.30 Bulk, Reflective Side Down, Anti-glare Up R1.00

Partition Wall	Length	Height	AdjZ	Area	Type
Wall P 2	3.90	2.40	7	7.79	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(2, 1)	0.77	2.04	7	1.57	Hollow core door
Wall P 3	1.50	2.40	2	3.60	Cavity Panel 70mm gap No Insulation
Wall P 4	2.00	2.40	4	4.80	Cavity Panel 70mm gap No Insulation
Wall P 5	2.10	2.40	4	3.47	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(5, 1)	0.77	2.04	4	1.57	Hollow core door

External Wall	Length	Height	Eaves	Orient	Area	Type Abs Insulation
Wall E 1	1.60	2.40	7.50	195	3.84	Brick Veneer 0.50 Bulk Insulation R1.50
Wall E 6	3.50	2.40	0.60	15	8.40	Brick Veneer 0.50 Bulk Insulation R1.50
Wall E 7	3.60	2.40	0.70	105	5.40	Brick Veneer 0.50 Bulk Insulation R1.50

Window	Width	Height	Eaves	Orient	Area	Name Glass Frame Opening Covering Shading
Window(7, 1)	1.80	1.80	0.70	105	3.24	GGG-05-001a Single Glazed Clear Aluminium 45% Opening Double Hung Sash Holland Blind No Shading

Zone 4 Other Night-tim Other Night-time Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor				Area	Covering Type Insulation
				4.20	Ceramic Tiles 8mm Concrete Slab on Ground Bulk Insulation in Contact with Floor R0.50

Ceiling	Slope		Area	Type Insulation
				Above Ceiling
	0		4.20	Plasterboard Bulk Insulation R3.00 Unventilated roofspace cavity

Roof	Slope	Shape	Type Solar Abs Insulation
	26	Hip	Corrugated Iron 0.30 Bulk, Reflective Side Down, Anti-glare Up R1.00

Partition Wall	Length	Height	AdjZ	Area	Type
Wall P 2	2.10	2.40	3	3.47	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(2, 1)	0.77	2.04	3	1.57	Hollow core door
Wall P 3	2.00	2.40	3	4.80	Cavity Panel 70mm gap No Insulation
Wall P 4	2.10	2.40	2	5.04	Cavity Panel 70mm gap No Insulation

External Wall	Length	Height	Eaves	Orient	Area	Type Abs Insulation
Wall E 1	2.00	2.40	0.60	15	4.20	Brick Veneer 0.50 Bulk Insulation R1.50

Window	Width	Height	Eaves	Orient	Area	Name Opening Shading	Glass Covering	Frame
Window(1, 1)	0.60	1.00	0.60	15	0.60	GGG-05-001a 45% Opening Sliding, Two Lites No Shading	Single Glazed Clear	Aluminium Holland Blind

Zone 5 Liv/Kitchen 1 Living/Kitchen Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor					Area	Covering Insulation	Type
					49.54	Ceramic Tiles 8mm Bulk Insulation in Contact with Floor R0.50	Concrete Slab on Ground

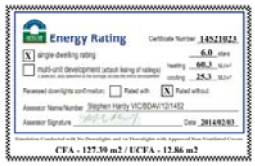
Ceiling	Slope				Area	Type Insulation	
	0				49.54	Above Ceiling Plasterboard Bulk Insulation R3.00 Unventilated roofspace cavity	

Roof	Slope	Shape			Type Insulation	Solar Abs
	26	Hip			Corrugated Iron Bulk, Reflective Side Down, Anti-glare Up R1.00	0.30

Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 2	0.40	2.40		9	0.96	Cavity Panel 70mm gap No Insulation
Wall P 3	2.50	2.40		12	3.41	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	1.20	2.15		12	2.59	Opening in wall
Wall P 4	2.90	2.40		8	6.96	Cavity Panel 70mm gap No Insulation
Wall P 5	2.90	2.40		10	5.39	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(5, 1)	0.77	2.04		10	1.57	Hollow core door
Wall P 6	1.00	2.40		7	0.25	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(6, 1)	1.00	2.15		7	2.15	Opening in wall
Wall P 7	0.60	2.40		7	1.44	Cavity Panel 70mm gap No Insulation
Wall P 8	1.50	2.40		7	3.60	Cavity Panel 70mm gap No Insulation
Wall P 9	2.80	2.40		6	6.72	Cavity Panel 70mm gap No Insulation

External Wall	Length	Height	Eaves	Orient	Area	Type Insulation	Abs
Wall E 1	5.30	2.40	3.50	285	6.00	Brick Veneer Bulk Insulation R1.50	0.50

Window	Width	Height	Eaves	Orient	Area	Name Opening Shading	Glass Covering	Frame
Window(1, 1)	3.20	2.10	3.50	285	6.72	GGG-05-001a 33% Opening Sliding, Three Lites No Shading	Single Glazed Clear	Aluminium Holland Blind
Wall E 10	6.30	2.40	0.70	195	9.61	Brick Veneer Bulk Insulation R1.50	0.50	
Window	Width	Height	Eaves	Orient	Area	Name Opening Shading	Glass Covering	Frame
Window(10, 1)	0.85	2.08	0.70	195	1.77	GGG-05-001a 30% Opening No Shading	Single Glazed Clear	Aluminium Holland Blind
Window(10, 2)	1.80	2.08	0.70	195	3.74	GGG-05-001a 30% Opening No Shading	Single Glazed Clear	Aluminium Holland Blind
Wall E 11	0.50	2.40	14.40	105	1.20	Brick Veneer Bulk Insulation R1.50	0.50	
Wall E 12	1.70	2.40	0.20	195	4.08	Brick Veneer Bulk Insulation R1.50	0.50	
Wall E 13	0.50	2.40	4.80	285	1.20	Brick Veneer Bulk Insulation R1.50	0.50	
Wall E 14	1.30	2.40	0.70	195	1.35	Brick Veneer	0.50	



						Bulk Insulation R1.50		
Window	Width	Height	Eaves	Orient	Area	Name	Glass	Frame
						Opening	Covering	
						Shading		
Window(14, 1)	0.85	2.08	0.70	195	1.77	GGG-05-001a	Single Glazed Clear	Aluminium
						30% Opening	Holland Blind	
						No Shading		

Zone 6 Wet Area 1 Wet Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor			Area	Covering	Type
				Insulation	
			5.32	Ceramic Tiles 8mm	Concrete Slab on Ground
				Bulk Insulation in Contact with Floor R0.50	
Ceiling	Slope		Area	Type	
				Insulation	
				Above Ceiling	
	0		5.32	Plasterboard	
				Bulk Insulation R3.00	
				Unventilated roofspace cavity	
Roof	Slope	Shape		Type	Solar Abs
				Insulation	
	26	Hip		Corrugated Iron	0.30
				Bulk, Reflective Side Down, Anti-glare Up R1.00	

Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 2	2.80	2.40		5	6.72	Cavity Panel 70mm gap No Insulation
Wall P 3	1.90	2.40		7	2.89	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	0.82	2.04		7	1.67	Hollow core door
Wall P 4	2.80	2.40		1	6.72	Cavity Panel 70mm gap No Insulation
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 1	1.90	2.40	0.70	195	1.47	Brick Veneer 0.50
						Bulk Insulation R1.50
Window	Width	Height	Eaves	Orient	Area	Name Glass Frame
						Opening Covering
						Shading
Window(1, 1)	1.47	2.10	0.70	195	3.09	GGG-05-001a Single Glazed Clear Aluminium
						45% Opening Sliding, Two Lites Holland Blind
						No Shading

Zone 7 Corridor 1 Corridoor Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	No	Yes	No	No	0	0	0	No

External Floor			Area	Covering	Type
				Insulation	
			11.23	Ceramic Tiles 8mm	Concrete Slab on Ground
				Bulk Insulation in Contact with Floor R0.50	
Ceiling	Slope		Area	Type	
				Insulation	
				Above Ceiling	
	0		11.23	Plasterboard	
				Bulk Insulation R3.00	
				Unventilated roofspace cavity	
Roof	Slope	Shape		Type	Solar Abs
				Insulation	
	26	Hip		Corrugated Iron	0.30
				Bulk, Reflective Side Down, Anti-glare Up R1.00	

Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 1	4.90	2.40		1	11.76	Cavity Panel 70mm gap No Insulation
Wall P 2	1.30	2.40		1	1.55	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(2, 1)	0.77	2.04		1	1.57	Hollow core door
Wall P 3	1.90	2.40		6	2.89	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	0.82	2.04		6	1.67	Hollow core door

Wall P 4	1.50	2.40		5	3.60	Cavity Panel 70mm gap No Insulation
Wall P 5	0.60	2.40		5	1.44	Cavity Panel 70mm gap No Insulation
Wall P 6	1.00	2.40		5	0.25	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(6, 1)	1.00	2.15		5	2.15	Opening in wall
Wall P 7	3.50	2.40		2	5.81	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(7, 1)	1.20	2.15		2	2.59	Opening in wall
Wall P 8	3.90	2.40		3	7.79	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(8, 1)	0.77	2.04		3	1.57	Hollow core door
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 9	1.20	2.40	3.30	105	1.16	Brick Veneer 0.50
						Bulk Insulation R1.50
Door Ext	Width	Height	Eaves	Orient	Area	Type
Door E(9, 1)	0.82	2.10	3.30	105	1.72	Solid timber door

Zone 8 Sleeping 2 Sleeping Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor	Area	Covering Type	
		Insulation	
	10.44	Carpet+Rubber Underlay 18mm	Concrete Slab on Ground
		Bulk Insulation in Contact with Floor R0.50	
Ceiling Slope	Area	Type	
		Insulation	
		Above Ceiling	
0	10.44	Plasterboard	
		Bulk Insulation R3.00	
		Unventilated roofspace cavity	
Roof Slope Shape		Type Solar Abs	
		Insulation	
26 Hip		Corrugated Iron 0.30	
		Bulk, Reflective Side Down, Anti-glare Up R1.00	

Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 1	3.60	2.40		10	8.64	Cavity Panel 70mm gap No Insulation
Wall P 2	2.90	2.40		5	6.96	Cavity Panel 70mm gap No Insulation
Wall P 3	1.00	2.40		12	0.83	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	0.77	2.04		12	1.57	Hollow core door
Wall P 4	2.60	2.40		11	6.24	Cavity Panel 70mm gap No Insulation
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 5	2.90	2.40	0.60	15	5.04	Brick Veneer 0.50
						Bulk Insulation R1.50
Window	Width	Height	Eaves	Orient	Area	Name Glass Frame
						Opening Covering
						Shading
Window(5, 1)	1.60	1.20	0.60	15	1.92	GGG-05-001a Single Glazed Clear Aluminium
						45% Opening Sliding, Two Lites Holland Blind
						No Shading

Zone 9 Sleeping 3 Sleeping Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor	Area	Covering Type	
		Insulation	
	10.84	Carpet+Rubber Underlay 18mm	Concrete Slab on Ground
		Bulk Insulation in Contact with Floor R0.50	
Ceiling Slope	Area	Type	
		Insulation	
		Above Ceiling	
0	10.84	Plasterboard	
		Bulk Insulation R3.00	
		Unventilated roofspace cavity	
Roof Slope Shape		Type Solar Abs	

						Insulation
		26		Hip		Corrugated Iron 0.30
						Bulk, Reflective Side Down, Anti-glare Up R1.00
Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 3	2.60	2.40		11	6.24	Cavity Panel 70mm gap No Insulation
Wall P 4	0.40	2.40		11	0.96	Cavity Panel 70mm gap No Insulation
Wall P 5	1.00	2.40		12	0.83	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(5, 1)	0.77	2.04		12	1.57	Hollow core door
Wall P 6	0.40	2.40		5	0.96	Cavity Panel 70mm gap No Insulation
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 1	3.60	2.40	0.60	285	6.72	Brick Veneer 0.50
						Bulk Insulation R1.50
Window	Width	Height	Eaves	Orient	Area	Name Glass Frame
						Opening Covering
						Shading
Window(1, 1)	1.60	1.20	0.60	285	1.92	GGG-05-001a Single Glazed Clear Aluminium
						45% Opening Sliding, Two Lites Holland Blind
						No Shading
Wall E 2	2.90	2.40	0.60	15	6.96	Brick Veneer 0.50
						Bulk Insulation R1.50
Wall E 7	2.90	2.40	6.00	195	6.96	Brick Veneer 0.50
						Bulk Insulation R1.50

Zone10 Sleeping 4 Sleeping Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor		Area	Covering	Type
			Insulation	
		10.44	Carpet+Rubber Underlay 18mm	Concrete Slab on Ground
			Bulk Insulation in Contact with Floor R0.50	
Ceiling	Slope	Area	Type	
			Insulation	
			Above Ceiling	
	0	10.44	Plasterboard	
			Bulk Insulation R3.00	
			Unventilated roofspace cavity	
Roof	Slope	Shape	Type Solar Abs	
			Insulation	
	26	Hip	Corrugated Iron 0.30	
			Bulk, Reflective Side Down, Anti-glare Up R1.00	

Partition Wall	Length	Height	AdjZ	Area	Type
Wall P 2	3.60	2.40	2	8.64	Cavity Panel 70mm gap No Insulation
Wall P 3	2.90	2.40	5	5.39	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height	AdjZ	Area	Type
Door I(3, 1)	0.77	2.04	5	1.57	Hollow core door
Wall P 4	3.60	2.40	8	8.64	Cavity Panel 70mm gap No Insulation

External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 1	2.90	2.40	0.60	15	5.04	Brick Veneer 0.50
						Bulk Insulation R1.50
Window	Width	Height	Eaves	Orient	Area	Name Glass Frame
						Opening Covering
						Shading
Window(1, 1)	1.60	1.20	0.60	15	1.92	GGG-05-001a Single Glazed Clear Aluminium
						45% Opening Sliding, Two Lites Holland Blind
						No Shading

Zone11 Wet Area 2 Wet Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	Yes	Yes	No	No	0	0	0	No

External Floor		Area	Covering	Type
			Insulation	
		7.54	Ceramic Tiles 8mm	Concrete Slab on Ground
			Bulk Insulation in Contact with Floor R0.50	
Ceiling	Slope	Area	Type	

						Insulation
						Above Ceiling
		0			7.54	Plasterboard
						Bulk Insulation R3.00
						Unventilated roofspace cavity
Roof		Slope		Shape		Type Solar Abs
						Insulation
		26		Hip		Corrugated Iron 0.30
						Bulk, Reflective Side Down, Anti-glare Up R1.00
Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 2	2.60	2.40		8	6.24	Cavity Panel 70mm gap No Insulation
Wall P 3	2.50	2.40		12	4.43	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	0.77	2.04		12	1.57	Hollow core door
Wall P 4	0.40	2.40		9	0.96	Cavity Panel 70mm gap No Insulation
Wall P 5	2.60	2.40		9	6.24	Cavity Panel 70mm gap No Insulation
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation
Wall E 1	2.90	2.40	0.60	15	4.56	Brick Veneer 0.50
						Bulk Insulation R1.50
Window	Width	Height	Eaves	Orient	Area	Name Glass Frame
						Opening Covering
						Shading
Window(1, 1)	1.60	1.50	0.60	15	2.40	GGG-05-001a Single Glazed Clear Aluminium
						45% Opening Sliding, Two Lites Holland Blind
						No Shading

Zone12 Corridor 2 Corridoor Area on Level 1

Air Movement	Screens	Seals	Chimney	Gas vent	Wall vents	Downlights	Ex Fans	Ceilin fans
	No	Yes	No	No	0	0	0	No

External Floor					Area	Covering Type
						Insulation
					2.50	Ceramic Tiles 8mm Concrete Slab on Ground
						Bulk Insulation in Contact with Floor R0.50
Ceiling		Slope			Area	Type
						Insulation
						Above Ceiling
		0			2.50	Plasterboard
						Bulk Insulation R3.00
						Unventilated roofspace cavity
Roof		Slope		Shape		Type Solar Abs
						Insulation
		26		Hip		Corrugated Iron 0.30
						Bulk, Reflective Side Down, Anti-glare Up R1.00
Partition Wall	Length	Height		AdjZ	Area	Type
Wall P 1	2.50	2.40		5	3.41	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(1, 1)	1.20	2.15		5	2.59	Opening in wall
Wall P 2	1.00	2.40		9	0.83	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(2, 1)	0.77	2.04		9	1.57	Hollow core door
Wall P 3	2.50	2.40		11	4.43	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(3, 1)	0.77	2.04		11	1.57	Hollow core door
Wall P 4	1.00	2.40		8	0.83	Cavity Panel 70mm gap No Insulation
Door Int	Width	Height		AdjZ	Area	Type
Door I(4, 1)	0.77	2.04		8	1.57	Hollow core door
External Wall	Length	Height	Eaves	Orient	Area	Type Abs
						Insulation