

Assessment Number:	00048441
Assessment Date:	23-Nov-17

Designcorp Architects

Client Ref Number:

Client Name:

Drawing Details: Designcorp Architects - 2017-176, Issue C

Sustainability Assessment

Property Address: 32-36 Hope Street, PENRITH BCA Climate Zone:							
Lot and Plan Nun	t and Plan Number: 37-39 DP 31239 Project Description: Unit building (45 units)						
Assessment Type	e: BA	ASIX assessment					
Result: Complie	es with	n Building Sustainability Inde	эх				
QDC Credit: N/A	A						
		Co	onstruction Requir	ements			
External Walls:	Brick	veneer, Hebel and metal cla	adding	Insulati	on:	Reflective foil and R1.5 batts	
Internal Walls:	Plaste	erboard; Hebel to party walls	3	Insulat	ion:	R2.0 batts to party walls	
Floor:	Susp	ended concrete		Insulati	on:	N/A	
Ceiling:	Plast	erboard		Insulati	on:	R2.5 batts where no unit above	
Roof:	Conc	rete		Insulati	on:	N/A	
Glazing:	Мајо	rity single clear glass. Refer	to individual NatH	ERS certi	ficate	S.	
Ceiling Penetration	reiling Penetrations: Sealed LED downlights and exhaust fans						
Other:	Refer	to BASIX certificate					
Assessor Name:	Mich	nael Young	Accreditati	on Numbe	er: A	ABSA 90121	
Signature:	/	Many					

DISCLAIMER: The report and results above have been calculated using information made available to Accelerate Sustainability Assessments as supplied on the referenced drawings. The report and subsequent results are specific to this data and shall become null and void if any variations are made. Unless information has been noted on the drawings, or advised in writing, the results and report reflect a worst case scenario whereby default values and assumptions have been applied.



PROJECT CERTIFICATION

of

Project Certification Number	1011669015
Certification Date	23/11/2017
Assessor Name	Michael Young
Assessor Number	90121
Assessor Company	Accelerate Sustainability Assessments
Assessor Signature	Mysamy

Client Details	Designcorp Architects Pty Ltd
Project Address	Lot 37-39 32-36 Hope Street Penrith NSW 2750

Software	oftware BERSPro v4.3.0.1 (BERSPro) Climate Zone			
Averaged Simulate	d Energy: HEATING		30.6 MJ/m2 pa	
Averaged Simulate	d Energy: COOLING		34.4 MJ/m2 pa	
Averaged Simulate	d Energy: TOTAL		65.0 MJ/m2 pa	

Averaged NatHERS Star Rating

7.1





of

PROJECT CERTIFICATION

	Sole-Occupancy Unit (SOU) Thermal Performance Specifications						
Unit Number	Certificate	Floor Area		Simulated Loads (area adjusted MJ/m2/y)		NatHERS	Rated with
	Number	Conditioned	Unconditioned	Heating	Cooling	Star Rating	Downlights
1	1011676168	99.7	4.7	36.7	38.9	6.6/10	Yes
10	1011676259	76.9	7.0	7.5	17.7	8.9/10	Yes
11	1011676267	68.7	6.1	7.7	21.7	8.8/10	Yes
12	1011676275	72.9	4.4	20.1	36.1	7.4/10	Yes
13	1011676283	78.3	2.4	24.9	23.8	7.8/10	Yes
14	1011676291	77.1	2.5	30.0	35.9	7.0/10	Yes
15	1011676309	76.1	3.7	44.0	26.6	6.8/10	Yes
16	1011676317	71.6	3.7	57.6	40.2	5.6/10	Yes
17	1011676325	75.0	2.3	26.6	39.6	6.9/10	Yes
18	1011676333	73.2	5.4	19.2	38.4	7.4/10	Yes



PROJECT CERTIFICATION

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Project Certifiation Number	1011669015
Certification Date	23/11/2017



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of

PROJECT CERTIFICATION

	Sole-Occupancy Unit (SOU) Thermal Performance Specifications						
Unit Number		Floor Area		Simulated Loads (area adjusted MJ/m2/y)		NatHERS	Rated with
	Number	Conditioned	Unconditioned	Heating	Cooling	Star Rating	Downlights
19	1011676341	68.7	6.1	7.6	21.1	8.8	Yes
2	1011676176	51.1	4.7	12.2	47.9	7.3	Yes
20	1011676358	68.7	6.1	8.1	21.4	8.8	Yes
21	1011676366	72.9	4.4	20.7	35.6	7.4	Yes
22	1011676374	78.3	2.4	25.6	23.2	7.8	Yes
23	1011676382	77.1	2.5	31.1	35.5	6.9	Yes
24	1011676390	76.1	3.7	44.9	25.8	6.8	Yes
25	1011676408	71.6	3.7	62.3	38.8	5.4	Yes
26	1011676416	75.0	2.3	27.1	48.5	6.6	Yes
27	1011676424	73.2	5.4	20.6	36.2	7.4	Yes
28	1011676432	76.9	7.0	8.1	17.2	8.9	Yes
29	1011676440	68.7	6.1	8.2	21.5	8.7	Yes
3	1011676184	71.0	5.1	17.5	29.1	7.9	Yes
30	1011676457	72.9	4.4	23.1	34.4	7.4	Yes
31	1011676465	78.3	2.4	26.6	22.9	7.8	Yes
32	1011676473	77.1	2.5	37.3	30.9	6.9	Yes
33	1011676481	76.1	3.7	48.7	25.0	6.7	Yes
34	1011676499	80.1	5.0	53.4	60.2	4.9	Yes
35	1011676507	48.0	5.4	24.4	60.3	6.2	Yes
36	1011676515	76.9	7.0	9.9	15.5	8.9	Yes
37	1011676523	68.7	6.1	9.8	19.5	8.8	Yes
38	1011676531	52.9	3.6	31.9	55.4	5.9	Yes
39	1011676549	53.5	2.0	36.3	17.7	7.6	Yes
4	1011676192	94.3	2.4	31.9	38.6	6.8	Yes
40	1011676101	92.7	5.0	52.8	36.8	5.9	Yes



PROJECT CERTIFICATION

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Project Certifiation Number	1011669015
Certification Date	23/11/2017

	Sole-Occupancy Unit (SOU) Thermal Performance Specifications						
Unit Number	Certificate	Floor Area		Simulated Loads (area adjusted MJ/m2/y)		NatHERS	Rated with
	Number	Conditioned	Unconditioned	Heating	Cooling	Star Rating	Downlights
41	1011676119	90.1	5.1	57.3	47.7	5.3	Yes
42	1011676127	95.2	3.8	33.5	52.4	6.1	Yes
43	1011676135	71.7	4.9	13.5	37.6	7.7	Yes
44	1011676143	82.6	5.2	49.9	38.7	5.9	Yes
45	1011676150	92.7	5.0	62.9	30.6	5.8	Yes
5	1011676200	78.5	4.3	45.9	43.0	5.9	Yes
6	1011676218	70.5	5.4	58.3	37.9	5.7	Yes
7	1011676226	71.6	3.7	56.6	41.0	5.6	Yes
8	1011676234	75.0	2.3	25.8	40.9	6.9	Yes
9	1011676242	73.2	5.4	18.5	39.9	7.4	Yes



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

Multi Dwelling

Certificate number: 881520M

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 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Friday, 24 November 2017

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



Project summary	
Project name	00048441
Street address	32-36 Hope Street Penrith 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 31239
Lot no.	37-39
Section no.	-
No. of residential flat buildings	1
No. of units in residential flat buildings	45
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Project score	
Water	✓ 41 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 35 Target 35

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable): 82145435687

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Description of project

Project address	
Project name	00048441
Street address	32-36 Hope Street Penrith 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 31239
Lot no.	37-39
Section no.	-
Project type	
No. of residential flat buildings	1
No. of units in residential flat buildings	45
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	1864.74
Roof area (m²)	121.2
Non-residential floor area (m²)	0.0
Residential car spaces	52
Non-residential car spaces	10

Common area landscape	
Common area lawn (m²)	230.5
Common area garden (m²)	288.0
Area of indigenous or low water use species (m²)	0.0
Assessor details	
Assessor number	90121
Certificate number	1011669015
Climate zone	28
Project score	
Water	✓ 41 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 35 Target 35

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Description of project

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

Residential flat buildings - Building1, 45 dwellings, 5 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
1	3	99.7	4.7	26.3	0.0
5	2	78.5	4.3	104.1	0.0
9	2	73.2	5.4	0.0	0.0
13	2	78.3	2.4	0.0	0.0
17	2	75.0	2.3 0.0		0.0
21	2	72.9	2.9 4.4 0.0		0.0
25	2	71.6	3.7	0.0	0.0
29	2	68.7	6.1	0.0	0.0
33	2	76.1	3.7	0.0	0.0
37	2	68.7	6.1	0.0	0.0
41	3	90.1	5.1	0.0	0.0
45	3	92.7	5.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
2	1	51.1	4.7	20.6	0.0
6	2	70.5	5.4	70.0	0.0
10	2	76.9	7.0	0.0	0.0
14	2	77.1	2.5	0.0	0.0
18	2	73.2	5.4	0.0	0.0
22	2	78.3	2.4	0.0	0.0
26	2	75.0	2.3	0.0	0.0
30	2	72.9	4.4	0.0	0.0
34	2	80.1	5.0	0.0	0.0
38	1	52.9	3.6	0.0	0.0
42	3	95.2	3.8	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
3	2	71.0	5.1	67.7	0.0
7	2	71.6	3.7	0.0	0.0
11	2	68.7	6.1	0.0	0.0
15	2	76.1	3.7	0.0	0.0
19	2	76.9	7.0	0.0	0.0
23	2	77.1	2.5	0.0	0.0
27	2	73.2	5.4	0.0	0.0
31	2	78.3	2.4	0.0	0.0
35	1	48.0	5.4	0.0	0.0
39	1	53.5	2.0	0.0	0.0
43	2	71.7	4.9	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
4	2	94.3	2.4	35.2	0.0
8	2	75.0	2.3	0.0	0.0
12	2	72.9	4.4	0.0	0.0
16	2	71.6	3.7	0.0	0.0
20	2	68.7	6.1	0.0	0.0
24	2	76.1	3.7	0.0	0.0
28	2	76.9	7.0	0.0	0.0
32	2	77.1	2.5	0.0	0.0
36	2	76.9	7.0	0.0	0.0
40	3	92.7	5.0	0.0	0.0
44	2	82.6	5.2	0.0	0.0

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Description of project

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

Common areas of unit building - Building1

Common area	Floor area (m²)
Car park (Basement 1)	1004.0
Lift car (No.1)	-
Garbage room (Lvl 1)	5.5
Garbage room (Lvl 4)	5.5
Service room 1 (Basement 1)	19.0
Service room 2 (Basement 2)	11.0
Ground floor lobby	57.5
Hallway/lobby (Lvl 3)	50.0

Common area	Floor area (m²)
Car park (Basement 2)	1090.0
Garbage room (Ground)	38.0
Garbage room (Lvl 2)	5.5
Cleaner room (Rooftop)	3.5
Service room 2 (Basement 1)	11.0
Service room (Rooftop)	5.5
Hallway/lobby (Lvl 1)	50.0
Hallway/lobby (Lvl 4)	47.5

Common area	Floor area (m²)
Truck loading area	166.0
Bulky waste room (Ground2)	15.0
Garbage room (Lvl 3)	5.5
WC (Rooftop)	3.5
Service room 1 (Basement 2)	18.0
Hyd booster room	5.5
Hallway/lobby (Lvl 2)	50.0
Hallway/lobby (Lvl 5)	42.5

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Schedule of BASIX commitments

- 1. Commitments for Residential flat buildings Building1
 - (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
 - (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy
- 2. Commitments for multi-dwelling houses
- 3. Commitments for single dwelling houses
- 4. Commitments for common areas and central systems/facilities for the development (non-building specific)
 - (i) Water
 - (ii) Energy

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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 Residential flat buildings - Building1

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	~	~	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		~	V
(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.		~	V
(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.	V	✓	
(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.	~	~	~

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	Fixtures			Appli	Appliances Individual pool				Individual spa					
Dwelling no.	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	4 star	4 star	no	4 star	4 star	-	-	-	-		-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	~	~	~
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		V	V
(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.		~	~

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(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".		~	

	Hot water	Bathroom ven	tilation system	Kitchen vent	ilation system	Laundry ventilation system		
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control	
All dwellings	gas instantaneous 5 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

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	Cod	oling	Hea	ting		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 kitche
1	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	3 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
4	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	2 (dedicated)	3 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
35	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	1 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	yes
38	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	1 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
41	1-phase airconditioning EER 3.0 - 3.5	1-	1-phase airconditioning EER 3.5 - 4.0	-	3 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	no
44	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	2 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
3, 6	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	2 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	1	no
2, 39	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	1 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
40, 42, 45	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	3 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	-	1-phase airconditioning EER 3.5 - 4.0	-	2 (dedicated)	2 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

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	Individual pool Individual spa			Appliances & other efficiency measures								
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	e-	gas cooktop & electric oven	3 star (new rating)	yes	3.5 star	-	3.5 star	no	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:	V	V	V
(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.	V	~	V

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		Thermal loads
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
1	36.7	38.9
2	12.2	47.9
3	17.5	29.1
4	31.9	38.6
5	45.9	43.0
6	58.3	37.9
7	56.6	41.0
8	25.8	40.9
9	18.5	39.9
10	7.5	17.7
11	7.7	21.7
12	20.1	36.1
13	24.9	23.8
14	30.0	35.9
15	44.0	26.6
16	57.6	40.2
17	26.6	39.6
18	19.2	38.4
19	7.6	21.1
20	8.1	21.4
21	20.7	35.6
22	25.6	23.2
23	31.1	35.5
24	44.9	25.8
25	62.3	38.8
26	27.1	48.5
27	20.6	36.2

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		Thermal loads
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
28	8.1	17.2
29	8.2	21.5
30	23.1	34.4
31	26.6	22.9
32	37.3	30.9
33	48.7	25.0
34	53.4	60.2
35	24.4	60.3
36	9.9	15.5
37	9.8	19.5
38	31.9	55.4
39	36.3	17.7
40	52.8	36.8
41	57.3	47.7
42	33.5	52.4
43	13.5	37.6
44	49.9	38.7
All other dwellings	62.9	30.6

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(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	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for)
Fire sprinkler system (No. 1)	-	-	-

(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.		~	~

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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 (Basement 1)	ventilation (supply + exhaust)	carbon monoxide monitor + 2-speed fan	fluorescent	none	Yes
Car park (Basement 2)	ventilation (supply + exhaust)	carbon monoxide monitor + 2-speed fan	fluorescent	none	Yes
Truck loading area	ventilation (supply + exhaust)	carbon monoxide monitor + 2-speed fan	fluorescent	none	Yes
Lift car (No.1)	-	-	fluorescent	connected to lift call button	No
Garbage room (Ground)	ventilation (supply + exhaust)	-	fluorescent	manual on / manual off	No
Bulky waste room (Ground2)	ventilation (supply + exhaust)	-	fluorescent	manual on / manual off	No
Garbage room (Lvl 1)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Garbage room (Lvl 2)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Garbage room (Lvl 3)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Garbage room (Lvl 4)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Cleaner room (Rooftop)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
WC (Rooftop)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Service room 1 (Basement 1)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Service room 2 (Basement 1)	no mechanical ventilation	-	fluorescent	manual on / manual off	No

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	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
Service room 1 (Basement 2)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Service room 2 (Basement 2)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Service room (Rooftop)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Hyd booster room	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Ground floor lobby	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes
Hallway/lobby (Lvl 1)	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes
Hallway/lobby (Lvl 2)	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes
Hallway/lobby (Lvl 3)	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes
Hallway/lobby (Lvl 4)	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes
Hallway/lobby (Lvl 5)	no mechanical ventilation	-	fluorescent	time clock and motion sensors	Yes

Central energy systems	Туре	Specification
Lift (No. 1)	geared traction with V V A C motor	Number of levels (including basement): 9

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

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		V	~
(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.		~	V
(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	4 star	4 star	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.	V	~	V

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Central energy systems	Туре	Specification
Other	Building management system installed?: yes	-

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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 "w" 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 "J" 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).

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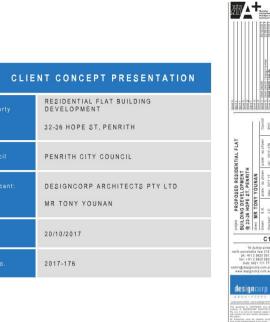
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designco

C14

16 duning street
orth parkametts naw 2151
ph: +61 2 9630 9911
fax + 61 2 9630 9912
mob: 0431 111 777
tming designcorp.com.au
www.designcorp.com.au

