

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1057654M

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](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Thursday, 14 November 2019

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



Project summary		
Project name	Jordan Springs RL - V02 -W&G	
Street address	Jordan Springs Boulevard Jordan Springs 2747	
Local Government Area	Penrith City Council	
Plan type and plan number	deposited 1248137	
Lot no.	1	
Section no.	-	
No. of residential flat buildings	3	
No. of units in residential flat buildings	139	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 25	Target 25




### Certificate Prepared by

Name / Company Name: Lendlease Technical Services (Aust) Pty Ltd

ABN (if applicable): 51632932391

# Description of project

Project address	
Project name	Jordan Springs RL - V02 -W&G
Street address	Jordan Springs Boulevard Jordan Springs 2747
Local Government Area	Penrith City Council
Plan type and plan number	deposited 1248137
Lot no.	1
Section no.	-
Project type	
No. of residential flat buildings	3
No. of units in residential flat buildings	139
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m <sup>2</sup> )	10797
Roof area (m <sup>2</sup> )	3663
Non-residential floor area (m <sup>2</sup> )	0.0
Residential car spaces	148
Non-residential car spaces	23

Common area landscape		
Common area lawn (m <sup>2</sup> )	0.0	
Common area garden (m <sup>2</sup> )	2060.0	
Area of indigenous or low water use species (m <sup>2</sup> )	2060.0	
Assessor details		
Assessor number	16/1751	
Certificate number	MRNB5ZL8VT	
Climate zone	28	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 25	Target 25

## Description of project

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

### Residential flat buildings - Building A, 36 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A101	2	96.0	0.0	0.0	0.0
A105	2	117.0	0.0	0.0	0.0
A201	2	96.0	0.0	0.0	0.0
A205	2	117.0	0.0	0.0	0.0
A301	2	96.0	0.0	0.0	0.0
A305	2	117.0	0.0	0.0	0.0
A401	1	61.0	0.0	0.0	0.0
A405	2	97.0	0.0	0.0	0.0
A503	2	116.0	0.0	0.0	0.0
A102	2	96.0	0.0	0.0	0.0
A106	1	66.0	0.0	0.0	0.0
A202	2	96.0	0.0	0.0	0.0
A206	1	66.0	0.0	0.0	0.0
A302	2	96.0	0.0	0.0	0.0
A306	1	66.0	0.0	0.0	0.0
A402	2	97.0	0.0	0.0	0.0
A406	1	61.0	0.0	0.0	0.0
A504	2	116.0	0.0	0.0	0.0
A103	1	66.0	0.0	0.0	0.0
A107	2	96.0	0.0	0.0	0.0
A203	1	66.0	0.0	0.0	0.0
A207	2	96.0	0.0	0.0	0.0
A303	1	66.0	0.0	0.0	0.0
A307	2	96.0	0.0	0.0	0.0
A403	2	116.0	0.0	0.0	0.0
A501	1	73.0	0.0	0.0	0.0
A505	2	97.0	0.0	0.0	0.0
A104	2	117.0	0.0	0.0	0.0
A108	2	96.0	0.0	0.0	0.0
A204	2	117.0	0.0	0.0	0.0
A208	2	96.0	0.0	0.0	0.0
A304	2	117.0	0.0	0.0	0.0
A308	2	96.0	0.0	0.0	0.0
A404	2	116.0	0.0	0.0	0.0
A502	2	97.0	0.0	0.0	0.0
A506	1	61.0	0.0	0.0	0.0

### Residential flat buildings - Building B, 52 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B101	2	87.0	0.0	0.0	0.0
B105	2	93.0	0.0	0.0	0.0
B102	2	106.0	0.0	0.0	0.0
B106	2	87.0	0.0	0.0	0.0
B103	2	92.0	0.0	0.0	0.0
B107	2	106.0	0.0	0.0	0.0
B104	2	93.0	0.0	0.0	0.0
B108	2	92.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B109	2	93.0	0.0	0.0	0.0
B203	2	92.0	0.0	0.0	0.0
B207	2	106.0	0.0	0.0	0.0
B301	2	87.0	0.0	0.0	0.0
B305	2	93.0	0.0	0.0	0.0
B309	2	93.0	0.0	0.0	0.0
B403	2	109.0	0.0	0.0	0.0
B501	2	91.0	0.0	0.0	0.0
B505	2	101.0	0.0	0.0	0.0
BG03	2	92.0	0.0	0.0	0.0
BG07	2	106.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B110	2	93.0	0.0	0.0	0.0
B204	2	93.0	0.0	0.0	0.0
B208	2	92.0	0.0	0.0	0.0
B302	2	106.0	0.0	0.0	0.0
B306	2	87.0	0.0	0.0	0.0
B310	2	93.0	0.0	0.0	0.0
B404	2	91.0	0.0	0.0	0.0
B502	2	101.0	0.0	0.0	0.0
B506	2	109.0	0.0	0.0	0.0
BG04	2	93.0	0.0	0.0	0.0
BG08	2	92.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B201	2	87.0	0.0	0.0	0.0
B205	2	93.0	0.0	0.0	0.0
B209	2	93.0	0.0	0.0	0.0
B303	2	92.0	0.0	0.0	0.0
B307	2	106.0	0.0	0.0	0.0
B401	2	91.0	0.0	0.0	0.0
B405	2	101.0	0.0	0.0	0.0
B503	2	109.0	0.0	0.0	0.0
BG01	2	87.0	0.0	0.0	0.0
BG05	2	93.0	0.0	0.0	0.0
BG09	2	93.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B202	2	106.0	0.0	0.0	0.0
B206	2	87.0	0.0	0.0	0.0
B210	2	93.0	0.0	0.0	0.0
B304	2	93.0	0.0	0.0	0.0
B308	2	92.0	0.0	0.0	0.0
B402	2	101.0	0.0	0.0	0.0
B406	2	109.0	0.0	0.0	0.0
B504	2	91.0	0.0	0.0	0.0
BG02	2	106.0	0.0	0.0	0.0
BG06	2	87.0	0.0	0.0	0.0
BG10	2	93.0	0.0	0.0	0.0

### Residential flat buildings - Building C, 51 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C101	2	87.2	0.0	0.0	0.0
C105	2	93.0	0.0	0.0	0.0
C109	2	93.0	0.0	0.0	0.0
C203	2	91.9	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C102	2	106.2	0.0	0.0	0.0
C106	2	87.2	0.0	0.0	0.0
C110	2	93.0	0.0	0.0	0.0
C204	2	93.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C103	2	91.9	0.0	0.0	0.0
C107	2	106.2	0.0	0.0	0.0
C201	2	87.2	0.0	0.0	0.0
C205	2	93.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C104	2	93.0	0.0	0.0	0.0
C108	2	91.9	0.0	0.0	0.0
C202	2	106.2	0.0	0.0	0.0
C206	2	87.2	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C207	2	106.2	0.0	0.0	0.0
C301	2	87.2	0.0	0.0	0.0
C305	2	93.0	0.0	0.0	0.0
C309	2	93.0	0.0	0.0	0.0
C403	2	109.4	0.0	0.0	0.0
C501	2	91.4	0.0	0.0	0.0
C505	2	101.2	0.0	0.0	0.0
CG03	2	91.9	0.0	0.0	0.0
CG07	2	106.2	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C208	2	91.9	0.0	0.0	0.0
C302	2	106.2	0.0	0.0	0.0
C306	2	87.2	0.0	0.0	0.0
C310	2	93.0	0.0	0.0	0.0
C404	2	91.4	0.0	0.0	0.0
C502	2	101.2	0.0	0.0	0.0
C506	2	109.4	0.0	0.0	0.0
CG04	2	93.0	0.0	0.0	0.0
CG08	2	91.9	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C209	2	93.0	0.0	0.0	0.0
C303	2	91.9	0.0	0.0	0.0
C307	2	106.2	0.0	0.0	0.0
C401	2	91.4	0.0	0.0	0.0
C405	2	101.2	0.0	0.0	0.0
C503	2	109.4	0.0	0.0	0.0
CG01	2	87.2	0.0	0.0	0.0
CG05	2	93.0	0.0	0.0	0.0
CG09	2	93.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C210	2	93.0	0.0	0.0	0.0
C304	2	93.0	0.0	0.0	0.0
C308	2	91.9	0.0	0.0	0.0
C402	2	101.2	0.0	0.0	0.0
C406	2	109.4	0.0	0.0	0.0
C504	2	91.4	0.0	0.0	0.0
CG02	2	106.2	0.0	0.0	0.0
CG06	2	87.2	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - Building A

Common area	Floor area (m <sup>2</sup> )
Indoor Pool	121.79
Lift car (No.2)	-
Switch room (No. 1)	77.29
Prep & Store	16.2
Library/Media Meeting Room	37.8
Staffroom	17.53
Consultant Room 2	12.96
Bar Lounge	100.08
Hallway/lobby type (No. 1)	367.86

Common area	Floor area (m <sup>2</sup> )
Gym (No. 1)	30.68
Lift motor room (No. 1)	9.24
Garbage room (No. 1)	22.4
Private Lounge	25.9
Sales Manager	14.0
Village Manager	15.3
Art Studio/Multi Purpose Room	41.28
Plant or service room (No. 1)	140.27

Common area	Floor area (m <sup>2</sup> )
Lift car (No.1)	-
Lift motor room (No. 2)	9.24
Kitchen	31.2
Store 1	24.78
Theatre/Cinema	63.36
Consultant Room 1	12.96
Lounge/Dining	169.7
Ground floor lobby type (No. 1)	44.25

### Common areas of unit building - Building B

Common area	Floor area (m <sup>2</sup> )
Lift car (No.3)	-
Lift motor room (No. 4)	9.24
Plant or service room (No. 2)	46.9

Common area	Floor area (m <sup>2</sup> )
Lift car (No.4)	-
Switch room (No. 2)	65.6
Hallway/lobby type (No. 2)	460.0

Common area	Floor area (m <sup>2</sup> )
Lift motor room (No. 3)	9.24
Garbage room (No. 2)	28.5

### Common areas of unit building - Building C

Common area	Floor area (m <sup>2</sup> )
Lift car (No.5)	-
Lift motor room (No. 6)	9.24
Plant or service room (No. 3)	41.1

Common area	Floor area (m <sup>2</sup> )
Lift car (No.6)	-
Switch room (No. 3)	65.6
Hallway/lobby type (No. 3)	460.0

Common area	Floor area (m <sup>2</sup> )
Lift motor room (No. 5)	9.24
Garbage room (No. 3)	109.9

### Common areas of the development (non-building specific)

Common area	Floor area (m <sup>2</sup> )
Car park area (No. 1)	5825.75

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building A

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 2. Commitments for Residential flat buildings - Building B

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - Building C

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 4. Commitments for multi-dwelling houses

## 5. Commitments for single dwelling houses

6. 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 Residential flat buildings - Building A

#### (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: <ul style="list-style-type: none"> <li>(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</li> <li>(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.</li> </ul>		✓ ✓	✓ ✓
(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 (> 6 but <= 7.5 L/min)	4 star	4 star	5 star	no	-	4 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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".		✓	

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	electric instantaneous	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting					Natural lighting		
	living areas	bedroom areas	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
A103, A106, A203, A206, A303, A306, A401, A406, A501, A506	1-phase airconditioning 5 Star	ceiling fans	1-phase airconditioning 5 Star	-	1	1	yes	yes	yes	yes	0	no
All other dwellings	1-phase airconditioning 5 Star	ceiling fans	1-phase airconditioning 5 Star	-	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
A101, A104, A105, A108, A201, A204, A205, A208, A301, A304, A305, A308, A401, A406, A501, A503, A504, A506	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	no
All other dwellings	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	yes

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			

<b>(iii) Thermal Comfort</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.	✔	✔	✔

<b>Thermal loads</b>		
<b>Dwelling no.</b>	<b>Area adjusted heating load (in mJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in mJ/m<sup>2</sup>/yr)</b>
A101	35.2	44.8
A102	15.7	48.7
A103	13.0	14.3
A104	17.4	23.0
A105	17.1	22.8
A106	12.9	12.5
A107	16.6	50.7
A108	41.4	52.6
A201	35.9	43.3
A202	16.3	47.5
A203	13.1	13.6

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
A204	18.0	22.6
A205	17.7	22.6
A206	13.5	12.4
A207	17.3	49.3
A208	42.2	51.9
A301	40.5	46.8
A302	42.1	56.0
A303	16.6	15.7
A304	19.4	22.7
A305	19.2	22.8
A306	17.3	14.6
A307	21.3	53.0
A308	45.9	56.1
A401	62.0	36.3
A402	22.0	31.9
A403	24.6	20.0
A404	19.8	19.9
A405	33.1	30.5
A406	57.4	30.7
A501	62.8	28.9
A502	38.5	43.8
A503	29.2	28.1
A504	35.2	28.7
A505	46.0	44.4
All other dwellings	63.0	27.8

**(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	3 star (> 7.5 but <= 9 L/min)	4 star	6 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Pool (No. 1)	Volume: 64.8 kLs	Location: Indoor Pool	-
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(ii) Energy	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.		✓	✓

(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	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
Indoor Pool	air conditioning system	time clock or BMS controlled	light-emitting diode	time clocks	Yes
Gym (No. 1)	air conditioning system	time clock or BMS controlled	light-emitting diode	time clocks	Yes
Lift car (No.1)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	Yes
Lift motor room (No. 1)	air conditioning system	thermostatically controlled	light-emitting diode	motion sensors	No
Lift motor room (No. 2)	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	No
Switch room (No. 1)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Garbage room (No. 1)	ventilation exhaust only	-	light-emitting diode	manual on / manual off	No
Kitchen	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Prep & Store	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Private Lounge	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Store 1	no mechanical ventilation	-	light-emitting diode	manual on / manual off	No
Library/Media Meeting Room	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Sales Manager	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes

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
Theatre/Cinema	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Staffroom	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Village Manager	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Consultant Room 1	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Consultant Room 2	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Art Studio/Multi Purpose Room	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Lounge/Dining	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Bar Lounge	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	Yes
Plant or service room (No. 1)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Ground floor lobby type (No. 1)	air conditioning system	time clock or BMS controlled	light-emitting diode	time clocks	Yes
Hallway/lobby type (No. 1)	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	Yes

Central energy systems	Type	Specification
Lift (No. 1)	geared traction with V V A C motor	Number of levels (including basement): 6
Lift (No. 2)	geared traction with V V A C motor	Number of levels (including basement): 6
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes

## 2. Commitments for Residential flat buildings - Building B

### (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 (> 6 but <= 7.5 L/min)	4 star	4 star	5 star	no	-	4 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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".		✓	

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	electric instantaneous	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	1-phase airconditioning 5 Star	ceiling fans	1-phase airconditioning 5 Star	-	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
B101, B105, B106, B110, B201, B205, B206, B210, B301, B305, B306, B310, B401, B403, B404, B406, B501, B503, B504, B506, BG01, BG02, BG05, BG06, BG07, BG10	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	yes
All other dwellings	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	no

<b>(iii) Thermal Comfort</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.	✓	✓	✓

<b>Thermal loads</b>		
<b>Dwelling no.</b>	<b>Area adjusted heating load (in mJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in mJ/m<sup>2</sup>/yr)</b>
B101	17.0	20.9
B102	16.1	17.4
B103	46.4	19.9
B104	30.7	39.3
B105	11.9	41.9

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
B106	16.8	17.2
B107	17.7	14.3
B108	44.7	16.5
B109	37.2	39.5
B110	10.7	43.7
B201	17.6	20.0
B202	16.6	17.2
B203	47.7	19.7
B204	31.5	38.2
B205	12.3	41.1
B206	17.1	16.6
B207	18.2	13.8
B208	45.5	16.3
B209	38.1	38.6
B210	11.2	43.3
B301	25.0	21.3
B302	20.5	16.5
B303	51.4	19.0
B304	41.6	41.1
B305	23.1	44.0
B306	23.1	17.1
B307	22.3	13.6
B308	49.6	16.2
B309	47.3	39.7
B310	21.2	46.0
B401	15.2	20.5
B402	32.6	19.0

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
B403	49.3	50.1
B404	14.9	19.4
B405	33.6	18.6
B406	40.3	50.6
B501	18.6	30.9
B502	45.7	32.0
B503	59.4	62.3
B504	18.9	30.5
B505	49.7	26.9
B506	51.1	59.5
BG01	27.0	14.3
BG02	34.6	10.1
BG03	63.0	18.7
BG04	38.6	28.8
BG05	19.7	31.2
BG06	22.4	14.0
BG07	34.2	9.9
BG08	60.6	17.6
BG09	45.1	28.6
All other dwellings	19.2	31.2

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	3 star (> 7.5 but <= 9 L/min)	4 star	6 star	no common laundry facility

<b>Central systems</b>	<b>Size</b>	<b>Configuration</b>	<b>Connection (to allow for...)</b>
Fire sprinkler system (No. 2)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

(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	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.3)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	Yes
Lift motor room (No. 3)	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	No
Lift motor room (No. 4)	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	No
Switch room (No. 2)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Garbage room (No. 2)	ventilation exhaust only	-	light-emitting diode	manual on / manual off	No
Plant or service room (No. 2)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Hallway/lobby type (No. 2)	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	Yes

Central energy systems	Type	Specification
Lift (No. 3)	geared traction with V V A C motor	Number of levels (including basement): 6
Lift (No. 4)	geared traction with V V A C motor	Number of levels (including basement): 6

### 3. Commitments for Residential flat buildings - Building C

#### (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 (> 6 but <= 7.5 L/min)	4 star	4 star	5 star	no	-	4 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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".		✓	

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	electric instantaneous	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	1-phase airconditioning 5 Star	ceiling fans	1-phase airconditioning 5 Star	-	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
C101, C105, C106, C110, C201, C205, C206, C210, C301, C305, C306, C310, C401, C403, C404, C406, C501, C504, C506, CG01, CG05, CG06	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	yes
All other dwellings	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	-	yes	no

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must:  (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or  (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C101	19.0	18.0
C102	16.7	17.0
C103	47.6	19.5
C104	31.1	38.8
C105	13.0	41.5

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C106	16.8	17.2
C107	18.3	14.1
C108	44.7	16.5
C109	37.2	39.5
C110	14.3	41.9
C201	19.5	17.8
C202	17.3	17.0
C203	48.3	19.2
C204	32.0	37.6
C205	13.4	41.0
C206	17.1	16.6
C207	18.8	13.9
C208	45.5	16.3
C209	38.1	38.6
C210	23.2	39.6
C301	25.0	21.3
C302	21.0	16.1
C303	52.5	18.7
C304	42.3	40.9
C305	24.4	44.1
C306	22.9	17.0
C307	22.7	13.0
C308	49.8	16.3
C309	47.1	39.4
C310	21.0	44.8
C401	15.2	21.0
C402	32.2	18.7

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C403	49.5	50.6
C404	14.9	19.4
C405	33.6	18.6
C406	40.3	50.6
C501	18.6	30.9
C502	48.9	26.7
C503	59.2	62.0
C504	18.9	30.5
C505	49.7	26.9
C506	51.2	59.6
CG01	27.7	14.2
CG02	35.1	10.2
CG03	63.1	18.9
CG04	38.5	28.8
CG05	19.7	31.2
CG06	22.4	14.0
CG07	35.2	9.7
CG08	60.9	17.6
All other dwellings	45.1	28.7

**(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	3 star (> 7.5 but ≤ 9 L/min)	4 star	6 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 3)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(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.		✓	✓

(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	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.5)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.6)	-	-	light-emitting diode	connected to lift call button	Yes
Lift motor room (No. 5)	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	No
Lift motor room (No. 6)	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	No
Switch room (No. 3)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Garbage room (No. 3)	ventilation exhaust only	-	light-emitting diode	manual on / manual off	No
Plant or service room (No. 3)	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	No
Hallway/lobby type (No. 3)	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	Yes

Central energy systems	Type	Specification
Lift (No. 5)	geared traction with V V A C motor	Number of levels (including basement): 6
Lift (No. 6)	geared traction with V V A C motor	Number of levels (including basement): 6

## 6. 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	3 star (> 7.5 but ≤ 9 L/min)	4 star	6 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000.0	To collect run-off from at least: - 840.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 686.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 2)	10000.0	To collect run-off from at least: - 900.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 686.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Central water tank - rainwater or stormwater (No. 3)	10000.0	To collect run-off from at least: - 900.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 686.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 4)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(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 (No. 1)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	Yes

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 145.0 peak kW
Other	Building management system installed?: yes	-

## 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).