

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Multi Dwelling

Certificate number: 1730728M_08

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 10/09/2020 published by the Department. This document is available at www.planningportal.nsw.gov.au/definitions

This certificate is a revision of certificate number 1730728M_03 submitted to the consent authority or certifier on 23 May 2024 with application SSD-67895459.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environment Planning and Assessment Regulation 2000

Secretary

Date of issue: Thursday, 13 November 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate RTTI585XYI.

Project summary

Project name	SMITH ST_08
Street address	120-122 SMITH STREET WOLLONGONG 2500
Local Government Area	WOLLONGONG
Plan type and plan number	Deposited Plan -
Lot no.	-
Section no.	-
No. of residential flat buildings	4
Residential flat buildings: no. of dwellings	150
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0

Project score

Water	✓ 41	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 62	Target 60
Materials	✓ -100	Target n/a

Certificate Prepared by

Name / Company Name: E-LAB Consulting

ABN (if applicable): 84647520634

Description of project

Project address	
Project name	SMITH ST_08
Street address	120-122 SMITH STREET WOLLONGONG 2500
Local Government Area	WOLLONGONG
Plan type and plan number	Deposited Plan -
Lot no.	-
Section no.	-
Project type	
No. of residential flat buildings	4
Residential flat buildings: no. of dwellings	150
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0
Site details	
Site area (m²)	5566.1
Roof area (m²)	2493.19
Non-residential floor area (m²)	288.2
Residential car spaces	168
Non-residential car spaces	15

Common area landscape		
Common area lawn (m²)	1461.85	
Common area garden (m²)	626.5	
Area of indigenous or low water use species (m²)	0	
Assessor details and thermal loads		
Assessor number	20/1972	
Certificate number	RTTI585XYI	
Climate zone	56	
Project score		
Water	✓ 41	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 62	Target 60
Materials	✓ -100	Target n/a

Description of project

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

Residential flat buildings - Building-A2, 35 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A2201	2	78.5	0	0	0
A2301	2	77.3	0	0	0
A2305	2	81.8	0	0	0
A2404	2	75	0	0	0
A2503	2	78.1	0	0	0
A2602	2	82.2	0	0	0
A2701	2	77.3	0	0	0
A2705	2	81.8	0	0	0
A2804	2	112.6	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A2202	3	101.6	0	0	0
A2302	2	82.2	0	0	0
A2401	2	77.3	0	0	0
A2405	2	81.8	0	0	0
A2504	2	75	0	0	0
A2603	2	77.7	0	0	0
A2702	2	82.2	0	0	0
A2801	3	125.4	0	0	0
A2805	3	139.6	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A2203	3	105.6	0	0	0
A2303	2	77.7	0	0	0
A2402	2	82.2	0	0	0
A2501	2	77.3	0	0	0
A2505	2	81.8	0	0	0
A2604	2	75	0	0	0
A2703	2	77.7	0	0	0
A2802	3	138	0	0	0
A2806	3	154.9	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A2204	2	79.8	0	0	0
A2304	2	75	0	0	0
A2403	2	77.7	0	0	0
A2502	2	82.2	0	0	0
A2601	2	77.3	0	0	0
A2605	2	81.8	0	0	0
A2704	2	75	0	0	0
A2803	3	141.8	0	0	0

Residential flat buildings - Building-B1, 45 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1201	2	83.6	0	0	0
B1205	1	52.1	0	0	0
B1303	2	81	0	0	0
B1401	2	83.6	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1202	2	88.3	0	0	0
B1206	1	70.7	0	0	0
B1304	2	84.9	0	0	0
B1402	2	88.6	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1203	2	77.7	0	0	0
B1301	2	83.6	0	0	0
B1305	1	52.1	0	0	0
B1403	2	81	0	0	0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1204	2	84.9	0	0	0
B1302	2	88.6	0	0	0
B1306	1	70.7	0	0	0
B1404	2	84.9	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1405	1	52.1	0	0	0
B1503	2	81	0	0	0
B1601	2	83.6	0	0	0
B1605	1	52.1	0	0	0
B1703	2	81	0	0	0
B1801	3	117.5	0	0	0
B1805	2	114.8	0	0	0
B1809	3	102.3	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1406	1	70.7	0	0	0
B1504	2	85	0	0	0
B1602	2	88.6	0	0	0
B1606	1	70.7	0	0	0
B1704	2	85	0	0	0
B1802	2	118.2	0	0	0
B1806	2	118.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1501	2	83.6	0	0	0
B1505	1	52.1	0	0	0
B1603	2	81	0	0	0
B1701	2	83.6	0	0	0
B1705	1	52.1	0	0	0
B1803	3	144	0	0	0
B1807	3	148.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B1502	2	88.6	0	0	0
B1506	1	70.7	0	0	0
B1604	2	85	0	0	0
B1702	2	88.6	0	0	0
B1706	1	70.7	0	0	0
B1804	2	106.7	0	0	0
B1808	1	64.8	0	0	0

Residential flat buildings - Building-B2, 35 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B2201	3	102.8	0	0	0
B2205	3	109.4	0	0	0
B2304	1	64.5	0	0	0
B2402	2	82.1	0	0	0
B2406	2	84.4	0	0	0
B2504	1	64.5	0	0	0
B2602	2	82.4	0	0	0
B2606	2	84.4	0	0	0
B2704	1	64.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B2202	2	82.1	0	0	0
B2301	3	102.6	0	0	0
B2305	3	109.5	0	0	0
B2403	2	80.1	0	0	0
B2501	3	102.6	0	0	0
B2505	3	110	0	0	0
B2603	2	80.1	0	0	0
B2701	3	102.6	0	0	0
B2705	3	110	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B2203	2	80.1	0	0	0
B2302	2	82.1	0	0	0
B2306	2	84.4	0	0	0
B2404	1	64.6	0	0	0
B2502	2	82.4	0	0	0
B2506	2	84.4	0	0	0
B2604	1	64.5	0	0	0
B2702	2	82.4	0	0	0
B2706	2	84.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
B2204	1	65.7	0	0	0
B2303	2	80.1	0	0	0
B2401	3	102.4	0	0	0
B2405	3	109.5	0	0	0
B2503	2	80.1	0	0	0
B2601	3	102.6	0	0	0
B2605	3	110	0	0	0
B2703	2	80.1	0	0	0

Residential flat buildings - Building-A1, 35 dwellings, 10 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)
A1201	3	100.1	0	0	0
A1301	3	100.1	0	0	0
A1305	2	82.6	0	0	0
A1404	1	53.2	0	0	0
A1503	3	98.3	0	0	0
A1602	2	87.6	0	0	0
A1701	3	100.3	0	0	0
A1705	2	82.7	0	0	0
A1804	3	137.4	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)
A1202	3	120.7	0	0	0
A1302	2	87.6	0	0	0
A1401	3	100.3	0	0	0
A1405	2	82.6	0	0	0
A1504	1	53.2	0	0	0
A1603	3	98.3	0	0	0
A1702	2	87.6	0	0	0
A1801	3	153.7	0	0	0
A1805	2	118.4	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)
A1203	2	82.1	0	0	0
A1303	3	98.3	0	0	0
A1402	2	87.6	0	0	0
A1501	3	100.3	0	0	0
A1505	2	83.2	0	0	0
A1604	1	53.2	0	0	0
A1703	3	98.3	0	0	0
A1802	3	151.6	0	0	0
A1806	3	137.9	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)
A1204	2	82.6	0	0	0
A1304	1	53.2	0	0	0
A1403	3	98.3	0	0	0
A1502	2	87.6	0	0	0
A1601	3	100.3	0	0	0
A1605	2	82.7	0	0	0
A1704	1	53.2	0	0	0
A1803	3	145.4	0	0	0

Description of project

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

Common areas of unit building - Building-A2

Common area	Floor area (m²)
A2_Bin	10.71
Hallway - A2	204.08

Common area	Floor area (m²)
Fire Stairs - A2	117.42

Common area	Floor area (m²)
Lobby - A2	26.9

Common areas of unit building - Building-B1

Common area	Floor area (m²)
B1_Bin	21.6

Common area	Floor area (m²)
B1_Storage	14.66

Common area	Floor area (m²)
B1_WC	7.18

Common areas of unit building - Building-B2

Common area	Floor area (m²)
B2_Bin	8.75

Common area	Floor area (m²)
Fire Stairs - B2	118.88

Common areas of unit building - Building-A1

Common area	Floor area (m²)
A1_Bin	8.68
Hallway - A1	190.12

Common area	Floor area (m²)
Fire Stairs - A1	139.47

Common area	Floor area (m²)
Lobby - A1	34.06

Common areas of the development (non-building specific)

Common area	Floor area (m²)
CARPARK	5598.77
Chute Room	44.81
Fire Pump Room	30.41
Hot Water Plant	66.97
Loading Bay	209.24
Building Management Office	29.24
Amenities	67.36

Common area	Floor area (m²)
Mains Switch Room	26.11
Bin Store	150.74
Cold Water Plant	18.28
Cold Water Meter	2.89
Share_Bike Storage	18.44
WC	17.32
Resi Bike Storage	35.12

Common area	Floor area (m²)
Bulky Waste	39.38
Substation	28.08
Carpark Fan Room	22.7
Fire Tank	48.83
COMMS	15.14
Airlock	8.85

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building-A2

(a) Buildings

(i) Materials

(b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

(c) Common areas and central systems/facilities

(i) Water

(ii) Energy

2. Commitments for Residential flat buildings - Building-B1

(a) Buildings

(i) Materials

(b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

(c) Common areas and central systems/facilities

(i) Water

(ii) Energy

3. Commitments for Residential flat buildings - Building-B2

(a) Buildings

(i) Materials

(b) Dwellings

(i) Water

- (ii) Energy
- (iii) Thermal Performance

(c) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

4. Commitments for Residential flat buildings - Building-A1

(a) Buildings

- (i) Materials

(b) Dwellings

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

(c) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

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

(a) Buildings 'Other'

- (i) Materials

(b) Common areas and central systems/facilities

- (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-A2

(a) Buildings

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	100	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	3390	fibreglass batts or roll	30% cement substitute

External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	concrete block/ plasterboard, frame: timber - H2 treated softwood	3500	none	fibreglass batts or roll
External wall type 2	framed (metal clad), frame: heavy steel post and beam frame	6500	40% cement substitute	fibreglass batts or roll

Internal wall types			
Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	3900	-

Reinforcement concrete frames/columns		
Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
-	-	-

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
framed - concrete tiles, frame: light steel frame	423.6	-	fibreglass batts or roll
concrete - plasterboard internal, frame: light steel frame	3812.4	-	fibreglass batts or roll

Glazing types			Frame types				
Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
0	669	0	669	0	0	0	0

(b) 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.	✓	✓	✓

	Fixtures					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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	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
All dwellings	No alternative water supply	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	

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

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

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	no	no

(iii) Thermal Performance	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.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✓	

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
A2201	21.7	4.5	26.200
A2202	24.9	12	36.900
A2203	20.8	8.9	29.700
A2204	31.4	5.6	37.000

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
A2301	21.2	5.1	26.300
A2302	12.3	12	24.300
A2303	4.5	14.7	19.200
A2304	10.8	7.5	18.300
A2305	16.6	8.2	24.800
A2401	24.9	4.9	29.800
A2402	13.2	9	22.200
A2403	6.4	12.7	19.100
A2404	12	6.2	18.200
A2405	21.3	6.4	27.700
A2501	25.2	5.1	30.300
A2502	13.7	8.4	22.100
A2503	6.1	12.5	18.600
A2504	10.9	6	16.900
A2505	20.5	6.7	27.200
A2601	25.3	5.1	30.400
A2602	14.1	8.5	22.600
A2603	4.2	12.6	16.800
A2604	6.2	6.5	12.700
A2605	16.6	6.4	23.000
A2701	26.2	5.4	31.600
A2702	14.3	8.8	23.100
A2703	4.4	13.3	17.700
A2704	7.8	7.8	15.600
A2705	16.5	6.5	23.000
A2801	30	6.3	36.300
A2802	20.2	11.4	31.600
A2803	2.9	21.2	24.100
A2804	6.3	14.3	20.600
A2805	10.1	17.6	27.700
All other dwellings	12.8	10.5	23.300

(c) 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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 2)	-	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
A2_Bin	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Fire Stairs - A2	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Lobby - A2	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Hallway - A2	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 2)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 7 number of levels from the bottom of the lift shaft to the top of the lift shaft: 9 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg

2. Commitments for Residential flat buildings - Building-B1

(a) Buildings

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	100	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	3724.4	fibreglass batts or roll	30% cement substitute

External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	concrete block/ plasterboard,frame:timber - H2 treated softwood	3500	none	fibreglass batts or roll
External wall type 2	framed (metal clad),frame:heavy steel post and beam frame	6500	40% cement substitute	fibreglass batts or roll

Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	3900	-

Reinforcement concrete frames/columns		
Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
-	-	-

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
framed - concrete tiles, frame: light steel frame	423.6	-	fibreglass batts or roll
concrete - plasterboard internal, frame: light steel frame	3812.4	-	fibreglass batts or roll

Glazing types			Frame types				
Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
0	669	0	669	0	0	0	0

(b) 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.	✓	✓	✓

	Fixtures					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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	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
All dwellings	No alternative water supply	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	

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

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

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
B1808, B1809	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	-
All other dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
B1808, B1809	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	-	-
All other dwellings	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	no	no

(iii) Thermal Performance	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.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✓	

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
B1201	19.6	12.9	32.500
B1202	12.5	15.8	28.300
B1203	24.8	8.1	32.900
B1204	14.8	9.4	24.200

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
B1205	29.3	8.7	38.000
B1206	28.3	8.8	37.100
B1301	21	14.9	35.900
B1302	11.5	20.1	31.600
B1303	17.9	18.3	36.200
B1304	10.7	9.5	20.200
B1305	14.4	14.2	28.600
B1306	22.2	15.1	37.300
B1401	25	11.6	36.600
B1402	15.5	20.1	35.600
B1403	21.4	14.7	36.100
B1404	14	6.9	20.900
B1405	18.6	10.9	29.500
B1406	20	9.2	29.200
B1501	24.1	11.3	35.400
B1502	14.8	15.6	30.400
B1503	21.9	14.5	36.400
B1504	14.6	6.3	20.900
B1505	19.4	10.2	29.600
B1506	19.3	9.2	28.500
B1601	22.5	11.7	34.200
B1602	15.2	17.1	32.300
B1603	22	14.5	36.500
B1604	15	6.4	21.400
B1605	20	10.3	30.300
B1606	19.8	9.1	28.900
B1701	19.2	14.9	34.100
B1702	16.6	19.5	36.100
B1703	18.5	12.1	30.600
B1704	15.7	5.9	21.600
B1705	20.5	10.1	30.600

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
B1706	20.2	9	29.200
B1801	18.7	17.9	36.600
B1802	9.3	17.8	27.100
B1803	16.3	17.7	34.000
B1804	19.7	18.2	37.900
B1805	12.5	21.2	33.700
B1806	9.2	17	26.200
B1807	12.1	19.3	31.400
B1808	20.7	15.6	36.300
All other dwellings	17.4	17.3	34.700

(c) 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	4 star (> 6 but <= 7.5 L/min)	4 star	5 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.		✓	✓
(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
B1_Bin	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
B1_Storage	ventilation supply only	thermostatically controlled	light-emitting diode	motion sensors	yes
B1_WC	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	motion sensors	yes
Fire Stairs - B1	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Lobby - A3	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Hallway - B1	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 3)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 7 number of levels from the bottom of the lift shaft to the top of the lift shaft: 9 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg

3. Commitments for Residential flat buildings - Building-B2

(a) Buildings

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	100	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	3347	fibreglass batts or roll	30% cement substitute

External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	concrete block/ plasterboard,frame:timber - H2 treated softwood	3500	none	fibreglass batts or roll
External wall type 2	framed (metal clad),frame:heavy steel post and beam frame	6500	40% cement substitute	fibreglass batts or roll

Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	3900	-

Reinforcement concrete frames/columns		
Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
-	-	-

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
framed - concrete tiles, frame: light steel frame	423.6	-	fibreglass batts or roll
concrete - plasterboard internal, frame: light steel frame	3812.4	-	fibreglass batts or roll

Glazing types			Frame types				
Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
0	669	0	669	0	0	0	0

(b) 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.	✓	✓	✓

	Fixtures					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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	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
All dwellings	No alternative water supply	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	

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

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

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
B2702, B2703, B2704, B2705, B2706	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	-
All other dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
B2702, B2703, B2704, B2705, B2706	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	-	-

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All other dwellings	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	no	no

(iii) Thermal Performance	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.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		

(iii) Thermal Performance	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.			

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)	Area adjusted total load (in MJ/m²/yr)
B2201	20.3	14.8	35.100
B2202	4.1	15.3	19.400
B2203	1.4	9.4	10.800
B2204	11	12.5	23.500
B2205	23.3	9.2	32.500
B2301	4.9	20.2	25.100
B2302	2.2	18.7	20.900
B2303	1.3	14.8	16.100
B2304	7.0	11.0	18.000
B2305	14.8	14.6	29.400
B2306	27.3	5.8	33.100
B2401	7.0	13.7	20.700
B2402	3.7	12.5	16.200
B2403	1.9	11.2	13.100
B2404	8.6	8.7	17.300
B2405	18.4	10.2	28.600
B2406	27.8	5.1	32.900
B2501	7.2	13.1	20.300
B2502	4.0	12.0	16.000
B2503	2.0	11.3	13.300
B2504	9.1	8.5	17.600
B2505	19.0	10.2	29.200
B2506	28.2	5.1	33.300
B2601	7.5	12.9	20.400
B2602	4.2	11.4	15.600
B2603	2.1	11.1	13.200

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
B2604	9.5	8.4	17.900
B2605	19.3	10.4	29.700
B2606	28.5	5.2	33.700
B2701	7.7	12.7	20.400
B2702	11.1	15	26.100
B2703	6.4	13.2	19.600
B2704	18.1	10.2	28.300
B2705	20.3	10.6	30.900
All other dwellings	24.9	7.1	32.000

(c) 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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
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
Lift bank (No. 1)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 2)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 3)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 4)	-	-	light-emitting diode	connected to lift call button	yes
B2_Bin	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Fire Stairs - B2	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Fire Stairs - B2	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Lobby - A4	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Hallway - B2	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 4)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 7 number of levels from the bottom of the lift shaft to the top of the lift shaft: 9 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg

4. Commitments for Residential flat buildings - Building-A1

(a) Buildings

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	100	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	3390	fibreglass batts or roll	30% cement substitute

External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	concrete block/ plasterboard,frame:timber - H2 treated softwood	3500	none	fibreglass batts or roll
External wall type 2	framed (metal clad),frame:heavy steel post and beam frame	6500	40% cement substitute	fibreglass batts or roll

Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	3900	-

Reinforcement concrete frames/columns		
Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
-	-	-

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
framed - concrete tiles, frame: light steel frame	423.6	-	fibreglass batts or roll
concrete - plasterboard internal, frame: light steel frame	3812.4	-	fibreglass batts or roll

Glazing types			Frame types				
Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
0	669	0	669	0	0	0	0

(b) 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.	✓	✓	✓

	Fixtures					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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	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
All dwellings	No alternative water supply	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below;		✓	

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

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

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	gas cooktop & electric oven	4 star	2 star	no	no

(iii) Thermal Performance	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.	✓	✓	✓
(i) The applicant must show on The plans accompanying The development application for The proposed development, The locations of ceiling fans set out in The Assessor Certificate.	✓		
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		✓	

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
A1201	23.5	5.2	28.700
A1202	16.2	6.9	23.100
A1203	8.4	12.2	20.600
A1204	20.9	9.8	30.700

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
A1301	19.2	11.8	31.000
A1302	7.5	8.8	16.300
A1303	1.3	17.3	18.600
A1304	3.1	13.2	16.300
A1305	15.8	9.5	25.300
A1401	22.5	10.8	33.300
A1402	6.9	7.1	14.000
A1403	1.9	13.3	15.200
A1404	4.9	10	14.900
A1405	19.8	7.7	27.500
A1501	22.2	10.7	32.900
A1502	7.1	6.9	14.000
A1503	2	13.20	15.200
A1504	5.4	10.1	15.500
A1505	20.2	7.7	27.900
A1601	19.6	10.6	30.200
A1602	6.4	6.7	13.100
A1603	2.2	13.2	15.400
A1604	5.6	10.3	15.900
A1605	20.3	7.9	28.200
A1701	19.3	10.3	29.600
A1702	6.7	7.4	14.100
A1703	2.5	13.2	15.700
A1704	6.1	10.4	16.500
A1705	21.9	12.7	34.600
A1801	7.6	17.1	24.700
A1802	10.9	14.5	25.400
A1803	9.7	13.4	23.100
A1804	10.5	10.3	20.800
A1805	19.8	9.1	28.900
All other dwellings	28.3	8.2	36.500

(c) 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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
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.		✓	✓
(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
A1_Bin	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Fire Stairs - A1	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Lobby - A1	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Hallway - A1	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 1)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 7 number of levels from the bottom of the lift shaft to the top of the lift shaft: 9 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg

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

(a) Buildings 'Other'

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	127	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	6000	fibreglass batts or roll	30% cement substitute

External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	concrete block/ plasterboard, frame: timber - H2 treated softwood	3500	none	fibreglass batts or roll
External wall type 2	framed (metal clad), frame: heavy steel post and beam frame	6500	40% cement substitute	fibreglass batts or roll

Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame: light steel frame	3900	-

Reinforcement concrete frames/columns		
Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
-	-	-

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
framed - concrete tiles, frame: light steel frame	423.6	-	fibreglass batts or roll
concrete - plasterboard internal, frame: light steel frame	3812.4	-	fibreglass batts or roll

Glazing types			Frame types				
Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
0	669	0	669	0	0	0	0

(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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	30000	To collect run-off from at least: - 2493 square metres of roof area of buildings in the development - 1300 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 2088 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 5)	-	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
CARPARK	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	yes
Mains Switch Room	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Bulky Waste	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Chute Room	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Bin Store	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Substation	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Fire Pump Room	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Cold Water Plant	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Carpark Fan Room	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Hot Water Plant	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Cold Water Meter	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Fire Tank	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	yes
Loading Bay	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Share_Bike Storage	ventilation supply only	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
COMMS	air conditioning system	none i.e., continuous	light-emitting diode	manual on / manual off	yes
Building Management Office	air conditioning system	time clock or BMS controlled	light-emitting diode	motion sensors	yes
WC	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	motion sensors	yes

	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
Airlock	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	yes
Amenities	air conditioning system	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	yes
Resi Bike Storage	no mechanical ventilation	-	light-emitting diode	motion sensors	yes

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.6 (~25 mm); (b) Piping internal to building: R0.6 (~25 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 0 peak kW
Other	Building management system installed?: yes Active power factor correction 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).