

# Assessor Certificate

## Multiple Dwellings

Assessed and issued in accordance with the BASIX  
Thermal Comfort Protocol for the Simulation Method



Date:	26 April 2021	BSA File ref:	12359
<b>Assessor</b>			
Name:	Gavin Chambers	Company:	Building Sustainability Assessments
Assessor #:	BDAV/13/1491		
Address:	7 William Street, HAMILTON NSW 2303		
Phone:	(02) 4962 3439	Email:	enquiries@buildingsustainability.net.au
Declaration of interest in the project design:	None		
<b>Project</b>			
Address:	Cnr West & Lake Street FORSTER NSW 2428		
Climate Zone:	15		
<b>Assessment</b>			
Software:	BERS Pro 4.3		

Affix assessor stamp

### Documentation

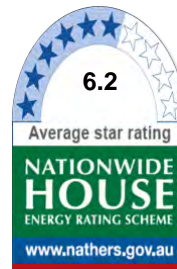
All details, upon which this assessment has been based, are included in the project documentation that has been stamped and signed by the Assessor issuing this certificate, as identified below:

### Drawings used for this assessment:

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

TVS Architects Job No. 5490.01 [3] 09/03/2021 DA Issue

### Thermal Performance Specification (copy on page 2)



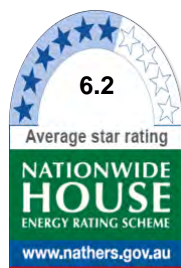
Certificate no.: 0001467690  
Assessor Name: Gavin Chambers  
Accreditation no.: VIC/BDAV/13/1491  
Certificate date: 26 Apr 2021  
Dwelling Address: Cnr West Lake Street  
Forster, NSW 2428

[www.nathers.gov.au](http://www.nathers.gov.au)



Attached to the drawings and is on page: Coversheet

Thermal performance specifications					Certificate #	0001467690	Page 1 of 5
Unit No.	Floor Areas		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Basix Floor Type and Area m <sup>2</sup>	
	Cond.	Uncond.	Heat	Cool			
A101	126	0	58	28	5.0		
A201	121	0	52	31	5.2		
A202	120	0	51	26	5.4		
A203	126	0	20	27	7.3		
A204	73	0	64	16	5.3		
A301	121	0	43	27	5.9		
A302	120	0	23	23	7.3		
A303	126	0	24	24	7.2		
A304	73	0	62	18	5.3		
A305	102	0	71	14	5.1		
A306	102	0	67	14	5.3		
A307	102	0	66	15	5.3		
A308	121	0	77	25	4.4		
A309	105	0	76	22	4.4		
A310	102	0	73	15	4.9		

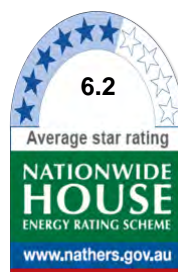


Certificate no.: 0001467690  
 Assessor Name: Gavin Chambers  
 Accreditation no.: VIC/BDIV/13/1491  
 Certificate date: 26 Apr 2021  
 Dwelling Address:  
 Cnr West Lake Street  
 Forster, NSW  
 2428  
[www.nathers.gov.au](http://www.nathers.gov.au)



April 2021		BSA Reference: 12359	
Building Sustainability Assessments		Ph: (02) 4962 3439	
enquiries@buildingsustainability.net.au		www.buildingsustainability.net.au	
Important Note			
The following specification was used to achieve the thermal performance values indicated on the Assessor Certificate and takes precedence over any other specification.			
If different construction elements are applied then the Assessor Certificate is no longer valid.			
Thermal Performance Specifications (does not apply to garage)			
External Wall Construction		Added Insulation	
Lightweight		R2.0	
190mm Concrete + Plasterboard		R1.0	
Internal Wall Construction		Added Insulation	
Plasterboard on studs (internal to units)		none	
Plasterboard on studs (party walls)		R2.0	
Plasterboard on studs (adjacent to lobbies/corridors)		R2.0	
190mm Concrete (party walls)		none	
250mm Concrete (to liftwells and stairwells)		R1.0	
Ceiling Construction		Added Insulation	
Plasterboard		R3.5 to ceilings adjacent to metal roof	
Plasterboard		R1.4 to ceilings adjacent to concrete above	
Roof Construction	Colour	Added Insulation	
Metal	Any	Foil + R1.0 blanket	
Concrete	Any	none	
Floor Construction	Covering	Added Insulation	
Concrete	As drawn	none	
Concrete (adjacent to carpark or open below)	As drawn	R0.5	
Windows	Glass and frame type	U Value	SHGC
Performance glazing with the values	5.40	0.49	All units except level 10
Performance glazing with the values	2.23	0.39	Units B1001, B1002, C1001, C1002
U and SHGC values are according to AFRC. Alternate products may be used if the U value is lower and the SHGC is less than 10% higher or lower than the above figures.			
External Window Shading		(eaves, verandahs, pergolas, awnings etc)	
All shade elements modelled as drawn			
Ceiling Penetrations		(downlights, exhaust fans, flues etc)	
No adjustment has been made for losses to insulation arising from ceiling penetrations.			

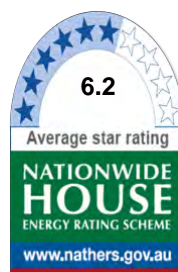
Assessor Certificate			Assessor # BDAV/13/1491			Issued:	26 April 2021
Thermal performance specifications			Certificate # 0001467690			Page 3 of 5	
Unit No.	Floor Areas		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Basix Floor Type and Area m <sup>2</sup>	
	Cond.	Uncond.	Heat	Cool			
A311	102	0	69	15	5.2		
A312	102	0	72	14	4.9		
A401	121	0	44	27	5.8		
A402	120	0	24	23	7.2		
A403	126	0	25	24	7.1		
A404	73	0	63	18	5.3		
A405	102	0	42	16	6.5		
A406	102	0	39	16	6.7		
A407	102	0	38	16	6.8		
A408	121	0	51	26	5.4		
A409	105	0	49	25	5.7		
A410	102	0	46	16	6.4		
A411	102	0	41	16	6.6		
A412	102	0	44	16	6.4		
A501	121	0	45	26	5.8		
A502	120	0	25	23	7.2		
A503	126	0	26	24	7.1		
A504	73	0	64	18	5.3		
A505	102	0	43	16	6.4		
A506	102	0	39	16	6.7		
A507	102	0	39	16	6.7		
A508	121	0	52	26	5.4		
A509	105	0	49	24	5.7		
A510	102	0	46	16	6.3		
A511	102	0	41	16	6.6		
A512	102	0	45	16	6.4		
A601	121	0	50	26	5.4		
A602	120	0	25	23	7.2		
A603	126	0	26	23	7.1		
A604	73	0	86	23	4.2		
A605	102	0	48	17	6.2		
A606	102	0	40	17	6.6		
A607	102	0	45	17	6.3		
A608	121	0	52	26	5.4		
A609	105	0	56	25	5.3		
A610	102	0	50	16	6.1		
A611	102	0	51	17	5.9		
A612	102	0	48	16	6.2		
A701	421	0	58	33	4.9		
A702	352	0	46	41	4.9		
A703	358	0	60	33	4.7		
B101	104	0	64	12	5.5		
B201	104	0	41	14	6.7		
B202	102	0	35	17	6.9		



Certificate no.: 0001467690  
 Assessor Name: Gavin Chambers  
 Accreditation no.: VIC/BDAV/13/1491  
 Certificate date: 26 Apr 2021  
 Dwelling Address:  
 Cnr West Lake Street  
 Forster, NSW  
 2428  
[www.nathers.gov.au](http://www.nathers.gov.au)



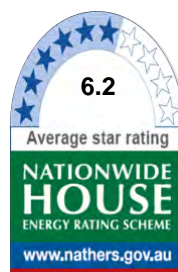
Assessor Certificate			Assessor # BDAV/13/1491			Issued:	26 April 2021
Thermal performance specifications			Certificate # 0001467690			Page 4 of 5	
Unit No.	Floor Areas		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Basix Floor Type and Area m <sup>2</sup>	
	Cond.	Uncond.	Heat	Cool			
B203	119	0	32	19	6.9		
B301	115	7	68	13	5.3		
B302	119	0	44	13	6.5		
B303	102	0	55	14	5.9		
B304	104	0	33	13	7.3		
B305	102	0	28	17	7.3		
B306	119	0	21	16	7.9		
B307	115	7	66	14	5.4		
B401	115	7	42	15	6.6		
B402	119	0	24	14	7.8		
B403	102	0	31	16	7.2		
B404	104	0	34	13	7.2		
B405	102	0	29	17	7.3		
B406	119	0	21	16	7.8		
B407	115	7	42	15	6.6		
B501	115	7	43	15	6.6		
B502	119	0	24	14	7.8		
B503	102	0	32	16	7.2		
B504	104	0	35	13	7.2		
B505	102	0	30	17	7.2		
B506	119	0	22	16	7.8		
B507	115	7	42	16	6.4		
B601	115	7	43	14	6.6		
B602	119	0	25	14	7.8		
B603	102	0	33	16	7.1		
B604	104	0	35	13	7.1		
B605	102	0	30	17	7.2		
B606	119	0	23	16	7.8		
B607	115	7	43	15	6.4		
B608	102	0	76	20	4.6		
B701	115	7	44	14	6.5		
B702	119	0	27	13	7.7		
B703	102	0	36	16	6.9		
B704	104	0	39	13	6.9		
B705	102	0	33	17	6.9		
B706	119	0	25	14	7.7		
B707	115	7	46	15	6.3		
B708	102	0	80	20	4.4		
B801	115	7	44	15	6.4		
B802	119	0	28	13	7.7		
B803	102	0	36	16	6.9		
B804	104	0	39	13	6.9		
B805	102	0	34	17	6.9		
B806	119	0	25	14	7.7		



Certificate no.: 0001467690  
 Assessor Name: Gavin Chambers  
 Accreditation no.: VIC/BDAV/13/1491  
 Certificate date: 26 Apr 2021  
 Dwelling Address:  
 Cnr West Lake Street  
 Forster, NSW  
 2428  
[www.nathers.gov.au](http://www.nathers.gov.au)



Assessor Certificate			Assessor # BDAV/13/1491			Issued:	26 April 2021
Thermal performance specifications			Certificate # 0001467690			Page 5 of 5	
Unit No.	Floor Areas		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Basix Floor Type and Area m <sup>2</sup>	
	Cond.	Uncond.	Heat	Cool			
B807	115	7	47	16	6.3		
B808	102	0	80	20	4.4		
B901	115	7	52	16	5.9		
B902	119	0	45	16	6.4		
B903	102	0	40	17	6.7		
B904	104	0	42	14	6.7		
B905	102	0	41	17	6.5		
B906	119	0	29	14	7.4		
B907	115	7	48	16	6.2		
B908	102	0	87	20	4.3		
B1001	333	0	57	35	4.8		
B1002	432	7	58	42	4.4		
C501	99	0	58	16	5.6		
C502	105	0	60	18	5.4		
C503	121	0	45	19	6.2		
C504	101	0	43	19	6.3		
C505	121	0	27	17	7.4		
C601	102	0	53	17	5.9		
C602	108	0	52	18	5.9		
C603	121	0	38	20	6.4		
C604	101	0	46	20	6.1		
C605	121	0	33	16	7.1		
C606	108	0	52	22	5.7		
C701	102	0	56	17	5.7		
C702	108	0	55	18	5.7		
C703	121	0	41	17	6.4		
C704	101	0	49	18	6.0		
C705	121	0	36	15	6.9		
C706	108	0	55	21	5.4		
C801	102	0	56	17	5.7		
C802	108	0	56	18	5.6		
C803	121	0	41	17	6.4		
C804	101	0	50	18	5.9		
C805	121	0	36	15	6.9		
C806	108	0	55	22	5.4		
C901	102	0	59	18	5.4		
C902	108	0	63	18	5.3		
C903	121	0	52	16	5.9		
C904	101	0	70	19	4.9		
C905	121	0	45	14	6.4		
C906	108	0	55	25	5.4		
C1001	310	0	67	42	4.2		
C1002	304	0	80	42	3.8		



Certificate no.: 0001467690  
 Assessor Name: Gavin Chambers  
 Accreditation no.: VIC/BDAV/13/1491  
 Certificate date: 26 Apr 2021  
 Dwelling Address:  
 Cnr West Lake Street  
 Forster, NSW  
 2428  
[www.nathers.gov.au](http://www.nathers.gov.au)



# BASIX<sup>®</sup>Certificate

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

## Multi Dwelling

Certificate number: 810706M\_02

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

This certificate is a revision of certificate number 810706M lodged with the consent authority or certifier on 15 May 2017 with application DA521/2017.

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 Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Monday, 26 April 2021

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



Planning,  
Industry &  
Environment

### Project summary

Project name	12359_02
Street address	Cnr West & Lake Street Forster 2428
Local Government Area	Great Lakes Council
Plan type and plan number	deposited 47987
Lot no.	11-13
Section no.	-
No. of residential flat buildings	3
No. of units in residential flat buildings	146
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 52	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 20	Target 20

Certificate Prepared by



(ABN: 27 131 950 064)

Ph: 02 4962 3439

Email: [enquiries@buildingsustainability.net.au](mailto:enquiries@buildingsustainability.net.au)

Revision of Certificates not lodged within 3 months of the date of issue will incur further BASIX issuing fees.

# Description of project

## Project address

Project name	12359_02
Street address	Cnr West & Lake Street Forster 2428
Local Government Area	Great Lakes Council
Plan type and plan number	deposited 47987
Lot no.	11-13
Section no.	-

## Project type

No. of residential flat buildings	3
No. of units in residential flat buildings	146
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	12153
Roof area (m²)	5270
Non-residential floor area (m²)	8789.0
Residential car spaces	211
Non-residential car spaces	288

## Common area landscape

Common area lawn (m²)	0.0
Common area garden (m²)	640.0
Area of indigenous or low water use species (m²)	-

## Assessor details

Assessor number	BDAV/13/1491
Certificate number	0001467690
Climate zone	15

## Project score

Water	✓ 52	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 20	Target 20

## Description of project

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

### Residential flat buildings - BuildingA, 56 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A101	3	126.0	0.0	0.0	0.0
A204	1	73.0	0.0	0.0	0.0
A304	1	73.0	0.0	0.0	0.0
A308	3	121.0	0.0	0.0	0.0
A312	2	102.0	0.0	8.0	0.0
A404	1	73.0	0.0	0.0	0.0
A408	3	121.0	0.0	0.0	0.0
A412	2	102.0	0.0	0.0	0.0
A504	1	73.0	0.0	0.0	0.0
A508	3	121.0	0.0	0.0	0.0
A512	2	102.0	0.0	0.0	0.0
A604	1	73.0	0.0	0.0	0.0
A608	3	121.0	0.0	0.0	0.0
A612	2	102.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A201	3	121.0	0.0	26.0	0.0
A301	3	121.0	0.0	0.0	0.0
A305	2	102.0	0.0	0.0	0.0
A309	2	105.0	0.0	14.0	0.0
A401	3	121.0	0.0	0.0	0.0
A405	2	102.0	0.0	0.0	0.0
A409	2	105.0	0.0	0.0	0.0
A501	3	121.0	0.0	0.0	0.0
A505	2	102.0	0.0	0.0	0.0
A509	2	105.0	0.0	0.0	0.0
A601	3	121.0	0.0	0.0	0.0
A605	2	102.0	0.0	0.0	0.0
A609	2	105.0	0.0	0.0	0.0
A701	4 or more bedrooms	421.0	0.0	9.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A202	3	120.0	0.0	14.0	0.0
A302	3	120.0	0.0	0.0	0.0
A306	2	102.0	0.0	0.0	0.0
A310	2	102.0	0.0	17.0	0.0
A402	3	120.0	0.0	0.0	0.0
A406	2	102.0	0.0	0.0	0.0
A410	2	102.0	0.0	0.0	0.0
A502	3	120.0	0.0	0.0	0.0
A506	2	102.0	0.0	0.0	0.0
A510	2	102.0	0.0	0.0	0.0
A602	3	120.0	0.0	0.0	0.0
A606	2	102.0	0.0	0.0	0.0
A610	2	102.0	0.0	0.0	0.0
A702	3	352.0	0.0	4.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A203	3	126.0	0.0	0.0	0.0
A303	3	126.0	0.0	0.0	0.0
A307	2	102.0	0.0	0.0	0.0
A311	2	102.0	0.0	9.0	0.0
A403	3	126.0	0.0	0.0	0.0
A407	2	102.0	0.0	0.0	0.0
A411	2	102.0	0.0	0.0	0.0
A503	3	126.0	0.0	0.0	0.0
A507	2	102.0	0.0	0.0	0.0
A511	2	102.0	0.0	0.0	0.0
A603	3	126.0	0.0	0.0	0.0
A607	2	102.0	0.0	0.0	0.0
A611	2	102.0	0.0	0.0	0.0
A703	3	358.0	0.0	8.0	0.0

### Residential flat buildings - BuildingB, 59 dwellings, 11 storeys above ground



Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B101	2	104.0	0.0	0.0	0.0
B301	3	115.0	7.0	0.0	0.0
B305	2	102.0	0.0	0.0	0.0
B402	3	119.0	0.0	0.0	0.0
B406	3	119.0	0.0	0.0	0.0
B503	2	102.0	0.0	0.0	0.0
B507	3	115.0	7.0	0.0	0.0
B604	2	104.0	0.0	0.0	0.0
B608	2	102.0	0.0	0.0	0.0
B704	2	104.0	0.0	0.0	0.0
B708	2	102.0	0.0	0.0	0.0
B804	2	104.0	0.0	0.0	0.0
B808	2	102.0	0.0	0.0	0.0
B904	2	104.0	0.0	0.0	0.0
B908	2	102.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B201	2	104.0	0.0	0.0	0.0
B302	3	119.0	0.0	0.0	0.0
B306	3	119.0	0.0	0.0	0.0
B403	2	102.0	0.0	0.0	0.0
B407	3	115.0	7.0	0.0	0.0
B504	2	104.0	0.0	0.0	0.0
B601	3	115.0	7.0	0.0	0.0
B605	2	102.0	0.0	0.0	0.0
B701	3	115.0	7.0	0.0	0.0
B705	2	102.0	0.0	0.0	0.0
B801	3	115.0	7.0	0.0	0.0
B805	2	102.0	0.0	0.0	0.0
B901	3	115.0	7.0	0.0	0.0
B905	2	102.0	0.0	0.0	0.0
B1001	4 or more bedrooms	333.0	0.0	67.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B202	2	102.0	0.0	0.0	0.0
B303	2	102.0	0.0	0.0	0.0
B307	3	115.0	7.0	0.0	0.0
B404	2	104.0	0.0	0.0	0.0
B501	3	115.0	7.0	0.0	0.0
B505	2	102.0	0.0	0.0	0.0
B602	3	119.0	0.0	0.0	0.0
B606	3	119.0	0.0	0.0	0.0
B702	3	119.0	0.0	0.0	0.0
B706	3	119.0	0.0	0.0	0.0
B802	3	119.0	0.0	0.0	0.0
B806	3	119.0	0.0	0.0	0.0
B902	3	119.0	0.0	0.0	0.0
B906	3	119.0	0.0	0.0	0.0
B1002	4 or more bedrooms	432.0	7.0	42.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B203	3	119.0	0.0	0.0	0.0
B304	2	104.0	0.0	0.0	0.0
B401	3	115.0	7.0	0.0	0.0
B405	2	102.0	0.0	0.0	0.0
B502	3	119.0	0.0	0.0	0.0
B506	3	119.0	0.0	0.0	0.0
B603	2	102.0	0.0	0.0	0.0
B607	3	115.0	7.0	0.0	0.0
B703	2	102.0	0.0	0.0	0.0
B707	3	115.0	7.0	0.0	0.0
B803	2	102.0	0.0	0.0	0.0
B807	3	115.0	7.0	0.0	0.0
B903	2	102.0	0.0	0.0	0.0
B907	3	115.0	7.0	0.0	0.0

### Residential flat buildings - BuildingC, 31 dwellings, 11 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C501	2	99.0	0.0	0.0	0.0
C505	3	121.0	0.0	0.0	0.0
C604	2	101.0	0.0	0.0	0.0
C702	2	108.0	0.0	0.0	0.0
C706	2	108.0	0.0	0.0	0.0
C804	2	101.0	0.0	0.0	0.0
C902	2	108.0	0.0	0.0	0.0
C906	2	108.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C502	2	105.0	0.0	0.0	0.0
C601	2	102.0	0.0	0.0	0.0
C605	3	121.0	0.0	0.0	0.0
C703	3	121.0	0.0	0.0	0.0
C801	2	102.0	0.0	0.0	0.0
C805	3	121.0	0.0	0.0	0.0
C903	3	121.0	0.0	0.0	0.0
C1001	3	310.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C503	3	121.0	0.0	0.0	0.0
C602	2	108.0	0.0	0.0	0.0
C606	2	108.0	0.0	0.0	0.0
C704	2	101.0	0.0	0.0	0.0
C802	2	108.0	0.0	0.0	0.0
C806	2	108.0	0.0	0.0	0.0
C904	2	101.0	0.0	0.0	0.0
C1002	3	304.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C504	2	101.0	0.0	0.0	0.0
C603	3	121.0	0.0	0.0	0.0
C701	2	102.0	0.0	0.0	0.0
C705	3	121.0	0.0	0.0	0.0
C803	3	121.0	0.0	0.0	0.0
C901	2	102.0	0.0	0.0	0.0
C905	3	121.0	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - BuildingA

Common area	Floor area (m²)
Lift car (No.1)	-
Lobby (L1)	22.0
Lobby (L4)	103.0
Lobby (L7)	89.0

Common area	Floor area (m²)
Lift car (No.2)	-
Lobby (L2)	39.0
Lobby (L5)	103.0

Common area	Floor area (m²)
Ground floor lobby (LG)	67.0
Lobby (L3)	113.0
Lobby (L6)	103.0

### Common areas of unit building - BuildingB

Common area	Floor area (m²)
Lift car (No.3)	-
Sauna Shower Room (L06)	46.0
Lobby (L2)	49.0
Lobby (L5)	100.0
Lobby (L8)	91.0

Common area	Floor area (m²)
Lift car (No.4)	-
Ground floor lobby (LG)	69.0
Lobby (L3)	100.0
Lobby (L6)	90.0
Lobby (L9 & 10)	114.0

Common area	Floor area (m²)
Communal Rec Facility (L05)	536.0
Lobby (L1)	23.0
Lobby (L4)	100.0
Lobby (L7)	91.0

### Common areas of unit building - BuildingC

Common area	Floor area (m²)
Lift car (No.5)	-
Lobby (L5)	37.0
Lobby (L9 & 10)	52.0

Common area	Floor area (m²)
Lift car (No.6)	-
Lobby (L6)	40.0
Lobby (L8)	40.0

Common area	Floor area (m²)
Ground floor lobby (LG)	70.0
Lobby (L7)	40.0

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

Common area	Floor area (m²)
Car park area (LGB1)	7899.0
Stoarge (LGB1)	123.0

Common area	Floor area (m²)
Car park area (L01)	2842.0
Sprinkler/Hydrant room (LGB1)	28.0

Common area	Floor area (m²)
Car park area (L02)	5020.0
Storage (L1)	25.0

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - BuildingA

### (a) Dwellings

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

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

- (i) Water
- (ii) Energy

## 2. Commitments for Residential flat buildings - BuildingB

### (a) Dwellings

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

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

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - BuildingC

### (a) Dwellings

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

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

- (i) Water
- (ii) Energy

## 4. Commitments for multi-dwelling houses

## 5. Commitments for single dwelling houses

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

(i) Water

(ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - BuildingA

#### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:			
(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and		✓	✓
(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓	✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

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

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	central water tank (no. 1)	See central systems	See central systems	no	yes	yes	no	no
None	-	-	-	-	-	-	-	-

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



(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

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

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
A701	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	4	1	yes	yes	yes	yes	0	no
A204, A304, A404, A504, A604	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	1	1	yes	yes	yes	yes	0	no
A101, A201, A202, A203, A301, A302, A303, A308, A401, A402, A403, A408, A501, A502, A503, A508, A601, A602, A603, A608, A702, A703	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	3	1	yes	yes	yes	yes	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	2	1	yes	yes	yes	yes	0	no

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

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A101	58.0	28.0
A201	52.0	31.0
A203	20.0	27.0
A204	64.0	16.0
A301	43.0	27.0
A302	23.0	23.0
A303	24.0	24.0
A304	62.0	18.0
A305	71.0	14.0
A306	67.0	14.0
A307	66.0	15.0
A308	77.0	25.0
A309	76.0	22.0
A310	73.0	15.0
A311	69.0	15.0
A312	72.0	14.0
A401	44.0	27.0
A402	24.0	23.0
A403	25.0	24.0
A404	63.0	18.0
A405	42.0	16.0
A407	38.0	16.0
A409	49.0	25.0
A412	44.0	16.0
A501	45.0	26.0
A503	26.0	24.0
A504	64.0	18.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
A505	43.0	16.0
A509	49.0	24.0
A512	45.0	16.0
A601	50.0	26.0
A603	26.0	23.0
A604	86.0	23.0
A605	48.0	17.0
A606	40.0	17.0
A607	45.0	17.0
A609	56.0	25.0
A610	50.0	16.0
A611	51.0	17.0
A612	48.0	16.0
A701	58.0	33.0
A702	46.0	41.0
A703	60.0	33.0
A202, A408	51.0	26.0
A410, A510	46.0	16.0
A411, A511	41.0	16.0
A502, A602	25.0	23.0
A508, A608	52.0	26.0
All other dwellings	39.0	16.0

**(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	3 star (> 7.5 but ≤ 9 L/min)	4 star	5 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No.1)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	No
Ground floor lobby (LG)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	daylight sensor and motion sensor	No
Lobby (L1)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L2)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L3)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L4)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L5)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L6)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L7)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 8
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 8

## 2. Commitments for Residential flat buildings - BuildingB

### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓



	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
B406	3 star (> 7.5 but <= 9 L/min)	4 star	5 star	5 star	no	-	-	32.0	yes	outdoors	no	-	-	-
All other dwellings	3 star (> 7.5 but <= 9 L/min)	4 star	5 star	5 star	no	-	-	-	-	-	-	-	-	-

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	central water tank (no. 1)	See central systems	See central systems	no	yes	yes	no	no
None	-	-	-	-	-	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

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

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
B406	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	4	2	yes	yes	yes	yes	2	yes
B507	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	5	2	yes	yes	yes	yes	2	yes
B101, B302, B304, B305, B401, B403, B405, B407, B602, B605, B804, B806, B902, B907	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	3	1	yes	yes	yes	yes	1	no
B306, B501, B502, B506, B603, B604, B606, B608, B704, B705, B708, B805, B901, B904, B905	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	3	1	yes	yes	yes	yes	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
B406	electric heat pump	yes	-	-	electric cooktop & electric oven	-	yes	3.5 star	-	-	no	no
All other dwellings	-	-	-	-	electric cooktop & electric oven	-	yes	3.5 star	-	-	no	no

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

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must:  (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.	✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
B101	64.0	12.0
B201	41.0	14.0
B202	35.0	17.0
B203	32.0	19.0
B301	68.0	13.0
B302	44.0	13.0
B303	55.0	14.0
B304	33.0	13.0
B305	28.0	17.0
B307	66.0	14.0
B403	31.0	16.0
B404	34.0	13.0
B405	29.0	17.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
B503	32.0	16.0
B506	22.0	16.0
B507	42.0	16.0
B601	43.0	14.0
B603	33.0	16.0
B606	23.0	16.0
B608	76.0	20.0
B701	44.0	14.0
B702	27.0	13.0
B705	33.0	17.0
B707	46.0	15.0
B801	44.0	15.0
B802	28.0	13.0
B805	34.0	17.0
B807	47.0	16.0
B901	52.0	16.0
B902	45.0	16.0
B903	40.0	17.0
B904	42.0	14.0
B905	41.0	17.0
B906	29.0	14.0
B907	48.0	16.0
B908	87.0	20.0
B1001	57.0	35.0
B1002	58.0	42.0
B306, B406	21.0	16.0
B401, B407	42.0	15.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
B402, B502	24.0	14.0
B501, B607	43.0	15.0
B504, B604	35.0	13.0
B505, B605	30.0	17.0
B703, B803	36.0	16.0
B704, B804	39.0	13.0
B708, B808	80.0	20.0
All other dwellings	25.0	14.0

**(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	3 star (> 7.5 but ≤ 9 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Pool (No. 1)	Volume: 101.0 kLs	Location: BuildingB Pool shaded: no	-
Spa (No. 1)	Volume: 6.77 kLs	Location: BuildingB Spa shaded: no Spa cover: yes	-



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

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No.3)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	No
Communal Rec Facility (L05)	air conditioning system	time clock or BMS controlled	light-emitting diode	daylight sensor and motion sensor	No
Sauna Shower Room (L06)	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	manual on / timer off	No
Ground floor lobby (LG)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L1)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L2)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L3)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L4)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L5)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L6)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No

	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
Lobby (L7)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L8)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L9 & 10)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 2)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 11
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Spa (No. 1)	Heating system: electric heat pump	Pump controlled by timer: yes
Sauna (No. 1)	Heating source: electric resistance	Efficiency measure: manual on / timer off

### 3. Commitments for Residential flat buildings - BuildingC

#### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

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

	Alternative water source							
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	central water tank (no. 1)	See central systems	See central systems	no	yes	yes	no	no
None	-	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

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

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
C1001, C1002	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	3	2	yes	yes	yes	yes	1	yes
C503, C505, C603, C605, C703, C705, C803, C805, C903, C905	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	3	1	yes	yes	yes	yes	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	ceiling fans + 1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 2.5 - 3.0	2	1	yes	yes	yes	yes	0	no

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

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C501	58.0	16.0
C502	60.0	18.0
C503	45.0	19.0
C504	43.0	19.0
C505	27.0	17.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C601	53.0	17.0
C602	52.0	18.0
C603	38.0	20.0
C604	46.0	20.0
C605	33.0	16.0
C606	52.0	22.0
C702	55.0	18.0
C704	49.0	18.0
C706	55.0	21.0
C802	56.0	18.0
C804	50.0	18.0
C806	55.0	22.0
C901	59.0	18.0
C902	63.0	18.0
C903	52.0	16.0
C904	70.0	19.0
C905	45.0	14.0
C906	55.0	25.0
C1001	67.0	42.0
C1002	80.0	42.0
C701, C801	56.0	17.0
C703, C803	41.0	17.0
All other dwellings	36.0	15.0



**(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	3 star (> 7.5 but ≤ 9 L/min)	4 star	5 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No.5)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.6)	-	-	light-emitting diode	connected to lift call button	No
Ground floor lobby (LG)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L5)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L6)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L7)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L9 & 10)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No
Lobby (L8)	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 3)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 11

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

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

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	999999.0	To collect run-off from at least: - 4100.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 458.0 square metres of common landscaped area on the site

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

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area (LGB1)	ventilation exhaust only	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	No
Car park area (L01)	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	No
Car park area (L02)	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	No
Stoarge (LGB1)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Sprinkler/Hydrant room (LGB1)	ventilation (supply + exhaust)	thermostatically controlled	fluorescent	manual on / manual off	No
Storage (L1)	no mechanical ventilation	-	light-emitting diode	manual on / manual off	No

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 97.0 peak kW

## 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).