

APPENDIX G

Assessor Certificate

Multiple Dwellings

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



Date:	26 September 2016	BSA File ref:	9447
Assessor			
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		
Project			
Address:	36 Brooks Parade		
	BELMONT NSW 2280	Climate Zone:	15
Assessment			
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)

Coeve Design Plans for Brooks Parade

Thermal Performance Specification (copy on page 2)

Attached to the drawings and is on page: DA02-A

Certificate Number	0000783170
Accreditation Number	VIC/BDAV/13/1491
Signature	Date 26/09/2016

Thermal performance specifications					Certificate #	0000783170	Page 1 of 5
Unit No.	Floor Areas		Predict. loads (MJ/M ² /y)		Star Rating	Basix Floor Type and Area m ²	
	Cond.	Uncond.	Heat	Cool			
A201	72	0	31	22	6.9		
A202	83	0	26	20	7.3		
A203	105	0	28	29	6.7		
A204	83	0	25	23	7.2		
A205	85	0	56	23	5.4		
A301	83	0	20	24	7.4		
A302	83	0	18	20	7.8		
A303	105	0	27	30	6.6		
A304	83	0	26	23	7.1		
A305	85	0	49	23	5.8		
A401	83	0	26	21	7.3		
A402	83	0	22	18	7.7		
A403	105	0	31	24	6.7		
A404	83	0	32	18	7.1		
A405	85	0	57	19	5.4		



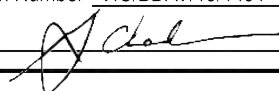
Building
Sustainability Assessments



CORPORATE
MEMBER
bda.v.
Building Designers
Association Victoria

Certificate Number 0000783170

Accreditation Number VIC/BDAV/13/1491

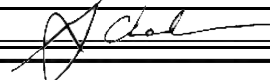
Signature  Date 26/09/2016

August 2016		BSA Reference: 9447		
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				
External Wall Construction		Added Insulation		
150 Concrete + Frame + Plasterboard		R2.0		
Internal Wall Construction		Added Insulation		
Plasterboard on studs		none		
150 Concrete + Frame + Plasterboard (walls to lobbies, stairwell, liftwell, adjacent unit)		R2.0		
Ceiling Construction		Added Insulation		
Plasterboard		R3.5 to ceilings adjacent to roof and decks above		
Roof Construction		Colour	Added Insulation	
Concrete		Any	none	
Floor Construction		Covering	Added Insulation	
Concrete		As drawn	none	
Windows	Glass and frame type	U Value	SHGC	Area sq m
ALM-001-01 A	Aluminium Type A Single Clear	6.7	0.57	As drawn
ALM-002-01 A	Aluminium Type B Single Clear	6.7	0.70	As drawn
Type A windows are awning windows, bifolds, casements, tilt 'n' turn windows, entry doors, french doors				
Type B windows are double hung windows, sliding windows & doors, fixed windows, stacker doors, louvres				
Skylights	Glass and frame type	U Value	SHGC	Area sq m
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.				
If insulation losses > 0.5% of the ceiling area occur then the assessment is no longer valid.				

Assessor Certificate			Assessor # BDAV/13/1491			Issued: 26 September 2016	
Thermal performance specifications			Certificate # 0000783170			Page 3 of 5	
Unit No.	Floor Areas		Predict. loads (MJ/M ² /y)		Star Rating	Basix Floor Type and Area m ²	
	Cond.	Uncond.	Heat	Cool			
A501	83	4	42	32	5.7		
A502	107	0	30	22	6.9		
A503	85	0	67	27	4.7		
A601	83	4	43	31	5.7		
A602	107	0	30	22	6.9		
A603	85	0	68	27	4.7		
A701	83	4	44	31	5.6		
A702	107	0	31	23	6.8		
A703	85	0	69	27	4.6		
A801	83	4	56	22	5.4		
A802	107	0	35	20	6.8		
A803	85	0	70	24	4.7		
B101	72	0	38	24	6.3		
B102	87	0	17	28	7.3		
B103	54	0	21	19	7.7		
B104	90	0	13	13	8.4		
B201	92	0	33	24	6.6		
B202	89	0	10	30	7.7		
B203	54	0	15	18	8.1		
B204	54	0	16	18	8.0		
B205	86	0	24	30	6.8		
B206	76	0	29	25	6.8		
B207	110	0	44	19	6.3		
B301	92	0	33	24	6.6		
B302	89	0	10	30	7.6		
B303	109	0	15	14	8.4		
B304	86	0	25	30	6.7		
B305	76	0	30	24	6.8		
B306	110	0	44	19	6.3		
B401	92	0	32	24	6.7		
B402	89	0	14	26	7.7		
B403	109	0	18	14	8.2		
B404	86	0	30	25	6.8		
B405	76	0	39	18	6.7		
B406	110	0	51	16	6.0		
B501	82	0	26	20	7.3		
B502	77	0	26	26	6.9		
B503	98	0	44	30	5.7		
B504	85	0	64	24	4.9		
B601	82	0	33	18	6.9		
B602	77	0	28	23	6.9		
B603	98	0	47	28	5.6		
B604	85	0	66	23	4.9		
C101	111	0	23	32	6.7		


Building Sustainability Assessments
CORPORATE MEMBER

Building Designers Association Victoria

Certificate Number **0000783170**
Accreditation Number VIC/BDAV/13/1491
Signature  Date 26/09/2016

Assessor Certificate			Assessor # BDAV/13/1491			Issued: 26 September 2016
Thermal performance specifications			Certificate # 0000783170			Page 4 of 5
Unit No.	Floor Areas		Predict. loads (MJ/M ² /y)		Star Rating	Basix Floor Type and Area m ²
	Cond.	Uncond.	Heat	Cool		
C102	91	0	13	13	8.6	
C103	63	0	16	13	8.3	
C104	89	0	21	27	7.2	
C105	90	0	42	25	6.0	
C106	78	0	61	15	5.4	
C201	91	0	32	19	6.9	
C202	61	0	6	23	8.3	
C203	85	0	15	32	7.2	
C204	68	0	10	12	8.9	
C205	63	0	10	13	8.8	
C206	89	0	16	25	7.6	
C207	90	0	35	26	6.4	
C208	78	0	52	17	5.9	
C301	91	0	23	20	7.4	
C302	61	0	8	24	8.2	
C303	85	0	16	32	7.2	
C304	68	0	10	12	8.8	
C305	63	0	11	13	8.7	
C306	89	0	17	25	7.5	
C307	90	0	36	26	6.3	
C308	78	0	53	17	5.9	
C401	88	0	33	17	7.0	
C402	61	0	14	20	8.1	
C403	85	0	19	27	7.3	
C404	68	0	14	11	8.7	
C405	63	0	14	13	8.4	
C406	89	0	22	20	7.4	
C407	90	0	45	20	6.1	
C408	78	0	58	15	5.7	
C501	108	0	35	15	7.0	
C502	74	0	23	26	7.1	
C503	79	0	19	19	7.8	
C504	92	0	41	29	5.9	
C601	108	0	38	13	6.9	
C602	74	0	26	23	7.1	
C603	79	0	16	17	8.1	
C604	92	0	42	26	5.9	
D101	99	0	44	20	6.2	
D102	82	0	8	31	7.8	
D103	91	0	25	20	7.3	
D201	101	0	32	22	6.8	
D202	85	0	13	33	7.3	
D203	79	0	16	17	8.1	
D204	53	0	28	16	7.4	



Certificate Number **0000783170**

Accreditation Number **VIC/BDAV/13/1491**

Signature *[Signature]* Date **26/09/2016**

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BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 747948M

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 18/09/2014 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Monday, 26 September 2016

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



Project summary

Project name	9447
Street address	36 Brooks Parade Belmont 2280
Local Government Area	Lake Macquarie City Council
Plan type and plan number	deposited 585
Lot no.	4
Section no.	-
No. of residential flat buildings	4
No. of units in residential flat buildings	130
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Project score

Water	✓ 40	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

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	9447
Street address	36 Brooks Parade Belmont 2280
Local Government Area	Lake Macquarie City Council
Plan type and plan number	deposited 585
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Project type

No. of residential flat buildings	4
No. of units in residential flat buildings	130
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m²)	6753
Roof area (m²)	2348
Non-residential floor area (m²)	505.0
Residential car spaces	150
Non-residential car spaces	19

Common area landscape

Common area lawn (m²)	0.0
Common area garden (m²)	1229.0
Area of indigenous or low water use species (m²)	-

Assessor details

Assessor number	BDAV/13/1491
Certificate number	0000783170
Climate zone	15

Project score

Water	✓ 40	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 - Building A, 27 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)
A201	2	72.0	0.0	0.0	0.0
A205	2	85.0	0.0	0.0	0.0
A304	2	83.0	0.0	0.0	0.0
A403	3	105.0	0.0	0.0	0.0
A502	3	107.0	0.0	0.0	0.0
A603	2	85.0	0.0	0.0	0.0
A801	2	83.0	4.0	0.0	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)
A202	2	83.0	0.0	0.0	0.0
A301	2	83.0	0.0	0.0	0.0
A305	2	85.0	0.0	0.0	0.0
A404	2	83.0	0.0	0.0	0.0
A503	2	85.0	0.0	0.0	0.0
A701	2	83.0	4.0	0.0	0.0
A802	3	107.0	0.0	0.0	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)
A203	3	105.0	0.0	0.0	0.0
A302	2	83.0	0.0	0.0	0.0
A401	2	83.0	0.0	0.0	0.0
A405	2	85.0	0.0	0.0	0.0
A601	2	83.0	4.0	0.0	0.0
A702	3	107.0	0.0	0.0	0.0
A803	2	85.0	0.0	0.0	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)
A204	2	83.0	0.0	0.0	0.0
A303	3	105.0	0.0	0.0	0.0
A402	2	83.0	0.0	0.0	0.0
A501	2	83.0	4.0	0.0	0.0
A602	3	107.0	0.0	0.0	0.0
A703	2	85.0	0.0	0.0	0.0

Residential flat buildings - Building B, 31 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)
B101	2	72.0	0.0	0.0	0.0
B201	2	92.0	0.0	0.0	0.0
B205	2	86.0	0.0	0.0	0.0
B302	2	89.0	0.0	0.0	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)
B102	2	87.0	0.0	0.0	0.0
B202	2	89.0	0.0	0.0	0.0
B206	2	76.0	0.0	0.0	0.0
B303	3	109.0	0.0	0.0	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)
B103	1	54.0	0.0	0.0	0.0
B203	1	54.0	0.0	0.0	0.0
B207	3	110.0	0.0	0.0	0.0
B304	2	86.0	0.0	0.0	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)
B104	2	90.0	0.0	0.0	0.0
B204	1	54.0	0.0	0.0	0.0
B301	2	92.0	0.0	0.0	0.0
B305	2	76.0	0.0	0.0	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)
B306	3	110.0	0.0	0.0	0.0
B404	2	86.0	0.0	0.0	0.0
B502	2	77.0	0.0	0.0	0.0
B602	2	77.0	0.0	0.0	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)
B401	2	92.0	0.0	0.0	0.0
B405	2	76.0	0.0	0.0	0.0
B503	3	98.0	0.0	0.0	0.0
B603	3	98.0	0.0	0.0	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)
B402	2	89.0	0.0	0.0	0.0
B406	3	110.0	0.0	0.0	0.0
B504	2	85.0	0.0	0.0	0.0
B604	2	85.0	0.0	0.0	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)
B403	3	109.0	0.0	0.0	0.0
B501	2	82.0	0.0	0.0	0.0
B601	2	82.0	0.0	0.0	0.0

Residential flat buildings - Building C, 38 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)
C101	3	111.0	0.0	0.0	0.0
C105	2	90.0	0.0	0.0	0.0
C203	2	85.0	0.0	0.0	0.0
C207	2	90.0	0.0	0.0	0.0
C303	2	85.0	0.0	0.0	0.0
C307	2	90.0	0.0	0.0	0.0
C403	2	85.0	0.0	0.0	0.0
C407	2	90.0	0.0	0.0	0.0
C503	2	79.0	0.0	0.0	0.0
C603	2	79.0	0.0	0.0	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)
C102	2	91.0	0.0	0.0	0.0
C106	2	78.0	0.0	0.0	0.0
C204	1	68.0	0.0	0.0	0.0
C208	2	78.0	0.0	0.0	0.0
C304	1	68.0	0.0	0.0	0.0
C308	2	78.0	0.0	0.0	0.0
C404	1	68.0	0.0	0.0	0.0
C408	2	78.0	0.0	0.0	0.0
C504	2	92.0	0.0	0.0	0.0
C604	2	92.0	0.0	0.0	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)
C103	1	63.0	0.0	0.0	0.0
C201	2	91.0	0.0	0.0	0.0
C205	1	63.0	0.0	0.0	0.0
C301	2	91.0	0.0	0.0	0.0
C305	1	63.0	0.0	0.0	0.0
C401	2	88.0	0.0	0.0	0.0
C405	1	63.0	0.0	0.0	0.0
C501	3	108.0	0.0	0.0	0.0
C601	3	108.0	0.0	0.0	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)
C104	2	89.0	0.0	0.0	0.0
C202	1	61.0	0.0	0.0	0.0
C206	2	89.0	0.0	0.0	0.0
C302	1	61.0	0.0	0.0	0.0
C306	2	89.0	0.0	0.0	0.0
C402	1	61.0	0.0	0.0	0.0
C406	2	89.0	0.0	0.0	0.0
C502	2	74.0	0.0	0.0	0.0
C602	2	74.0	0.0	0.0	0.0

Residential flat buildings - Building D, 34 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)
D101	2	99.0	0.0	0.0	0.0
D202	2	85.0	0.0	0.0	0.0
D206	2	74.0	0.0	0.0	0.0
D303	2	79.0	0.0	0.0	0.0
D307	2	90.0	0.0	0.0	0.0
D404	1	53.0	0.0	0.0	0.0
D501	3	97.0	0.0	0.0	0.0
D505	2	80.0	0.0	0.0	0.0
D604	2	91.0	0.0	0.0	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)
D102	2	82.0	0.0	0.0	0.0
D203	2	79.0	0.0	0.0	0.0
D207	2	93.0	0.0	0.0	0.0
D304	1	53.0	0.0	0.0	0.0
D401	3	101.0	0.0	0.0	0.0
D405	2	80.0	0.0	0.0	0.0
D502	1	58.0	0.0	0.0	0.0
D601	3	97.0	0.0	0.0	0.0
D605	2	80.0	0.0	0.0	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)
D103	2	91.0	0.0	0.0	0.0
D204	1	53.0	0.0	0.0	0.0
D301	3	101.0	0.0	0.0	0.0
D305	2	80.0	0.0	0.0	0.0
D402	2	85.0	0.0	0.0	0.0
D406	2	80.0	0.0	0.0	0.0
D503	1	54.0	0.0	0.0	0.0
D602	1	58.0	0.0	0.0	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)
D201	3	101.0	0.0	0.0	0.0
D205	2	74.0	0.0	0.0	0.0
D302	2	85.0	0.0	0.0	0.0
D306	2	80.0	0.0	0.0	0.0
D403	2	79.0	0.0	0.0	0.0
D407	2	90.0	0.0	0.0	0.0
D504	2	91.0	0.0	0.0	0.0
D603	1	54.0	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 - Building A

Common area	Floor area (m ²)	Common area	Floor area (m ²)	Common area	Floor area (m ²)
Car park area (A)(LB)	1175.0	Car park area (A)(LG)	338.0	Lift car (No.1)	-
Garbage room (A)(LB)	21.0	Service Area (A)(LB)	17.0	Plant Area (A)(L8)	23.0
Storage area (A)(LG)	80.0	Ground floor lobby type (A)(LG)	27.0	Hallway/lobby type (A)(L1)	27.0
Hallway/lobby type (A)(L2)	16.0	Hallway/lobby type (A)(L3)	16.0	Hallway/lobby type (A)(L4)	6.0
Hallway/lobby type (A)(L5)	6.0	Hallway/lobby type (A)(L6)	6.0	Hallway/lobby type (A)(L7)	6.0

Common areas of unit building - Building B

Common area	Floor area (m ²)	Common area	Floor area (m ²)	Common area	Floor area (m ²)
Car park area (B)(LB)	1175.0	Lift car (No.2)	-	Garbage room (B)(LB)	16.0
Service Area (B)(LB)	17.0	Plant Area (B)(L6)	23.0	Storage area (B)(LG)	19.0
Ground floor lobby type (B)(LG)	45.0	Hallway/lobby type (B)(L1)	20.0	Hallway/lobby type (B)(L2)	20.0
Hallway/lobby type (B)(L3)	20.0	Hallway/lobby type (B)(L4)	13.0	Hallway/lobby type (B)(L5)	13.0

Common areas of unit building - Building C

Common area	Floor area (m ²)	Common area	Floor area (m ²)	Common area	Floor area (m ²)
Car park area (C)(LB)	1175.0	Lift car (No.3)	-	Garbage room (C)(LB)	18.0
Service Area (C)(LB)	17.0	Service Area (C)(LG)	54.0	Plant Area (C)(L6)	23.0
Ground floor lobby type (C)(LG)	58.0	Hallway/lobby type (C)(L1)	23.0	Hallway/lobby type (C)(L2)	23.0
Hallway/lobby type (C)(L3)	23.0	Hallway/lobby type (C)(L4)	13.0	Hallway/lobby type (C)(L5)	13.0

Common areas of unit building - Building D

Common area	Floor area (m²)
Car park area (D)(LB)	1174.0
Garbage room (D)(LB)	17.0
Ground floor lobby type (D)(LG)	33.0
Hallway/lobby type (D)(L3)	28.0

Common area	Floor area (m²)
Car park area (D)(LG)	338.0
Service Area (D)(LB)	17.0
Hallway/lobby type (D)(L1)	36.0
Hallway/lobby type (D)(L4)	15.0

Common area	Floor area (m²)
Lift car (No.4)	-
Plant Area (D)(L6)	23.0
Hallway/lobby type (D)(L2)	28.0
Hallway/lobby type (D)(L5)	15.0

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building A

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for Residential flat buildings - Building B

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

3. Commitments for Residential flat buildings - Building C

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

4. Commitments for Residential flat buildings - Building D

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

5. Commitments for multi-dwelling houses

6. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Building A

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:			
(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 (> 4.5 but <= 6 L/min)	3 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
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	interlocked to light	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
A203, A303, A403	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	no
A501, A601, A701, A801	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	2	no
A502, A602, A702, A802	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	yes
A201, A202, A204, A302, A304, A402, A404	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	no
A205, A301, A305, A401, A405, A503, A603, A703, A803	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	yes

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	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	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 ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
A201	31.0	22.0
A202	26.0	20.0
A203	28.0	29.0
A204	25.0	23.0
A205	56.0	23.0
A301	20.0	24.0
A302	18.0	20.0
A303	27.0	30.0
A304	26.0	23.0
A305	49.0	23.0
A401	26.0	21.0
A402	22.0	18.0
A403	31.0	24.0
A404	32.0	18.0
A405	57.0	19.0
A501	42.0	32.0
A503	67.0	27.0
A601	43.0	31.0
A603	68.0	27.0
A701	44.0	31.0
A702	31.0	23.0
A703	69.0	27.0
A801	56.0	22.0
A802	35.0	20.0
A803	70.0	24.0
All other dwellings	30.0	22.0

(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	no common facility	no common facility	3 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
Car park area (A)(LB)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Car park area (A)(LG)	ventilation exhaust only	carbon monoxide monitor + VSD fan	fluorescent	daylight sensor and motion sensor	No
Lift car (No.1)	-	-	fluorescent	connected to lift call button	No
Garbage room (A)(LB)	ventilation exhaust only	-	fluorescent	motion sensors	No
Service Area (A)(LB)	ventilation exhaust only	thermostatically controlled	fluorescent	manual on / manual off	No
Plant Area (A)(L8)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Storage area (A)(LG)	ventilation exhaust only	time clock or BMS controlled	fluorescent	motion sensors	No
Ground floor lobby type (A)(LG)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L1)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L2)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L3)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L4)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L5)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L6)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (A)(L7)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired storage (manifolded)	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 10

2. Commitments for Residential flat buildings - Building B

(a) Dwellings

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

	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 (> 4.5 but <= 6 L/min)	3 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
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 2	individual fan, ducted to façade or roof	interlocked to light	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
B303, B403	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	no
B103, B203, B204	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1	1	yes	yes	yes	yes	0	no
B207, B306, B406, B503, B603	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	yes
B201, B205, B301, B304, B401, B404, B501, B502, B601, B602	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	yes
B101, B102, B104, B202, B206, B302, B305, B402, B405, B504, B604	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	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 ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
B101	38.0	24.0
B102	17.0	28.0
B103	21.0	19.0
B104	13.0	13.0
B203	15.0	18.0
B204	16.0	18.0
B205	24.0	30.0
B206	29.0	25.0
B303	15.0	14.0
B304	25.0	30.0
B305	30.0	24.0
B401	32.0	24.0
B402	14.0	26.0
B403	18.0	14.0
B404	30.0	25.0
B405	39.0	18.0
B406	51.0	16.0
B501	26.0	20.0
B502	26.0	26.0
B503	44.0	30.0
B504	64.0	24.0
B601	33.0	18.0
B602	28.0	23.0
B603	47.0	28.0
B604	66.0	23.0
B201, B301	33.0	24.0
B202, B302	10.0	30.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
All other dwellings	44.0	19.0

(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	no common facility	no common facility	3 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
Car park area (B)(LB)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Lift car (No.2)	-	-	fluorescent	connected to lift call button	No
Garbage room (B)(LB)	ventilation exhaust only	-	fluorescent	motion sensors	No
Service Area (B)(LB)	ventilation exhaust only	thermostatically controlled	fluorescent	manual on / manual off	No
Plant Area (B)(L6)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Storage area (B)(LG)	ventilation exhaust only	time clock or BMS controlled	fluorescent	motion sensors	No
Ground floor lobby type (B)(LG)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (B)(L1)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (B)(L2)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (B)(L3)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (B)(L4)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (B)(L5)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No

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

3. Commitments for Residential flat buildings - Building C

(a) Dwellings

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

	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 (> 4.5 but <= 6 L/min)	3 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
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 3	individual fan, ducted to façade or roof	interlocked to light	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
C101	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	yes
C501, C601	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	no
C102, C106, C208, C308, C408, C503, C603	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	no
C103, C202, C204, C205, C302, C304, C305, C402, C404, C405	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1	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
C104, C105, C201, C203, C206, C207, C301, C303, C306, C307, C401, C403, C406, C407, C502, C504, C602, C604	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	yes

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	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	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 ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
C101	23.0	32.0
C102	13.0	13.0
C103	16.0	13.0
C104	21.0	27.0
C105	42.0	25.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
C106	61.0	15.0
C201	32.0	19.0
C202	6.0	23.0
C203	15.0	32.0
C205	10.0	13.0
C206	16.0	25.0
C207	35.0	26.0
C208	52.0	17.0
C301	23.0	20.0
C302	8.0	24.0
C303	16.0	32.0
C305	11.0	13.0
C306	17.0	25.0
C307	36.0	26.0
C308	53.0	17.0
C401	33.0	17.0
C402	14.0	20.0
C403	19.0	27.0
C404	14.0	11.0
C405	14.0	13.0
C406	22.0	20.0
C407	45.0	20.0
C408	58.0	15.0
C501	35.0	15.0
C502	23.0	26.0
C503	19.0	19.0
C504	41.0	29.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
C601	38.0	13.0
C602	26.0	23.0
C603	16.0	17.0
C604	42.0	26.0
All other dwellings	10.0	12.0

(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	no common facility	no common facility	3 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
Car park area (C)(LB)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Lift car (No.3)	-	-	fluorescent	connected to lift call button	No
Garbage room (C)(LB)	ventilation exhaust only	-	fluorescent	motion sensors	No
Service Area (C)(LB)	ventilation exhaust only	thermostatically controlled	fluorescent	manual on / manual off	No
Service Area (C)(LG)	ventilation exhaust only	thermostatically controlled	fluorescent	manual on / manual off	No
Plant Area (C)(L6)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Ground floor lobby type (C)(LG)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (C)(L1)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (C)(L2)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (C)(L3)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (C)(L4)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (C)(L5)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 3)	gas-fired storage (manifolded)	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): 8

4. Commitments for Residential flat buildings - Building D

(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 (> 4.5 but <= 6 L/min)	3 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
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
D101	central hot water system 4	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

	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
D102, D103, D201, D202, D203, D204, D205, D206, D207, D301, D302, D303, D304, D305, D306, D307, D401, D402, D403, D404, D405, D406, D407, D501, D502, D503, D504, D505, D601, D602, D603, D604, D605	central hot water system 4	individual fan, ducted to façade or roof	interlocked to light	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
D501, D601	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	yes
D201, D301, D401	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	3	1	yes	yes	yes	yes	0	no
D204, D304, D404, D502, D503, D602, D603	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1	1	yes	yes	yes	yes	0	no
D101, D103, D202, D302, D305, D306, D402, D405, D406, D504, D604	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	yes
D102, D203, D205, D206, D207, D303, D307, D403, D407, D505, D605	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	1-phase airconditioning 2 Star (new rating)	2	1	yes	yes	yes	yes	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	-	-	-	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)
D101	44.0	20.0
D102	8.0	31.0
D103	25.0	20.0
D201	32.0	22.0
D202	13.0	33.0
D204	28.0	16.0
D205	44.0	35.0
D206	57.0	37.0
D207	41.0	13.0
D301	33.0	23.0
D302	14.0	33.0
D304	20.0	17.0
D305	39.0	39.0
D306	55.0	38.0
D307	33.0	16.0
D401	41.0	21.0
D402	20.0	26.0
D403	20.0	15.0
D404	25.0	16.0
D405	44.0	31.0
D406	63.0	29.0
D407	39.0	14.0
D501	29.0	33.0
D502	21.0	16.0
D503	22.0	17.0
D504	50.0	36.0
D505	48.0	15.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D601	40.0	25.0
D602	18.0	14.0
D603	16.0	15.0
D604	62.0	27.0
D605	49.0	14.0
All other dwellings	16.0	17.0

(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	no common facility	no common facility	3 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
Car park area (D)(LB)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Car park area (D)(LG)	ventilation exhaust only	carbon monoxide monitor + VSD fan	fluorescent	daylight sensor and motion sensor	No
Lift car (No.4)	-	-	fluorescent	connected to lift call button	No
Garbage room (D)(LB)	ventilation exhaust only	-	fluorescent	motion sensors	No
Service Area (D)(LB)	ventilation exhaust only	thermostatically controlled	fluorescent	manual on / manual off	No
Plant Area (D)(L6)	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Ground floor lobby type (D)(LG)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (D)(L1)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (D)(L2)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (D)(L3)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (D)(L4)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No
Hallway/lobby type (D)(L5)	ventilation (supply + exhaust)	time clock or BMS controlled	fluorescent	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 4)	gas-fired storage (manifolded)	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 8

7. 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	no common facility	no common facility	3 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.	✓	✓	✓

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).