

Thermal Comfort & BASIX Assessment

BUILDING
SUSTAINABILITY
CONSULTANTS



■ FRIENDLY ■ INFORMATIVE ■ EFFICIENT ■ KNOWLEDGEABLE

Impact Group
Proposed Residential Development
Gracewood Village Stage 3

To be built at:
2-8 Free Settlers Drive,
Kellyville, NSW 2155

Issue	File Ref	Description	Author	Date
A	17-0809	Thermal Comfort and BASIX Assessment	HE	04/12/17
B	17-0809	Update Thermal Comfort and BASIX Assessment	HE	15/12/17

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Impact Group. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our client's instructions and preferred building inclusions.



Prepared for Baptist Care
Care of Impact Group
105 Reservoir Street, Surry Hills NSW 2010

Contact Sam Sirdah
Phone: 0416815612 Email: sams@impactgroup.com.au

Introduction Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 2 – 8 Free Settlers Drive, Kellyville, NSW 2155.
Heating and cooling loads for the development have been determined using BERS Pro Plus 4.3 thermal comfort simulation software. The report is based on the architectural drawings provided by DKO Architects Pty Ltd. For further details, refer to the individual BASIX certificate(s) and Efficient Living's inclusions summary respectively.

Analysis The BASIX assessment is divided into three sections, each independently measuring the efficiency of the development. These are Water, Thermal Comfort and Energy.
BASIX requires a minimum target of 40% for the water section, a pass or fail is required for the thermal comfort section and a minimum required target of 35% for the energy section.

Water The proposed development has achieved the BASIX Water target of 40%.
The water usage of the development is calculated based on the number and efficiency of permanent fixtures and appliances such as taps, showerheads and toilets, the dish washer and clothes washing machine.
The size of the rain tank and number of connections can have a significant impact on your water score as does the area of gardens and lawns and whether or not low water plant species are incorporated.

Thermal comfort Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics is measured using BERS Pro Plus V4.2 thermal comfort simulation software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in MJ (megajoules) per square meter of floor area.
Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with, than the individual unit caps.

Energy The proposed development has achieved the energy target of 35% to pass this section.

The energy usage of the development is calculated based on the efficiency of fixed appliances that will be used. This includes the air conditioning system, hot water system, lighting, exhaust fans, cook top, oven, and clothes drying facilities.

Inclusions summary The inclusions as outlined in the table below have been incorporated in each unit to allow them to reach their environmental sustainability targets.

Thermal comfort Average heating loads are 13% below allowable BASIX targets

Average cooling loads are 18% below allowable BASIX targets

Glazing Doors/windows Aluminium framed single glazing:
U-Value: 6.70 (equal to or lower than)
SHGC: 0.70 ($\pm 10\%$)

Aluminium framed clear performance glazing as per assessor certificate:
U-Value: 4.30 (equal to or lower than)
SHGC: 0.53 ($\pm 10\%$)

Given values are AFRC, total window system values (glass and frame)

Roof Metal roof with a foil backed blanket (Minimum R1.2up and R1.2down)

Default colour modelled

Ceiling Plasterboard ceiling with a minimum R2.5 insulation (insulation only value), where roof is over

Plasterboard ceiling, no insulation where neighbouring units are above

Note: All ceiling penetrations have been modelled in accordance with NatHERS protocols, all downlights are assumed sealed LED down lights.

External wall Brick veneer with a minimum R2.0 insulation (insulation only value)

Lightweight metal cladding with a minimum R2.0 insulation (insulation only value)

Lightweight cladding with a minimum R2.0 insulation (insulation only value)

Default colour modelled

Inter tenancy walls Plasterboard on studs with an R1.7 insulation

Minimum 150mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs. No insulation required

Walls with-in dwellings Plasterboard on studs – no insulation

Floors Concrete, no insulation where garage below
Concrete, with a minimum R1.8 insulation (insulation only value) required to units **2.15 & 3.15** where open sub-floor is below
Concrete between levels no insulation required

Floor coverings Carpet to bedrooms, tiles to wet areas and timber elsewhere

BASIX water inclusions Score 40/40

Fixtures within units Showerheads: Mid flow (>6L but <=7.5 L/min)
Toilets: 4.0 star
Kitchen taps: 5.0 star
Bathroom vanity taps: 5.0 star

Appliances within units Dishwashers: 3.0 star

Central rainwater storage 2,000L collecting from 50m² roof area
Connect to irrigation of landscaping

Fire sprinkler test water No restrictions

BASIX energy inclusions Score 35/35

Hot water system Individual gas instantaneous 6.0 stars

Lift motors All lifts to have gearless traction with VVVF motor

Appliances & other efficiency measures within units Gas cooktop & electric oven
Dishwashers: 4.0 star
Clothes dryers: 2.0 star
Well ventilated fridge space
Indoor clothes drying lines

Heating & cooling within units All units to have individual, single phase, reverse cycle air conditioning to living areas and at least 1 bedroom.



	A minimum efficiency of 2.5 stars is required for cooling; and A minimum efficiency of 3.0 stars is required for heating Day/Night zoning is also required
Artificial lighting within units	At least 80% of all light fittings with-in each room are to have dedicated LED globes
Ventilation within units	Bathroom – Individual fan, ducted to roof or façade – manual on / manual off switch Laundry – Individual fan, ducted to roof or façade – manual on / manual off switch Kitchen range hood – Individual fan, ducted to roof or façade – manual on / manual off switch
Ventilation to common areas	Car park area – supply & exhaust air with a carbon monoxide monitor & VSD fan Garbage rooms – Exhaust air, running continuously Plant/storage – Supply only, interlocked to light Garbage chute and service rooms – No mechanical ventilation Ground floor lobbies and hallways – Naturally ventilated
Artificial lighting to common areas	Car park area – Fluorescent lights with zoned switching and motion sensors Lifts – LED lights connected to lift call button Garbage rooms – Fluorescent lights with motion sensor Plant/ storage basement – Fluorescent lights with manual on / manual off switch Garbage chute and service rooms – Light Emitting Diodes (LEDs) with motion sensors Ground floor lobby – Light Emitting Diodes (LEDs) with no restriction Hallways – Light Emitting Diodes (LEDs) with zoned switching and motion sensors
Documentation	This report is based upon the following plans prepared by DKO Architects Pty Ltd DA211 , DA212 , DA213 , DA214 , DA221 , DA216, DA300 , DA301 , DA302 , DA303 & DA304
Report Contact	Haylea Edwards Phone: (02) 9970 6181 Email: haylea@efficientliving.com.au



Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0002295470						Accreditation # VIC/BDAV/12/1473	
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
Cluster 2							
2.01	3	116	0	59	53	5	None
2.02	2	95	0	59	62	4.7	Performance glazing throughout
2.03	2	93	0	57	46	5.4	Performance glazing to living area
2.04	2	95	0	62	37	5.5	Performance glazing throughout
2.05	2	99	0	58	48	5.3	None
2.11	3	116	0	50	43	5.8	None
2.12	2	95	0	52	59	5.1	Performance glazing to living area
2.13	2	102	0	56	51	5.2	None
2.14	2	95	0	31	63	5.8	Performance glazing to living area
2.15	2	99	0	63	58	5.1	None
2.16	2	98	0	62	27	5.9	Performance glazing throughout R1.8 open sub floor insulation
2.21	3	116	0	51	43	5.7	None
2.22	2	95	0	53	58	5.1	Performance glazing to living area
2.23	2	102	0	57	50	5.2	None
2.24	2	95	0	32	60	5.8	Performance glazing to living area
2.25	2	99	0	60	62	4.7	None
2.26	2	98	0	58	39	5.6	None
2.31	3	116	0	50	43	5.8	None
2.32	2	95	0	53	57	5.1	Performance glazing to living area
2.33	2	102	0	57	50	5.2	None
2.34	2	95	0	32	61	5.8	Performance glazing to living area
2.35	2	99	0	54	63	4.9	None
2.36	2	98	0	49	41	5.9	None
2.41	3	116	0	49	50	5.5	Performance glazing to living area
2.42	2	95	0	62	63	4.6	Performance glazing throughout
2.43	2	102	0	48	62	5.1	Performance glazing throughout
2.44	2	95	0	46	63	5.2	Performance glazing throughout
2.45	2	99	0	40	61	5.4	Performance glazing throughout
2.46	2	98	0	53	49	5.4	None
Cluster 3							
3.01	3	114	0	57	40	5.6	Performance glazing to living area
3.02	3	115	0	46	34	6.4	Performance glazing to living area
3.03	2	89	0	59	28	6	Performance glazing to living area
3.04	2	95	0	39	59	5.6	Performance glazing throughout

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0002295470							Accreditation # VIC/BDAV/12/1473
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
3.05	2	99	0	53	52	5.3	None
3.11	3	114	0	48	35	6.2	Performance glazing to living area
3.12	3	115	0	51	38	5.9	None
3.13	2	88	0	49	30	6.4	None
3.14	2	95	0	36	63	5.4	Performance glazing to living, dining & kitchen area
3.15	2	99	0	47	55	5.4	None
3.16	2	87	0	62	21	6.3	Performance glazing throughout and R1.8 floor insulation
3.21	3	114	0	45	37	6.3	Performance glazing to living, dining & kitchen area
3.22	3	115	0	51	41	5.8	None
3.23	2	88	0	48	34	6.3	None
3.24	2	95	0	36	63	5.5	Performance glazing to living, dining & kitchen area
3.25	2	99	0	47	56	5.4	None
3.26	2	87	0	47	28	6.6	None
3.31	3	114	0	42	34	6.6	Performance glazing to living, dining & kitchen area
3.32	3	115	0	50	44	5.8	None
3.33	2	88	0	49	39	5.9	None
3.34	2	95	0	36	62	5.5	Performance glazing to living, dining & kitchen area
3.35	2	99	0	46	59	5.3	None
3.36	2	87	0	39	29	6.9	None
3.41	3	114	0	47	49	5.7	Performance glazing to living, dining & kitchen area
3.42	3	115	0	41	46	6.1	Performance glazing to living, dining & kitchen area
3.43	2	88	0	49	57	5.3	Performance glazing to living, dining & kitchen area
3.44	2	95	0	46	61	5.2	Performance glazing to living, dining & kitchen area
3.45	2	99	0	37	59	5.7	Performance glazing to living, dining & kitchen area
3.46	2	87	0	44	49	5.8	None
Cluster 4							
4.01	3	125	0	51	40	5.9	None
4.02	3	115	0	59	36	5.7	Performance glazing to living, dining & kitchen area
4.03	3	107	0	62	22	6.2	None
4.04	3	115	0	40	56	5.7	Performance glazing to balcony sliding door
4.05	3	125	0	36	50	6.1	None
4.06	3	125	0	49	26	6.6	None
4.11	3	125	0	41	38	6.4	None
4.12	3	115	0	55	37	5.8	Performance glazing to balcony sliding door
4.13	3	115	0	59	28	5.9	None
4.14	3	115	0	48	61	5.2	None

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0002295470						Accreditation # VIC/BDAV/12/1473	
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M²/y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
4.15	3	125	0	31	50	6.3	None
4.16	3	125	0	36	29	7	None
4.21	3	125	0	41	38	6.4	None
4.22	3	115	0	55	39	5.8	Performance glazing to balcony sliding door
4.23	3	115	0	60	32	5.8	None
4.24	3	115	0	48	62	5.1	None
4.25	3	125	0	32	49	6.4	None
4.26	3	125	0	37	29	6.9	None
4.31	3	125	0	41	38	6.4	None
4.32	3	115	0	54	41	5.7	Performance glazing to balcony sliding door
4.33	3	115	0	60	32	5.8	None
4.34	3	115	0	40	52	5.4	Performance glazing to balcony sliding door
4.35	3	125	0	32	48	6.4	None
4.36	3	125	0	37	29	7	None
4.41	3	125	0	55	54	5.2	None
4.42	3	115	0	59	55	4.9	Performance glazing to balcony sliding door
4.43	3	115	0	49	36	6.2	Performance glazing throughout
4.44	3	115	0	44	63	5.2	Performance glazing throughout
4.45	3	125	0	50	57	5.2	None
4.46	3	125	0	40	50	5.9	None

Nationwide House Energy Rating Scheme* — Multiple-dwelling summary

Certificate number: **0002295470**

Certificate Date: **15 Dec 2017**

★ Average Star rating: **5.7**



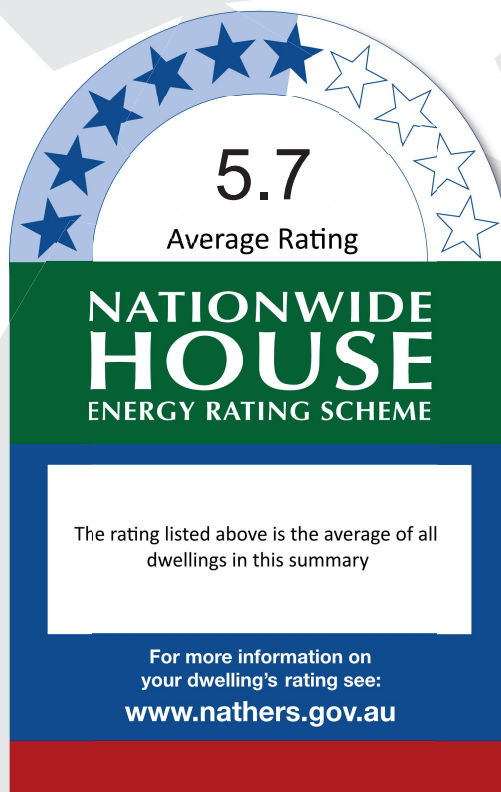
Assessor details

Accreditation number: **VIC/BDAV/12/1473**
Name: **Tracey Cools**
Organisation: **Efficient Living**
Email: **admin@efficientliving.com.au**
Phone: **(02) 9970 6181**
Declaration of interest: **None**
Software: **BERS Pro v4.3.0.2a (3.13)**
AAO: **BDAV**

Dwelling details

Street: **Free Settlers Drive**
Suburb: **Kellyville**
State: **NSW**
Postcode: **2155**

Scan to access this certificate online and confirm this is valid.



Summary of all dwellings

Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0002294395	2.01	59.0	53.0	112.0	5
0002294437	2.02	59.0	62.0	121.0	4.7
0002294460	2.03	57.0	46.0	103.0	5.4
0002294486	2.04	36.0	62.0	99.0	5.5
0002294528	2.05	58.0	48.0	106.0	5.3
0002294569	2.11	50.0	43.0	93.0	5.8
0002294593	2.12	52.0	59.0	111.0	5.1
0002294627	2.13	56.0	51.0	107.0	5.2
0002294650	2.14	31.0	63.0	94.0	5.8
0002294684	2.15	63.0	58.0	121.0	4.8
0002294692	2.16	62.0	27.0	89.0	5.9
0002294726	2.21	51.0	43.0	95.0	5.7
0002294759	2.22	53.0	58.0	111.0	5.1
0002294783	2.23	57.0	50.0	107.0	5.2
0002294817	2.24	32.0	60.0	92.0	5.8

Nationwide House Energy Rating Scheme* - Multiple Dwelling Summary

Certificate number: **0002295470**

Certificate Date:

15 Dec 2017

★ Average Star rating: **5.7**



Summary of all dwellings continued

Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0002294841	2.25	60.0	62.0	122.0	4.7
0002294874	2.26	58.0	39.0	97.0	5.6
0002294908	2.31	50.0	43.0	94.0	5.8
0002294932	2.32	53.0	57.0	110.0	5.1
0002294965	2.33	57.0	50.0	108.0	5.2
0002295004	2.34	32.0	60.0	93.0	5.8
0002295038	2.35	54.0	63.0	117.0	4.9
0002295061	2.36	49.0	41.0	90.0	5.9
0002295095	2.41	48.0	50.0	99.0	5.5
0002295145	2.42	62.0	64.0	125.0	4.6
0002295178	2.43	48.0	62.0	110.0	5.1
0002295186	2.44	46.0	64.0	109.0	5.2
0002295210	2.45	40.0	61.0	101.0	5.4
0002295244	2.46	53.0	49.0	102.0	5.4
0002295277	3.01	57.0	40.0	97.0	5.6
0002294403	3.02	46.0	34.0	80.0	6.4
0002294445	3.03	59.0	28.0	87.0	6
0002294478	3.04	39.0	59.0	98.0	5.6
0002294502	3.05	53.0	51.0	105.0	5.3
0002294536	3.11	48.0	35.0	83.0	6.2
0002294551	3.12	51.0	38.0	89.0	5.9
0002294585	3.13	49.0	30.0	79.0	6.4
0002294619	3.14	36.0	64.0	99.0	5.4
0002294643	3.15	47.0	55.0	102.0	5.4
0002294668	3.16	62.0	21.0	82.0	6.3
0002294718	3.21	45.0	37.0	82.0	6.3
0002294734	3.22	51.0	41.0	92.0	5.8
0002294775	3.23	48.0	34.0	82.0	6.3
0002294809	3.24	36.0	62.0	99.0	5.5
0002294833	3.25	47.0	56.0	103.0	5.4
0002294858	3.26	47.0	28.0	75.0	6.6
0002294882	3.31	42.0	34.0	75.0	6.6
0002294924	3.32	50.0	44.0	93.0	5.8
0002294957	3.33	49.0	39.0	89.0	5.9
0002294981	3.34	36.0	62.0	99.0	5.5
0002295020	3.35	46.0	59.0	105.0	5.3
0002295046	3.36	39.0	29.0	68.0	6.9
0002295087	3.41	46.0	49.0	95.0	5.7
0002295111	3.42	41.0	46.0	86.0	6.1
0002295129	3.43	49.0	57.0	106.0	5.3
0002295152	3.44	46.0	61.0	107.0	5.2
0002295194	3.45	37.0	59.0	96.0	5.7
0002295228	3.46	44.0	49.0	93.0	5.8

Nationwide House Energy Rating Scheme* - Multiple Dwelling Summary

Certificate number: **0002295470**

Certificate Date:

15 Dec 2017

★ Average Star rating: **5.7**



Summary of all dwellings continued

Certificate Details

Certificate number	Dwelling/Unit number	Heating load	Cooling load	Total load	Star Rating
0002295251	4.01	51.0	40.0	91.0	5.9
0002295269	4.02	59.0	36.0	95.0	5.7
0002294411	4.03	62.0	22.0	84.0	6.2
0002294429	4.04	40.0	56.0	95.0	5.7
0002294452	4.05	36.0	50.0	86.0	6.1
0002294494	4.06	49.0	26.0	75.0	6.6
0002294510	4.11	41.0	38.0	79.0	6.4
0002294544	4.12	55.0	37.0	92.0	5.8
0002294577	4.13	59.0	28.0	87.0	5.9
0002294601	4.14	48.0	61.0	109.0	5.2
0002294635	4.15	31.0	50.0	81.0	6.3
0002294676	4.16	36.0	29.0	66.0	7
0002294700	4.21	41.0	38.0	79.0	6.4
0002294742	4.22	55.0	39.0	94.0	5.8
0002294767	4.23	60.0	32.0	92.0	5.8
0002294791	4.24	48.0	62.0	110.0	5.1
0002294825	4.25	32.0	49.0	81.0	6.4
0002294866	4.26	37.0	29.0	66.0	6.9
0002294890	4.31	41.0	38.0	79.0	6.4
0002294916	4.32	54.0	41.0	95.0	5.7
0002294940	4.33	60.0	32.0	93.0	5.8
0002294973	4.34	40.0	61.0	101.0	5.4
0002295012	4.35	32.0	48.0	80.0	6.4
0002295053	4.36	37.0	29.0	66.0	7
0002295079	4.41	55.0	54.0	109.0	5.2
0002295103	4.42	55.0	59.0	114.0	4.9
0002295137	4.43	48.0	36.0	84.0	6.2
0002295160	4.44	44.0	63.0	107.0	5.2
0002295202	4.45	50.0	57.0	107.0	5.2
0002295236	4.46	40.0	50.0	90.0	5.9

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 884139M

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

Secretary

Date of issue: Friday, 15 December 2017

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



Project summary		
Project name	Gracewood Village Stage 3	
Street address	2-8 Free Settlers Drive Kellyville 2155	
Local Government Area	Hills Shire Council	
Plan type and plan number	deposited 1163410	
Lot no.	100	
Section no.	-	
No. of residential flat buildings	3	
No. of units in residential flat buildings	88	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 35	Target 35

Certificate Prepared by
Name / Company Name: Efficient Living
ABN (if applicable): 82116346082

Description of project

Project address

Project name	Gracewood Village Stage 3
Street address	2-8 Free Settlers Drive Kellyville 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1163410
Lot no.	100
Section no.	-

Project type

No. of residential flat buildings	3
No. of units in residential flat buildings	88
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	35200
Roof area (m ²)	2865
Non-residential floor area (m ²)	953.0
Residential car spaces	126
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	153.0
Common area garden (m ²)	2629.0
Area of indigenous or low water use species (m ²)	-

Assessor details

Assessor number	BDAV12/1473
Certificate number	0002295470
Climate zone	28

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 35	Target 35

Description of project

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

Residential flat buildings - Cluster 2, 29 dwellings, 5 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)
2.01	3	116.0	0.0	0.0	0.0
2.05	2	99.0	0.0	0.0	0.0
2.14	2	95.0	0.0	0.0	0.0
2.22	2	95.0	0.0	0.0	0.0
2.26	2	98.0	0.0	0.0	0.0
2.34	2	95.0	0.0	0.0	0.0
2.42	2	95.0	0.0	0.0	0.0
2.46	2	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)
2.02	2	95.0	0.0	0.0	0.0
2.11	3	116.0	0.0	0.0	0.0
2.15	2	99.0	0.0	0.0	0.0
2.23	2	102.0	0.0	0.0	0.0
2.31	3	116.0	0.0	0.0	0.0
2.35	2	99.0	0.0	0.0	0.0
2.43	2	102.0	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)
2.03	2	93.0	0.0	0.0	0.0
2.12	2	95.0	0.0	0.0	0.0
2.16	2	98.0	0.0	0.0	0.0
2.24	2	95.0	0.0	0.0	0.0
2.32	2	95.0	0.0	0.0	0.0
2.36	2	98.0	0.0	0.0	0.0
2.44	2	95.0	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)
2.04	2	95.0	0.0	0.0	0.0
2.13	2	102.0	0.0	0.0	0.0
2.21	3	116.0	0.0	0.0	0.0
2.25	2	99.0	0.0	0.0	0.0
2.33	2	102.0	0.0	0.0	0.0
2.41	3	116.0	0.0	0.0	0.0
2.45	2	99.0	0.0	0.0	0.0

Residential flat buildings - Cluster 3, 29 dwellings, 5 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)
3.01	3	114.0	0.0	0.0	0.0
3.05	2	99.0	0.0	0.0	0.0
3.14	2	95.0	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)
3.02	3	115.0	0.0	0.0	0.0
3.11	3	114.0	0.0	0.0	0.0
3.15	2	99.0	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)
3.03	2	89.0	0.0	0.0	0.0
3.12	3	115.0	0.0	0.0	0.0
3.16	2	87.0	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)
3.04	2	95.0	0.0	0.0	0.0
3.13	2	88.0	0.0	0.0	0.0
3.21	3	114.0	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)
3.22	3	115.0	0.0	0.0	0.0
3.26	2	87.0	0.0	0.0	0.0
3.34	2	95.0	0.0	0.0	0.0
3.42	3	115.0	0.0	0.0	0.0
3.46	2	87.0	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)
3.23	2	88.0	0.0	0.0	0.0
3.31	3	114.0	0.0	0.0	0.0
3.35	2	99.0	0.0	0.0	0.0
3.43	2	88.0	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)
3.24	2	95.0	0.0	0.0	0.0
3.32	3	115.0	0.0	0.0	0.0
3.36	2	87.0	0.0	0.0	0.0
3.44	2	95.0	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)
3.25	2	99.0	0.0	0.0	0.0
3.33	2	88.0	0.0	0.0	0.0
3.41	3	114.0	0.0	0.0	0.0
3.45	2	99.0	0.0	0.0	0.0

Residential flat buildings - Cluster 4, 30 dwellings, 5 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)
4.01	3	125.0	0.0	0.0	0.0
4.05	3	125.0	0.0	0.0	0.0
4.13	3	115.0	0.0	0.0	0.0
4.21	3	125.0	0.0	0.0	0.0
4.25	3	125.0	0.0	0.0	0.0
4.33	3	115.0	0.0	0.0	0.0
4.41	3	125.0	0.0	0.0	0.0
4.45	3	125.0	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)
4.02	3	115.0	0.0	0.0	0.0
4.06	3	125.0	0.0	0.0	0.0
4.14	3	115.0	0.0	0.0	0.0
4.22	3	115.0	0.0	0.0	0.0
4.26	3	125.0	0.0	0.0	0.0
4.34	3	115.0	0.0	0.0	0.0
4.42	3	115.0	0.0	0.0	0.0
4.46	3	125.0	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)
4.03	3	107.0	0.0	0.0	0.0
4.11	3	125.0	0.0	0.0	0.0
4.15	3	125.0	0.0	0.0	0.0
4.23	3	115.0	0.0	0.0	0.0
4.31	3	125.0	0.0	0.0	0.0
4.35	3	125.0	0.0	0.0	0.0
4.43	3	115.0	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)
4.04	3	115.0	0.0	0.0	0.0
4.12	3	115.0	0.0	0.0	0.0
4.16	3	125.0	0.0	0.0	0.0
4.24	3	115.0	0.0	0.0	0.0
4.32	3	115.0	0.0	0.0	0.0
4.36	3	425.0	0.0	0.0	0.0
4.44	3	115.0	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 - Cluster 2

Common area	Floor area (m ²)
Lift car (No.1)	-

Common area	Floor area (m ²)
Lift car (No.2)	-

Common areas of unit building - Cluster 3

Common area	Floor area (m ²)
Lift car (No.3)	-

Common area	Floor area (m ²)
Lift car (No.4)	-

Common areas of unit building - Cluster 4

Common area	Floor area (m ²)
Lift car (No.5)	-

Common area	Floor area (m ²)
Lift car (No.6)	-

Common areas of the development (non-building specific)

Common area	Floor area (m ²)
Car park area	3928.5
Vent plant rooms	76.6
Garbage chute and service rooms	186.08

Common area	Floor area (m ²)
Garbage rooms and loading doc	403.44
Electrical services	46.12
Ground floor lobby	305.13

Common area	Floor area (m ²)
Hot water plant	46.68
CW pump room	5.16
Hallway/lobby L1-4	602.52

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Cluster 2

(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 - Cluster 3

(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 - Cluster 4

(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 - Cluster 2

(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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(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	gas instantaneous 6 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	1-phase airconditioning 3 Star (zoned)	1-phase airconditioning 3 Star (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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	4 star	-	2 star	yes	no

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

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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)
2.01	59.0	53.0
2.02	59.0	62.0
2.03	57.0	46.0
2.04	62.0	37.0
2.05	58.0	48.0
2.12	52.0	59.0
2.13	56.0	51.0
2.14	31.0	63.0
2.15	63.0	58.0
2.16	62.0	27.0
2.21	51.0	43.0
2.22	53.0	58.0
2.24	32.0	60.0
2.25	60.0	62.0
2.26	58.0	39.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
2.32	53.0	57.0
2.34	32.0	61.0
2.35	54.0	63.0
2.36	49.0	41.0
2.41	49.0	50.0
2.42	62.0	63.0
2.43	48.0	62.0
2.44	46.0	63.0
2.45	40.0	61.0
2.46	53.0	49.0
2.11, 2.31	50.0	43.0
All other dwellings	57.0	50.0

(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	no common facility	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

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 6
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 6

2. Commitments for Residential flat buildings - Cluster 3

(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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(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	gas instantaneous 6 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

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
3.01, 3.02, 3.11, 3.12, 3.21, 3.22, 3.31, 3.32, 3.41, 3.42	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	1-phase airconditioning 3 Star (zoned)	1-phase airconditioning 3 Star (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
All other dwellings	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	1-phase airconditioning 3 Star (zoned)	1-phase airconditioning 3 Star (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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	4 star	-	2 star	yes	no

(iii) Thermal Comfort

	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.	✓	✓	✓

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
3.01	46.0	34.0
3.02	59.0	28.0
3.05	53.0	52.0
3.11	57.0	40.0
3.12	48.0	35.0
3.13	51.0	38.0
3.14	49.0	30.0
3.16	47.0	55.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
3.21	62.0	21.0
3.22	45.0	37.0
3.23	51.0	41.0
3.24	48.0	34.0
3.26	47.0	56.0
3.31	47.0	28.0
3.32	42.0	34.0
3.33	50.0	44.0
3.34	49.0	39.0
3.35	46.0	59.0
3.36	39.0	29.0
3.41	47.0	49.0
3.42	41.0	46.0
3.43	49.0	57.0
3.44	46.0	61.0
3.45	37.0	59.0
3.46	44.0	49.0
3.03, 3.04	39.0	59.0
All other dwellings	36.0	63.0

(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	no common facility	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.3)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	No

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

3. Commitments for Residential flat buildings - Cluster 4

(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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3 star	-	-	-	-	-	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(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	gas instantaneous 6 star	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
All dwellings	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	ceiling fans + 1-phase airconditioning 2.5 Star (zoned)	1-phase airconditioning 3 Star (zoned)	1-phase airconditioning 3 Star (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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	4 star	-	2 star	yes	no

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

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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)
4.01	51.0	40.0
4.02	59.0	36.0
4.03	62.0	22.0
4.04	40.0	56.0
4.05	36.0	50.0
4.06	49.0	26.0
4.12	55.0	37.0
4.13	59.0	28.0
4.14	48.0	61.0
4.15	31.0	50.0
4.16	36.0	29.0
4.22	55.0	39.0
4.24	48.0	62.0
4.25	32.0	49.0
4.33	54.0	41.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
4.35	40.0	52.0
4.36	32.0	48.0
4.41	55.0	54.0
4.42	59.0	55.0
4.43	49.0	36.0
4.44	44.0	63.0
4.45	50.0	57.0
4.46	40.0	50.0
4.23, 4.34	60.0	32.0
4.26, 4.31	37.0	29.0
All other dwellings	41.0	38.0

(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	no common facility	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

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

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	2000.0	To collect run-off from at least: - 50.0 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 2782.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 1)	-	-	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(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	ventilation exhaust only	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Garbage rooms and loading doc	ventilation exhaust only	-	fluorescent	manual on / manual off	No
Hot water plant	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Vent plant rooms	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Electrical services	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
CW pump room	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Garbage chute and service rooms	no mechanical ventilation	-	light-emitting diode	motion sensors	No
Ground floor lobby	no mechanical ventilation	-	light-emitting diode	none	No
Hallway/lobby L1-4	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	No

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).