

# BASIX™ Certificate

Building Sustainability Index

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## Multi Dwelling

Certificate number: 1792248M\_06

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at [www.planningportal.nsw.gov.au/definitions](http://www.planningportal.nsw.gov.au/definitions)

This certificate is a revision of certificate number 1792248M submitted to the consent authority or certifier on 18 June 2025 with application SSD-75660711.

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

Secretary

Date of issue: Wednesday, 01 April 2026

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



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate 0011872920.

### Project summary

Project name	240491E-Crows Nest OSD Site A_06
Street address	32 HUME STREET CROWS NEST 2065
Local Government Area	NORTH SYDNEY
Plan type and plan number	Deposited Plan 1296669
Lot no.	2
Section no.	-
No. of residential flat buildings	3
Residential flat buildings: no. of dwellings	536
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0

### Project score

Water	✔ 41	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 63	Target 63
Materials	✔ -100	Target n/a

### Certificate Prepared by

Name / Company Name: CREDWELL ENERGY PTY LTD

ABN (if applicable): 65625598352

# Description of project

Project address	
Project name	240491E-Crows Nest OSD Site A_06
Street address	32 HUME STREET CROWS NEST 2065
Local Government Area	NORTH SYDNEY
Plan type and plan number	Deposited Plan 1296669
Lot no.	2
Section no.	-
Project type	
No. of residential flat buildings	3
Residential flat buildings: no. of dwellings	536
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0
Site details	
Site area (m <sup>2</sup> )	3879
Roof area (m <sup>2</sup> )	2962
Non-residential floor area (m <sup>2</sup> )	516
Residential car spaces	0
Non-residential car spaces	0

Common area landscape		
Common area lawn (m <sup>2</sup> )	0	
Common area garden (m <sup>2</sup> )	2236	
Area of indigenous or low water use species (m <sup>2</sup> )	952.2	
Assessor details and thermal loads		
Assessor number	101026	
Certificate number	0011872920	
Climate zone	56	
Project score		
Water	✔ 41	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 63	Target 63
Materials	✔ -100	Target n/a

## Description of project

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

### Residential flat buildings - Tower 01, 258 dwellings, 24 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
10401	1	49	0	0	0
10405	1	40	0	0	0
10409	1	39	0	0	0
10413	1	57	0	0	0
10504	1	40	0	0	0
10508	1	39	0	0	0
10512	1	57	0	0	0
10603	1	51	0	0	0
10607	1	40	0	0	0
10611	2	77	0	0	0
10702	1	40	0	0	0
10706	1	51	0	0	0
10710	1	40	0	0	0
10801	1	49	0	0	0
10805	1	40	0	0	0
10809	1	39	0	0	0
10813	1	57	0	0	0
10904	1	40	0	0	0
10908	1	39	0	0	0
10912	1	57	0	0	0
11003	1	51	0	0	0
10402	1	40	0	0	0
10406	1	51	0	0	0
10410	1	40	0	0	0
10501	1	49	0	0	0
10505	1	40	0	0	0
10509	1	39	0	0	0
10513	1	57	0	0	0
10604	1	40	0	0	0
10608	1	39	0	0	0
10612	1	57	0	0	0
10703	1	51	0	0	0
10707	1	40	0	0	0
10711	2	77	0	0	0
10802	1	40	0	0	0
10806	1	51	0	0	0
10810	1	40	0	0	0
10901	1	49	0	0	0
10905	1	40	0	0	0
10909	1	39	0	0	0
10913	1	57	0	0	0
11004	1	40	0	0	0
10403	1	51	0	0	0
10407	1	40	0	0	0
10411	2	77	0	0	0
10502	1	40	0	0	0
10506	1	51	0	0	0
10510	1	40	0	0	0
10601	1	49	0	0	0
10605	1	40	0	0	0
10609	1	39	0	0	0
10613	1	57	0	0	0
10704	1	40	0	0	0
10708	1	39	0	0	0
10712	1	57	0	0	0
10803	1	51	0	0	0
10807	1	40	0	0	0
10811	2	77	0	0	0
10902	1	40	0	0	0
10906	1	51	0	0	0
10910	1	40	0	0	0
11001	1	49	0	0	0
11005	1	40	0	0	0
10404	1	40	0	0	0
10408	1	39	0	0	0
10412	1	57	0	0	0
10503	1	51	0	0	0
10507	1	40	0	0	0
10511	2	77	0	0	0
10602	1	40	0	0	0
10606	1	51	0	0	0
10610	1	40	0	0	0
10701	1	49	0	0	0
10705	1	40	0	0	0
10709	1	39	0	0	0
10713	1	57	0	0	0
10804	1	40	0	0	0
10808	1	39	0	0	0
10812	1	57	0	0	0
10903	1	51	0	0	0
10907	1	40	0	0	0
10911	2	77	0	0	0
11002	1	40	0	0	0
11006	1	51	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11007	1	40	0	0	0
11011	2	77	0	0	0
11102	1	40	0	0	0
11106	1	51	0	0	0
11110	1	40	0	0	0
11201	1	49	0	0	0
11205	1	40	0	0	0
11209	1	39	0	0	0
11213	1	57	0	0	0
11304	1	40	0	0	0
11308	1	39	0	0	0
11312	1	57	0	0	0
11403	1	51	0	0	0
11407	1	40	0	0	0
11411	2	77	0	0	0
11502	1	40	0	0	0
11506	1	51	0	0	0
11510	1	40	0	0	0
11601	1	49	0	0	0
11605	1	40	0	0	0
11609	1	39	0	0	0
11613	1	57	0	0	0
11704	1	40	0	0	0
11708	1	39	0	0	0
11712	1	57	0	0	0
11803	1	51	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11008	1	39	0	0	0
11012	1	57	0	0	0
11103	1	51	0	0	0
11107	1	40	0	0	0
11111	2	77	0	0	0
11202	1	40	0	0	0
11206	1	51	0	0	0
11210	1	40	0	0	0
11301	1	49	0	0	0
11305	1	40	0	0	0
11309	1	39	0	0	0
11313	1	57	0	0	0
11404	1	40	0	0	0
11408	1	39	0	0	0
11412	1	57	0	0	0
11503	1	51	0	0	0
11507	1	40	0	0	0
11511	2	77	0	0	0
11602	1	40	0	0	0
11606	1	51	0	0	0
11610	1	40	0	0	0
11701	1	49	0	0	0
11705	1	40	0	0	0
11709	1	39	0	0	0
11713	1	57	0	0	0
11804	1	40	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11009	1	39	0	0	0
11013	1	57	0	0	0
11104	1	40	0	0	0
11108	1	39	0	0	0
11112	1	57	0	0	0
11203	1	51	0	0	0
11207	1	40	0	0	0
11211	2	77	0	0	0
11302	1	40	0	0	0
11306	1	51	0	0	0
11310	1	40	0	0	0
11401	1	49	0	0	0
11405	1	40	0	0	0
11409	1	39	0	0	0
11413	1	57	0	0	0
11504	1	40	0	0	0
11508	1	39	0	0	0
11512	1	57	0	0	0
11603	1	51	0	0	0
11607	1	40	0	0	0
11611	2	77	0	0	0
11702	1	40	0	0	0
11706	1	51	0	0	0
11710	1	40	0	0	0
11801	1	49	0	0	0
11805	1	40	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11010	1	40	0	0	0
11101	1	49	0	0	0
11105	1	40	0	0	0
11109	1	39	0	0	0
11113	1	57	0	0	0
11204	1	40	0	0	0
11208	1	39	0	0	0
11212	1	57	0	0	0
11303	1	51	0	0	0
11307	1	40	0	0	0
11311	2	77	0	0	0
11402	1	40	0	0	0
11406	1	51	0	0	0
11410	1	40	0	0	0
11501	1	49	0	0	0
11505	1	40	0	0	0
11509	1	39	0	0	0
11513	1	57	0	0	0
11604	1	40	0	0	0
11608	1	39	0	0	0
11612	1	57	0	0	0
11703	1	51	0	0	0
11707	1	40	0	0	0
11711	2	77	0	0	0
11802	1	40	0	0	0
11806	1	51	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11807	1	40	0	0	0
11811	2	77	0	0	0
11902	1	40	0	0	0
11906	1	51	0	0	0
11910	1	40	0	0	0
12001	1	49	0	0	0
12005	1	40	0	0	0
12009	1	39	0	0	0
12013	1	56	0	0	0
12104	1	40	0	0	0
12108	1	39	0	0	0
12112	1	57	0	0	0
12203	1	40	0	0	0
12207	1	42	0	0	0
12211	3	78	0	0	0
12303	1	40	0	0	0
12307	1	42	0	0	0
12311	2	78	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11808	1	39	0	0	0
11812	1	57	0	0	0
11903	1	51	0	0	0
11907	1	40	0	0	0
11911	2	77	0	0	0
12002	1	40	0	0	0
12006	1	51	0	0	0
12010	1	40	0	0	0
12101	1	49	0	0	0
12105	1	40	0	0	0
12109	1	39	0	0	0
12113	1	57	0	0	0
12204	1	40	0	0	0
12208	1	39	0	0	0
12212	3	124	0	0	0
12304	1	40	0	0	0
12308	1	39	0	0	0
12312	3	124	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11809	1	39	0	0	0
11813	1	57	0	0	0
11904	1	40	0	0	0
11908	1	39	0	0	0
11912	1	57	0	0	0
12003	1	51	0	0	0
12007	1	40	0	0	0
12011	2	77	0	0	0
12102	1	40	0	0	0
12106	1	51	0	0	0
12110	1	40	0	0	0
12201	1	50	0	0	0
12205	1	40	0	0	0
12209	1	40	0	0	0
12301	1	50	0	0	0
12305	1	40	0	0	0
12309	1	40	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
11810	1	40	0	0	0
11901	1	49	0	0	0
11905	1	40	0	0	0
11909	1	39	0	0	0
11913	1	57	0	0	0
12004	1	40	0	0	0
12008	1	39	0	0	0
12012	1	57	0	0	0
12103	1	51	0	0	0
12107	1	40	0	0	0
12111	2	77	0	0	0
12202	1	54	0	0	0
12206	1	53	0	0	0
12210	2	40	0	0	0
12302	1	54	0	0	0
12306	1	53	0	0	0
12310	1	40	0	0	0

## Residential flat buildings - Tower 02, 238 dwellings, 24 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
20401	1	53	0	0	0
20405	1	54	0	0	0
20409	1	53	0	0	0
20501	1	54	0	0	0
20505	1	54	0	0	0
20509	1	54	0	0	0
20601	1	54	0	0	0
20605	1	54	0	0	0
20609	1	54	0	0	0
20701	1	54	0	0	0
20705	1	54	0	0	0
20709	1	54	0	0	0
20801	1	54	0	0	0
20805	1	54	0	0	0
20809	1	54	0	0	0
20901	1	54	0	0	0
20905	1	54	0	0	0
20909	1	54	0	0	0
21001	1	54	0	0	0
21005	1	54	0	0	0
21009	1	54	0	0	0
21101	1	54	0	0	0
21105	1	54	0	0	0
21109	1	54	0	0	0
21201	1	54	0	0	0
20402	1	53	0	0	0
20406	1	50	0	0	0
20410	1	53	0	0	0
20502	1	54	0	0	0
20506	1	50	0	0	0
20510	1	53	0	0	0
20602	1	54	0	0	0
20606	1	50	0	0	0
20610	1	53	0	0	0
20702	1	54	0	0	0
20706	1	50	0	0	0
20710	1	53	0	0	0
20802	1	54	0	0	0
20806	1	50	0	0	0
20810	1	53	0	0	0
20902	1	54	0	0	0
20906	1	50	0	0	0
20910	1	53	0	0	0
21002	1	54	0	0	0
21006	1	50	0	0	0
21010	1	53	0	0	0
21102	1	54	0	0	0
21106	1	50	0	0	0
21110	1	53	0	0	0
21202	1	54	0	0	0
20403	1	54	0	0	0
20407	1	42	0	0	0
20411	1	53	0	0	0
20503	1	54	0	0	0
20507	1	42	0	0	0
20511	1	53	0	0	0
20603	1	54	0	0	0
20607	1	42	0	0	0
20611	1	53	0	0	0
20703	1	54	0	0	0
20707	1	42	0	0	0
20711	1	53	0	0	0
20803	1	54	0	0	0
20807	1	42	0	0	0
20811	1	53	0	0	0
20903	1	54	0	0	0
20907	1	42	0	0	0
20911	1	53	0	0	0
21003	1	54	0	0	0
21007	1	42	0	0	0
21011	1	53	0	0	0
21103	1	54	0	0	0
21107	1	42	0	0	0
21111	1	53	0	0	0
21203	1	54	0	0	0
20404	2	72	0	0	0
20408	1	52	0	0	0
20412	1	53	0	0	0
20504	2	72	0	0	0
20508	1	52	0	0	0
20512	1	53	0	0	0
20604	2	72	0	0	0
20608	1	52	0	0	0
20612	1	53	0	0	0
20704	2	72	0	0	0
20708	1	52	0	0	0
20712	1	53	0	0	0
20804	2	72	0	0	0
20808	1	52	0	0	0
20812	1	53	0	0	0
20904	2	72	0	0	0
20908	1	52	0	0	0
20912	1	53	0	0	0
21004	2	74	0	0	0
21008	1	52	0	0	0
21012	1	53	0	0	0
21104	2	72	0	0	0
21108	1	52	0	0	0
21112	1	53	0	0	0
21204	2	72	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
21205	1	54	0	0	0
21209	1	54	0	0	0
21301	1	54	0	0	0
21305	1	54	0	0	0
21309	1	54	0	0	0
21401	1	54	0	0	0
21405	1	54	0	0	0
21409	1	54	0	0	0
21501	1	54	0	0	0
21505	1	54	0	0	0
21509	1	54	0	0	0
21601	1	54	0	0	0
21605	1	54	0	0	0
21609	1	54	0	0	0
21701	1	54	0	0	0
21705	1	54	0	0	0
21709	1	54	0	0	0
21801	1	54	0	0	0
21805	1	54	0	0	0
21809	1	54	0	0	0
21901	1	54	0	0	0
21905	1	54	0	0	0
21909	1	54	0	0	0
22001	1	54	0	0	0
22005	1	54	0	0	0
22009	1	54	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
21206	1	50	0	0	0
21210	1	53	0	0	0
21302	1	54	0	0	0
21306	1	50	0	0	0
21310	1	53	0	0	0
21402	1	54	0	0	0
21406	1	50	0	0	0
21410	1	53	0	0	0
21502	1	54	0	0	0
21506	1	50	0	0	0
21510	1	53	0	0	0
21602	1	54	0	0	0
21606	1	50	0	0	0
21610	1	53	0	0	0
21702	1	54	0	0	0
21706	1	50	0	0	0
21710	1	53	0	0	0
21802	1	54	0	0	0
21806	1	50	0	0	0
21810	1	54	0	0	0
21902	1	54	0	0	0
21906	1	50	0	0	0
21910	1	52	0	0	0
22002	1	54	0	0	0
22006	1	50	0	0	0
22010	1	54	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
21207	1	42	0	0	0
21211	1	53	0	0	0
21303	1	54	0	0	0
21307	1	42	0	0	0
21311	1	53	0	0	0
21403	1	54	0	0	0
21407	1	42	0	0	0
21411	1	53	0	0	0
21503	1	54	0	0	0
21507	1	42	0	0	0
21511	1	53	0	0	0
21603	1	54	0	0	0
21607	1	42	0	0	0
21611	1	53	0	0	0
21703	1	54	0	0	0
21707	1	42	0	0	0
21711	1	53	0	0	0
21803	1	54	0	0	0
21807	1	42	0	0	0
21811	1	54	0	0	0
21903	1	54	0	0	0
21907	1	42	0	0	0
21911	1	54	0	0	0
22003	1	54	0	0	0
22007	1	42	0	0	0
22011	1	54	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
21208	1	52	0	0	0
21212	1	53	0	0	0
21304	2	72	0	0	0
21308	1	52	0	0	0
21312	1	53	0	0	0
21404	2	72	0	0	0
21408	1	52	0	0	0
21412	1	53	0	0	0
21504	2	72	0	0	0
21508	1	52	0	0	0
21512	1	53	0	0	0
21604	2	72	0	0	0
21608	1	52	0	0	0
21612	1	53	0	0	0
21704	2	72	0	0	0
21708	1	52	0	0	0
21712	1	54	0	0	0
21804	2	72	0	0	0
21808	1	52	0	0	0
21812	1	50	0	0	0
21904	2	72	0	0	0
21908	1	52	0	0	0
21912	1	54	0	0	0
22004	2	72	0	0	0
22008	1	52	0	0	0
22012	1	74	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
22101	1	54	0	0	0
22105	1	54	0	0	0
22109	1	54	0	0	0
22201	1	54	0	0	0
22205	1	54	0	0	0
22209	2	74	0	0	0
22302	1	54	0	0	0
22306	1	42	0	0	0
22310	2	74	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
22102	1	54	0	0	0
22106	1	50	0	0	0
22110	1	56	0	0	0
22202	1	54	0	0	0
22206	1	42	0	0	0
22210	2	74	0	0	0
22303	1	54	0	0	0
22307	1	56	0	0	0
22311	3	95	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
22103	1	54	0	0	0
22107	1	42	0	0	0
22111	1	52	0	0	0
22203	1	54	0	0	0
22207	1	56	0	0	0
22211	3	95	0	0	0
22304	1	54	0	0	0
22308	1	52	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
22104	2	72	0	0	0
22108	1	52	0	0	0
22112	1	56	0	0	0
22204	1	54	0	0	0
22208	1	52	0	0	0
22301	1	54	0	0	0
22305	1	54	0	0	0
22309	2	74	0	0	0

### Residential flat buildings - Tower 03, 40 dwellings, 13 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
30301	2	88	0	0	0
30307	2	76	0	0	0
30404	3	133	0	0	0
30503	2	77	0	0	0
30602	3	97	0	0	0
30701	2	88	0	0	0
30707	2	76	0	0	0
30804	3	133	0	0	0
30903	2	77	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
30302	3	97	0	0	0
30401	2	88	0	0	0
30407	2	76	0	0	0
30504	3	133	0	0	0
30603	2	77	0	0	0
30702	3	97	0	0	0
30801	2	88	0	0	0
30807	1	39	0	0	0
30904	3	133	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
30303	2	77	0	0	0
30402	3	97	0	0	0
30501	2	88	0	0	0
30507	1	38	0	0	0
30604	3	133	0	0	0
30703	2	77	0	0	0
30802	3	97	0	0	0
30901	2	88	0	0	0
30907	2	76	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
30304	3	133	0	0	0
30403	2	77	0	0	0
30502	3	97	0	0	0
30601	2	88	0	0	0
30607	2	76	0	0	0
30704	3	133	0	0	0
30803	2	77	0	0	0
30902	3	97	0	0	0
31001	2	88	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
31002	3	97	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
31003	2	77	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
31004	3	133	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
31007	2	76	0	0	0

## Description of project

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

### Common areas of unit building - Tower 01

Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )
Level 24 - T1 - Amenities	588	Hallway/lobby - Tower 01 (L4-25)	1100

### Common areas of unit building - Tower 02

Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )
Level 24 - T2- Amenities	588	Hallway/lobby - Tower 02 (L4-25)	1100

### Common areas of unit building - Tower 03

Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )
Lift bank (No. 1)	-	Lift bank (No. 3)	-	Lift bank (No. 4)	-
Lift bank (No. 5)	-	AFH amenity	287	Hallway/lobby - Tower 3 (L4-10)	600

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

Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )	Common area	Floor area (m <sup>2</sup> )
Gym area	2200	Tower 2 waste room	111	Tower 1 waste room	138
Bulky waste	42	Residents storage	262	Furniture room	29
Fire pump room	120	Plant room	383	Fire control room	12
Bicycle parking	380	Store	72	Sky lobby	556
Mail room	47	Fire stairs	930	AFH Lobby	43

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Tower 01

### (a) Buildings

(i) Materials

### (b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

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

(i) Water

(ii) Energy

## 2. Commitments for Residential flat buildings - Tower 02

### (a) Buildings

(i) Materials

### (b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

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

(i) Water

(ii) Energy

## 3. Commitments for Residential flat buildings - Tower 03

### (a) Buildings

(i) Materials

### (b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

(c) Common areas and central systems/facilities

(i) Water

(ii) Energy

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

(a) Buildings 'Other'

(i) Materials

(b) Common areas and central systems/facilities

(i) Water

(ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Tower 01

#### (a) Buildings

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

#### Floor types

Floor type	Area (m2)	Insulation	Low emissions option
suspended floor above open subfloor, frame: suspended concrete slab	302	-	-
floors above habitable rooms, frame: suspended concrete slab	23500	-	-

#### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	framed (metal clad), frame: light steel frame	8160	-	-

### Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	19430	-
Internal wall type 2	single skin masonry, frame:light steel frame	1350	-
Internal wall type 3	plasterboard, frame:light steel frame	1320	-

### Reinforcement concrete frames/columns

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

### Ceiling and roof types

Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: light steel frame	940	-	-

### Glazing types

### Frame types

Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
-	8160	-	8160	-	-	-	-

**(b) Dwellings**

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: <ul style="list-style-type: none"> <li>(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and</li> <li>(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.</li> </ul>		✔ ✔	✔ ✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

Dwelling no.	Fixtures					Appliances		Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
10401, 10402, 10403, 10404, 10405, 10406,	4 star (> 4.5 but <= 6 L/min)	3 star	4 star	4 star	-	4.5 star	5 star	-	-	-	-	-	-	-

Dwelling no.	Fixtures					Appliances		Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
10407, 10408, 10409, 10410, 10411, 10412, 10413, 10501, 10502, 10503, 10504, 10505, 10506, 10507														
All other dwellings	4 star (> 4.5 but <= 6 L/min)	3 star	4 star	4 star	-	not specified	not specified	-	-	-	-	-	-	-

Dwelling no.	Alternative water source							
	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
10405, 10411, 10412, 10413, 10511, 10512, 10513, 10611, 10612, 10613, 10711, 10712, 10713, 10811, 10812, 10813, 10911, 10912, 10913, 11011, 11012, 11013, 11111, 11112, 11113, 11211,	No alternative water supply	-	-	-	-	-	-	-

Alternative water source								
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
11212, 11213, 11311, 11312, 11313, 11411, 11412, 11413, 11511, 11512, 11513, 12212, 12312								
All other dwellings	Central water tank (No. 1)	See central systems	See central systems	-	yes	yes	-	-

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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".		✓	

Dwelling no.	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
12212, 12312	Central hot water system (No. 1)	individual fan, ducted to façade or roof	manual on / timer off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off
All other dwellings	Central hot water system (No. 1)	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
10411, 10412, 10413, 10511, 10512, 10513, 10611, 10612, 10613, 10711, 10712, 10713, 10811, 10812, 10813, 10911, 10912, 10913, 11011, 11012, 11013, 11111,	-	-	Central heating system (No. 1)	Central heating system (No. 1)	0	-

Dwelling no.	Cooling		Heating		Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
11112, 11113, 11211, 11212, 11213, 11311, 11312, 11313, 11411, 11412, 11413, 11511, 11512, 11513						
All other dwellings	Central cooling system (No. 1)	Central cooling system (No. 1)	Central heating system (No. 1)	Central heating system (No. 1)	0	no

Dwelling no.	Individual pool			Individual spa		Appliances other efficiency measures				
	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	electric cooktop & electric oven	3.5 star	8.0 star	no	no

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

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

<b>Thermal loads</b>			
<b>Dwelling no.</b>	<b>Area adjusted heating load (in MJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in MJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted total load (in MJ/m<sup>2</sup>/yr)</b>
10401	17.5	6.5	24.000
10402	18.8	6.4	25.200
10403	13.1	9.3	22.400
10404	12.9	10.2	23.100
10405	15.2	9.7	24.900
10406	9.5	8.5	18.000
10407	2.9	10.4	13.300
10408	4.5	10.3	14.800
10409	3.9	10.3	14.200
10410	4.8	10.5	15.300
10411	15.9	4.2	20.100
10412	25.3	4.2	29.500
10413	19.3	5.7	25.000
10501	19.1	7.7	26.800
10502	21.6	8.0	29.600

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
10503	12.9	10.9	23.800
10504	13.6	11.7	25.300
10505	13.90	12	25.900
10506	11.7	10.7	22.400
10507	3.3	12.2	15.500
10508	5.7	12.1	17.800
10509	4.8	11.9	16.700
10510	5.3	12.4	17.700
10511	16.1	4.1	20.200
10512	27.2	5.2	32.400
10513	20.9	7.1	28.000
10601	19.3	7.6	26.900
10602	20.5	8.2	28.700
10603	11.8	10.9	22.700
10604	12.3	11.7	24.000
10605	12.5	12	24.500
10606	11.5	10.8	22.300
10607	3.5	12.2	15.700
10608	5.8	11.9	17.700
10609	4.9	11.7	16.600
10610	5.4	12	17.400
10611	17.6	5.1	22.700
10612	27.50	5.1	32.600
10613	21.1	7.1	28.200
10701	19.6	7.7	27.300
10702	19.2	8.3	27.500
10703	10.1	10.8	20.900
10704	10.8	11.7	22.500
10705	10.9	12	22.900
10706	10.9	10.8	21.700
10707	3.60	12.0	15.600

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
10708	5.8	11.6	17.400
10709	5	11.4	16.400
10710	5.6	11.9	17.500
10711	17.9	5.1	23.000
10712	27.8	5.1	32.900
10713	21.4	6.9	28.300
10801	20.1	7.6	27.700
10802	19.6	8.3	27.900
10803	8.9	10.8	19.700
10804	9.1	11.7	20.800
10805	9.1	12.1	21.200
10806	10.2	10.7	20.900
10807	3.8	11.8	15.600
10808	6	11.6	17.600
10809	5.1	11.3	16.400
10810	5.8	11.8	17.600
10811	18.2	5.1	23.300
10812	28.1	5.1	33.200
10813	22.1	7	29.100
10901	20.8	7.9	28.700
10903	9.4	11.3	20.700
10904	9.2	12.8	22.000
10905	9.2	13.2	22.400
10906	10.3	12.4	22.700
10907	4	11.9	15.900
10908	7.5	11	18.500
10909	6.6	10.8	17.400
10910	7.1	11.2	18.300
10911	18.9	5.2	24.100
10912	29	5.3	34.300
11001	20.9	7.9	28.800

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
11002	21.7	9.1	30.800
11003	9.1	11.5	20.600
11004	8.7	13.1	21.800
11005	8.7	13.2	21.900
11006	9.9	12.5	22.400
11007	4.1	11.9	16.000
11008	7.7	10.9	18.600
11009	6.7	10.6	17.300
11010	7.2	11.3	18.500
11011	19	5.2	24.200
11012	29	5.4	34.400
11101	21.2	7.9	29.100
11103	9.2	11.5	20.700
11104	8.9	13.1	22.000
11105	8.9	13.3	22.200
11106	10	12.6	22.600
11108	7.9	10.9	18.800
11109	6.8	10.5	17.300
11110	7.3	11.2	18.500
11111	19.2	5.2	24.400
11112	29.2	5.4	34.600
11113	22.5	7	29.500
11201	21.7	7.7	29.400
11202	21.9	9.3	31.200
11203	9.4	11.4	20.800
11204	9	13	22.000
11205	9.0	13.2	22.200
11206	10.20	12.5	22.700
11208	8	10.7	18.700
11209	6.9	10.3	17.200
11210	7.5	11.1	18.600

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
11211	19.3	5.3	24.600
11212	29.3	5.5	34.800
11213	22.6	7.2	29.800
11302	23.5	10.5	34.000
11303	10.7	12.7	23.400
11304	10.1	14	24.100
11305	10.2	14.4	24.600
11306	10.6	13.4	24.000
11307	4.7	12	16.700
11308	9.2	11.4	20.600
11309	8.1	11.2	19.300
11310	8.7	11.6	20.300
11311	20.3	5.3	25.600
11312	30	5.6	35.600
11313	23.3	7.2	30.500
11401	21.9	8	29.900
11402	23.8	10.2	34.000
11404	10.4	14.1	24.500
11405	10.4	14.2	24.600
11406	10.7	13.6	24.300
11407	4.9	14.5	19.400
11408	9.40	13.2	22.600
11409	8.3	12.9	21.200
11410	8.9	13.2	22.100
11411	20.6	5.4	26.000
11412	30.2	5.7	35.900
11413	23.5	7.2	30.700
11502	23.9	10.3	34.200
11504	10.5	14	24.500
11505	10.5	14.20	24.700
11506	10.8	13.6	24.400

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
11507	5.0	14.2	19.200
11508	9.5	13.1	22.600
11510	9	13.2	22.200
11511	20.7	5.5	26.200
11513	23.6	7.2	30.800
11601	21.7	8.1	29.800
11602	23.9	10.6	34.500
11603	11.1	12.4	23.500
11604	10.7	13.9	24.600
11605	10.6	14.2	24.800
11607	5	13.2	18.200
11608	9.5	13	22.500
11610	9	13.1	22.100
11611	20.9	5.5	26.400
11613	23.5	7.1	30.600
11701	22.2	8.5	30.700
11702	25.6	11.4	37.000
11703	12.3	13.8	26.100
11704	11.9	15.7	27.600
11705	12	16.2	28.200
11706	11.6	14.9	26.500
11707	5.5	15	20.500
11708	10.9	13.9	24.800
11709	9.6	13.5	23.100
11710	10.2	13.8	24.000
11711	21.6	5.6	27.200
11712	30.6	6.1	36.700
11713	24	7.4	31.400
11801	20.7	8.3	29.000
11803	12.6	13.8	26.400
11804	12.4	15.3	27.700

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
11805	12.2	16.2	28.400
11806	11.7	14.9	26.600
11807	5.7	14.7	20.400
11808	11	13.9	24.900
11809	9.8	13.4	23.200
11810	10.3	13.9	24.200
11811	21.9	5.5	27.400
11812	30.6	6.6	37.200
11813	24	7.6	31.600
11901	20.6	8.4	29.000
11903	12.7	13.7	26.400
11904	12.4	15.6	28.000
11905	12.3	16	28.300
11907	5.8	14.4	20.200
11909	9.9	13.5	23.400
11910	10.5	13.8	24.300
11911	22	5.6	27.600
11912	30.4	6.9	37.300
11913	23.8	7.8	31.600
12001	22.1	8.8	30.900
12002	25.7	11.6	37.300
12003	12.9	13.7	26.600
12004	12.5	15.4	27.900
12005	12.4	16.1	28.500
12007	5.9	14.1	20.000
12008	11.1	13.6	24.700
12009	9.8	13.3	23.100
12010	10.5	13.7	24.200
12011	22	5.4	27.400
12012	30.2	6.9	37.100
12013	23.5	7.9	31.400

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
12101	20.5	8.5	29.000
12102	25.6	11.7	37.300
12103	13	13.4	26.400
12104	12.6	15.1	27.700
12105	12.6	15.6	28.200
12106	11.8	14.7	26.500
12107	6	14	20.000
12108	11.2	13.5	24.700
12109	9.9	13.3	23.200
12110	10.6	13.7	24.300
12111	22.1	5.5	27.600
12112	29.9	7	36.900
12113	23.4	8.1	31.500
12201	20.6	9.5	30.100
12202	24.7	12.9	37.600
12203	15.6	14.5	30.100
12205	10	14.8	24.800
12206	12.9	16.4	29.300
12207	7	16.3	23.300
12209	12.4	15	27.400
12210	13.1	15.7	28.800
12211	23.1	5.8	28.900
12212	26.2	5.3	31.500
12301	20.4	9.7	30.100
12302	24.6	13.3	37.900
12303	15.6	14.6	30.200
12305	10.10	14.7	24.800
12306	12.8	16.2	29.000
12307	7	16.5	23.500
12309	12.4	14.8	27.200
12310	13.2	15.5	28.700

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
12311	22.9	5.9	28.800
12312	25.3	6	31.300
10902, 11102	21.8	9.3	31.100
10913, 11013	22.3	7.1	29.400
11107, 11207	4.3	11.5	15.800
11301, 11501	21.8	8.1	29.900
11403, 11503	11	12.6	23.600
11509, 11609	8.4	13	21.400
11512, 11612	30.1	5.9	36.000
11606, 11908	10.9	13.7	24.600
11802, 11902	25.7	11.5	37.200
11906, 12006	11.7	14.8	26.500
12204, 12304	10.1	14.2	24.300
All other dwellings	13.7	15.7	29.400

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

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

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	4 star	4 star	no common laundry facility

<b>Central systems</b>	<b>Size</b>	<b>Configuration</b>	<b>Connection (to allow for...)</b>
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(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
Level 24 - T1 - Amenities	air conditioning system	time clock or BMS controlled	light-emitting diode	motion sensors	yes
Hallway/lobby - Tower 01 (L4-25)	ventilation supply only	time clock or BMS controlled	light-emitting diode	daylight sensor and motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 1)	gearless traction with V V V F motor and regenerative drive	Number of levels with apartments served by a lift: 20 number of levels from the bottom of the lift shaft to the top of the lift shaft: 24 number of lifts: 3 lift load capacity: $\geq 1001$ kg but $\leq 1500$ kg
Central hot water system (No. 1)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm) (c) Unit Efficiency: $3.5 < COP \leq 4.0$
Central cooling system (No. 1)	variable refrigerant volume units	Energy source: electric driven compressor Heat rejection method: water cooled condenser Unit efficiency (min): high – COP > 5.5
Central heating system (No. 1)	variable refrigerant volume units	Energy source: electric driven compressor + water sourced evaporator Unit efficiency high – COP > 5.5

## 2. Commitments for Residential flat buildings - Tower 02

### (a) Buildings

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

#### Floor types

Floor type	Area (m2)	Insulation	Low emissions option
suspended floor above open subfloor, frame: suspended concrete slab	302	-	-
floors above habitable rooms, frame: suspended concrete slab	23500	-	-

#### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	framed (metal clad),frame:light steel frame	8160	-	-

#### Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	19430	-
Internal wall type 2	single skin masonry, frame:light steel frame	1350	-
Internal wall type 3	plasterboard, frame:light steel frame	1320	-

**Reinforcement concrete frames/columns**

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

**Ceiling and roof types**

Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: light steel frame	940	-	-

**Glazing types**

**Frame types**

Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
-	8160	-	8160	-	-	-	-

**(b) Dwellings**

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: <ul style="list-style-type: none"> <li>(aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and</li> <li>(bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.</li> </ul>		✔ ✔	✔ ✔
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✔	✔	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✔	
(g) The pool or spa must be located as specified in the table.	✔	✔	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✔	✔	✔

	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
20401, 20402, 20403, 20404, 20405, 20406,	4 star (> 4.5 but <= 6 L/min)	3 star	4 star	4 star	-	4.5 star	5 star	-	-	-	-	-	-	-

Dwelling no.	Fixtures					Appliances		Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
20407, 20408, 20409, 20410, 20411, 20412, 20501, 20502, 20503, 20504, 20505, 20506, 20507, 20508														
All other dwellings	4 star (> 4.5 but <= 6 L/min)	3 star	4 star	4 star	-	not specified	not specified	-	-	-	-	-	-	-

Dwelling no.	Alternative water source							
	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
20410, 20411, 20412, 20510, 20511, 20512, 20610, 20611, 20612, 20710, 20711, 20712, 20810, 20811, 20812, 20910, 20911, 20912, 21010, 21011, 21012, 21110, 21111, 21112, 21210, 21211,	No alternative water supply	-	-	-	-	-	-	-

Alternative water source								
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
21212, 21310, 21311, 21312, 21410, 21411, 21412, 21510, 21511, 21512, 21610, 21611, 21612, 21710, 21711, 22210, 22211								
All other dwellings	Central water tank (No. 1)	See central systems	See central systems	-	yes	yes	-	-

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


(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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 (No. 2)	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
20510, 20511, 20512, 20610, 20611, 20612, 20710, 20711, 20712, 20810, 20811, 20812, 20910, 20911, 20912, 21010, 21011, 21012, 21110, 21111, 21112, 21210,	Central cooling system (No. 2)	Central cooling system (No. 2)	Central heating system (No. 2)	Central heating system (No. 2)	0	-

Dwelling no.	Cooling		Heating		Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
21211, 21212, 21310, 21311, 21312, 21410, 21411, 21412, 21510, 21511, 21512, 21610, 21611, 21612, 21710, 21711, 22210, 22211						
All other dwellings	Central cooling system (No. 2)	Central cooling system (No. 2)	Central heating system (No. 2)	Central heating system (No. 2)	0	no

Dwelling no.	Individual pool			Individual spa		Appliances other efficiency measures				
	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	electric cooktop & electric oven	3.5 star	8.0 star	no	no

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

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

<b>Thermal loads</b>			
<b>Dwelling no.</b>	<b>Area adjusted heating load (in MJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in MJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted total load (in MJ/m<sup>2</sup>/yr)</b>
20401	18.7	5.9	24.600
20402	25.6	4.6	30.200
20403	19.5	3.7	23.200
20404	7.8	10.5	18.300
20405	4.5	10.4	14.900
20406	8.2	9.7	17.900
20407	6.1	8.8	14.900
20408	10.7	6.9	17.600
20409	15.5	5.3	20.800
20410	29.8	4.1	33.900
20411	20.3	5.9	26.200
20412	17.1	6.1	23.200
20501	20.2	6.8	27.000

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
20502	27.6	4.4	32.000
20503	16.4	4.6	21.000
20504	5.2	13.8	19.000
20505	4.8	13.6	18.400
20506	5.6	13.9	19.500
20507	4.3	13.1	17.400
20510	26.4	5	31.400
20511	20.5	5.9	26.400
20512	19	7.2	26.200
20601	20.5	6.8	27.300
20602	27.9	4.5	32.400
20603	16.6	4.6	21.200
20604	5.4	13.7	19.100
20605	4.9	13.6	18.500
20606	5.7	13.7	19.400
20607	4.5	12.9	17.400
20609	19	5.80	24.800
20610	26.6	5.1	31.700
20611	20.8	5.9	26.700
20612	19.4	7.1	26.500
20701	20.7	6.6	27.300
20702	28.1	4.5	32.600
20703	16.8	4.6	21.400
20704	5.6	13.7	19.300
20705	4.9	13.3	18.200
20706	5.7	13.5	19.200
20707	4.6	12.7	17.300
20708	10	8.3	18.300
20709	19.4	5.4	24.800
20710	26.8	5.0	31.800
20711	21.1	5.9	27.000

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
20712	19.6	7.1	26.700
20801	20.9	6.6	27.500
20802	28.4	4.6	33.000
20803	17.7	4.7	22.400
20804	5.6	13.6	19.200
20805	5.1	13.1	18.200
20806	5.9	13.3	19.200
20807	4.8	12.6	17.400
20808	10.2	8.3	18.500
20809	17.5	6.2	23.700
20810	26.9	5.2	32.100
20811	21.3	5.8	27.100
20812	20	7	27.000
20902	29.3	4.7	34.000
20903	18.70	4.9	23.600
20904	7.3	13.2	20.500
20905	6.3	12.6	18.900
20906	7.4	12.7	20.100
20907	5.2	12.8	18.000
20908	11.5	8.6	20.100
20909	19.9	5.1	25.000
20910	28.3	5.4	33.700
20911	21.9	5.9	27.800
20912	20.2	7	27.200
21002	29.3	4.9	34.200
21003	18.8	4.9	23.700
21004	7.4	13.1	20.500
21005	6.4	12.5	18.900
21006	7.5	12.6	20.100
21007	5.4	12.5	17.900
21008	11.7	8.5	20.200

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
21010	28.1	5.4	33.500
21011	22.1	5.8	27.900
21012	21	7.1	28.100
21101	21.9	6.8	28.700
21102	29.5	4.8	34.300
21103	19.1	5.1	24.200
21104	7.5	12.9	20.400
21105	6.5	12.4	18.900
21106	7.7	12.4	20.100
21107	5.4	12.2	17.600
21108	11.9	8.6	20.500
21109	18.2	5.6	23.800
21110	27.9	5.7	33.600
21111	23.2	5.8	29.000
21201	21.9	7	28.900
21202	29.5	5	34.500
21203	19.1	5.2	24.300
21204	7.6	12.8	20.400
21205	6.7	12.4	19.100
21206	7.9	12.5	20.400
21207	5.6	12.3	17.900
21208	10.9	8.5	19.400
21209	17.7	5.8	23.500
21210	27.6	5.7	33.300
21211	23.4	5.8	29.200
21301	22.5	7.2	29.700
21302	30.2	5.4	35.600
21303	19.7	5.3	25.000
21304	8.7	13.7	22.400
21305	8	13.3	21.300
21306	9	13.3	22.300

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
21307	6	13.6	19.600
21308	12.4	9.1	21.500
21309	18.7	5.6	24.300
21310	28.8	6.1	34.900
21311	24	6	30.000
21312	21.10	7.1	28.200
21401	22.7	7.5	30.200
21403	20	5.3	25.300
21405	8	13	21.000
21406	9.1	13.2	22.300
21407	6.1	13.4	19.500
21408	12.6	9	21.600
21409	19	5.8	24.800
21410	29	6.2	35.200
21411	23.6	6.1	29.700
21412	21.8	7.5	29.300
21503	20.1	5.3	25.400
21505	8.1	13	21.100
21506	9.2	13.2	22.400
21507	6.2	13.3	19.500
21508	12.8	9.1	21.900
21509	19.1	5.8	24.900
21510	29.0	6.1	35.100
21511	22.6	6.1	28.700
21512	21.6	7.6	29.200
21602	30.2	5.8	36.000
21603	20.3	5.3	25.600
21604	9.1	13.4	22.500
21605	8.2	12.9	21.100
21606	9.4	13.1	22.500
21607	6.3	13.2	19.500

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
21608	12.8	9	21.800
21609	19.2	5.9	25.100
21610	28.9	6.1	35.000
21611	22.6	6.2	28.800
21612	21.5	7.5	29.000
21701	23	7.5	30.500
21702	30.9	6.0	36.900
21703	20.7	5.4	26.100
21704	10.2	14.5	24.700
21705	9.5	13.8	23.300
21706	10.7	14	24.700
21707	7	14.5	21.500
21708	13.1	9.5	22.600
21709	20.1	6	26.100
21710	30.1	6.5	36.600
21711	22.2	6.5	28.700
21712	21.9	7.8	29.700
21801	23	8.5	31.500
21802	31.00	6.1	37.100
21803	21.2	5.4	26.600
21804	10.2	14.4	24.600
21805	9.8	13.7	23.500
21806	10.9	13.9	24.800
21807	7.1	14.4	21.500
21809	19.9	5.8	25.700
21810	30.2	6.6	36.800
21811	22	7.1	29.100
21812	21.9	9	30.900
21901	22.8	8.7	31.500
21902	30.6	6.5	37.100
21903	21.1	5.2	26.300

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
21904	10.3	14.3	24.600
21906	10.9	13.8	24.700
21907	7.2	14.2	21.400
21909	20	5.8	25.800
21910	30.1	6.6	36.700
21911	20.5	7.6	28.100
21912	21.7	9.5	31.200
22001	22.6	9.1	31.700
22002	30.3	6.7	37.000
22003	21	5.3	26.300
22004	10.4	14.2	24.600
22006	10.8	13.7	24.500
22007	7.3	13.9	21.200
22008	13.5	9.4	22.900
22009	20.2	5.8	26.000
22010	29.9	6.7	36.600
22011	19.1	7.8	26.900
22012	21.5	9.8	31.300
22101	22.4	9.5	31.900
22102	29.5	6.8	36.300
22103	20.9	5.5	26.400
22104	10.5	14.2	24.700
22105	10	13.7	23.700
22106	10.9	13.7	24.600
22107	7.4	13.9	21.300
22108	13.6	9.5	23.100
22109	20.4	5.9	26.300
22110	29.5	6.5	36.000
22111	18.6	7.9	26.500
22112	21.3	10.3	31.600
22201	23.8	5.9	29.700

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
22202	20.6	5.8	26.400
22203	12.9	16.4	29.300
22204	11.9	15.5	27.400
22205	13.3	15.9	29.200
22206	8.7	15.7	24.400
22207	14	9.5	23.500
22208	22.1	9	31.100
22209	30.2	7.7	37.900
22210	18.5	11.1	29.600
22211	21.7	11.4	33.100
22301	21.00	6.5	27.500
22302	18.3	5.8	24.100
22303	12.4	16.4	28.800
22304	11.6	16	27.600
22305	12.9	15.7	28.600
22306	8.6	16.2	24.800
22307	13.7	9.5	23.200
22308	22.00	8.7	30.700
22309	29.5	8.1	37.600
22310	18.1	11.5	29.600
22311	20.9	11.6	32.500
20508, 20608	9.8	8.3	18.100
20509, 21009	18.7	5.7	24.400
20901, 21001	21.6	6.9	28.500
21112, 21212	21.2	7	28.200
21402, 21502	30.3	5.7	36.000
21404, 21504	8.9	13.5	22.400
21501, 21601	22.7	7.3	30.000
21808, 21908	13.4	9.4	22.800
All other dwellings	9.9	13.7	23.600

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

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

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	4 star	4 star	no common laundry facility

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

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(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
Level 24 - T2- Amenities	air conditioning system	time clock or BMS controlled	light-emitting diode	motion sensors	yes
Hallway/lobby - Tower 02 (L4-25)	ventilation supply only	time clock or BMS controlled	fluorescent	daylight sensor and motion sensor	yes

Central energy systems	Type	Specification
Lift bank (No. 3)	gearless traction with V V V F motor and regenerative drive	Number of levels with apartments served by a lift: 20 number of levels from the bottom of the lift shaft to the top of the lift shaft: 24 number of lifts: 3 lift load capacity: $\geq 1001$ kg but $\leq 1500$ kg
Central hot water system (No. 2)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm) (c) Unit Efficiency: $3.5 < COP \leq 4.0$
Central cooling system (No. 2)	variable refrigerant volume units	Energy source: electric driven compressor Heat rejection method: water cooled condenser Unit efficiency (min): high – COP > 5.5
Central heating system (No. 2)	variable refrigerant volume units	Energy source: electric driven compressor + water sourced evaporator Unit efficiency high – COP > 5.5

### 3. Commitments for Residential flat buildings - Tower 03

#### (a) Buildings

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

#### Floor types

Floor type	Area (m2)	Insulation	Low emissions option
floors above habitable rooms, frame: suspended concrete slab	15400	-	-

#### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	framed (metal clad),frame:light steel frame	2600	-	-

#### Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	5040	-
Internal wall type 2	single skin masonry, frame:no frame	650	-

**Reinforcement concrete frames/columns**

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

**Ceiling and roof types**

Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: light steel frame	700	-	-

**Glazing types**

**Frame types**

Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
-	2500	-	2500	-	-	-	-

**(b) Dwellings**

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 4.5 but <= 6 L/min)	3 star	4 star	4 star	-	not specified	not specified	-	-	-	-	-	-	-

Alternative water source								
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up
All dwellings	Central water tank (No. 1)	See central systems	See central systems	-	yes	yes	-	-

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	Central hot water system (No. 3)	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	Central cooling system (No. 3)	Central cooling system (No. 3)	Central heating system (No. 3)	Central heating system (No. 3)	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	electric cooktop & electric oven	not specified	not specified	no	no

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

<b>Thermal loads</b>			
Dwelling no.	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
30301	30.7	2.7	33.400
30302	22.7	2.9	25.600
30303	31.3	4.2	35.500
30304	20.3	3.1	23.400

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
30307	30.2	5.7	35.900
30401	32.3	3.2	35.500
30402	23.4	3.8	27.200
30403	30.7	5.7	36.400
30404	21.9	3.6	25.500
30407	28.5	6.3	34.800
30501	30.7	4.6	35.300
30502	22.2	4.1	26.300
30503	30.2	6.1	36.300
30504	22.3	3.5	25.800
30507	28.8	6.7	35.500
30601	32.9	3.1	36.000
30602	20	4.1	24.100
30603	29.6	6	35.600
30604	22.5	3.7	26.200
30607	29.1	6.7	35.800
30701	33.2	3.1	36.300
30702	16.6	4.3	20.900
30703	26.1	6.5	32.600
30704	22.7	3.9	26.600
30707	29.3	6.9	36.200
30801	33.4	3.2	36.600
30802	13.3	5.3	18.600
30803	19.6	7.6	27.200
30804	22.9	3.8	26.700
30807	29.6	6.8	36.400
30901	33.6	3.1	36.700
30902	8.3	5.6	13.900
30903	13.0	7.7	20.700
30904	23.1	3.8	26.900
30907	29.6	7	36.600

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
31001	34.1	3.7	37.800
31002	6.9	5.8	12.700
31003	10.4	7.8	18.200
31004	24.1	3.7	27.800
All other dwellings	31.4	6	37.400

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

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

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	4 star	4 star	no common laundry facility

<b>Central systems</b>	<b>Size</b>	<b>Configuration</b>	<b>Connection (to allow for...)</b>
Swimming pool (No. 1)	Volume: 40 kLs	Location: Tower 03 Pool shaded: no	-
Fire sprinkler system (No. 3)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(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.		✓	✓

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✔	✔	✔

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS
Lift bank (No. 1)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 3)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 4)	-	-	light-emitting diode	connected to lift call button	yes
Lift bank (No. 5)	-	-	light-emitting diode	connected to lift call button	yes
AFH amenity	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	yes
Hallway/lobby - Tower 3 (L4-10)	ventilation supply only	time clock or BMS controlled	compact fluorescent	daylight sensor and motion sensor	yes

Central energy systems	Type	Specification
Swimming pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Lift bank (No. 4)	gearless traction with V V V F motor and regenerative drive	Number of levels with apartments served by a lift: 8 number of levels from the bottom of the lift shaft to the top of the lift shaft: 13 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg
Lift bank (No. 5)	gearless traction with V V V F motor and regenerative drive	Number of levels with apartments served by a lift: 8 number of levels from the bottom of the lift shaft to the top of the lift shaft: 13 number of lifts: 1 lift load capacity: >= 1001 kg but <= 1500kg
Central hot water system (No. 3)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm) (c) Unit Efficiency: 3.5 < COP <= 4.0
Central cooling system (No. 3)	variable refrigerant volume units	Energy source: electric driven compressor Heat rejection method: air cooled condenser Unit efficiency (min): high – COP > 5.5
Central heating system (No. 3)	variable refrigerant volume units	Energy source: electric driven compressor + air sourced evaporator Unit efficiency high – COP > 5.5

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

##### (a) Buildings 'Other'

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

##### Floor types

Floor type	Area (m2)	Insulation	Low emissions option
suspended floor above open subfloor, frame: suspended concrete slab	1060	-	-

##### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	framed (metal clad),frame:light steel frame	370	-	-

##### Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
-	-	-	-

##### Reinforcement concrete frames/columns

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

**Ceiling and roof types**

Ceiling and roof type	Area (m <sup>2</sup> )	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: light steel frame	382	-	-

**Glazing types****Frame types**

Single glazing (m <sup>2</sup> )	Double glazing (m <sup>2</sup> )	Triple glazing (m <sup>2</sup> )	Aluminium frames (m <sup>2</sup> )	Timber frames (m <sup>2</sup> )	uPVC frames (m <sup>2</sup> )	Steel frames (m <sup>2</sup> )	Composite frames (m <sup>2</sup> )
50	-	-	50	-	-	-	-

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

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

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	4 star	4 star	no common laundry facility

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

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS
Gym area	no mechanical ventilation	-	light-emitting diode	time clocks	yes
Tower 2 waste room	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Tower 1 waste room	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Bulky waste	ventilation exhaust only	-	light-emitting diode	motion sensors	yes
Residents storage	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Furniture room	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Fire pump room	ventilation supply only	thermostatically controlled	light-emitting diode	motion sensors	yes
Plant room	ventilation supply only	thermostatically controlled	light-emitting diode	motion sensors	yes
Fire control room	ventilation supply only	thermostatically controlled	light-emitting diode	motion sensors	yes
Bicycle parking	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	yes
Store	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	yes
Sky lobby	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	yes
Mail room	no mechanical ventilation	-	light-emitting diode	motion sensors	yes
Fire stairs	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	yes
AFH Lobby	no mechanical ventilation	-	light-emitting diode	daylight sensor and motion sensor	yes

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 40 peak kW
Other	Building management system installed?: yes	-

## Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

## Legend

1. Commitments identified with a "✔" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✔" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✔" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).