



IGS INTEGRATED
GROUP
SERVICES



**160-172 Lord Sheffield Circuit, Penrith
NSW**

BASIX Assessment Report

10th November 2022



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1. EXECUTIVE SUMMARY

IGS has been commissioned to assess the interaction of the residential area of the proposed development at 160-172 Lord Sheffield Circuit, Penrith NSW, with the local environment in terms of BASIX compliance.

A BASIX Certificate is a regulatory requirement and demonstrates compliance with the NSW Government's sustainability targets. BASIX assessment and certification has been completed for this project (Certificate No 1334150M_02).

Dwellings within the development have been assessed in terms of their passive energy design using the BASIX Thermal Comfort protocol. They have also been assessed in terms of their ability to conserve water and also to minimise energy consumption via appliances and hot water etc.

With the recommendations provided in the BASIX certificate, the development meets and exceeds the minimum requirements for all following areas.

- Energy Efficiency
- Water Efficiency
- Thermal Comfort

This development achieves the following targets:

- Energy Efficiency: 25% reduction (minimum requirements under BASIX: 25%)
- Water Efficiency: 42% reduction (minimum requirements under BASIX: 40%)
- Thermal Comfort: Will pass the thermal performance requirements under BASIX.

2. INTRODUCTION

BASIX is an NSW State Planning Policy Tool which assesses the environmental performance of new residential premises against a range water, energy and greenhouse gas emissions targets. The assessment has three core components, BASIX Thermal Comfort, BASIX Water and BASIX Energy.

The thermal comfort assessment requires that the thermal performance of dwellings is evaluated and measures put in place to ensure annual heating and cooling loads do not exceed pre-defined limits without compromising the occupant's thermal comfort. This assessment uses computer simulation to evaluate the estimated building fabric thermal performance and passive solar design features such as orientation and solar shading.

The energy section evaluates gas and electrical energy used for heating, cooling lighting, ventilation and appliances. The BASIX Energy target requires the development to uses 25% less energy than the NSW average.

The water assessment takes account of landscaping, stormwater management as well as water efficiency performance of fixtures and fitting such as taps and showers. The BASIX target for water requires that potable water consumption is at least 40% lower than the NSW average.

3. BUILDING DESCRIPTION

The proposed development will be located at 160-172 Lord Sheffield Circuit, Penrith NSW.

3.1 Information Used in Review

Our review is based on the following architectural drawings provided by SJB Architects (Table 1).

Table 1. Architectural drawings list.

Drawing Title	Drawing Number
Context Plan	A-0100
Site Plan	A-0102
Floor Plan - Basement 3	A-1000
Floor Plan - Basement 2	A-1001
Floor Plan - Basement 1	A-1002
Floor Plan - Ground Level	A-1003
Floor Plan - Ground Mezzanine	A-1003M
Floor Plan - Level 1	A-1004
Floor Plan - Level 2	A-1005
Floor Plan - Level 3	A-1006
Floor Plan - Level 4-9	A-1007
Floor Plan - Communal Rooftop	A-1013
Floor Plan - Roof	A-1014
Elevation - North	A-1401
Elevation - South	A-1402
Elevation - East	A-1403
Elevation - West	A-1404
Sections - Sheet 1	A-1501
Sections - Sheet 2	A-1502
Sections - Sheet 3	A-1503
Detailed Section - Sheet 1	A-1601
Detailed Section - Sheet 2	A-1602
Photomontage	A-2501
Photomontage	A-2502
Photomontage	A-2503
External Materials and Finishes	A-2511
Axonometric North	A-2521
Axonometric East	A-2522
Axonometric South	A-2523
Axonometric West	A-2524
Apartment Type - Sheet 1	A-4401
Apartment Type - Sheet 2	A-4402
Apartment Type - Sheet 3	A-4403

Apartment Type - Sheet 4	A-4404
Apartment Type - Sheet 5	A-4405
Apartment Type - Adaptable & Liveable	A-4410
Solar Compliance	A-6001
Cross Ventilation Compliance	A-6002
Shadow Diagrams (Winter Solstice) 9am	A-6011
Shadow Diagrams (Winter Solstice) 12pm	A-6012
Shadow Diagrams (Winter Solstice) 3pm	A-6013
View From the Sun (Winter Solstice) 9am/10am	A-6021
View From the Sun (Winter Solstice) 11am/12pm	A-6022
View From the Sun (Winter Solstice) 1pm/2pm	A-6023
View From the Sun (Winter Solstice) 3pm	A-6024
Compliant Envelope Diagram - 32m Height Plane	A-6041
Compliant Envelope Diagram 35.2m Height Plane	A-6042
Height Plan 32m	A-6051
Height Plan 35.2m	A-6052
Area Plans GFA	6101
Area Plans GFA	6102
Deep Soil Diagram	6103

4. BASIX WATER SECTION

The water efficiency performance of the development has been assessed using the online BASIX Tool. The assessment has considered the common area and central system features including the landscape design, plant species, water catchment areas, rain water tank size and efficiency of preferred fixtures and fittings in the dwellings.

The proposed development will meet the mandatory BASIX water target of 40% as long as the water commitments detailed in Table 2 are installed. For details of the requirements necessary to achieve this target, please refer to the BASIX Certificate No. 1334150M_02.

Table 2. Water Commitments.

Common Areas and Central Systems	
Common areas	<ul style="list-style-type: none"> • No common facility for showerheads • 5-star (water rated) taps • No common facility for toilets • No common facility for laundry
Pool	<ul style="list-style-type: none"> • Outdoor Rooftop pool (No. 1) on Eastern building: Volume 125.3 kLs not shaded • Outdoor Rooftop pool (No. 2) on Western building: Volume 166.3 kLs not shaded
Private Dwellings	
Fixtures for apartments	<ul style="list-style-type: none"> • 3-star (Water Rating) showerheads with a flow rate > 6 but ≤ 7.5 L/min • 4-star (Water Rating) toilets • 5-star (Water Rating) kitchen taps • 5-star (Water Rating) bathroom taps • 4-star (Water Rating) dishwashers • On demand hot water recirculation

5. BASIX THERMAL COMFORT SECTION

The preliminary thermal performance of the development has been evaluated using BERS Pro software; this computer simulation of residential developments is used to assess the potential of a residential development to have low heating and cooling energy requirements once operational.

5.1 Modelling Assumptions

BERS Pro software calculates the transient hourly heat gains and losses for each space inside a building taking into account the building's thermal storage, typical residential occupancy and operational profiles plus hourly weather data for the site.

Building geometry and orientation were modelled according to supplied drawings.

The "base-case" building fabric and estimated glazing and thermal performance requirements are described in Table 3 below. Please note the estimated requirements below are based on the nominated construction materials by the architect.

Table 3. Building Fabric Requirements.

Element	Insulation/glazing
External walls	<ul style="list-style-type: none"> 200mm concrete with added R1.0 insulation FC cladding with added R2.0 insulation
Internal walls	<ul style="list-style-type: none"> Plasterboard and Hebel (corridor and intertenancy) with no added insulation
Floor	<ul style="list-style-type: none"> Concrete Slab, Unit Below 150mm with no added insulation
Ceiling	<ul style="list-style-type: none"> Concrete, Plasterboard with added R4.0 insulation
Roof	<ul style="list-style-type: none"> Concrete with no added insulation
Ceiling Penetrations	<ul style="list-style-type: none"> Sealed LED downlights and exhaust fans
Glazing	<ul style="list-style-type: none"> Unit C205: Max U-value of 3.1 and SHGC of 0.49 (+/- 10%) to all glazing Units C305 - C905: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to all glazing Units E305 - E905: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding doors of living + beds Unit B205: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding doors of living + beds Units B306 - B906: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding doors of living + beds Units D306 - D906: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding doors of living + beds Units B201- B901: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding door of living Units E201- E901: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding door of living Units A211- A911: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding door of living Unit A912: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding door of living Units A313 - A913: Max U-value of 4.3 and SHGC of 0.53 (+/- 10%) to sliding door of living All other glazing: Max U-Value: 6.70 SHGC: 0.66-0.73

Note:

The preliminary thermal insulation and glazing performance requirements outlined in this report nominate the estimated minimum BASIX requirements only. The specified performance values therefore do not consider requirements for any other disciplines such as Acoustics, Fire or Safety compliance. Where required, the development shall comply with any additional requirements related to the local council or other design disciplines in addition to the compliance

requirements detailed in this report. This report is only a guide to the BASIX certificate, for full details of BASIX requirements please refer to the thermal and BASIX certificates.

Building must also comply with Parts 3.12.1, 3.12.3 and 3.12.5 of the NCC 2019. Compliance with the minimum BASIX requirements does not warrant thermal comfort. All services consultants and contractors shall design and construct the development to comply with the minimum requirements of the NCC Vol 1 & 2 and NSW Section J requirements.

6. BASIX ENERGY SECTION

The Energy performance of the development has been assessed using the online BASIX Tool. The assessment has considered Common Area and Central System features including the lifts, ventilation and lighting for common areas (corridors, lobbies, car park etc.), centralised domestic hot water and the efficiency of preferred lighting and appliances in the dwellings. The proposed development will meet the mandatory BASIX Energy target of 25% as long as the energy commitments detailed in Table 4 are installed.

Table 4. Energy Commitments.

Component		Commitment
Common Areas of residential areas	Lifts	<ul style="list-style-type: none"> Quantity: 15, Gearless traction with VVVF motor
	Ventilation	<ul style="list-style-type: none"> Carpark: ventilation (supply & exhaust). Controlled with carbon monoxide monitor + VSD fan Switch room: ventilation (supply & exhaust). Thermostatically controlled Garbage room: ventilation exhaust only Plant or service rooms: ventilation (supply & exhaust) Thermostatically controlled Hallways/Lobby areas: ventilation (supply & exhaust) Time clock or BMS controlled
	Lighting	<ul style="list-style-type: none"> Carpark: LED lighting with motion sensors Switch room: LED lighting with manual on / manual off Lifts: LED lighting, connected to lift call button Garbage room: LED lighting with motion sensors Plant or service rooms: LED lighting with manual on / manual off Hallways/Lobby areas: LED lighting with time clock and motion sensor
	Hot water	<ul style="list-style-type: none"> Central hot water systems (No. 1 & 2) Electric heat pump – air sourced with R0.75 insulation to the pipes
	Pool (No. 1&2)	<ul style="list-style-type: none"> Pumps controlled by timer
	Alternative Energy supply	<ul style="list-style-type: none"> 80 kW solar PV system
Private Dwellings	Ventilation	<ul style="list-style-type: none"> Kitchen Exhaust: Individual fan, ducted to façade or roof, manual on/off switch Bathroom & Laundry Exhaust: Individual fan, ducted to façade or roof, interlocked to light
	Heating & Cooling to living and bedroom areas	<ul style="list-style-type: none"> Heating: 1-phase air-conditioning EER 3.5 – 4.0 (zoned) Cooling: 1-phase air-conditioning EER 3.5 – 4.0 (zoned)
	Lighting	<ul style="list-style-type: none"> Fluorescent or LED lights with dedicated fittings
	Other	<ul style="list-style-type: none"> Electric cooktops and electric ovens Ventilated fridge space 4.5-star (energy rating) dishwashers 9-star (energy rating) clothes dryers Indoor or sheltered clothes drying line

7. DISCLAIMER

This report is prepared using the information described above and inputs from other consultants. Whilst IGS has endeavoured to ensure the information used is accurate, no responsibility or liability to any third party is accepted for any loss or damage arising out of the use of this report by any third party. Any third party wishing to act upon any material contained in this report should first contact IGS for detailed advice which will take into account that party's particular requirements.

Computer performance assessment provides an estimate of building performance. This estimate is based on a necessarily simplified and idealised version of the building that does not and cannot fully represent all the intricacies of the building once built. As a result, simulation results only represent an interpretation of the potential performance of the building. Although great care has been taken to prepare this report, IGS does not make any representations or give any warranties or assurances as to the accuracy or completeness of the information contained in the report or that the report is free from errors or omission. IGS and its employees and agents shall not be liable for any loss arising because of, any person using or relying on the report and whether caused by reason or error, negligent act or omission in the report. The BASIX assessment and certification has been prepared based on the preliminary architectural and building services design with the view to conduct a detailed assessment once the design is further developed.

Performance of the completed building may be significantly affected by the quality of construction; commissioning, ongoing management of the building, and the way the building is operated, monitored, and maintained. Building fabric inputs require verifiable manufacturer data to confirm thermal properties.

This report is intended as a guide to assist with the application of BASIX. It should be read in conjunction with the BASIX and the NCC 2019; specific applications may vary during the design development of the project.

8. SUMMARY & CONCLUSION

The proposed development has been assessed in terms of its ability to conserve water and minimise energy consumption. Furthermore, the thermal performance (passive and fabric design) of the development will comply with the BASIX thermal comfort requirements.

Subject to the provisions of this report the proposed development will be able to achieve the BASIX requirements. For further details, please refer to the BASIX Certificate 1334150M_02 provided.

APPENDIX A – BASIX CERTIFICATE

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 1334150M_02

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

Secretary

Date of issue: Thursday, 10 November 2022

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



Planning,
Industry &
Environment

If any changes to this BASIX certificate are required, please contact IGS with following details:

- Project reference: 160-172 Sheffield Circuit, Penrith NSW 2750
- Contact number: 0430 108 801

Project summary

Project name	160-172 Lord Sheffield Circuit, Penr_02
Street address	160-172 Sheffield Circuit Penrith NSW 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 1184498
Lot no.	3001
Section no.	-
No. of residential flat buildings	2
No. of units in residential flat buildings	287
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Project score

Water	✓ 42	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 25	Target 25

Certificate Prepared by

Name / Company Name: IGS

ABN (if applicable): 68163019029

Description of project

Project address

Project name	160-172 Lord Sheffield Circuit, Penr_02
Street address	160-172 Sheffield Circuit Penrith NSW 2750
Local Government Area	Penrith City Council
Plan type and plan number	deposited 1184498
Lot no.	3001
Section no.	-

Project type

No. of residential flat buildings	2
No. of units in residential flat buildings	287
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	8280
Roof area (m ²)	1935
Non-residential floor area (m ²)	-
Residential car spaces	421
Non-residential car spaces	-

Common area landscape

Common area lawn (m ²)	66.0
Common area garden (m ²)	3374.0
Area of indigenous or low water use species (m ²)	2197.0

Assessor details

Assessor number	DMN/16/1757
Certificate number	0008196350
Climate zone	28
Ceiling fan in at least one bedroom	No
Ceiling fan in at least one living room or other conditioned area	No

Project score

Water	✔ 42	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 25	Target 25

Description of project

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

Residential flat buildings - Western Building, 135 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
C201	2	86.0	0.0	0.0	0.0
C301	2	86.0	0.0	0.0	0.0
C401	2	86.0	0.0	0.0	0.0
C501	2	86.0	0.0	0.0	0.0
C601	2	86.0	0.0	0.0	0.0
C701	2	86.0	0.0	0.0	0.0
C801	2	86.0	0.0	0.0	0.0
C901	2	86.0	0.0	0.0	0.0
D201	2	81.0	4.0	0.0	0.0
D301	2	81.0	4.0	0.0	0.0
D306	2	70.0	5.0	0.0	0.0
D405	1	49.0	4.0	0.0	0.0
D504	2	86.0	0.0	0.0	0.0
D603	2	77.0	4.0	0.0	0.0
D702	2	77.0	4.0	0.0	0.0
D801	2	81.0	4.0	0.0	0.0
D806	2	70.0	5.0	0.0	0.0
D905	1	49.0	4.0	0.0	0.0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
C202	2	71.0	4.0	0.0	0.0
C302	2	71.0	4.0	0.0	0.0
C402	2	71.0	4.0	0.0	0.0
C502	2	71.0	4.0	0.0	0.0
C602	2	71.0	4.0	0.0	0.0
C702	2	71.0	4.0	0.0	0.0
C802	2	71.0	4.0	0.0	0.0
C902	2	71.0	4.0	0.0	0.0
D202	2	77.0	4.0	0.0	0.0
D302	2	77.0	4.0	0.0	0.0
D401	2	81.0	4.0	0.0	0.0
D406	2	70.0	5.0	0.0	0.0
D505	1	49.0	4.0	0.0	0.0
D604	2	86.0	0.0	0.0	0.0
D703	2	77.0	4.0	0.0	0.0
D802	2	77.0	4.0	0.0	0.0
D901	2	81.0	4.0	0.0	0.0
D906	2	70.0	5.0	0.0	0.0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
C203	2	77.0	4.0	0.0	0.0
C303	2	71.0	4.0	0.0	0.0
C403	2	71.0	4.0	0.0	0.0
C503	2	71.0	4.0	0.0	0.0
C603	2	71.0	4.0	0.0	0.0
C703	2	71.0	4.0	0.0	0.0
C803	2	71.0	4.0	0.0	0.0
C903	2	71.0	4.0	0.0	0.0
D203	2	77.0	4.0	0.0	0.0
D303	2	77.0	4.0	0.0	0.0
D402	2	77.0	4.0	0.0	0.0
D501	2	81.0	4.0	0.0	0.0
D506	2	70.0	5.0	0.0	0.0
D605	1	49.0	4.0	0.0	0.0
D704	2	86.0	0.0	0.0	0.0
D803	2	77.0	4.0	0.0	0.0
D902	2	77.0	4.0	0.0	0.0
E201	3	97.0	4.0	0.0	0.0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
C204	3	97.0	4.0	0.0	0.0
C304	3	97.0	4.0	0.0	0.0
C404	3	97.0	4.0	0.0	0.0
C504	3	97.0	4.0	0.0	0.0
C604	3	97.0	4.0	0.0	0.0
C704	3	97.0	4.0	0.0	0.0
C804	3	97.0	4.0	0.0	0.0
C904	3	97.0	4.0	0.0	0.0
D204	2	86.0	0.0	0.0	0.0
D304	2	86.0	0.0	0.0	0.0
D403	2	77.0	4.0	0.0	0.0
D502	2	77.0	4.0	0.0	0.0
D601	2	81.0	4.0	0.0	0.0
D606	2	70.0	5.0	0.0	0.0
D705	1	49.0	4.0	0.0	0.0
D804	2	86.0	0.0	0.0	0.0
D903	2	77.0	4.0	0.0	0.0
E202	2	77.0	4.0	0.0	0.0
Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
C205	1	58.0	5.0	0.0	0.0
C305	2	82.0	4.0	0.0	0.0
C405	2	82.0	4.0	0.0	0.0
C505	2	82.0	4.0	0.0	0.0
C605	2	82.0	4.0	0.0	0.0
C705	2	82.0	4.0	0.0	0.0
C805	2	82.0	4.0	0.0	0.0
C905	2	82.0	4.0	0.0	0.0
D205	3	103.0	4.0	0.0	0.0
D305	1	49.0	4.0	0.0	0.0
D404	2	86.0	0.0	0.0	0.0
D503	2	77.0	4.0	0.0	0.0
D602	2	77.0	4.0	0.0	0.0
D701	2	81.0	4.0	0.0	0.0
D706	2	70.0	5.0	0.0	0.0
D805	1	49.0	4.0	0.0	0.0
D904	2	86.0	0.0	0.0	0.0
E203	2	71.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
E204	2	86.0	0.0	0.0	0.0
E303	2	71.0	4.0	0.0	0.0
E402	2	77.0	4.0	0.0	0.0
E501	3	97.0	4.0	0.0	0.0
E506	1	60.0	4.0	0.0	0.0
E605	2	83.0	4.0	0.0	0.0
E704	2	86.0	0.0	0.0	0.0
E803	2	71.0	4.0	0.0	0.0
E902	2	77.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
E205	1	60.0	5.0	0.0	0.0
E304	2	86.0	0.0	0.0	0.0
E403	2	71.0	4.0	0.0	0.0
E502	2	77.0	4.0	0.0	0.0
E601	3	97.0	4.0	0.0	0.0
E606	1	60.0	4.0	0.0	0.0
E705	2	83.0	4.0	0.0	0.0
E804	2	86.0	0.0	0.0	0.0
E903	2	71.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
E206	1	60.0	5.0	0.0	0.0
E305	2	83.0	4.0	0.0	0.0
E404	2	86.0	0.0	0.0	0.0
E503	2	71.0	4.0	0.0	0.0
E602	2	77.0	4.0	0.0	0.0
E701	3	97.0	4.0	0.0	0.0
E706	1	60.0	4.0	0.0	0.0
E805	2	83.0	4.0	0.0	0.0
E904	2	86.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
E301	3	97.0	4.0	0.0	0.0
E306	1	60.0	4.0	0.0	0.0
E405	2	83.0	4.0	0.0	0.0
E504	2	86.0	0.0	0.0	0.0
E603	2	71.0	4.0	0.0	0.0
E702	2	77.0	4.0	0.0	0.0
E801	3	97.0	4.0	0.0	0.0
E806	1	60.0	4.0	0.0	0.0
E905	2	83.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
E302	2	77.0	4.0	0.0	0.0
E401	3	97.0	4.0	0.0	0.0
E406	1	60.0	4.0	0.0	0.0
E505	2	83.0	4.0	0.0	0.0
E604	2	86.0	0.0	0.0	0.0
E703	2	71.0	4.0	0.0	0.0
E802	2	77.0	4.0	0.0	0.0
E901	3	97.0	4.0	0.0	0.0
E906	1	60.0	4.0	0.0	0.0

Residential flat buildings - Eastern Building, 152 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A201	2	86.0	0.0	0.0	0.0
A206	2	76.0	5.0	0.0	0.0
A211	2	89.0	4.0	0.0	0.0
A303	2	77.0	4.0	0.0	0.0
A308	1	52.0	4.0	0.0	0.0
A313	1	52.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A202	2	71.0	4.0	0.0	0.0
A207	1	52.0	4.0	0.0	0.0
A212	1	52.0	4.0	0.0	0.0
A304	3	114.0	4.0	0.0	0.0
A309	2	76.0	5.0	0.0	0.0
A401	2	82.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A203	2	77.0	4.0	0.0	0.0
A208	1	52.0	4.0	0.0	0.0
A213	1	52.0	4.0	0.0	0.0
A305	2	51.0	4.0	0.0	0.0
A310	3	107.0	4.0	0.0	0.0
A402	2	71.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A204	3	114.0	4.0	0.0	0.0
A209	2	76.0	5.0	0.0	0.0
A301	2	86.0	0.0	0.0	0.0
A306	2	76.0	5.0	0.0	0.0
A311	3	117.0	4.0	0.0	0.0
A403	2	77.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A205	1	51.0	4.0	0.0	0.0
A210	2	99.0	4.0	0.0	0.0
A302	2	71.0	4.0	0.0	0.0
A307	1	52.0	4.0	0.0	0.0
A312	1	52.0	4.0	0.0	0.0
A404	3	114.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A405	2	76.0	5.0	0.0	0.0
A410	3	107.0	4.0	0.0	0.0
A502	2	71.0	4.0	0.0	0.0
A507	1	52.0	4.0	0.0	0.0
A512	1	52.0	4.0	0.0	0.0
A604	3	114.0	4.0	0.0	0.0
A609	2	76.0	5.0	0.0	0.0
A701	2	82.0	4.0	0.0	0.0
A706	2	76.0	5.0	0.0	0.0
A711	3	117.0	4.0	0.0	0.0
A803	2	77.0	4.0	0.0	0.0
A808	1	52.0	4.0	0.0	0.0
A813	1	52.0	4.0	0.0	0.0
A905	2	76.0	5.0	0.0	0.0
A910	3	107.0	4.0	0.0	0.0
B202	2	77.0	4.0	0.0	0.0
B301	3	97.0	4.0	0.0	0.0
B306	2	70.0	5.0	0.0	0.0
B405	1	50.0	4.0	0.0	0.0
B504	2	86.0	0.0	0.0	0.0
B603	2	71.0	4.0	0.0	0.0
B702	2	77.0	4.0	0.0	0.0
B801	3	97.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A406	2	76.0	5.0	0.0	0.0
A411	3	117.0	4.0	0.0	0.0
A503	2	77.0	4.0	0.0	0.0
A508	1	52.0	4.0	0.0	0.0
A513	1	52.0	4.0	0.0	0.0
A605	2	76.0	5.0	0.0	0.0
A610	3	107.0	4.0	0.0	0.0
A702	2	71.0	4.0	0.0	0.0
A707	1	52.0	4.0	0.0	0.0
A712	1	52.0	4.0	0.0	0.0
A804	3	114.0	4.0	0.0	0.0
A809	2	76.0	5.0	0.0	0.0
A901	2	82.0	4.0	0.0	0.0
A906	2	76.0	5.0	0.0	0.0
A911	3	117.0	4.0	0.0	0.0
B203	2	71.0	4.0	0.0	0.0
B302	2	77.0	4.0	0.0	0.0
B401	3	97.0	4.0	0.0	0.0
B406	2	70.0	5.0	0.0	0.0
B505	1	50.0	4.0	0.0	0.0
B604	2	86.0	0.0	0.0	0.0
B703	2	71.0	4.0	0.0	0.0
B802	2	77.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A407	1	52.0	4.0	0.0	0.0
A412	1	52.0	4.0	0.0	0.0
A504	3	114.0	4.0	0.0	0.0
A509	2	76.0	5.0	0.0	0.0
A601	2	82.0	4.0	0.0	0.0
A606	2	76.0	5.0	0.0	0.0
A611	3	117.0	4.0	0.0	0.0
A703	2	77.0	4.0	0.0	0.0
A708	1	52.0	4.0	0.0	0.0
A713	1	52.0	4.0	0.0	0.0
A805	2	76.0	5.0	0.0	0.0
A810	3	107.0	4.0	0.0	0.0
A902	2	71.0	4.0	0.0	0.0
A907	1	52.0	4.0	0.0	0.0
A912	1	52.0	4.0	0.0	0.0
B204	2	86.0	0.0	0.0	0.0
B303	2	71.0	4.0	0.0	0.0
B402	2	77.0	4.0	0.0	0.0
B501	3	97.0	4.0	0.0	0.0
B506	2	70.0	5.0	0.0	0.0
B605	1	50.0	4.0	0.0	0.0
B704	2	86.0	0.0	0.0	0.0
B803	2	71.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A408	1	52.0	4.0	0.0	0.0
A413	1	52.0	4.0	0.0	0.0
A505	2	76.0	5.0	0.0	0.0
A510	3	107.0	4.0	0.0	0.0
A602	2	71.0	4.0	0.0	0.0
A607	1	52.0	4.0	0.0	0.0
A612	1	52.0	4.0	0.0	0.0
A704	3	114.0	4.0	0.0	0.0
A709	2	76.0	5.0	0.0	0.0
A801	2	82.0	4.0	0.0	0.0
A806	2	76.0	5.0	0.0	0.0
A811	3	117.0	4.0	0.0	0.0
A903	2	77.0	4.0	0.0	0.0
A908	1	52.0	4.0	0.0	0.0
A913	1	52.0	4.0	0.0	0.0
B205	2	70.0	5.0	0.0	0.0
B304	2	86.0	0.0	0.0	0.0
B403	2	71.0	4.0	0.0	0.0
B502	2	77.0	4.0	0.0	0.0
B601	3	97.0	4.0	0.0	0.0
B606	2	70.0	5.0	0.0	0.0
B705	1	50.0	4.0	0.0	0.0
B804	2	86.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
A409	2	76.0	5.0	0.0	0.0
A501	2	82.0	4.0	0.0	0.0
A506	2	76.0	5.0	0.0	0.0
A511	3	117.0	4.0	0.0	0.0
A603	2	77.0	4.0	0.0	0.0
A608	1	52.0	4.0	0.0	0.0
A613	1	52.0	4.0	0.0	0.0
A705	2	76.0	5.0	0.0	0.0
A710	3	107.0	4.0	0.0	0.0
A802	2	71.0	4.0	0.0	0.0
A807	1	52.0	4.0	0.0	0.0
A812	1	52.0	4.0	0.0	0.0
A904	3	114.0	4.0	0.0	0.0
A909	2	76.0	5.0	0.0	0.0
B201	3	97.0	4.0	0.0	0.0
B206	1	50.0	4.0	0.0	0.0
B305	1	50.0	4.0	0.0	0.0
B404	2	86.0	0.0	0.0	0.0
B503	2	71.0	4.0	0.0	0.0
B602	2	77.0	4.0	0.0	0.0
B701	3	97.0	4.0	0.0	0.0
B706	2	70.0	5.0	0.0	0.0
B805	1	50.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
B806	2	70.0	5.0	0.0	0.0
B905	1	50.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
B901	3	97.0	4.0	0.0	0.0
B906	2	70.0	55.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
B902	2	77.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
B903	2	71.0	4.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
B904	2	86.0	0.0	0.0	0.0

Description of project

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

Common areas of unit building - Western Building

Common area	Floor area (m²)
Lift car (No.6)	-
Lift car (No.9)	-

Common area	Floor area (m²)
Lift car (No.7)	-
Lift car (No.10)	-

Common area	Floor area (m²)
Lift car (No.8)	-

Common areas of unit building - Eastern Building

Common area	Floor area (m²)
Lift car (No.1)	-
Lift car (No.4)	-

Common area	Floor area (m²)
Lift car (No.2)	-
Lift car (No.5)	-

Common area	Floor area (m²)
Lift car (No.3)	-

Common areas of the development (non-building specific)

Common area	Floor area (m²)
Car park area	16300.0
Plant or service room	800.0

Common area	Floor area (m²)
Switch room	90.0
Hallway/lobby type	2080.0

Common area	Floor area (m²)
Garbage room	375.0

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Western Building

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for Residential flat buildings - Eastern Building

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

3. Commitments for multi-dwelling houses

4. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Western Building

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	On demand HW recirculation	-	4 star	-	-	-	-	-	-	-

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

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

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

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

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
C204, C304, C404, C504, C604, C704, C804, C904, D205, E201, E301, E401, E501, E601, E701, E801, E901	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-
C205, D305, D405, D505, D605, D705, D805, D905, E205, E206, E306, E406, E506, E606, E706, E806, E906	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-
All other dwellings	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	yes	4.5 star	-	9 star	yes	-

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
C201	38.9	21.6
C202	27.2	29.3
C203	26.5	34.3
C204	56.5	48.9
C205	60.9	63.6
C301	41.4	21.0
C302	27.3	29.1
C303	42.1	39.2
C304	60.4	43.8
C305	55.6	36.0
C401	41.9	20.7
C402	26.5	29.1
C403	40.6	39.0
C404	61.1	43.4
C405	56.2	35.9
C501	42.2	20.8
C504	61.5	43.8
C505	59.5	35.5
C601	42.6	20.8
C602	26.2	29.1
C604	61.9	45.0
C605	56.9	35.4
C701	42.8	20.7
C703	39.8	39.2
C704	62.3	46.0
C705	57.1	36.0
C801	43.1	20.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
C802	26.4	29.6
C803	40.1	39.4
C804	62.1	47.0
C805	57.2	36.1
C901	50.5	18.0
C902	29.5	27.1
C903	42.0	35.1
C904	62.7	44.6
C905	62.3	31.7
D201	41.7	18.4
D202	35.6	30.4
D203	28.4	33.0
D204	37.3	20.9
D205	58.8	38.7
D301	44.1	17.6
D302	38.1	29.0
D303	31.0	31.6
D304	39.8	19.9
D305	55.4	40.8
D306	45.6	36.8
D401	44.4	17.7
D402	36.3	29.6
D403	29.8	31.3
D404	40.3	19.6
D405	56.0	41.0
D406	46.0	36.5
D501	44.1	17.8

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
D502	31.3	30.4
D503	29.1	31.8
D504	40.6	19.8
D505	56.4	40.9
D506	46.4	35.8
D601	43.2	17.9
D602	31.1	30.8
D603	29.3	31.8
D604	40.9	19.9
D605	56.9	40.2
D606	46.7	36.0
D701	43.0	17.9
D702	30.9	31.0
D703	29.0	32.0
D704	41.1	19.4
D705	57.1	40.3
D706	46.8	35.9
D801	43.1	18.0
D802	30.5	31.6
D803	29.3	32.0
D804	41.4	19.4
D805	57.4	41.0
D806	46.4	36.1
D901	5.8	16.1
D902	32.9	28.2
D903	31.4	28.7
D904	48.8	17.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
D905	60.6	35.3
D906	41.7	30.7
E201	47.9	44.9
E202	25.6	34.5
E203	48.6	30.1
E204	43.1	19.7
E205	53.1	36.3
E206	51.2	42.1
E301	48.6	34.3
E302	28.1	32.9
E303	47.1	29.0
E304	45.6	18.7
E305	37.5	31.0
E306	55.3	38.2
E401	49.2	33.9
E402	28.6	33.2
E403	45.0	29.3
E404	45.9	18.7
E405	37.9	31.2
E406	55.9	38.4
E501	49.7	33.5
E502	28.8	33.1
E503	40.2	29.4
E504	45.6	18.8
E505	38.2	31.0
E506	56.4	38.2
E601	50.0	33.5

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
E602	29.1	33.0
E603	35.4	29.8
E604	44.0	18.9
E605	38.5	31.2
E606	56.9	38.1
E701	50.2	33.4
E702	29.4	33.1
E703	30.6	30.3
E704	42.1	19.0
E705	38.6	30.8
E706	57.2	37.7
E801	50.6	33.3
E802	26.8	32.9
E803	28.2	30.8
E804	42.2	19.1
E805	38.1	31.4
E806	57.6	38.0
E901	53.9	29.4
E902	32.2	29.0
E903	28.5	28.4
E904	49.3	17.3
E905	44.9	28.2
E906	61.0	32.5
C502, C702	26.2	29.2
All other dwellings	39.7	39.1

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Pool (No. 2)	Volume: 166.0 kLs	Location: Western Building Pool shaded: no	-

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

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

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No.6)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.7)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.8)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.9)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.10)	-	-	light-emitting diode	connected to lift call button	No

Central energy systems	Type	Specification
Central hot water system (No. 2)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.75 (~32 mm); (b) Piping internal to building: R0.75 (~32 mm)
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 8)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 9)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 10)	gearless traction with V V V F motor	Number of levels (including basement): 17

Central energy systems	Type	Specification
Pool (No. 2)	Heating source: no heating	Pump controlled by timer: yes

2. Commitments for Residential flat buildings - Eastern Building

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	On demand HW recirculation	-	4 star	-	-	-	-	-	-	-

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

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

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


	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 2	individual fan, ducted to façade or roof	interlocked to light	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	interlocked to light

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
A204, A304, A310, A311, A404, A410, A411, A504, A510, A511, A604, A610, A611, A704, A710, A711, A804, A810, A811, A904, A910, A911, B201, B301, B401, B501, B601, B701, B801, B901	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
A205, A207, A208, A212, A213, A307, A308, A312, A313, A407, A408, A412, A413, A507, A508, A512, A513, A607, A608, A612, A613, A707, A708, A712, A713, A807, A808, A812, A813, A907, A908, A912, A913, B206, B305, B405, B505, B605, B705,	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
B805, B905												
All other dwellings	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	-

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	yes	4.5 star	-	9 star	yes	-

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

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

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A201	37.2	19.8
A202	42.4	31.0
A203	58.1	33.4
A204	43.1	38.5
A205	15.2	60.7
A206	15.1	36.8
A207	16.2	51.7
A208	16.3	50.4
A209	22.6	42.6
A210	46.4	29.2
A211	47.9	60.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A212	54.7	47.7
A213	58.0	40.8
A301	39.8	19.9
A302	43.6	28.6
A303	59.8	31.6
A304	46.3	35.4
A305	23.4	48.4
A306	22.6	45.5
A307	18.4	47.9
A308	18.6	47.1
A309	24.8	39.2
A310	45.5	22.5
A311	37.7	54.5
A312	58.2	43.8
A313	47.2	32.9
A401	41.1	20.2
A402	39.3	29.2
A403	49.8	32.5
A404	48.7	33.3
A405	23.8	48.4
A406	23.0	45.4
A407	19.0	47.5
A408	18.4	46.7
A409	25.1	39.0
A410	46.0	22.4
A411	38.2	53.9
A412	58.8	44.1

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A413	47.7	32.9
A501	41.4	20.0
A502	35.6	30.0
A503	50.1	32.2
A504	48.8	33.1
A505	24.1	48.3
A506	23.2	42.2
A507	19.2	47.1
A508	18.8	46.5
A509	25.3	38.9
A510	46.3	22.1
A511	38.6	53.8
A512	59.2	44.1
A513	48.0	32.7
A601	41.7	19.9
A602	38.4	30.7
A603	47.6	32.9
A604	47.2	33.4
A605	24.5	48.4
A606	23.5	45.0
A607	19.5	48.0
A608	19.3	47.1
A609	25.6	38.7
A610	46.7	22.2
A611	39.0	53.4
A612	59.7	44.1
A613	48.4	33.7

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A701	41.6	20.0
A702	33.8	30.7
A703	44.9	33.7
A704	44.5	33.4
A705	24.7	47.8
A706	23.9	44.7
A707	19.6	47.8
A708	19.5	46.8
A709	25.7	38.5
A710	46.9	22.5
A711	39.2	53.3
A712	60.0	44.0
A713	48.5	44.4
A801	42.0	19.8
A802	33.6	31.6
A803	44.0	34.2
A804	43.5	33.6
A805	25.0	47.4
A806	24.0	44.4
A807	19.9	47.7
A808	19.9	46.4
A809	26.1	38.4
A810	47.2	22.2
A811	39.5	53.2
A812	60.4	43.9
A813	48.4	34.4
A901	48.7	17.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A902	34.8	27.8
A903	42.3	30.6
A904	46.7	31.1
A905	28.6	44.1
A906	27.0	41.2
A907	23.5	41.5
A908	23.5	41.0
A909	29.2	34.3
A910	54.4	20.4
A911	43.5	46.9
A912	50.8	32.3
A913	53.5	28.2
B201	54.2	25.2
B202	39.0	34.7
B203	51.7	33.0
B204	38.5	20.2
B205	46.0	33.9
B206	52.2	49.1
B301	56.8	24.4
B302	41.7	32.8
B303	51.9	32.8
B304	41.0	18.9
B305	54.3	45.2
B306	47.5	32.1
B401	56.8	24.3
B402	40.5	32.8
B403	51.8	32.5

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
B404	41.3	18.7
B405	54.9	44.8
B406	49.3	30.5
B501	56.5	24.4
B502	38.8	33.2
B503	50.9	32.6
B504	41.4	18.6
B505	55.3	45.7
B506	49.6	30.6
B601	55.5	24.3
B602	37.8	33.2
B603	53.2	32.2
B604	41.6	18.7
B605	55.6	46.9
B606	49.8	30.7
B701	54.6	24.3
B702	37.5	33.7
B703	46.0	33.1
B704	41.7	18.8
B705	55.5	47.5
B706	49.8	30.9
B801	54.1	24.9
B802	37.5	34.1
B803	44.9	33.3
B804	41.9	18.7
B805	54.1	48.2
B806	50.0	31.3

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
B901	58.4	22.3
B902	37.9	29.2
B903	44.6	29.9
B904	39.7	15.9
B905	57.1	41.8
All other dwellings	54.4	27.1

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Pool (No. 1)	Volume: 125.3 kLs	Location: Eastern Building Pool shaded: no	-

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

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

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No.1)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.3)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.5)	-	-	light-emitting diode	connected to lift call button	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.75 (~32 mm); (b) Piping internal to building: R0.75 (~32 mm)
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 17
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 17

Central energy systems	Type	Specification
Pool (No. 1)	Heating source: no heating	Pump controlled by timer: yes

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	5 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	motion sensors	No
Switch room	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	No
Garbage room	ventilation exhaust only	-	light-emitting diode	motion sensors	No
Plant or service room	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	No
Hallway/lobby type	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	No

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 80.0 peak kW

Notes

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

Legend

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