

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 1316898M

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, 25 August 2022

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



Planning,
Industry &
Environment

Project summary		
Project name	Uniting Charlestown - Stage 1 Building D	
Street address	27 Tiral Street Charlestown 2290	
Local Government Area	Lake Macquarie City Council	
Plan type and plan number	deposited 551260	
Lot no.	223	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	133	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 34	Target 20




Certificate Prepared by

Name / Company Name: JHA Consulting Engineers

ABN (if applicable): 48612666172

Description of project

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Section no.	-
Project type	
No. of residential flat buildings	1
No. of units in residential flat buildings	133
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m ²)	3500
Roof area (m ²)	998
Non-residential floor area (m ²)	-
Residential car spaces	125
Non-residential car spaces	27

Common area landscape		
Common area lawn (m ²)	1181.0	
Common area garden (m ²)	0.0	
Area of indigenous or low water use species (m ²)	-	
Assessor details		
Assessor number	206470	
Certificate number	0007990250	
Climate zone	15	
Ceiling fan in at least one bedroom	No	
Ceiling fan in at least one living room or other conditioned area	No	
Project score		
Water	 40	Target 40
Thermal Comfort	 Pass	Target Pass
Energy	 34	Target 20

Description of project

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

Residential flat buildings - Building D, 133 dwellings, 14 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)
D01012	80.7	0.0	0.0	0.0	0.0
D01061	52.8	0.0	0.0	0.0	0.0
D01111	53.4	0.0	0.0	0.0	0.0
D02012	80.7	0.0	0.0	0.0	0.0
D02061	52.8	0.0	0.0	0.0	0.0
D02111	53.4	0.0	0.0	0.0	0.0
D03012	80.7	0.0	0.0	0.0	0.0
D03061	52.8	0.0	0.0	0.0	0.0
D03111	53.4	0.0	0.0	0.0	0.0
D04012	86.4	0.0	0.0	0.0	0.0
D04061	49.3	0.0	0.0	0.0	0.0
D04112	75.3	0.0	0.0	0.0	0.0
D05041	59.1	0.0	0.0	0.0	0.0
D05092	79.4	0.0	0.0	0.0	0.0
D06023	101.1	0.0	0.0	0.0	0.0
D06072	81.8	0.0	0.0	0.0	0.0
D06122	74.0	0.0	0.0	0.0	0.0
D07052	69.1	0.0	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)
D01021	58.4	0.0	0.0	0.0	0.0
D01071	59.1	0.0	0.0	0.0	0.0
D01122	79.4	0.0	0.0	0.0	0.0
D02021	58.4	0.0	0.0	0.0	0.0
D02071	59.1	0.0	0.0	0.0	0.0
D02122	79.4	0.0	0.0	0.0	0.0
D03021	58.4	0.0	0.0	0.0	0.0
D03071	59.1	0.0	0.0	0.0	0.0
D03122	79.4	0.0	0.0	0.0	0.0
D04023	101.1	0.0	0.0	0.0	0.0
D04072	81.8	0.0	0.0	0.0	0.0
D04122	74.0	0.0	0.0	0.0	0.0
D05052	69.1	0.0	0.0	0.0	0.0
D05102	80.0	0.0	0.0	0.0	0.0
D06031	52.8	0.0	0.0	0.0	0.0
D06081	53.4	0.0	0.0	0.0	0.0
D07012	86.4	0.0	0.0	0.0	0.0
D07061	49.3	0.0	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)
D01031	49.4	0.0	0.0	0.0	0.0
D01082	69.1	0.0	0.0	0.0	0.0
D01132	80.0	0.0	0.0	0.0	0.0
D02031	49.4	0.0	0.0	0.0	0.0
D02082	69.1	0.0	0.0	0.0	0.0
D02132	80.0	0.0	0.0	0.0	0.0
D03031	49.4	0.0	0.0	0.0	0.0
D03082	69.1	0.0	0.0	0.0	0.0
D03132	80.0	0.0	0.0	0.0	0.0
D04031	52.8	0.0	0.0	0.0	0.0
D04081	53.4	0.0	0.0	0.0	0.0
D05012	86.4	0.0	0.0	0.0	0.0
D05061	49.3	0.0	0.0	0.0	0.0
D05112	75.3	0.0	0.0	0.0	0.0
D06041	59.1	0.0	0.0	0.0	0.0
D06091	79.4	0.0	0.0	0.0	0.0
D07023	101.1	0.0	0.0	0.0	0.0
D07072	69.8	0.0	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)
D01042	70.7	0.0	0.0	0.0	0.0
D01091	49.3	0.0	0.0	0.0	0.0
D01142	75.3	0.0	0.0	0.0	0.0
D02042	70.7	0.0	0.0	0.0	0.0
D02091	49.3	0.0	0.0	0.0	0.0
D02142	75.3	0.0	0.0	0.0	0.0
D03042	70.7	0.0	0.0	0.0	0.0
D03091	49.3	0.0	0.0	0.0	0.0
D03142	75.3	0.0	0.0	0.0	0.0
D04041	59.1	0.0	0.0	0.0	0.0
D04092	79.4	0.0	0.0	0.0	0.0
D05023	101.1	0.0	0.0	0.0	0.0
D05072	81.8	0.0	0.0	0.0	0.0
D05122	74.0	0.0	0.0	0.0	0.0
D06052	69.1	0.0	0.0	0.0	0.0
D06102	80.0	0.0	0.0	0.0	0.0
D07031	52.8	0.0	0.0	0.0	0.0
D07083	109.0	0.0	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)
D01051	49.3	0.0	0.0	0.0	0.0
D01102	81.8	0.0	0.0	0.0	0.0
D01152	74.0	0.0	0.0	0.0	0.0
D02051	49.3	0.0	0.0	0.0	0.0
D02102	81.8	0.0	0.0	0.0	0.0
D02152	74.0	0.0	0.0	0.0	0.0
D03051	49.3	0.0	0.0	0.0	0.0
D03102	81.8	0.0	0.0	0.0	0.0
D03152	74.0	0.0	0.0	0.0	0.0
D04052	69.1	0.0	0.0	0.0	0.0
D04102	80.0	0.0	0.0	0.0	0.0
D05031	52.8	0.0	0.0	0.0	0.0
D05081	53.4	0.0	0.0	0.0	0.0
D06012	86.4	0.0	0.0	0.0	0.0
D06061	49.3	0.0	0.0	0.0	0.0
D06112	75.3	0.0	0.0	0.0	0.0
D07041	59.1	0.0	0.0	0.0	0.0
D07092	75.3	0.0	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)
D07102		74.0	0.0	0.0	0.0
D08052		69.1	0.0	0.0	0.0
D09012		86.4	0.0	0.0	0.0
D09062		74.2	0.0	0.0	0.0
D10023		101.1	0.0	0.0	0.0
D10072		74.0	0.0	0.0	0.0
D11052		86.5	0.0	0.0	0.0
DLG012		73.2	0.0	0.0	0.0
DUG03		49.3	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)
D08012		86.4	0.0	0.0	0.0
D08062		70.4	0.0	0.0	0.0
D09023		101.1	0.0	0.0	0.0
D09072		67.6	0.0	0.0	0.0
D10031		52.8	0.0	0.0	0.0
D11012		86.4	0.0	0.0	0.0
D12012		86.4	0.0	0.0	0.0
DLG02		47.0	0.0	0.0	0.0
DUG04		52.8	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)
D08023		101.1	0.0	0.0	0.0
D08072		72.2	0.0	0.0	0.0
D09031		52.8	0.0	0.0	0.0
D09082		58.5	0.0	0.0	0.0
D10041		59.1	0.0	0.0	0.0
D11022		101.1	0.0	0.0	0.0
D12022		101.1	0.0	0.0	0.0
DLG03		49.8	0.0	0.0	0.0
DUG05		59.2	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)
D08031		52.8	0.0	0.0	0.0
D08081		58.5	0.0	0.0	0.0
D09041		59.1	0.0	0.0	0.0
D09092		74.0	0.0	0.0	0.0
D10052		76.2	0.0	0.0	0.0
D11033		52.8	0.0	0.0	0.0
D12033		112.9	0.0	0.0	0.0
DUG01		83.4	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)
D08041		59.1	0.0	0.0	0.0
D08092		74.0	0.0	0.0	0.0
D09051		50.3	0.0	0.0	0.0
D10012		86.4	0.0	0.0	0.0
D10062		79.3	0.0	0.0	0.0
D11041		70.4	0.0	0.0	0.0
D12043		79.6	0.0	0.0	0.0
DUG02		70.7	0.0	0.0	0.0

Description of project

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

Common areas of unit building - Building D

Common area	Floor area (m ²)
lower ground car park	1690.0
Lift car (No.1)	-
Fire pump room	106.2
Substation	30.15
level 1 to 11 lobbies	1181.0

Common area	Floor area (m ²)
upper ground car park	1515.0
Lift car (No.2)	-
Comm and MSB	48.9
lower ground lobby	52.1

Common area	Floor area (m ²)
Basement Car park	1771.0
Lift car (No.3)	-
waste room	34.46
upper ground lobby	52.94

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building D

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Building D

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: <ul style="list-style-type: none"> (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.	✓	✓	✓

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
All dwellings	4 star (> 4.5 but <= 6 L/min)	4 star	6 star	6 star	no	-	4 star	-	-	-	-	-	-	-

Dwelling no.	Alternative water source							
	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	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
D0402, D0502, D0602, D0702, D0708, D0802, D0902, D1002, D1103, D1203, D1204	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	3	1	yes	yes	yes	yes	0	no

Dwelling no.	Cooling		Heating		Artificial lighting					Natural lighting		
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
D0102, D0103, D0105, D0106, D0107, D0109, D0111, D0202, D0203, D0205, D0206, D0207, D0209, D0211, D0302, D0303, D0305, D0306, D0307, D0309, D0311, D0403, D0404, D0406, D0408, D0503, D0504, D0506, D0508, D0603, D0604, D0606, D0608, D0609, D0703, D0704, D0706, D0803, D0804,	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1	1	yes	yes	yes	yes	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
D0808, D0903, D0904, D0905, D1003, D1004, D1104, DLG03, DUG01, DUG04, DUG05												
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	2	1	yes	yes	yes	yes	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	-	no	4 star	-	6 star	no	no

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

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
D0101	54.1	20.9
D0102	29.3	20.2
D0103	16.3	19.8
D0104	26.8	30.8
D0105	28.7	23.3
D0106	42.0	22.6
D0107	41.7	27.9

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D0108	37.6	31.2
D0109	58.9	19.5
D0110	40.0	32.0
D0111	38.5	14.7
D0112	52.5	12.4
D0113	55.7	9.3
D0114	48.9	10.0
D0115	55.7	7.1
D0201	53.0	20.5
D0202	27.3	18.3
D0203	21.5	17.2
D0204	30.5	24.8
D0205	32.1	19.6
D0206	44.6	21.7
D0207	47.5	22.7
D0208	34.0	31.5
D0209	47.7	18.7
D0210	32.2	30.0
D0211	29.4	14.6
D0212	42.0	13.0
D0213	45.3	10.8
D0214	36.5	13.0
D0215	44.4	9.0
D0301	59.4	17.3
D0302	34.2	15.7
D0303	28.6	23.5
D0304	31.6	24.7

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D0305	32.9	19.6
D0306	45.6	21.2
D0307	48.8	22.2
D0308	35.1	31.5
D0309	48.7	18.2
D0310	33.1	29.6
D0311	30.2	14.2
D0312	42.5	12.9
D0313	45.9	11.2
D0314	37.1	13.2
D0315	45.0	8.9
D0401	29.1	26.8
D0402	31.2	20.8
D0403	48.0	19.5
D0404	35.6	13.1
D0405	35.9	32.3
D0406	49.2	17.9
D0407	33.6	29.2
D0408	30.7	14.0
D0409	42.9	12.9
D0410	46.1	11.9
D0411	37.4	13.0
D0412	42.1	9.5
D0501	26.1	27.2
D0502	27.8	20.7
D0503	48.7	19.5
D0504	36.2	12.8

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D0505	36.3	32.0
D0506	49.7	17.4
D0507	34.1	28.4
D0508	31.1	14.1
D0509	43.0	12.9
D0510	46.1	12.5
D0511	37.5	13.8
D0512	42.3	9.8
D0601	26.4	27.4
D0602	28.3	20.6
D0603	49.1	19.5
D0604	36.7	13.1
D0605	37.0	31.2
D0606	50.3	17.1
D0607	40.9	29.7
D0608	33.9	15.7
D0609	40.8	18.2
D0610	44.4	17.2
D0611	38.6	14.0
D0612	42.4	10.0
D0701	26.7	28.3
D0702	28.9	20.3
D0703	49.6	19.7
D0704	37.2	13.2
D0705	37.6	31.4
D0706	50.8	16.6
D0707	61.4	29.0

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D0708	42.2	26.8
D0709	35.8	14.8
D0710	42.1	11.1
D0801	26.8	28.6
D0802	29.3	20.1
D0803	50.0	19.8
D0804	37.7	13.1
D0805	38.2	31.1
D0806	42.4	23.8
D0807	46.3	27.4
D0808	52.5	18.1
D0809	40.6	11.5
D0901	26.7	29.6
D0902	29.4	20.2
D0903	50.4	19.5
D0904	38.0	13.2
D0905	43.5	22.7
D0906	58.7	30.7
D0907	45.9	29.7
D0908	38.8	19.4
D0909	36.8	11.9
D1001	25.5	30.2
D1002	29.9	20.3
D1003	50.7	19.4
D1004	38.2	13.2
D1005	50.4	35.1
D1006	36.4	16.8

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
D1007	35.4	12.2
D1101	51.3	20.3
D1102	24.5	30.8
D1103	30.1	20.6
D1104	51.0	19.7
D1105	44.7	30.5
D1201	33.4	16.6
D1202	24.4	31.1
D1203	30.4	20.7
D1204	54.6	12.5
DLG01	12.0	20.3
DLG02	22.4	17.7
DLG03	32.5	27.1
DUG01	57.0	16.1
DUG02	20.8	28.3
DUG03	17.3	20.3
DUG04	34.2	21.2
All other dwellings	54.5	32.3

(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	4 star (> 4.5 but <= 6 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	22500.0	To collect run-off from at least: - 998.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 1181.0 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 1)	-	-	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
lower ground car park	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	motion sensors	No
upper ground car park	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	motion sensors	No
Basement Car park	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	motion sensors	No
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
Fire pump room	no mechanical ventilation	-	light-emitting diode	manual on / manual off	No
Comm and MSB	no mechanical ventilation	-	light-emitting diode	manual on / manual off	No
waste room	ventilation exhaust only	-	light-emitting diode	motion sensors	No
Substation	ventilation (supply + exhaust)	none ie. continuous	light-emitting diode	motion sensors	No
lower ground lobby	ventilation supply only	time clock or BMS controlled	light-emitting diode	motion sensors	No
upper ground lobby	ventilation supply only	time clock or BMS controlled	light-emitting diode	motion sensors	No
level 1 to 11 lobbies	ventilation supply only	time clock or BMS controlled	light-emitting diode	motion sensors	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	electric heat pump - air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.6 (~25 mm); (b) Piping internal to building: R0.6 (~25 mm)
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 13
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 13

4. 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	4 star (> 4.5 but ≤ 6 L/min)	4 star	5 star	no common laundry facility

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

Central energy systems	Type	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 100.0 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).