

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

# Multi Dwelling

Certificate number: 1349953M 07

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

This certificate is a revision of certificate number 1349953M 02 lodged with the consent authority or certifier on 15 November 2022 with application DA/580/2022.

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

Secretary

Date of issue: Monday, 05 August 2024

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



Project summary					
Project name	11-27 Jennifer St, Little Bay_07				
Street address	11-27 JENNIFER STREET LITTLE BAY 2036				
Local Government Area	RANDWICK				
Plan type and plan number	Deposited Plan 1237484				
Lot no.	11				
Section no.	-				
No. of residential flat buildings	2				
No. of units in residential flat buildings	94				
No. of multi-dwelling houses	0				
No. of single dwelling houses	0				
Project score					
Water	<b>✓</b> 41	Target 40			
Thermal Comfort	✓ Pass	Target Pass			
Energy	<b>✓</b> 47	Target 35			

Certificate Prepared by	
Name / Company Name: E-LAB Consulting	
ABN (if applicable): 84647520634	

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# **Description of project**

Project address	
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Local Government Area	RANDWICK
Plan type and plan number	Deposited Plan 1237484
Lot no.	11
Section no.	-
Project type	
No. of residential flat buildings	2
No. of units in residential flat buildings	94
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	11610
Roof area (m²)	3476
Non-residential floor area (m²)	0.00
Residential car spaces	132
Non-residential car spaces	10

Common area landscape						
Common area lawn (m²)	1360					
Common area garden (m²)	225					
Area of indigenous or low water use species (m²)	0					
Assessor details and therma	al loads					
Assessor number	DMN/16/1751					
Certificate number	QK1BWK65S5					
Climate zone	56					
Ceiling fan in at least one bedroom	Yes					
Ceiling fan in at least one living room orother conditioned area	Yes					
Project score						
Water	<b>✓</b> 41	Target 40				
Thermal Comfort	✓ Pass	Target Pass				
Energy	<b>✓</b> 47	Target 35				

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# **Description of project**

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

# Residential flat buildings - Building ABC, 38 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A101	2	89.4	0	0	0
A201	2	89.1	0	0	0
A301	3	159.1	0	0	0
AG02	2	98.5	0	12.5	0
B102	3	119.8	0	0	0
B302	3	119.8	0	0	0
C102	2	82.3	0	0	0
C202	2	82.3	0	0	0
C302	2	82.3	0	0	0
CG03	2	118.3	0	8.89	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A102	2	98.5	0	0	0
A202	2	98.1	0	0	0
A302	2	82.3	0	0	0
AG03	2	82.3	0	15.86	0
B201	3	134.2	0	0	0
BG01	3	134.2	0	7.64	0
C103	2	118.2	0	0	0
C203	2	118.2	0	0	0
C303	4+	172.4	0	0	0
CG04	2	79.9	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A103	2	82.3	0	0	0
A203	2	82.3	0	0	0
A303	3	120.2	0	0	0
AG04	3	120.2	0	7.64	0
B202	3	119.8	0	0	0
BG02	3	119.8	0	7.58	0
C104	2	79.8	0	0	0
	2	80	0	0	0
CG01	3	120.8	0	7.64	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A104	3	120.2	0	0	0
A204	3	120.2	0	0	0
AG01	2	89.4	0	0	0
B101	3	134.2	0	0	0
B301	3	134.2	0	0	0
C101	3	120.8	0	0	0
C201	3	120.8	0	0	0
C301	3	120.8	0	0	0
CG02	2	82.3	0	15.86	0

# Residential flat buildings - Building DEFG, 56 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D101	2	89.4	0	0	0
D105	3	117.4	0	0	0
D204	1	53.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D102	2	90.2	0	0	0
D201	2	89.4	0	0	0
D205	3	117.4	0	0	0

	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
	D103	3	128.8	0	0	0
]	D202	2	90.2	0	0	0
]	D301	4+	177.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D104	1	53.4	0	0	0
D203	3	128.8	0	0	0
D302	3	117.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
D303	1	53.4	0	0	0	D304	3	117.4	0	0	0	DG01	2	100.9	0	0	0	DG02	3	128.8	0	22.7	0
DG03	1	53.4	0	11.09	0	DG04	3	117.4	0	18.54	0	E101	3	107.1	0	0	0	E102	2	101.5	0	0	0
E103	3	112.2	0	0	0	E201	3	106.8	0	0	0	E202	2	101.5	0	0	0	E203	3	112.2	0	0	0
E301	3	106.8	0	0	0	E302	2	101.5	0	0	0	E303	3	112.2	0	0	0	EG01	4+	149.8	0	26.27	0
EG02	4+	153.8	0	27.9	0	F101	3	117.4	0	0	0	F102	1	53.4	0	0	0	F103	2	84.2	0	0	0
F104	2	101.9	0	0	0	F105	3	111.3	0	0	0	F201	3	117.4	0	0	0	F202	1	53.4	0	0	0
F203	2	84.2	0	0	0	F204	2	101.9	0	0	0	F205	3	111.3	0	0	0	F301	3	117.4	0	0	0
F302	1	53.4	0	0	0	F303	4+	189	0	0	0	F304	3	111.3	0	0	0	FG01	3	117.4	0	16.63	0
FG02	1	53.4	0	10.63	0	FG03	2	84.2	0	0	0	FG04	2	101.9	0	0	0	FG05	3	111.3	0	0	0
G101	3	109.5	0	0	0	G102	3	166.2	0	0	0	G201	3	109.5	0	0	0	G202	3	166.2	0	0	0
G301	3	109.5	0	0	0	G302	3	166.2	0	0	0	GG01	3	109.5	0	0	0	GG02	3	166.2	0	6.04	0

# **Description of project**

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

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

Common area	Floor area (m²)
Car Park	5397.22
Pump Room - Basement	23.57
RW Pump - Basement	9.56
Fan Room - Basement	18.7

Common area	Floor area (m²)
Storage - Basement	22.57
Fire Pump Room - Basement	94.62
CW Plant - Basement	13.4

Common area	Floor area (m²)
Switch Room - Basement	44.14
Comms Room - Basement	10.79
HW Plant - Basement	23.04

# Common areas of unit building - Building ABC

Common area	Floor area (m²)
Hallway - ABC	403.18

# Common areas of unit building - Building DEFG

Common area	Floor area (m²)
Communal Room	21.68

Common area	Floor area (m²)
Hallway - DEFG	727.2

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# Schedule of BASIX commitments

- 1. Commitments for Residential flat buildings Building ABC
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 2. Commitments for Residential flat buildings Building DEFG
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 3. Commitments for single dwelling houses
- 4. Commitments for multi-dwelling houses
- 5. Commitments for common areas and central systems/facilities for the development (non-building specific)
  - (a) Common areas and central systems/facilities
    - (i) Water

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(ii) Energy

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## Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carriedout. 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 ABC

## (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.		~	V
(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.	V	~	
(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.	V	~	
(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.	~	~	~

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	Fixtures					Appli	iances Individual pool			I	Individual spa			
Dwelling no.	All shower- heads	All toilet flushing systems	_	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish- washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 6 but <= 7.5 L/min)	4 star	6 star	6 star		not specified	4.5 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					
All dwellings	No alternative water supply	-	-	-	-	-	-	-					

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

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		<b>→</b>	~
(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".		V	

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

	Cooling Heating		Artificial lighting						Natural lighting			
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroom	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitcher
_	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.5 - 4.0	3-phase airconditioning / EER 3.5 - 4.0	0	0	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no

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	Individual po	ool	Individual s	ра	Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		electric cooktop & electric oven	2.5 star (new rating)	no	4 star	-	8.0 star	-	-

(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:	<	<b>\</b>	~
(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.	<b>y</b>	~	V
(i) The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate.	V		

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		>	

		Thermal loads						
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)						
A101	9	16.1						
A102	4.6	7.6						
A103	1.4	2.6						
A104	4.2	11.4						
A201	10.9	15.3						
A202	7.8	8						
A203	1.8	2.4						
A204	4.8	11.3						
A301	38	21.2						
A302	9.8	5.9						
A303	17.9	16.7						
AG01	14.8	8						
AG02	9.5	6.7						
AG03	6	2						
AG04	13.9	8						
B101	1.7	11.2						
B102	3.5	10						
B201	2.1	9.1						
B202	3.5	7.4						
B301	12.1	16.3						
B302	13	13.9						
BG01	8	8.2						
BG02	13.7	7.7						
C101	3.8	11.6						
C103	8.3	7.5						
C104	17.4	22.6						

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		Thermal loads
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
C201	4.3	11.1
C203	27.9	10.3
C204	26.1	23.7
C301	17.1	16.8
C302	5.5	16.2
C303	43.3	23.3
CG01	13.3	7.9
CG02	1.9	9.9
CG03	8.3	9.2
CG04	25.4	11.3
All other dwellings	0.8	11.5

## (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>&gt;</b>	•
(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.	>	<b>~</b>	
(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
	no common facility	4 star	6 star	no common laundry facility
areas				

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

(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.	•	V	~

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	Common area v	entilation system	Common area lighting				
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS		
Fire stairs basement	-	-	light-emitting diode	connected to lift call button	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		
Hallway - ABC	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	no		

Central energy systems	Туре	Specification				
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 5				
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 5				
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 5				
Central hot water system (No. 1)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)				

# 2. Commitments for Residential flat buildings - Building DEFG

## (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.		~	V
(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			V
(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.	V	~	
(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.	V	~	
(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 bathroom taps	HW recirculation or diversion	All clothes washers	All dish- washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 6 but <= 7.5 L/min)	4 star	6 star	6 star		not specified	4.5 star	-	-	-	-	-	-	-

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		Alternative water source								
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top- up	Spa top-up		
All dwellings	No alternative water supply	-	-	-	-	-	-	-		

on CC/CDC & specs	Certifier check
<b>&gt;</b>	>
<b>V</b>	>
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<b>~</b>	
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_	<b>&gt;</b>

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		~	<b>~</b>
(cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		<b>~</b>	
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		V	

	Hot water	Bathroom ven	tilation system	Kitchen vent	lation system	Laundry ventilation system		
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control	
All dwellings	Central hot water system (No. 2)	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

	Coo	ling	Hea	ting		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitcher	
	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.0 - 3.5	•	3-phase airconditioning / EER 3.5 - 4.0	0	0	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no	

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	Individual po	ool	Individual s	ра	Appliances & other efficiency m				cy measur	ures			
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line	
All dwellings	-	-	-	-	electric cooktop & electric oven	2.5 star (new rating)	no	4 star	-	8.0 star	-	-	

(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.		<b>&gt;</b>	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		<b>&gt;</b>	>
(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.	<b>y</b>	~	~
(i) The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate.	~		

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		>	

		Thermal loads
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
D101	27.7	22.6
D102	18.9	14.1
D103	4.2	11.1
D104	2.6	8.7
D105	2.4	9.7
D201	22.6	23.3
D202	12.8	15.2
D203	5.3	11
D204	3.2	8.7
D205	2.8	9.2
D301	34.4	20.4
D302	24.2	12.5
D303	15.3	11.7
D304	12.9	13.4
DG01	40.4	21
DG02	10.6	9
DG03	11	6.4
DG04	12.9	3.6
E101	1.6	8.7
E102	1.7	11.7
E103	2.5	10.4
E201	1.9	8.3
E202	1.5	10.9
E203	2.8	9.1
E301	8.2	11.8
E302	7.8	13.8

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	Thermal loads				
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)			
E303	9.9	13			
EG01	10.2	7.3			
EG02	14.1	6.7			
F101	2.1	9.8			
F102	1.1	11.5			
F103	1.2	8.3			
F104	4.8	20.5			
F105	18.1	8.2			
F201	2.5	9.2			
F202	1.7	11.4			
F203	1.5	7.7			
F204	5.5	19.8			
F205	19.2	7.3			
F301	7.4	14.1			
F302	8.4	20.7			
F303	40.7	20.6			
F304	34.1	11			
FG01	11.9	4			
FG02	6.2	9.3			
FG03	4.3	4.7			
FG04	8.2	19.6			
FG05	30.2	6.1			
G101	13	19.1			
G102	11.3	24.5			
G201	14	18.1			
G202	12.2	23.6			
G301	29.7	20.2			
G302	23.6	25			
GG01	25.1	7.8			
All other dwellings	7.8	25.3			

## (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>&gt;</b>	•
(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.	>	<b>~</b>	
(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
	no common facility	4 star	6 star	no common laundry facility
areas				

Central systems	Size	Configuration	Connection (to allow for)
Fire sprinkler system (No. 3)		So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(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.	•	V	~

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	Common area v	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS	
Lift car (No. 3)	-	]-	light-emitting diode	connected to lift call button	no	
Lift car (No. 4)	-	-	light-emitting diode	connected to lift call button	no	
Lift car (No. 5)	-	-	light-emitting diode	connected to lift call button	no	
Lift car (No. 6)	-	-	light-emitting diode	connected to lift call button	no	
Communal Room	air conditioning system	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	no	
Hallway - DEFG	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	no	

Central energy systems	Туре	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 5
Central hot water system (No. 2)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)

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

## (a) 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>~</b>	<
(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.	~	<b>~</b>	
(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.		<b>~</b>	
(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	4 star	6 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for)
Central water tank - rainwater or stormwater (No. 1)	40000.00	To collect run-off from at least: - 430.00 square metres of roof area of buildings in the development - 0.00 square metres of impervious area in the development - 0.00 square metres of garden/lawn area in the development - 0.00 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 1585 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 4)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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(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.	•	~	V

	Common area v	entilation 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	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	no
Storage - Basement	no mechanical ventilation	-	light-emitting diode	motion sensors	no
Switch Room - Basement	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	no
Pump Room - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Fire Pump Room - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Comms Room - Basement	no mechanical ventilation	-	light-emitting diode	manual on / manual off	no
RW Pump - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
CW Plant - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
HW Plant - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Fan Room - Basement	no mechanical ventilation	-	light-emitting diode	manual on / manual off	no

Central energy systems	Туре	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 44.00 peak kW
Other	-	-

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#### **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

**BASIX** 

- 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 fulfillment it is required to monitor in relation to the building or part, has been fulfilled).

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# **BASIX Compliance Report**

11 Jennifer St, Little Bay, NSW 2036

Project No. P00366

Revision 6

Issued 05 Aug 2024

Client Urban Property Group

**E-LAB Consulting** 

Where science and engineering inspire design.

# **Document QA and Revisions**

ISSUE	DATE	COMMENTS	ENGINEER	REVIEWER
1	7/11/2022	Issue for DA	FP	АК
2	8/11/2022	Issue for DA	FP	АК
3	16/08/2023	Issue for DA	RL	АК
4	3/05/2024	Draft Post DA	MR/NA	AK
5	29/05/2024	Final Post DA	MR/NA	AK
6	05/08/2024	Final Post DA	MR/NA	AK

#### Confidentiality:

This document contains commercial information which has been prepared exclusively for the use by The Principal. The document in entirety is confidential. No information contained in this document may be released in part or whole to any third party without the approval of the Author or The Principal.

#### Disclaimer:

The Building's energy and water performance is computed using an energy model developed for thermal comfort and provides only an estimation and potential performance of the building. This cannot be used alone to determine performance in actual practice as they are based on the idealised version of the building which does not and cannot fully consider all the complexities of the building's maintenance and operation.

Authorised by:

**Engineering Lab NSW Pty Ltd** 

Hax lloft

Alex Kobler | Director

Sustainability



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# **Executive Summary**

This report has been prepared to outline the BASIX compliance for the 11 Jennifer St development in Little Bay. The BASIX requirements for the development under the New Dwelling BASIX pathway has three sections: Water, Thermal Comfort, and Energy. Each section is independently evaluated to demonstrate the development's improvement on NSW average residential buildings. The minimum compliance requirements are per the below:

AREA	MINIMUM COMPLIANCE REQUIREMENT	PROJECT SCORE
Energy	35%	47%
Water	40%	41%
Thermal Comfort	Pass	Pass

Percentages stated for Energy and Water are the percentage improvement on the average consumption for NSW dwellings.

The formal BASIX Certificate has been included in appendix A of this report.

The NatHERS group certificate has been included in Appendix B of this report.

Insulation markup has been attached to Appendix C of this report.

The intent of this report is to outline the initial requirements for the development, especially the energy requirements which may lead to alterations in the design.

# 1 INTRODUCTION

## 1.1 PROJECT DESCRIPTION

The 11-27 Jennifer St development consists of three 4-storey residential apartment buildings with 1 level of combined basement. The proposed development will contain the following:

- A total of 117 residential car parking spaces within the basement carpark
- Communal open spaces on the rooftop
- A communal room on the ground level
- A rooftop solar system

#### 1.2 SITE LOCATION

The development site is at 11 Jennifer St, Little Bay 2036. Figure 1 below is an image of the site in context of its location.



Figure 1: Site Location (Source: SIX Maps)

# 2 BASIX COMPLIANCE

BASIX Compliance is the minimum sustainability performance requirement in the state of NSW. It serves as the only pathway for compliance to demonstrate compliance with the National Construction Code, Part J.

E-LAB Consulting have completed modelling on the Water, Thermal, and Energy sections of the BASIX assessment for the development located at 11 Jennifer St, Little Bay, NSW 2036. All residential dwellings and common areas serving residential purposes are taken into consideration for the assessment.

Based on the assumptions listed in the report and information provided to the date the BASIX outcome achieved is as follows:

AREA	OUTCOME ACHIEVED
Energy	47%
Water	41%
Thermal Comfort	PASS

It is recommended that any changes done on the drawings and specifications are to be conveyed as soon as possible to the E-LAB team as these changes will result in a different BASIX result and certificate.

#### 2.1 BASIX CERTIFICATION DETAIL

PROJECT SUMMARY		
Project Name	11-27 Jennifer St, Little Bay	
Local Government Area	Randwick City Council	
Plan Type	DP	
Plan No.	1237484	
No. of New Residential Buildings	2	
No. of New units in Residential Building	94	
BASIX Certificate No.	1349953M_07	



# 2.2 BASIX ENERGY

The following minimum standards will be required to comply with the minimum 35% BASIX Energy Target for the project. These are to be pursued by the project team and achieved in full.

DESIGN ELEMENT	COMPLIANCE CRITERIA
Domestic Hot Water Systems	Centralised electric heat pump – air sourced hot water with minimum R1 insulation to internal and external pipework.
Mechanical Heating and Cooling	Reverse cycle air-conditioning (three-phase) for all units (Living and Bedrooms).  Minimum EER ratings: Cooling 3.0-3.5, Heating 3.5-4.0.  Permanently installed 900mm diameter ceiling fans are provided (Living/Kitchen and all Bedrooms).
Apartment Ventilation	Bathroom: individual fan, ducted to roof or façade – manual on/off switch.  Laundry: individual fan, ducted to roof or façade – manual on/off switch.  Kitchen: Individual fan, ducted to roof or façade – manual on/off switch.
Common Area Ventilation	Car park: Ventilation supply and exhaust controlled by carbon monoxide monitor and VSD fan  Hallway – ABC, Hallway – CDEF, Storage – Basement, Comms room – Basement, Fire Stairs – Basement: No Mechanical ventilation
	Switch room, Communal Room: Air conditioning system, thermostatically controlled
	Waste Room – Basement: Ventilation exhaust only  Pump Room – Basement, Fire pump room – Basement, RW Pump – Basement, CW Plant – Basement, HW Plant – Basement: Ventilation exhaust only, interlocked to light
Apartment Artificial Lighting	Dedicated LED fittings throughout.
Common Area Artificial Lighting	All common areas are fitted out with LEDs.  The following efficiency measures are employed throughout the development:  Car park, communal Room, Hallway – DEFG, Hallway - ABC: Zoned switching with motion sensors  Storage – Basement: Motion sensors
	Switch Room — Basement, Pump room — Basement, Fire Pump Room — Basement, RW Plant — Basement, CW Plant — Basement, HW Plant — Basement, Fan Room — Basement  All elevators lights are connected to the lift call button
Vertical Transport	7 lifts, each serving 5 storeys. Gearless traction with VVVF Motor
Appliances in Apartments	Electric cooktop and electric oven in each apartment.  Refrigerator energy rating: 2.5 Star minimum. Well-ventilated fridge space not required.

	Dishwasher energy rating: 4 Star minimum.	
	Clothes Dryer energy rating: 8 Star minimum.	
PV Array	44 peak kW of PV	

# 2.3 BASIX WATER

The following minimum standards were considered to comply with the minimum 40% BASIX Water Target for the project.

DESIGN ELEMENT	COMPLIANCE CRITERIA	
Fixtures Within Units	Showerheads: 4 Star (> 6 but <= 7.5 L/min) minimum.	
	Toilets: 4 Star WELS Rated minimum.	
	Kitchen Taps: 6 Star WELS Rated minimum.	
	Bathroom Taps: 6 Star WELS Rated minimum.	
Fixtures Within Common Areas	Taps: 6 Star WELS Rated minimum.	
	Toilet: 4 Star WELS Rated minimum.	
Fittings/Appliances Within Units	Dishwasher water rating: 4.5 Star minimum.	
	Clothes Washer water rating: Not specified.	
Fire Sprinkler Test Water	Contained in a closed system. Water from tests is stored in a water tank for reuse in the next periodic sprinkler test.	
Landscape Area	1360 m² lawn area.	
	225 m² garden area (vegetated area excluding lawn)	
Alternative Water Supply	Rainwater tanks (40 kL total) to service ground floor common landscape area.	



# 2.4 THERMAL COMFORT

DESIGN ELEMENT	COMPLIANCE CRITERIA
Glazed Doors / Windows	Units G_1.02, G_2.02 and G_3.02 will have the following glazing specifications:
	Windows facing the balcony
	U-value = 5.6, SHGC = 0.41
	All other glazing
	U-value = 4.1, SHGC = 0.52
	All remaining apartments are required the following glazing specifications:
	Windows facing the balcony
	U-value = 5.4, SHGC = 0.58
	All other glazing
	U-value = 4.1, SHGC = 0.52
	Common area glazing: No Requirement
	Operability – max available while meeting window safety device requirements defined in the BCA.
	Note — all glazing systems are whole of system, including glazing and frame systems.
External Solid Walls	R2.5 bulk insulation, to achieve a total R-value of R2.8
	Medium or light colour
Internal Walls (between conditioned and internal non-conditioned space)	R1.8 bulk insulation only between conditioned and unconditioned area.
Exposed Roofs/Balconies	All exposed roofs/balconies will have bulk roof insulation R3.0, to achieve a total minimum R-value of R3.2.
	Medium or light colour
Exposed Floor & Suspended Floor Slabs (Enclosed floor levels between conditioned and internal non- conditioned space)	R2.0 insulation to underside of suspended concrete slabs.
Floors Covering	Carpet in Bedrooms
	Timber in Living/Dining rooms
	Tile in Kitchen and Bathrooms.
Air Leakage	All dwelling kitchen, bathroom, and laundry shall be via individual fan ducted to façade or roof.
	I
	Exhaust air fans all sealed with self-closing damping.

Ceilir	ng Fans	Permanently installed minimum 900mm diameter ceiling fans are provided with a speed controller for each individual dwelling (Living and Bedrooms).
In-sla	ab Heating or Cooling	It is assumed no in-slab heating or cooling systems present.

# APPENDIX A BASIX CERTIFICATE





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

# Multi Dwelling

Certificate number: 1349953M 07

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

This certificate is a revision of certificate number 1349953M 02 lodged with the consent authority or certifier on 15 November 2022 with application DA/580/2022.

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

Secretary

Date of issue: Monday, 05 August 2024

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



Project summary				
Project name	11-27 Jennifer St, Little Bay_07			
Street address	11-27 JENNIFER STREET LITTLE	BAY 2036		
Local Government Area	RANDWICK			
Plan type and plan number	Deposited Plan 1237484			
Lot no.	11			
Section no.	-			
No. of residential flat buildings	2			
No. of units in residential flat buildings	94			
No. of multi-dwelling houses	0			
No. of single dwelling houses	0			
Project score				
Water	<b>✓</b> 41	Target 40		
Thermal Comfort	✓ Pass	Target Pass		
Energy	<b>✓</b> 47	Target 35		

Certificate Prepared by	
Name / Company Name: E-LAB Consulting	
ABN (if applicable): 84647520634	

Certificate No.: 1349953M 07

Version: 3.0 / DARWINIA 03 01 0

# **Description of project**

Project address	
Project name	11-27 Jennifer St, Little Bay_07
Street address	11-27 JENNIFER STREET LITTLE BAY 2036
Local Government Area	RANDWICK
Plan type and plan number	Deposited Plan 1237484
Lot no.	11
Section no.	-
Project type	
No. of residential flat buildings	2
No. of units in residential flat buildings	94
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	11610
Roof area (m²)	3476
Non-residential floor area (m²)	0.00
Residential car spaces	132
Non-residential car spaces	10

Common area landscape						
Common area lawn (m²)	1360					
Common area garden (m²)	225					
Area of indigenous or low water use species (m²)	0					
Assessor details and therma	al loads					
Assessor number	DMN/16/1751					
Certificate number	QK1BWK65S5					
Climate zone	56					
Ceiling fan in at least one bedroom	Yes					
Ceiling fan in at least one living room orother conditioned area	Yes					
Project score						
Water	<b>✓</b> 41	Target 40				
Thermal Comfort	<b>✓</b> Pass	Target Pass				
Energy	<b>✓</b> 47	Target 35				

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## **Description of project**

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

#### Residential flat buildings - Building ABC, 38 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A101	2	89.4	0	0	0
A201	2	89.1	0	0	0
A301	3	159.1	0	0	0
AG02	2	98.5	0	12.5	0
B102	3	119.8	0	0	0
B302	3	119.8	0	0	0
C102	2	82.3	0	0	0
C202	2	82.3	0	0	0
C302	2	82.3	0	0	0
CG03	2	118.3	0	8.89	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)	
A102	2	98.5	0	0	0	
A202	2	98.1	0	0	0	
A302	2	82.3	0	0	0	
AG03	2	82.3	0	15.86	0	
B201	3	134.2	0	0	0	
BG01	3	134.2	0	7.64	0	
C103	2	118.2	0	0	0	
C203	2	118.2	0	0	0	
C303	4+	172.4	0	0	0	
CG04	2	79.9	0	0	0	
- DEEO EO desallinas Astronom						

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A103	2	82.3	0	0	0
A203	2	82.3	0	0	0
A303	3	120.2	0	0	0
AG04	3	120.2	0	7.64	0
B202	3	119.8	0	0	0
BG02	3	119.8	0	7.58	0
C104	2	79.8	0	0	0
C204	2	80	0	0	0
CG01	3	120.8	0	7.64	0

A104     3     120.2     0     0     0       A204     3     120.2     0     0     0       AG01     2     89.4     0     0     0       B101     3     134.2     0     0     0       B301     3     134.2     0     0     0       C101     3     120.8     0     0     0       C201     3     120.8     0     0     0       C301     3     120.8     0     0     0       CG02     2     82.3     0     15.86     0	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
AG01     2     89.4     0     0     0       B101     3     134.2     0     0     0       B301     3     134.2     0     0     0       C101     3     120.8     0     0     0       C201     3     120.8     0     0     0       C301     3     120.8     0     0     0	A104	3	120.2	0	0	0
B101     3     134.2     0     0     0       B301     3     134.2     0     0     0       C101     3     120.8     0     0     0       C201     3     120.8     0     0     0       C301     3     120.8     0     0     0	A204	3	120.2	0	0	0
B301     3     134.2     0     0     0       C101     3     120.8     0     0     0       C201     3     120.8     0     0     0       C301     3     120.8     0     0     0	AG01	2	89.4	0	0	0
C101     3     120.8     0     0     0       C201     3     120.8     0     0     0       C301     3     120.8     0     0     0	B101	3	134.2	0	0	0
C201         3         120.8         0         0         0           C301         3         120.8         0         0         0	B301	3	134.2	0	0	0
C301 3 120.8 0 0 0	C101	3	120.8	0	0	0
	C201	3	120.8	0	0	0
CG02 2 82.3 0 15.86 0	C301	3	120.8	0	0	0
	CG02	2	82.3	0	15.86	0

### Residential flat buildings - Building DEFG, 56 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D101	2	89.4	0	0	0
D105	3	117.4	0	0	0
D204	1	53.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D102	2	90.2	0	0	0
D201	2	89.4	0	0	0
D205	3	117.4	0	0	0

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Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D103	3	128.8	0	0	0
D202	2	90.2	0	0	0
D301	4+	177.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D104	1	53.4	0	0	0
D203	3	128.8	0	0	0
D302	3	117.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
D303	1	53.4	0	0	0	D304	3	117.4	0	0	0	DG01	2	100.9	0	0	0	DG02	3	128.8	0	22.7	0
DG03	1	53.4	0	11.09	0	DG04	3	117.4	0	18.54	0	E101	3	107.1	0	0	0	E102	2	101.5	0	0	0
E103	3	112.2	0	0	0	E201	3	106.8	0	0	0	E202	2	101.5	0	0	0	E203	3	112.2	0	0	0
E301	3	106.8	0	0	0	E302	2	101.5	0	0	0	E303	3	112.2	0	0	0	EG01	4+	149.8	0	26.27	0
EG02	4+	153.8	0	27.9	0	F101	3	117.4	0	0	0	F102	1	53.4	0	0	0	F103	2	84.2	0	0	0
F104	2	101.9	0	0	0	F105	3	111.3	0	0	0	F201	3	117.4	0	0	0	F202	1	53.4	0	0	0
F203	2	84.2	0	0	0	F204	2	101.9	0	0	0	F205	3	111.3	0	0	0	F301	3	117.4	0	0	0
F302	1	53.4	0	0	0	F303	4+	189	0	0	0	F304	3	111.3	0	0	0	FG01	3	117.4	0	16.63	0
FG02	1	53.4	0	10.63	0	FG03	2	84.2	0	0	0	FG04	2	101.9	0	0	0	FG05	3	111.3	0	0	0
G101	3	109.5	0	0	0	G102	3	166.2	0	0	0	G201	3	109.5	0	0	0	G202	3	166.2	0	0	0
G301	3	109.5	0	0	0	G302	3	166.2	0	0	0	GG01	3	109.5	0	0	0	GG02	3	166.2	0	6.04	0

## **Description of project**

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

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

Common area	Floor area (m²)
Car Park	5397.22
Pump Room - Basement	23.57
RW Pump - Basement	9.56
Fan Room - Basement	18.7

Common area	Floor area (m²)
Storage - Basement	22.57
Fire Pump Room - Basement	94.62
CW Plant - Basement	13.4

Common area	Floor area (m²)
Switch Room - Basement	44.14
Comms Room - Basement	10.79
HW Plant - Basement	23.04

#### Common areas of unit building - Building ABC

Common area	Floor area (m²)
Hallway - ABC	403.18

#### Common areas of unit building - Building DEFG

Common area	Floor area (m²)
Communal Room	21.68

Common area	Floor area (m²)
Hallway - DEFG	727.2

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## Schedule of BASIX commitments

- 1. Commitments for Residential flat buildings Building ABC
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 2. Commitments for Residential flat buildings Building DEFG
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 3. Commitments for single dwelling houses
- 4. Commitments for multi-dwelling houses
- 5. Commitments for common areas and central systems/facilities for the development (non-building specific)
  - (a) Common areas and central systems/facilities
    - (i) Water

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(ii) Energy

#### Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carriedout. 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 ABC

#### (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.		~	V
(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.	V	~	
(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.	V	~	
(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.	~	~	~

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	Fixtures					Appli	ances	Individual pool			I	Individual spa		
Dwelling no.	All shower- heads	All toilet flushing systems	_	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish- washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 6 but <= 7.5 L/min)	4 star	6 star	6 star		not specified	4.5 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					
All dwellings	No alternative water supply	-	-	-	-	-	-	-					

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

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		<b>→</b>	~
(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".		V	

	Hot water	Bathroom ven	tilation system	Kitchen venti	lation system	Laundry vent	ilation system
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	Central hot water system (No. 1)	individual fan, ducted to façade or roof		individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling Heating			Artificial lighting						Natural lighting		
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroom	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitcher
	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.5 - 4.0	3-phase airconditioning / EER 3.5 - 4.0	0	0	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no

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	Individual po	ool	Individual s	ра	Appliances & other efficiency measures			es				
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		electric cooktop & electric oven	2.5 star (new rating)	no	4 star	-	8.0 star	-	-

(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:	<	<b>\</b>	~
(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.	<b>y</b>	~	V
(i) The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate.	V		

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		>	

Thermal loads					
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)			
A101	9	16.1			
A102	4.6	7.6			
A103	1.4	2.6			
A104	4.2	11.4			
A201	10.9	15.3			
A202	7.8	8			
A203	1.8	2.4			
A204	4.8	11.3			
A301	38	21.2			
A302	9.8	5.9			
A303	17.9	16.7			
AG01	14.8	8			
AG02	9.5	6.7			
AG03	6	2			
AG04	13.9	8			
B101	1.7	11.2			
B102	3.5	10			
B201	2.1	9.1			
B202	3.5	7.4			
B301	12.1	16.3			
B302	13	13.9			
BG01	8	8.2			
BG02	13.7	7.7			
C101	3.8	11.6			
C103	8.3	7.5			
C104	17.4	22.6			

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		Thermal loads
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
C201	4.3	11.1
C203	27.9	10.3
C204	26.1	23.7
C301	17.1	16.8
C302	5.5	16.2
C303	43.3	23.3
CG01	13.3	7.9
CG02	1.9	9.9
CG03	8.3	9.2
CG04	25.4	11.3
All other dwellings	0.8	11.5

#### (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>&gt;</b>	•
(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.	>	<b>~</b>	
(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
	no common facility	4 star	6 star	no common laundry facility
areas				

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

(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.	•	V	~

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	Common area v	entilation system	Common area lighting				
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS		
Fire stairs basement	-	-	light-emitting diode	connected to lift call button	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		
Hallway - ABC	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	no		

Central energy systems	Туре	Specification			
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 5			
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 5			
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 5			
Central hot water system (No. 1)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)			

## 2. Commitments for Residential flat buildings - Building DEFG

#### (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.		<b>&gt;</b>	>
(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.		<b>~</b>	>
(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		<b>~</b>	•
(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.	V	~	
(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.	V	<b>~</b>	
(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 bathroom taps	HW recirculation or diversion	All clothes washers	All dish- washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	4 star (> 6 but <= 7.5 L/min)	4 star	6 star	6 star		not specified	4.5 star	-	-	-	-	-	-	-

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		Alternative water source								
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top- up	Spa top-up		
All dwellings	No alternative water supply	-	-	-	-	-	-	-		

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

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		<b>~</b>	
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		V	

	Hot water	Bathroom ven	tilation system	Kitchen vent	lation system	Laundry ventilation system		
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control	
All dwellings	Central hot water system (No. 2)	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

	Coo	ling	Hea	ting	Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitcher
	3-phase airconditioning / EER 3.0 - 3.5	3-phase airconditioning / EER 3.0 - 3.5	•	3-phase airconditioning / EER 3.5 - 4.0	0	0	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	0	no

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	Individual po	ool	Individual s	ра	Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	electric cooktop & electric oven	2.5 star (new rating)	no	4 star	-	8.0 star	-	-

(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:	<	<b>\</b>	~
(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.	<b>y</b>	~	V
(i) The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate.	V		

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(j) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.		>	

		Thermal loads								
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)								
D101	27.7	22.6								
D102	18.9	14.1								
D103	4.2	11.1								
D104	2.6	8.7								
D105	2.4	9.7								
D201	22.6	23.3								
D202	12.8	15.2								
D203	5.3	11								
D204	3.2	8.7								
D205	2.8	9.2								
D301	34.4	20.4								
D302	24.2	12.5								
D303	15.3	11.7								
D304	12.9	13.4								
DG01	40.4	21								
DG02	10.6	9								
DG03	11	6.4								
DG04	12.9	3.6								
E101	1.6	8.7								
E102	1.7	11.7								
E103	2.5	10.4								
E201	1.9	8.3								
E202	1.5	10.9								
E203	2.8	9.1								
E301	8.2	11.8								
E302	7.8	13.8								

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	Thermal loads				
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)			
E303	9.9	13			
EG01	10.2	7.3			
EG02	14.1	6.7			
F101	2.1	9.8			
F102	1.1	11.5			
F103	1.2	8.3			
F104	4.8	20.5			
F105	18.1	8.2			
F201	2.5	9.2			
F202	1.7	11.4			
F203	1.5	7.7			
F204	5.5	19.8			
F205	19.2	7.3			
F301	7.4	14.1			
F302	8.4	20.7			
F303	40.7	20.6			
F304	34.1	11			
FG01	11.9	4			
FG02	6.2	9.3			
FG03	4.3	4.7			
FG04	8.2	19.6			
FG05	30.2	6.1			
G101	13	19.1			
G102	11.3	24.5			
G201	14	18.1			
G202	12.2	23.6			
G301	29.7	20.2			
G302	23.6	25			
GG01	25.1	7.8			
All other dwellings	7.8	25.3			

#### (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.		<b>&gt;</b>	~
(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
	no common facility	4 star	6 star	no common laundry facility
areas				

Central systems	Size	Configuration	Connection (to allow for)
Fire sprinkler system (No. 3)		So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

(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.	>	~	~

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	Common area v	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS	
Lift car (No. 3)	-	]-	light-emitting diode	connected to lift call button	no	
Lift car (No. 4)	-	-	light-emitting diode	connected to lift call button	no	
Lift car (No. 5)	-	-	light-emitting diode	connected to lift call button	no	
Lift car (No. 6)	-	-	light-emitting diode	connected to lift call button	no	
Communal Room	air conditioning system	time clock or BMS controlled	light-emitting diode	zoned switching with motion sensor	no	
Hallway - DEFG	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	no	

Central energy systems	Туре	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 5
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 5
Central hot water system (No. 2)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)

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

#### (a) 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>✓</b>	~
(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.	~	<b>~</b>	
(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.		<b>~</b>	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		<b>~</b>	~
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		<b>✓</b>	~

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	4 star	6 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for)
Central water tank - rainwater or stormwater (No. 1)	40000.00	To collect run-off from at least: - 430.00 square metres of roof area of buildings in the development - 0.00 square metres of impervious area in the development - 0.00 square metres of garden/lawn area in the development - 0.00 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 1585 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 4)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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(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.	•	~	V

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	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	no
Storage - Basement	no mechanical ventilation	-	light-emitting diode	motion sensors	no
Switch Room - Basement	air conditioning system	thermostatically controlled	light-emitting diode	manual on / manual off	no
Pump Room - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Fire Pump Room - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Comms Room - Basement	no mechanical ventilation	-	light-emitting diode	manual on / manual off	no
RW Pump - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
CW Plant - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
HW Plant - Basement	ventilation exhaust only	interlocked to light	light-emitting diode	manual on / manual off	no
Fan Room - Basement	no mechanical ventilation	-	light-emitting diode	manual on / manual off	no

Central energy systems	Туре	Specification
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 44.00 peak kW
Other	-	-

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#### **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

**BASIX** 

- 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 fulfillment it is required to monitor in relation to the building or part, has been fulfilled).

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# APPENDIX B NATHERS GROUP CERTIFICATE



# Nationwide House Energy Rating Scheme — Class 2 summary NatHERS Certificate No. QK1BWK65S5

Generated on 5 Aug 2024 using FirstRate5 v5.3.2b

#### **Property**

**Address** 

11 Jennifer Street, Little Bay, NSW, 2036

Lot/DP

NatHERS climate zone

#### **Accredited assessor**



E-LAB Consulting

E-LAB Consulting

alex.kobler@e-lab.com.au

0447343451

Accreditation No. DMN/16/1751

**Assessor Accrediting Organisation** 





#### **第単回 Verification**

To verify this certificate, scan the QR code or visit

https://www.fr5.com.au/QRCodeLanding?PublicId=QK1BWK65S5&GrpCert=1 When using either link, ensure you are visiting www.fr5.com.au.

## Summary of all dwellings

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating			
UTLV9G6UTD-07	A_1.01	9.0	15.6	24.6	8.1			
5053WA2IWX-06	A_1.02	4.6	7.6	12.2	9.2			
IT04NEZUHT-06	A_1.03	1.4	2.6	4.0	10			
HZMCYRP8AE-03	A_1.04	4.2	11.4	15.6	8.9			
9ERKP43NJV-03	A_2.01	10.9	15.3	26.2	7.9			
ADAF34R12S-06	A_2.02	7.8	8.0	15.8	8.9			
LDMRLHZV89-06	A_2.03	1.8	2.4	4.2	10			

Continued over

#### **National Construction Code (NCC) requirements**

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



# Summary of and links to all dwellings (continued)

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating			
8H5V0QRNN6-03	A_2.04	4.8	11.3	16.1	8.8			
EQOGKUHZL7-03	A_3.01	38.0	21.2	59.2	5.4			
UD54QXMVPT-04	A_3.02	9.8	5.9	15.7	8.9			
FSNTXJ266L-04	A_3.03	17.9	16.7	34.6	7.3			
AXBUWYRA5S-07	A_G.01	14.8	8.0	22.8	8.3			
70IY380VKH-07	A_G.02	9.5	6.7	16.2	8.8			
5C8HQUD2ER-07	A_G.03	6.0	2.0	8.0	9.6			
Z09F4GTLP3-04	A_G.04	13.9	8.0	21.9	8.3			
7113HMUDPO-04	B_1.01	1.7	11.2	12.9	9.1			
FCCUSNG9NC-04	B_1.02	3.5	10.0	13.5	9			
B1PZEAS83L-04	B_2.01	2.1	9.1	11.2	9.3			
DVEMYT928Z-07	B_2.02	3.5	7.4	10.9	9.3			
P2E5MNXMPS-03	B_3.01	12.1	16.3	28.4	7.8			
5IFBUXM020-03	B_3.02	13.0	13.9	26.9	7.9			
ZRGTUR3CV3-03	B_G.01	8.0	8.2	16.2	8.8			
UY5OK3969G-06	/5OK3969G-06 B_G.02		7.5	21.1	8.4			
NKXXV9KEPG-06	C_1.01	3.8	11.6	15.4	8.9			
CV9Q02PQST-06	C_1.02	0.8	11.5	12.3	9.2			
2FL9E5TH6Y-06	C_1.03	8.3	7.5	15.8	8.8			
V1ZOM0XQLV	C_1.04	17.4	22.6	40.0	6.9			
RII4F6MT1T-06	C_2.01	4.3	11.0	15.3	8.9			
1EABQ2N0P7-06	C_2.02	0.8	11.5	12.3	9.2			
2Z42MN2WX9-04	C_2.03	11.3	8.3	19.6	8.5			
6T3I2MVWJU-04	C_2.04	19.4	22.3	41.7	6.8			
PZWMK2NYME-03	C_3.01	17.1	16.8	33.9	7.4			
2HVY2RIVM5-03	C_3.02	5.5	16.2	21.7	8.4			
76Y52KLUYF-03	C_3.03	43.3	23.3	66.6	4.9			
0109SZT4T4-06	C_G.01	13.3	7.9	21.2	8.4			
I5UOFHBWE9-06	C_G.02	1.9	9.9	11.8	9.2			
E9JNWSB0TA-03	C_G.03	8.3	9.2	17.5	8.7			
Q3AHK9C0QZ-03	C_G.04	25.4	11.3	36.7	7.2			
OZD263WFYE-05	D_1.01	27.7	22.6	50.3	6.1			
MGEMB4S1HY-05	D_1.02	18.9	14.1	33.0	7.4			
BM8REGECIH-05	D_1.03	4.2	10.4	14.6	8.9			
VGY06O6RR3-05	D_1.04	2.6	8.2	10.8	9.3			
65CPYJYXFQ-05	D_1.05	2.4	9.4	11.8	9.2			
RLT1YC1WXZ-05	D_2.01	22.6	21.6	44.2	6.6			

Continued over



# Summary of and links to all dwellings (continued)

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating		
ZU7QSFROQX-05	D_2.02	12.8	15.0	27.8	7.8		
7BKO2FJT34-05	D_2.03	6.4	10.8	17.2	8.7		
SQ620JX7B4-05	D_2.04	3.2	8.4	11.6	9.2		
XK41EM8W6S-05	D_2.05	2.8	8.7	11.5	9.3		
1JGSSPBF9T-04	D_3.01	34.4	19.6	54.0	5.8		
SRX66UCUXB	D_3.02	24.2	12.7	36.9	7.2		
3H22HIXFZI-04	D_3.03	15.3	11.1	26.4	7.9		
RUNWAXHSJP-04	D_3.04	12.9	12.6	25.5	8		
IS8SBPRBU6-04	D_G.01	40.4	21.0	61.4	5.3		
Y37YAH6US4-04	D_G.02	10.6	9.0	19.6	8.5		
IT5TLGVSZ8-04	D_G.03	11.0	6.4	17.4	8.7		
Y9UCGMJVP7-04	D_G.04	12.9	3.6	16.5	8.8		
VRUHEJ9GLT-04	E_1.01	1.6	8.7	10.3	9.4		
EWRV98Y0JL-04	E_1.02	1.7	11.7	13.4	9.1		
JD5FRTLQ94-03	E_1.03	2.5	10.4	12.9	9.1		
0SQ1LKF99X-03	E_2.01	1.9	8.3	10.2	9.4		
AAEG4ZF2DL-03	E_2.02	1.5	10.9	12.4	9.2		
RMUQZSVOZU-03	E_2.03	2.8	9.1	11.9	9.2		
UQ4F4GNA31-03	E_3.01	8.2	11.8	20.0	8.5		
2Y1WKJ8ZK2-03	E_3.02	7.8	13.8	21.6	8.4		
OSNXMN79C2-03	E_3.03	9.9	13.0	22.9	8.3		
Y0JOZR2XMI-03	E_G.01	10.2	7.3	17.5	8.7		
TPSOT3V8FQ-03	E_G.02	14.1	6.7	20.8	8.4		
U6E7GPFUEQ-04	F_1.01	2.1	9.8	11.9	9.2		
YGXRACPM63-04	F_1.02	1.1	11.5	12.6	9.1		
QKMCI898ET-04	F_1.03	1.2	8.3	9.5	9.4		
193VI1WMIK-04	F_1.04	4.8	20.5	25.3	8.1		
MIT6UM1BNQ-04	F_1.05	18.1	8.2	26.3	7.9		
OJCMAJTBYH-04	F_2.01	2.5	9.2	11.7	9.2		
PGQUYYNCJJ-04	F_2.02	1.7	11.4	13.1	9.1		
PCEVQH0QS5-04	F_2.03	1.5	7.7	9.2	9.4		
G8UXFS7QU8-04	F_2.04	5.5	19.8	25.3	8.1		
HUXA4F29H5-04	F_2.05	19.2	7.3	26.5	7.9		
9Z2EBLEQ62-06	F_3.01	7.4	14.1	21.5	8.4		
TDT2BRV3OG-06	F_3.02	8.4	20.7	29.1	7.7		
16RKB4PE1L-06	F_3.03	40.7	20.6	61.3	5.3		

Continued over



# Summary of and links to all dwellings (continued)

Certificate number and link			Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating		
P1JX5RFQV4-06	F_3.04	34.1	11.0	45.1	6.4		
ORU1PEA49M-06	F_G.01	11.9	4.0	15.9	8.8		
T8UBDDHRCG-06	F_G.02	6.0	9.2	15.2	8.9		
59YUN1467T-06	F_G.03	4.3	4.7	9.0	9.4		
MFHU1KLZ56-06	F_G.04	8.2	19.6	27.8	7.9		
4VFO1QGHT2-06	F_G.05	30.2	6.1	36.3	7.2		
KYNP9O29OX-06	G_1.01	12.9	19.2	32.1	7.4		
KE7PAO1AJ3-03	G_1.02	11.3	24.5	35.8	7.2		
1RWGMK4K36-03	G_2.01	14.0	18.1	32.1	7.4		
UWNEJX11VN-03 G_2.02		12.2	23.6	35.8	7.2		
RMLHW0XZOM-03	G_3.01	29.7	20.2	49.9	6.1		
YG70B2BHDY-03	G_3.02	26.6	29.3	55.9	5.6		
TSGRDX02GM-03	G_G.01	25.1	7.8	32.9	7.4		
LXODKFD429-03	G_G.02	7.8	25.3	33.1	7.4		
Avera	ge	11.4	12.3	23.7	8.2		



#### **Explanatory notes**

#### About this report

This summary rating is the average rating of all NCC Class 2 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances, or energy production of solar panels. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

#### **Accredited Assessors**

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO). AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

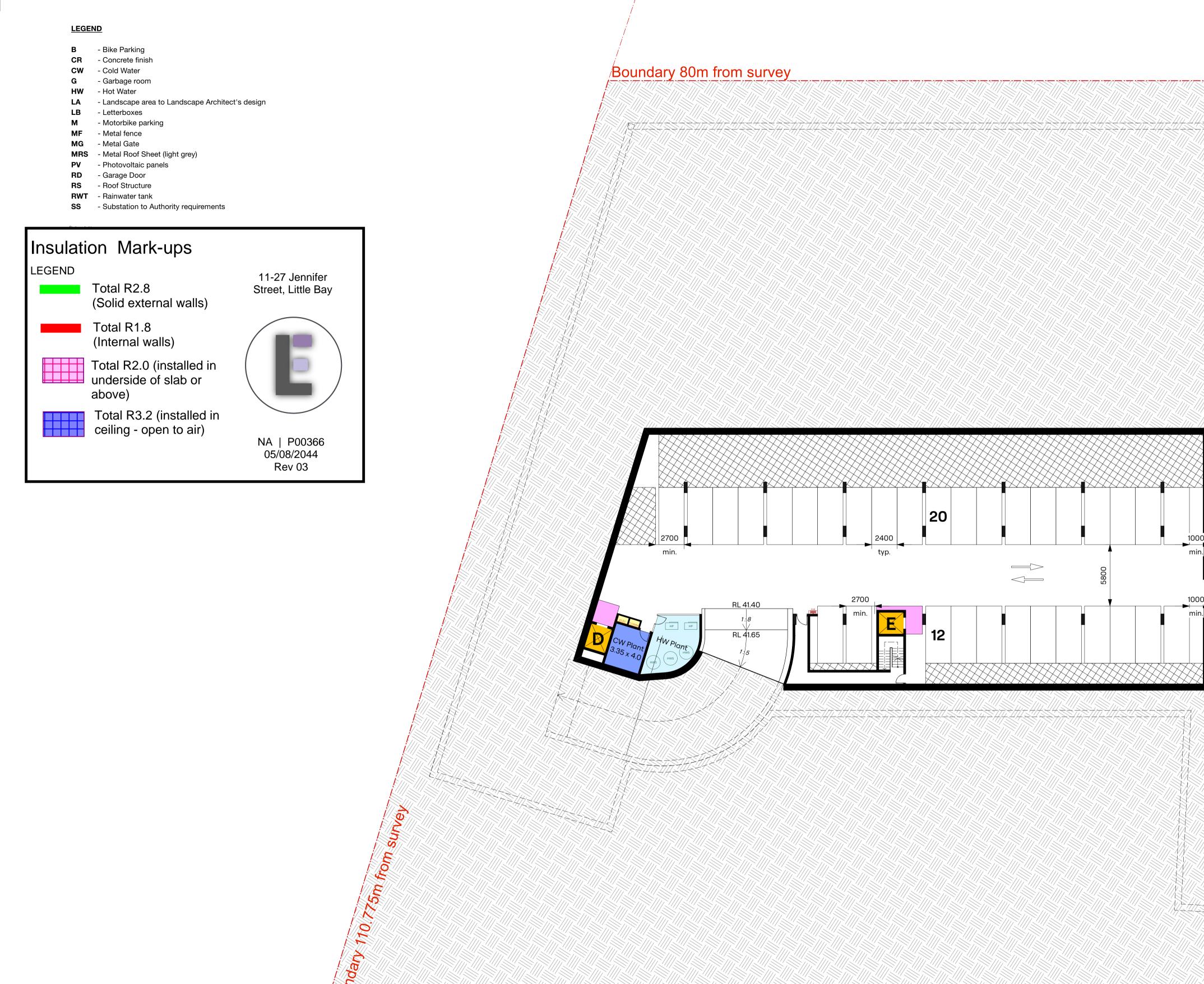
Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

#### Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content, input and creation of the NatHERS Certificate is by the assessor. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

# APPENDIX C INSULATION MARKUP





FOR DEVELOPEMENT APPLICATION ONLY -28/5/2024

Lower Basement Level Floor Plan
Scale: 1:200

- Use figured dimensions only Do not scale Comply with relevant Authorities' requirements - Comply with the Building Code of Australia
- Comply with all relevant Australian Standards
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										Architecture + Urban Projects	CLIENT Urban P
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PROJECT	DRAWING								
11 Jennifer St Little Bay NSW 2036	Lower Basement Level Floor Plan								
CLIENT Urban Property Group	DRAWN AR	снеске <b></b>	PLOT DATE 28/5/2024	јов NO <b>22.27</b>					
AMENDING DEVELOPMENT APPLICATION	scale 1:200		DRAWING NO A 2.108	REV <b>A</b>					

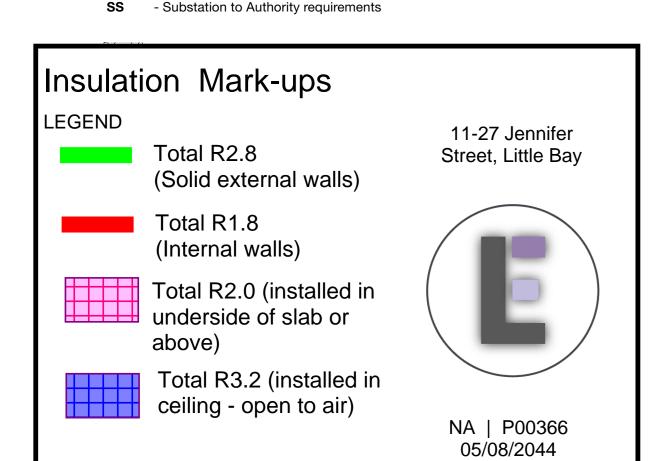
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## **LEGEND**

B - Bike Parking
CR - Concrete finish
CW - Cold Water
G - Garbage room
HW - Hot Water
LA - Landscape area to Landscape Architect's design
LB - Letterboxes
M - Motorbike parking
MF - Metal fence
MG - Metal Gate
MRS - Metal Roof Sheet (light grey)
PV - Photovoltaic panels
RD - Garage Door
RS - Roof Structure

Rainwater tank



Rev 03



FOR DEVELOPEMENT APPLICATION ONLY -28/5/2024

Basement Level Floor Plan

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9									Architecture + Urban Projects	CLIENT Urban Property Group	1	DRAWN	CHECKED	PLOT DATE	JOB NO
HYDRAULIC	ACCESS	TRAFFIC	BCA Mokanzia Graup	LANDSCAPE	ENVIRONMENTAL E-Lab Consulting	SURVEYOR RGM Property Surveys			Gadiqal Lands	organistopolis, aroup		AR	PT	28/5/2024	22.27
neuron www.neuron.build		Suit 701, 12-14 Marine Pde	Mckenzie Group L 6 189 Kent St	35 Wellington Street	Level 11, 10 Carrington St	Suite 402, 49 Queens Road			Level 4, 15 Foster St, Surry Hills NSW 2010 +61 2 9211 6276 www.hillthalis.com.au	PACKAGE	AMENDING	SCALE	l	DRAWING NO	REV
ed from Hill Thalis		Southport QLD 4215	Sydney 2000 NSW	Chippendale NSW 2008	Sydney NSW 2000	Five Dock NSW 2046			Philip Thalis ARB #6780 Sarah Hill ARB #5285 Nominated Architects	DEVEL	OPMENT APPLICATION	1:200	)	A 2.109	Α





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Gadigal Lands Level 4, 15 Foster St, Surry Hills NSW 2010 www.hillthalis.com.au Philip Thalis ARB #6780

Sarah Hill ARB #5285

22.27 SCALE DRAWING NO **AMENDING** A 2.111 **DEVELOPMENT APPLICATION** 





