

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 443074M

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 23 August 2012

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



Project summary		
Project name	EPPING PARK STAGE 3, BUILDING 11	
Street address	61 Mobbs Lane EPPING 2121	
Local Government Area	Parramatta City Council	
Plan type and plan number	deposited 129023	
Lot no.	2	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	47	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 21	Target 20

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 116 346 082

Description of project

Project address

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Project type

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No. of units in residential flat buildings	47
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	7952
Roof area (m ²)	894
Non-residential floor area (m ²)	0
Residential car spaces	65
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	371
Common area garden (m ²)	380
Area of indigenous or low water use species (m ²)	0

Assessor details

Assessor number	20101
Certificate number	72562635
Climate zone	56

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 21	Target 20

Description of project

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

Residential flat buildings - Building 11, 47 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
101	2	80.0	0.0	0	0
105	2	83.0	0.0	0	0
201	2	80.0	0.0	0	0
205	2	83.0	0.0	0	0
301	2	80.0	0.0	0	0
305	2	83.0	0.0	0	0
401	2	80.0	0.0	0	0
405	2	83.0	0.0	0	0
501	3	93.0	0.0	0	0
505	2	79.0	3.0	0	0
G02	2	79.0	2.0	0	0
G06	2	79.0	3.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
102	2	79.0	2.0	0	0
106	2	79.0	3.0	0	0
202	2	79.0	2.0	0	0
206	2	79.0	3.0	0	0
302	2	79.0	2.0	0	0
306	2	79.0	3.0	0	0
402	2	79.0	2.0	0	0
406	2	79.0	3.0	0	0
502	3	109.0	0.0	0	0
506	2	80.0	3.0	0	0
G03	1	56.0	3.0	0	0
G07	2	80.0	3.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
103	1	56.0	3.0	0	0
107	2	80.0	3.0	0	0
203	1	56.0	3.0	0	0
207	2	80.0	3.0	0	0
303	1	56.0	3.0	0	0
307	2	80.0	3.0	0	0
403	1	56.0	3.0	0	0
407	2	80.0	3.0	0	0
503	2	83.0	0.0	0	0
507	2	79.0	0.0	0	0
G04	2	77.0	0.0	0	0
G08	2	79.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	83.0	0.0	0	0
108	2	79.0	0.0	0	0
204	2	83.0	0.0	0	0
208	2	79.0	0.0	0	0
304	2	83.0	0.0	0	0
308	2	79.0	0.0	0	0
404	2	83.0	0.0	0	0
408	2	79.0	0.0	0	0
504	2	83.0	0.0	0	0
G01	2	80.0	0.0	0	0
G05	2	78.0	0.0	0	0

Description of project

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

Common areas of unit building - Building 11

Common area	Floor area (m ²)	Common area	Floor area (m ²)
Lift car (No. 1)	-	Hallways	424

Common areas of the development (non-building specific)

Common area	Floor area (m ²)	Common area	Floor area (m ²)	Common area	Floor area (m ²)
Indoor pool, spa & sauna (% of total)	65	Gym (% of total)	16	Car park (% of total)	1547
Garbage rooms (% of total)	98	Plant rooms (% of total)	21	Change Rooms (% of total)	11

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building 11

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Building 11

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
101, 102, 103, 104, 105, 106, 107, 108, 201, 202, 203, 204, 205, 206	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	-	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
207, 208, 301, 302, 303, 304, 305, 306, 307, 308, 401, 402, 403, 404, 405, 406, 407, 408, 501, 502, 503, 504, 505, 506, 507, G01, G02, G03, G04, G05, G06, G07, G08	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	2 star	3 star	-	-	-	-	-	-	-

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

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, not ducted	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
501, 502	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	3	0	no	yes	yes	no	0	no
103, 203, 303, 403, G03	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
101, 102, 104, 105, 106, 107, 108, 201, 202, 204, 205, 206, 207, 208, 301, 302, 304, 305, 306, 307, 308, 401, 402, 404, 405, 406, 407, 408, 503, 504, 505, 506, 507, G01, G02, G04, G05, G06, G07,	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
G08												

	Individual pool		Individual spa		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
101, 102, 103, 104, 105, 106, 107, 108, 201, 202, 203, 204, 205, 206	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	-	2 star	no	no

	Individual pool		Individual spa		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
207, 208, 301, 302, 303, 304, 305, 306, 307, 308, 401, 402, 403, 404, 405, 406, 407, 408, 501, 502, 503, 504, 505, 506, 507, G01, G02, G03, G04, G05, G06, G07, G08	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	2.5 star	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
204	16	16
501	65	19
502	50	17
503	29	15
505	50	26

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
506	65	24
507	66	22
G01	55	12
G02	65	13
G03	54	15
G04	29	14
G05	30	35
G07	54	18
G08	57	13
105, 405	26	17
205, 305	20	27
504, G06	39	19
104, 304, 404	18	13
101, 201, 301, 401	49	15
102, 202, 302, 402	63	16
103, 203, 303, 403	51	19
106, 206, 306, 406	38	25
107, 207, 307, 407	51	24
All other dwellings	54	17

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	3 star	3 star	3 star

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No. 1)	-	-	light-emitting diode	connected to lift call button	No
Hallways	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No

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

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	3 star	3 star	3 star

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 894 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 751 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site
Pool (No. 1)	Volume: 37 kLs	Location: Indoor pool, spa & sauna (% of total) Pool shaded: no	-

Central systems	Size	Configuration	Connection (to allow for...)
Spa (No. 1)	Volume: 2 kLs	Location: Indoor pool, spa & sauna (% of total) Spa shaded: no Spa cover: yes	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Indoor pool, spa & sauna (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No
Gym (% of total)	air conditioning system	time clock or BMS controlled	compact fluorescent	time clocks	No
Car park (% of total)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Garbage rooms (% of total)	ventilation exhaust only	-	fluorescent	motion sensors	No
Plant rooms (% of total)	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Change Rooms (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Spa (No. 1)	Heating system: electric heat pump	Pump controlled by timer: yes

Notes

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

Legend

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

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 443079M

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 23 August 2012

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



Planning &
Infrastructure

Project summary		
Project name	EPPING PARK STAGE 3, BUILDING 12	
Street address	61 Mobbs Lane EPPING 2121	
Local Government Area	Parramatta City Council	
Plan type and plan number	deposited 129023	
Lot no.	2	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	83	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 25	Target 20

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 116 346 082

Description of project

Project address

Project name	EPPING PARK STAGE 3, BUILDING 12
Street address	61 Mobbs Lane EPPING 2121
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 129023
Lot no.	2
Section no.	-

Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	83
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	7952
Roof area (m ²)	1419
Non-residential floor area (m ²)	0
Residential car spaces	115
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	571
Common area garden (m ²)	1180
Area of indigenous or low water use species (m ²)	0

Assessor details

Assessor number	20101
Certificate number	72562635
Climate zone	56

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 25	Target 20

Description of project

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

Residential flat buildings - Building 12, 83 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
101	2	81.0	0.0	0	0
105	2	83.0	0.0	0	0
110	1	58.0	0.0	0	0
114	2	82.0	7.0	0	0
203	2	81.0	6.0	0	0
207	2	83.0	0.0	0	0
212	2	80.0	0.0	0	0
301	2	81.0	0.0	0	0
305	2	83.0	0.0	0	0
310	1	58.0	0.0	0	0
314	2	82.0	7.0	0	0
403	2	81.0	6.0	0	0
407	2	83.0	0.0	0	0
412	2	80.0	0.0	0	0
501	2	81.0	0.0	0	0
505	2	83.0	0.0	0	0
510	1	58.0	0.0	0	0
514	2	80.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
102	2	76.0	7.0	0	0
106	2	88.0	0.0	0	0
111	2	79.0	0.0	0	0
115	2	81.0	0.0	0	0
204	2	79.0	0.0	0	0
209	2	79.0	0.0	0	0
213	2	80.0	6.0	0	0
302	2	76.0	7.0	0	0
306	2	88.0	0.0	0	0
311	2	79.0	0.0	0	0
315	2	81.0	0.0	0	0
404	2	79.0	0.0	0	0
409	2	79.0	0.0	0	0
413	2	80.0	6.0	0	0
502	2	76.0	7.0	0	0
506	2	88.0	0.0	0	0
511	2	79.0	0.0	0	0
G01	2	80.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
103	2	81.0	6.0	0	0
107	2	83.0	0.0	0	0
112	2	80.0	0.0	0	0
201	2	81.0	0.0	0	0
205	2	83.0	0.0	0	0
210	1	58.0	0.0	0	0
214	2	82.0	7.0	0	0
303	2	81.0	6.0	0	0
307	2	83.0	0.0	0	0
312	2	80.0	0.0	0	0
401	2	81.0	0.0	0	0
405	2	83.0	0.0	0	0
410	1	58.0	0.0	0	0
414	2	82.0	7.0	0	0
503	2	81.0	6.0	0	0
507	2	83.0	0.0	0	0
512	2	80.0	0.0	0	0
G02	2	76.0	7.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	79.0	0.0	0	0
109	2	79.0	0.0	0	0
113	2	80.0	6.0	0	0
202	2	76.0	7.0	0	0
206	2	88.0	0.0	0	0
211	2	79.0	0.0	0	0
215	2	81.0	0.0	0	0
304	2	79.0	0.0	0	0
309	2	79.0	0.0	0	0
313	2	80.0	6.0	0	0
402	2	76.0	7.0	0	0
406	2	88.0	0.0	0	0
411	2	79.0	0.0	0	0
415	2	81.0	0.0	0	0
504	2	79.0	0.0	0	0
509	2	79.0	0.0	0	0
513	3	101.0	7.0	0	0
G03	2	81.0	6.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G04	2	79.0	0.0	0	0
G09	2	79.0	0.0	0	0
G13	2	86.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G05	2	76.0	0.0	0	0
G10	1	58.0	0.0	0	0
G14	2	82.0	7.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G06	2	87.0	0.0	0	0
G11	2	70.0	0.0	0	0
G15	2	81.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G07	2	83.0	0.0	0	0
G12	2	80.0	0.0	0	0

Description of project

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

Common areas of unit building - Building 12

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

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

Common area	Floor area (m ²)
Hallways	418

Common areas of the development (non-building specific)

Common area	Floor area (m ²)
Indoor pool, spa & sauna (% of total)	65
Garbage rooms (% of total)	118.84

Common area	Floor area (m ²)
Gym (% of total)	16
Plant rooms (% of total)	21

Common area	Floor area (m ²)
Car park (% of total)	3547
Change Rooms (% of total)	11

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building 12

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Building 12

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
101, 102, 103, 104, 105, 106, 107, 109, 110, 111, 112, 113, 114, 115, 201, 202, 203, 204, 205, 206, 207, 209, 210, 211, 212	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	-	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
213, 214, 215, 301, 302, 303, 304, 305, 306, 307, 309, 310, 311, 312, 313, 314, 315, 401, 402, 403, 404, 405, 406, 407, 409, 410, 411, 412, 413, 414, 415, 501, 502, 503, 504, 505, 506, 507, 509, 510,	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	2 star	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
511, 512, 513, 514, G01, G02, G03, G04, G05, G06, G07, G09, G10, G11, G12, G13, G14, G15														

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

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, not ducted	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
110, 210, 310, 410, 510, G10	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
101, 102, 103, 104, 105, 106, 107, 109, 111, 112, 113, 114, 115, 201, 202, 203, 204, 205, 206, 207, 209, 211, 212, 213, 214, 215, 301, 302, 303, 304, 305, 306, 307, 309, 311, 312, 313, 314, 315,	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
401, 402, 403, 404, 405, 406, 407, 409, 411, 412, 413, 414, 415, 501, 502, 503, 504, 505, 506, 507, 509, 511, 512, 513, 514, G01, G02, G03, G04, G05, G06, G07, G09, G11, G12, G13, G14, G15												

	Individual pool		Individual spa		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
101, 102, 103, 104, 105, 106, 107, 109, 110, 111, 112, 113, 114, 115, 201, 202, 203, 204, 205, 206, 207, 209, 210, 211, 212	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	-	2 star	no	no

	Individual pool		Individual spa		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
213, 214, 215, 301, 302, 303, 304, 305, 306, 307, 309, 310, 311, 312, 313, 314, 315, 401, 402, 403, 404, 405, 406, 407, 409, 410, 411, 412, 413, 414, 415, 501, 502, 503, 504, 505, 506, 507,	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	2.5 star	2 star	no	no

	Individual pool		Individual spa		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
509, 510, 511, 512, 513, 514, G01, G02, G03, G04, G05, G06, G07, G09, G10, G11, G12, G13, G14, G15												

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

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

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
105	16	38
209	50	22
413	23	24
414	48	26
501	60	43
502	45	20
503	32	21
504	32	23
505	29	28
506	21	25
507	65	37
509	64	23
510	58	30

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
511	32	17
512	26	22
513	62	18
514	50	40
G01	58	31
G02	44	13
G03	30	15
G04	30	14
G05	27	14
G06	25	9
G07	60	26
G09	59	20
G10	60	25
G12	25	14
G14	49	19
G15	66	22
G11, G13	29	14
109, 309, 409	54	22
113, 213, 313	22	24
114, 214, 314	44	25
205, 305, 405	18	34
101, 201, 301, 401	41	46
102, 202, 302, 402	35	19
103, 203, 303, 403	21	21
104, 204, 304, 404	18	29
106, 206, 306, 406	11	23
107, 207, 307, 407	52	36

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
110, 210, 310, 410	47	32
111, 211, 311, 411	20	21
112, 212, 312, 412	15	29
All other dwellings	62	23

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
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
Hallways	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 7
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 7

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 894 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 1751 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site
Pool (No. 1)	Volume: 37 kLs	Location: Indoor pool, spa & sauna (% of total) Pool shaded: no	-

Central systems	Size	Configuration	Connection (to allow for...)
Spa (No. 1)	Volume: 2 kLs	Location: Indoor pool, spa & sauna (% of total) Spa shaded: no Spa cover: yes	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Indoor pool, spa & sauna (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No
Gym (% of total)	air conditioning system	time clock or BMS controlled	compact fluorescent	time clocks	No
Car park (% of total)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Garbage rooms (% of total)	ventilation exhaust only	-	fluorescent	motion sensors	No
Plant rooms (% of total)	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Change Rooms (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Spa (No. 1)	Heating system: electric heat pump	Pump controlled by timer: yes

Notes

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

Legend

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

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 443091M

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 23 August 2012

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



Planning &
Infrastructure

Project summary		
Project name	EPPING PARK STAGE 3, BUILDINGS 13 & 14	
Street address	61 Mobbs Lane EPPING 2121	
Local Government Area	Parramatta City Council	
Plan type and plan number	deposited 129023	
Lot no.	2	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	69	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 23	Target 20

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 116 346 082

Description of project

Project address

Project name	EPPING PARK STAGE 3, BUILDINGS 13 & 14
Street address	61 Mobbs Lane EPPING 2121
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 129023
Lot no.	2
Section no.	-

Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	69
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	7952
Roof area (m ²)	741
Non-residential floor area (m ²)	0
Residential car spaces	98
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	671
Common area garden (m ²)	1580
Area of indigenous or low water use species (m ²)	400

Assessor details

Assessor number	20101
Certificate number	72562635
Climate zone	56

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 23	Target 20

Description of project

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

Residential flat buildings - BuildingS 13 & 14, 69 dwellings, 7 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	86.0	0.0	0	0
108	3	109.0	0.0	0	0
116	2	80.0	0.0	0	0
120	2	90.0	0.0	0	0
206	2	80.0	0.0	0	0
215	2	80.0	0.0	0	0
219	2	80.0	0.0	0	0
306	3	109.0	0.0	0	0
316	2	80.0	0.0	0	0
404	2	80.0	0.0	0	0
408	2	80.0	0.0	0	0
418	2	79.0	0.0	0	0
506	2	80.0	0.0	0	0
G02	2	90.0	0.0	0	0
G07	2	78.0	0.0	0	0
G12	2	90.0	0.0	0	0
G17	3	101.0	0.0	0	0
G21	2	87.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
105	2	90.0	0.0	0	0
109	2	80.0	0.0	0	0
117	3	101.0	0.0	0	0
121	2	87.0	0.0	0	0
207	3	109.0	0.0	0	0
216	2	80.0	0.0	0	0
220	3	100.0	0.0	0	0
307	2	80.0	0.0	0	0
317	3	101.0	0.0	0	0
405	2	80.0	0.0	0	0
415	2	80.0	0.0	0	0
419	2	80.0	0.0	0	0
515	2	80.0	0.0	0	0
G04	2	87.0	0.0	0	0
G08	3	109.0	0.0	0	0
G13	2	88.0	0.0	0	0
G18	2	78.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
106	2	80.0	0.0	0	0
110	2	80.0	0.0	0	0
118	2	79.0	0.0	0	0
204	3	109.0	0.0	0	0
208	2	80.0	0.0	0	0
217	3	101.0	0.0	0	0
304	2	80.0	0.0	0	0
308	2	80.0	0.0	0	0
318	2	79.0	0.0	0	0
406	3	109.0	0.0	0	0
416	2	80.0	0.0	0	0
504	3	116.0	0.0	0	0
516	2	80.0	0.0	0	0
G05	2	90.0	0.0	0	0
G09	2	80.0	0.0	0	0
G15	2	80.0	0.0	0	0
G19	2	80.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
107	2	80.0	0.0	0	0
115	2	80.0	0.0	0	0
119	2	80.0	0.0	0	0
205	2	80.0	0.0	0	0
209	2	80.0	0.0	0	0
218	2	79.0	0.0	0	0
305	2	80.0	0.0	0	0
315	2	80.0	0.0	0	0
319	2	80.0	0.0	0	0
407	2	80.0	0.0	0	0
417	3	101.0	0.0	0	0
505	2	80.0	0.0	0	0
G01	2	87.0	0.0	0	0
G06	2	80.0	0.0	0	0
G10	2	80.0	0.0	0	0
G16	2	80.0	0.0	0	0
G20	2	90.0	0.0	0	0

Description of project

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

Common areas of unit building - BuildingS 13 & 14

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

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

Common area	Floor area (m²)
Hallways	766

Common areas of the development (non-building specific)

Common area	Floor area (m²)
Indoor pool, spa & sauna (% of total)	65
Garbage rooms (% of total)	160

Common area	Floor area (m²)
Gym (% of total)	16
Plant rooms (% of total)	50

Common area	Floor area (m²)
Car park (% of total)	3547
Change Rooms (% of total)	11

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - BuildingS 13 & 14

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - BuildingS 13 & 14

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
104, 105, 106, 107, 108, 109, 110, 115, 116, 117, 118, 119, 120, 121, 204, 205, 206, 207, 208, 209, 215	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	-	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
216, 217, 218, 219, 220, 304, 305, 306, 307, 308, 315, 316, 317, 318, 319, 404, 405, 406, 407, 408, 415, 416, 417, 418, 419, 504, 505, 506, 515, 516, G01, G02, G04, G05, G06, G07, G08, G09, G10, G12,	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	2 star	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
G13, G15, G16, G17, G18, G19, G20, G21														

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, not ducted	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
318, 407	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no
108, 117, 204, 207, 217, 220, 306, 317, 406, 417, 504, G08, G17	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 3 Star (new rating) (zoned)	1-phase airconditioning 3 Star (new rating) (zoned)	3 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
104, 105, 106, 107, 109, 110, 115, 116, 118, 119, 120, 121, 205, 206, 208, 209, 215, 216, 218, 219, 304, 305, 307, 308, 315, 316, 319, 404, 405, 408, 415, 416, 418, 419, 505, 506, 515, 516, G01,	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
G02, G04, G05, G06, G07, G09, G10, G12, G13, G15, G16, G18, G19, G20, G21												

	Individual pool		Individual spa		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
104, 105, 106, 107, 108, 109, 110, 115, 116, 117, 118, 119, 120, 121, 204, 205, 206, 207, 208, 209, 215	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	-	2 star	no	no

	Individual pool		Individual spa		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
216, 217, 218, 219, 220, 304, 305, 306, 307, 308, 315, 316, 317, 318, 319, 404, 405, 406, 407, 408, 415, 416, 417, 418, 419, 504, 505, 506, 515, 516, G01, G02, G04, G05, G06, G07, G08, G09,	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	2.5 star	2 star	no	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
G10, G12, G13, G15, G16, G17, G18, G19, G20, G21												

(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:	✓	✓	✓

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.			
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.	✓	✓	✓

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
104	66	30
105	66	43
120	61	23
121	49	21
204	43	39
220	46	25
504	56	19
G01	57	13
G02	62	26
G04	51	17
G05	52	33
G06	22	23
G07	18	17
G08	36	14
G09	45	22
G10	54	17
G12	54	14
G13	59	11
G15	45	17

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
G16	45	12
G17	38	11
G18	16	17
G19	20	16
G20	65	20
G21	50	19
505, 506	51	22
515, 516	54	16
106, 205, 304, 404	18	21
107, 206, 305, 405	12	17
108, 207, 306, 406	29	14
109, 208, 307, 407	38	22
110, 209, 308, 408	42	16
115, 215, 315, 415	40	15
116, 216, 316, 416	40	14
117, 217, 317, 417	33	10
118, 218, 318, 418	11	16
All other dwellings	18	14

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
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
Hallways	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 7
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 7

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 741 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 2251 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site
Pool (No. 1)	Volume: 37 kLs	Location: Indoor pool, spa & sauna (% of total) Pool shaded: no	-

Central systems	Size	Configuration	Connection (to allow for...)
Spa (No. 1)	Volume: 2 kLs	Location: Indoor pool, spa & sauna (% of total) Spa shaded: no Spa cover: yes	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Indoor pool, spa & sauna (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No
Gym (% of total)	air conditioning system	time clock or BMS controlled	compact fluorescent	time clocks	No
Car park (% of total)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Garbage rooms (% of total)	ventilation exhaust only	-	fluorescent	manual on / manual off	No
Plant rooms (% of total)	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Change Rooms (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Spa (No. 1)	Heating system: electric heat pump	Pump controlled by timer: yes

Notes

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

Legend

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

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 443095M

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 23 August 2012

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



Project summary		
Project name	EPPING PARK STAGE 3, BUILDINGS 15 & 16	
Street address	61 Mobbs Lane EPPING 2121	
Local Government Area	Parramatta City Council	
Plan type and plan number	deposited 129023	
Lot no.	2	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	84	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 23	Target 20

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 116 346 082

Description of project

Project address

Project name	EPPING PARK STAGE 3, BUILDINGS 15 & 16
Street address	61 Mobbs Lane EPPING 2121
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 129023
Lot no.	2
Section no.	-

Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	84
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	7952
Roof area (m ²)	887
Non-residential floor area (m ²)	0
Residential car spaces	117
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	671
Common area garden (m ²)	1580
Area of indigenous or low water use species (m ²)	400

Assessor details

Assessor number	20101
Certificate number	72562635
Climate zone	56

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 23	Target 20

Description of project

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

Residential flat buildings - Buildings 15 & 16, 84 dwellings, 7 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
107	2	81.0	0.0	0	0
111	2	83.0	0.0	0	0
116	1	62.0	0.0	0	0
120	2	82.0	7.0	0	0
209	2	81.0	6.0	0	0
213	2	83.0	0.0	0	0
218	2	80.0	0.0	0	0
307	2	81.0	0.0	0	0
311	2	83.0	0.0	0	0
316	1	62.0	0.0	0	0
320	2	82.0	7.0	0	0
409	2	81.0	6.0	0	0
413	2	83.0	0.0	0	0
418	2	80.0	0.0	0	0
507	2	88.0	0.0	0	0
515	3	92.0	0.0	0	0
G05	2	87.0	0.0	0	0
G10	1	56.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
108	2	76.0	7.0	0	0
112	2	88.0	0.0	0	0
117	2	79.0	0.0	0	0
121	2	81.0	0.0	0	0
210	2	79.0	0.0	0	0
215	2	79.0	0.0	0	0
219	2	80.0	6.0	0	0
308	2	76.0	7.0	0	0
312	2	88.0	0.0	0	0
317	2	79.0	0.0	0	0
321	2	81.0	0.0	0	0
410	2	79.0	0.0	0	0
415	2	79.0	0.0	0	0
419	2	80.0	6.0	0	0
508	2	79.0	0.0	0	0
516	2	80.0	0.0	0	0
G07	2	81.0	0.0	0	0
G11	2	83.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
109	2	81.0	6.0	0	0
113	2	83.0	0.0	0	0
118	2	80.0	0.0	0	0
207	2	81.0	0.0	0	0
211	2	83.0	0.0	0	0
216	1	62.0	0.0	0	0
220	2	82.0	7.0	0	0
309	2	81.0	6.0	0	0
313	2	83.0	0.0	0	0
318	2	80.0	0.0	0	0
407	2	82.0	0.0	0	0
411	2	83.0	0.0	0	0
416	1	62.0	0.0	0	0
420	2	82.0	7.0	0	0
509	2	83.0	0.0	0	0
517	2	83.0	7.0	0	0
G08	2	76.0	7.0	0	0
G12	2	88.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
110	2	79.0	0.0	0	0
115	2	79.0	0.0	0	0
119	2	80.0	6.0	0	0
208	2	76.0	7.0	0	0
212	2	88.0	0.0	0	0
217	2	79.0	0.0	0	0
221	2	81.0	0.0	0	0
310	2	79.0	0.0	0	0
315	2	79.0	0.0	0	0
319	2	80.0	6.0	0	0
408	2	76.0	7.0	0	0
412	2	88.0	0.0	0	0
417	2	79.0	0.0	0	0
421	2	81.0	0.0	0	0
510	3	104.0	8.0	0	0
G04	2	87.0	0.0	0	0
G09	2	81.0	6.0	0	0
G13	2	83.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G15	2	79.0	0.0	0	0
G19	2	86.0	7.0	0	0
LG01	2	87.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G16	1	62.0	0.0	0	0
G20	2	75.0	0.0	0	0
LG02	2	87.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G17	3	89.0	0.0	0	0
G26	2	87.0	0.0	0	0
LG23	2	87.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
G18	3	104.0	0.0	0	0
G27	2	87.0	0.0	0	0
LG24	2	87.0	0.0	0	0

Description of project

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

Common areas of unit building - Buildings 15 & 16

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

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

Common area	Floor area (m ²)
Hallways	410

Common areas of the development (non-building specific)

Common area	Floor area (m ²)
Indoor pool, spa & sauna (% of total)	65
Garbage rooms (% of total)	118

Common area	Floor area (m ²)
Gym (% of total)	16
Plant rooms (% of total)	50

Common area	Floor area (m ²)
Car park (% of total)	5547
Change Rooms (% of total)	11

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Buildings 15 & 16

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Buildings 15 & 16

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
107, 108, 109, 110, 111, 112, 113, 115, 116, 117, 118, 119, 120, 121, 207, 208, 209, 210, 211, 212, 213, 215, 216, 217, 218	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	-	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
219, 220, 221, 307, 308, 309, 310, 311, 312, 313, 315, 316, 317, 318, 319, 320, 321, 407, 408, 409, 410, 411, 412, 413, 415, 416, 417, 418, 419, 420, 421, 507, 508, 509, 510, 515, 516, 517, G04, G05,	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	2 star	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
G07, G08, G09, G10, G11, G12, G13, G15, G16, G17, G18, G19, G20, G26, G27, LG01, LG02, LG23, LG24														

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, not ducted	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
510, G18	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	3 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	1	no
515, G17	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	3 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no
116, 216, 316, 416, G10, G16	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no
517, G05, G26, G27, LG01, LG02, LG23, LG24	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	yes

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
108, 109, 119, 120, 208, 209, 219, 220, 308, 309, 319, 320, 408, 409, 419, 420, G08, G09, G19	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	1	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
107, 110, 111, 112, 113, 115, 117, 118, 121, 207, 210, 211, 212, 213, 215, 217, 218, 221, 307, 310, 311, 312, 313, 315, 317, 318, 321, 407, 410, 411, 412, 413, 415, 417, 418, 421, 507, 508, 509,	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
516, G04, G07, G11, G12, G13, G15, G20												

	Individual pool		Individual spa		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
107, 108, 109, 110, 111, 112, 113, 115, 116, 117, 118, 119, 120, 121, 207, 208, 209, 210, 211, 212, 213, 215, 216, 217, 218	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	-	2 star	no	no

	Individual pool		Individual spa		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
219, 220, 221, 307, 308, 309, 310, 311, 312, 313, 315, 316, 317, 318, 319, 320, 321, 407, 408, 409, 410, 411, 412, 413, 415, 416, 417, 418, 419, 420, 421, 507, 508, 509, 510, 515, 516, 517,	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	2.5 star	2 star	no	no

	Individual pool		Individual spa		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
G04, G05, G07, G08, G09, G10, G11, G12, G13, G15, G16, G17, G18, G19, G20, G26, G27, LG01, LG02, LG23, LG24												

(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.			

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

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
407	66	25
408	65	17
413	66	22
415	65	26
416	51	21
420	40	22
421	63	31
507	62	23
508	23	19
509	22	20
510	57	17

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
515	53	23
516	38	32
517	54	27
G04	65	25
G05	61	43
G07	66	21
G08	59	14
G09	45	12
G10	24	27
G11	26	17
G12	22	15
G13	65	20
G15	66	23
G16	49	19
G17	34	24
G18	38	33
G19	35	21
G20	58	23
G26	46	53
G27	51	24
LG01	65	12
LG02	51	35
LG23	50	30
LG24	55	13
107, 207, 307	50	21
108, 208, 308	51	15
113, 213, 313	57	22

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
115, 215, 315	56	23
116, 216, 316	34	18
120, 220, 320	32	22
121, 221, 321	61	28
109, 209, 309, 409	31	15
112, 212, 312, 412	13	16
117, 217, 317, 417	29	24
118, 218, 318, 418	25	31
119, 219, 319, 419	25	26
All other dwellings	14	18

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
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
Hallways	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 7
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 7

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 887 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 2251 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site
Pool (No. 1)	Volume: 37 kLs	Location: Indoor pool, spa & sauna (% of total) Pool shaded: no	-

Central systems	Size	Configuration	Connection (to allow for...)
Spa (No. 1)	Volume: 2 kLs	Location: Indoor pool, spa & sauna (% of total) Spa shaded: no Spa cover: yes	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Indoor pool, spa & sauna (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No
Gym (% of total)	air conditioning system	time clock or BMS controlled	compact fluorescent	time clocks	No
Car park (% of total)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Garbage rooms (% of total)	ventilation exhaust only	-	fluorescent	manual on / manual off	No
Plant rooms (% of total)	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Change Rooms (% of total)	ventilation (supply + exhaust)	time clock or BMS controlled	compact fluorescent	time clocks	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Spa (No. 1)	Heating system: electric heat pump	Pump controlled by timer: yes
Sauna (No. 1)	Heating source: gas	Efficiency measure: manual on / timer off

Notes

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

Legend

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

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 443089M

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 29/06/2009 published by the Department of Planning. This document is available at www.basix.nsw.gov.au

Director-General

Date of issue: Thursday, 23 August 2012

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



Project summary		
Project name	EPPING PARK STAGE 3, BUILDING 17	
Street address	61 Mobbs Lane EPPING 2121	
Local Government Area	Parramatta City Council	
Plan type and plan number	deposited 129023	
Lot no.	2	
Section no.	-	
No. of residential flat buildings	1	
No. of units in residential flat buildings	42	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	✔ 40	Target 40
Thermal Comfort	✔ Pass	Target Pass
Energy	✔ 30	Target 30

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82 116 346 082

Description of project

Project address

Project name	EPPING PARK STAGE 3, BUILDING 17
Street address	61 Mobbs Lane EPPING 2121
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 129023
Lot no.	2
Section no.	-

Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	42
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m ²)	7952
Roof area (m ²)	713
Non-residential floor area (m ²)	0
Residential car spaces	56
Non-residential car spaces	0

Common area landscape

Common area lawn (m ²)	138
Common area garden (m ²)	868
Area of indigenous or low water use species (m ²)	0

Assessor details

Assessor number	20101
Certificate number	72562635
Climate zone	56

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 30	Target 30

Description of project

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

Residential flat buildings - Building 17, 42 dwellings, 5 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
101	2	80.0	0.0	0	0
105	2	80.0	6.0	0	0
110	1	66.0	0.0	0	0
201	2	80.0	0.0	0	0
205	2	80.0	6.0	0	0
210	1	66.0	0.0	0	0
301	2	80.0	0.0	0	0
309	1	66.0	0.0	0	0
G03	2	72.0	0.0	0	0
G08	2	78.0	0.0	0	0
G12	2	78.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
102	2	84.0	0.0	0	0
106	2	91.0	0.0	0	0
111	2	79.0	0.0	0	0
202	2	84.0	0.0	0	0
206	2	91.0	0.0	0	0
211	2	79.0	0.0	0	0
302	1	63.0	0.0	0	0
310	2	86.0	0.0	0	0
G04	2	76.0	7.0	0	0
G09	1	66.0	0.0	0	0
G13	2	86.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
103	2	81.0	0.0	0	0
108	2	78.0	0.0	0	0
112	2	84.0	0.0	0	0
203	2	81.0	0.0	0	0
208	2	78.0	0.0	0	0
212	2	84.0	0.0	0	0
303	2	91.0	0.0	0	0
G01	2	80.0	0.0	0	0
G05	2	80.0	6.0	0	0
G10	1	66.0	0.0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	76.0	7.0	0	0
109	1	66.0	0.0	0	0
113	2	86.0	0.0	0	0
204	2	76.0	7.0	0	0
209	1	66.0	0.0	0	0
213	2	86.0	0.0	0	0
308	2	78.0	0.0	0	0
G02	2	84.0	0.0	0	0
G06	2	91.0	0.0	0	0
G11	2	79.0	0.0	0	0

Description of project

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

Common areas of unit building - Building 17

Common area	Floor area (m ²)
Car park	2127.45
Garbage rooms	97.63

Common area	Floor area (m ²)
Lift car (No. 1)	-
Plant rooms	63.7

Common area	Floor area (m ²)
Lift car (No. 2)	-
Hallways	244.83

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building 17

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

2. Commitments for multi-dwelling houses

3. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

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

1. Commitments for Residential flat buildings - Building 17

(a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
310, G01, G02, G03, G04, G05, G06, G08, G09, G10, G11, G12, G13	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	-	3 star	-	-	-	-	-	-	-

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
101, 102, 103, 104, 105, 106, 108, 109, 110, 111, 112, 113, 201, 202, 203, 204, 205, 206, 208, 209, 210, 211, 212, 213, 301, 302, 303, 308, 309	3 star (> 7.5 but <= 9 L/min)	4 star	4 star	4 star	no	2 star	3 star	-	-	-	-	-	-	-

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, not ducted	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 dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
302	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	yes
309	(zoned)	(zoned)	(zoned)	(zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no
104, 105, 204, 205, G04, G05	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	1	no
109, 110, 209, 210, G09, G10	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
101, 102, 103, 106, 108, 111, 112, 113, 201, 202, 203, 206, 208, 211, 212, 213, 301, 303, 308, 310, G01, G02, G03, G06, G08, G11, G12, G13	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	1-phase airconditioning 2.5 Star (new rating) (zoned)	2 (dedicated)	0	no	yes (dedicated)	yes (dedicated)	no	0	no

	Individual pool		Individual spa		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
310, G01, G02, G03, G04, G05, G06, G08, G09, G10, G11, G12, G13	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	-	2 star	yes	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
101, 102, 103, 104, 105, 106, 108, 109, 110, 111, 112, 113, 201, 202, 203, 204, 205, 206, 208, 209, 210, 211, 212, 213, 301, 302, 303, 308, 309	-	-	-	-	gas cooktop & electric oven	-	yes	3 star	2.5 star	2 star	yes	no

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

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
102	42	20
103	48	22
104	46	20
105	22	17
110	56	26
111	31	16
112	42	18
202	54	23

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
203	55	26
204	58	23
205	23	19
210	65	29
211	47	21
212	50	23
301	22	21
302	60	40
303	31	29
308	34	29
309	44	22
310	33	24
G01	23	15
G02	56	17
G03	58	22
G04	62	16
G05	31	15
G06	32	20
G08	33	22
G09	38	21
G10	47	22
G11	45	16
G12	49	16
G13	36	17
101, 201	13	16
106, 206	24	24
108, 208	28	24

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
109, 209	29	23
All other dwellings	28	19

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	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
Garbage rooms	ventilation exhaust only	-	fluorescent	motion sensors	No
Plant rooms	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Hallways	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No

Central energy systems	Type	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

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

(b) Common areas and central systems/facilities

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 7.5 but ≤ 9 L/min)	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	10000	To collect run-off from at least: - 713 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 1006 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site

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

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 5 peak kW

Notes

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

Legend

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