

MERITON APARTMENTS

Proposed new residential buildings

To be built at:

330 Church Street, PARRAMATTA

BASIX Assessment

Issue No.	Description	Author	Date
No. 01	Assessment and certification	TC/DH	18/05/11
No. 02	Revised assessment and certification due to increased height of proposal	MF/TMC/DA	30/06/13
No. 03	Change to floor layouts and shading	TMC/DA	21/03/14



This report has been prepared by Efficient Living Pty Ltd on behalf of our client Meriton Apartments. Efficient Living prepares all reports in accordance with the BASIX thermal comfort protocols and is backed by professional indemnity insurance. This report takes into account our client's instructions and preferred building inclusions.

PREPARED FOR :	PREPARED BY :
<p>Meriton Apartments Pty. Ltd. Level 11/528 Kent Street Sydney NSW 2000</p> <p>Contact : Phone : (02) 9287 2888 Fax : (02) 9287 2777</p>	<p>Efficient Living 13/13 Lagoon St, Narrabeen NSW, 2101</p> <p>Email: tracey@efficientliving.com.au Phone : (02) 9970 6181 Fax : (02) 9944 0293</p>

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BASIX CERTIFICATES



INTRODUCTION

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 330 Church St, PARRAMATTA.

Heating and cooling loads for the development have been determined using BERS thermal simulation software. The report is based on the architectural drawings provided by Meriton. For further details, refer to the individual BASIX certificates and Efficient Living Inclusions Summary respectively.

ANALYSIS

The BASIX assessment is divided into three sections, each independently measuring the efficiency of the development. These are Water, Thermal Comfort and Energy.

BASIX requires a minimum target of 40% for the Water section. A BERS pass or fail is required for the thermal comfort section and a minimum required target of 20% for the energy section.

WATER

The proposed development has achieved the BASIX Water target of 40%.

The water usage of the development is calculated based on the number and efficiency of permanent fixtures and appliances such as: taps, showerheads and toilets, the dish washer and clothes washing machine.

The size of the rain tank and number of connections has a huge impact on your water score as does the area of gardens and lawns and whether or not low-water plant species are incorporated.

THERMAL COMFORT

Thermal Comfort targets are set by the department of planning in the form of heating and cooling caps. The buildings thermal physics is measured using BERS thermal performance assessment tools. This equates an expected level of energy consumption to heat and cool each dwelling per annum expressed in MJ (mega joules) per square meter of floor area.

Each unit has individual heating and cooling caps and a weighted average heating and cooling load for the whole development. The weighted average caps are a lot harder to achieve than the individual unit caps.

ENERGY

The proposed development has achieved the energy target of 20% to pass this section.

The energy usage of the development is calculated based on the efficiency of fixed appliances that will be used. This includes the air conditioning system, hot water system, lighting, exhaust fans and the cook top, oven, and clothes drying facilities.

Inclusions Summary

Riverfront Apartments, West Tower

All units have reached the targets as set for new dwellings in NSW.

The inclusions as outlined in the table below have been incorporated in each unit to allow them to reach their environmental sustainability targets.

Construction general	
Glazing	Doors / windows: Aluminium framed single glazed Low-e, grey tint to selected units detailed in the thermal comfort results below; U-Value: 4.68 SHGC: 0.39 Grey tint only to all other units; U-Value: 6.83 SHGC: 0.54
Roof / ceiling insulation	Roof: Light colored, concrete slab roof (SA <0.475) Ceiling: Plasterboard R2.0 insulation to units with roof over.
Wall / floor insulation	External Wall: Pre-cast concrete R1.0 to units to selected units detailed in the thermal comfort results below No insulation to all other units Internal walls within units: Plasterboard on studs - no insulation Inter-tenancy walls: Hebel - no insulation Floors: Concrete R1.0 to open sub-floor of units detailed in the thermal comfort results below No insulation to all other units
BASIX Water inclusions – Score 40/40	
Fixtures (within units)	Showerheads: 3 star (>7.5 but <=9 L/min) Toilets: 4 star Kitchen taps: 4 star Bathroom taps: 4 star
Fixtures (within common areas)	Showerheads: 3 star (>7.5 but <=9 L/min) Toilets: 4 star Bathroom taps: 4 star
Appliances (within units)	Dishwashers: 3 star Clothes washers: At least 60% of all occupants are expected to provide clothes washing machines with a water efficiency of 2 stars or greater.
Central rainwater storage	Tank size: 20 000L Collect run-off from: 350m ² of roof areas and 216m ² of impervious area. Connected to: Irrigation of landscaping
Pool / Spa / Sauna	Indoor pool: Volume – 165kL

BASIX Energy inclusions – Score Pass 20/20	
Central hot water system	Central gas-fired boiler with R1.0 (~38mm) insulation to the ring main and supply risers
Lift motors	All lifts to have gearless traction with VVVF motor.
Appliances & other efficiency measures (within units)	Gas cooktop & electric oven Dishwashers: 3 star Clothes dryers: 2 star Fridges: 2 star Well vented fridge spaces
Heating & cooling (within units)	All units to have individual single phase reverse cycle air conditioning: All 1 bedroom units: 2.0 star – Cooling and 2.5 star - Heating (zoned) [new rating] All 2 bedroom units: 2.0 star – Cooling and 2.5 star - Heating (zoned) [new rating] All 3 bedroom units: 2.0 star – Cooling and 3.0 star - Heating (zoned) [new rating]
Artificial lighting (within units)	Fluorescent lighting to be provided to all bedrooms, bathrooms and laundries. Dedicated fittings to be provided to bedrooms only
Ventilation systems (within units)	Bathroom ventilation: Individual fan, ducted to roof or façade – manual on/manual off Laundry ventilation: Individual fan, ducted to roof or façade – manual on/manual off Kitchen ventilation: Individual fan, not ducted roof– manual switch on/off
Artificial lighting (within common areas)	Car park area: fluorescent – zoned switching with motion sensor Lifts: light emitting diode – connected to lift call button Garbage rooms: fluorescent – manual on / manual off Plant areas: fluorescent – manual on / manual off Rooftop plant areas: fluorescent – manual on / manual off Services: fluorescent – manual on / manual off Pool toilets: compact fluorescent – manual on / manual off Mail: compact fluorescent – manual on / manual off Lobbies: compact fluorescent – zoned switching with motion sensor Hallways: compact fluorescent – zoned switching with motion sensor Indoor pool & sauna: compact fluorescent – manual on / off Gym: compact fluorescent – manual on / off
Ventilation systems (within common areas)	Car park area: ventilation (supply + exhaust) - carbon monoxide monitor + VSD fan Garbage rooms: ventilation exhaust only – No efficiency measure required Plant areas: ventilation supply only – interlocked to light Rooftop plant areas: no mechanical ventilation Services: ventilation supply only – interlocked to light Pool toilets: ventilation exhaust only – interlocked to light Mail: ventilation supply only – timed clock or BMS controlled Lobbies: ventilation supply only – none i.e. continuous Podium lobbies and Hallways: ventilation supply only – timed clock or BMS controlled Indoor pool & sauna: ventilation exhaust only – time clock or BMS controlled Gym: air conditioned – time clock or BMS controlled
Pool / Spa / Sauna heating systems	Pool – electric heat pump heating - pump controlled by a timer Sauna – Gas – manual on/timer off
Alternative Energy	Photovoltaic system - 250 peak kW



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

Issued in accordance with **BASIX** Thermal Comfort Simulation Method



Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473	
Thermal performance specifications									Page 1 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
P1-01	2	75	0	65	48	3.0	1	Yes	R1.0 to external walls + Low-e throughout + R1.0 subfloor	
P1-02	2	96	0	56	28	4.0	0	No	R1.0 to external walls + Low-e throughout + R1.0 subfloor	
P1-03	2	87	0	50	16	5.0	0	Yes	R1.0 to external walls + Low-e throughout + R1.0 subfloor	
P1-04	1	64	0	66	22	3.5	0	Yes	R1.0 to external walls & R1.0 to open floor	
P1-05	1	47	4	53	31	4.0	1	Yes	R1.0 to external walls & Low-E throughout & R1.0 to subfloor	
P1-06	2	75	0	65	16	4.0	0	No	R1.0 to open floor & Low-E throughout	
P1-07	2	78	5	65	39	3.0	1	Yes	R1.0 to external walls + Low-e throughout + R1.0 subfloor	
P1-08	2	78	5	66	38	3.0	1	Yes	R1.0 to external walls + Low-e throughout + R1.0 subfloor	
P2-01	2	75	0	49	53	3.5	1	Yes	R1.0 to external walls + Low-e throughout	
P2-02	2	96	0	62	41	3.5	0	No		
P2-03	2	87	0	66	24	3.5	0	Yes		
P2-04	1	64	0	52	23	4.5	0	Yes		
P2-05	1	47	4	55	26	4.0	1	Yes	R1.0 to external walls & Low-E throughout	
P2-06	2	75	0	65	14	4.0	0	No	Low-E throughout	
P2-07	2	78	5	64	31	3.5	1	Yes	R1.0 to external walls & Low-E throughout	
P3-08	2	78	5	66	32	3.5	1	Yes	R1.0 to external walls & Low-E throughout	
P3-01	2	75	0	66	30	3.5	1	Yes	R1.0 to external walls & Low-E throughout	
P3-02	2	96	0	66	43	3.0	0	No	R1.0 to external walls	
P3-03	2	87	0	60	18	4.0	0	Yes	R1.0 to external walls & Low-E throughout	
P3-04	1	64	0	57	21	4.0	0	Yes	R1.0 to external walls	
P3-05	1	47	4	59	24	4.0	1	Yes	R1.0 to external walls & Low-E throughout	
P3-06	2	75	0	64	17	4.0	0	No	Low-E throughout	



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

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Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473
Thermal performance specifications									Page 2 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
P3-07	2	78	5	66	44	3.0	1	Yes	R1.0 to external walls & Low-E throughout
P3-08	2	78	5	66	42	2.5	1	Yes	R1.0 to external walls & Low-E throughout
4-01	2	93	0	46	28	4.5	1	No	R1.0 to external walls & low-e glazing throughout
4-04	2	86	0	66	52	3.0	0	Yes	R1.0 to external walls
4-05	2	83	0	61	11	4.5	0	No	R1.0 to external walls
4-07	2	81	0	55	31	4.0	0	No	
4-08	2	74	5	60	27	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
4-09	2	83	0	66	23	3.5	1	No	R1.0 to external walls & Low-E throughout
4-12	1	51	0	46	21	4.5	0	No	Low-e glazing throughout
4-13	1	53	0	56	28	4.0	0	Yes	R1.0 to external walls
5-01	2	93	0	37	29	4.5	1	No	R1.0 to external walls & low-e glazing throughout
5-04	2	86	0	52	54	3.0	0	Yes	R1.0 to external walls
5-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls
5-07	2	84	0	34	37	4.5	0	No	
5-08	2	74	5	56	25	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
5-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen
5-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout
5-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls
6-01	2	87	0	45	30	4.0	1	No	R1.0 to external walls & low-e glazing throughout
6-04	2	86	0	53	55	3.0	0	Yes	R1.0 to external walls
6-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls
6-07	2	84	0	34	37	4.5	0	No	
6-08	2	74	5	56	25	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
6-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen
6-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout
6-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

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Certificate # 114730311				Issued: 21/03/14			Accreditation #		VIC/BDAV/12/1473	
Thermal performance specifications									Page 3 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
7-01	2	87	0	45	30	4.0	1	No	R1.0 to external walls & low-e glazing throughout	
7-04	2	86	0	53	53	3.0	0	Yes	R1.0 to external walls	
7-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls	
7-07	2	84	0	35	36	4.5	0	No		
7-08	2	74	5	56	25	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
7-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen	
7-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout	
7-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls	
8-01	2	93	0	37	29	4.5	1	No	R1.0 to external walls & low-e glazing throughout	
8-04	2	86	0	52	54	3.0	0	Yes	R1.0 to external walls	
8-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls	
8-07	2	84	0	35	36	4.5	0	No	R1.0 to external walls & Low-E throughout	
8-08	2	80	5	47	54	3.5	1	No	R1.0 to external walls	
8-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen	
8-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout	
8-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls	
9-01	2	93	0	37	29	4.5	1	No	R1.0 to external walls & low-e glazing throughout	
9-04	2	86	0	54	52	3.0	0	Yes	R1.0 to external walls	
9-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls	
9-07	2	84	0	34	40	4.5	0	No		
9-08	2	74	5	56	25	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
9-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen	
9-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout	
9-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls	
10-01	2	93	0	37	29	4.5	1	No	R1.0 to external walls & low-e glazing throughout	
10-04	2	86	0	66	51	3.0	0	Yes		



Thermal Comfort Results

Riverfront Apartments

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Certificate # 14730311				Issued: 21/03/14			Accreditation #		VIC/BDAV/12/1473
Thermal performance specifications									Page 4 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
10-05	2	83	0	45	12	5.5	0	No	R1.0 to external walls
10-07	2	84	0	35	35	4.5	0	No	
10-08	2	74	5	56	25	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
10-09	2	90	0	64	26	3.5	1	No	R1.0 to external walls & Low-E Living/kitchen
10-12	1	51	0	24	17	6.5	0	No	Low-e glazing throughout
10-13	1	53	0	44	28	4.5	0	Yes	R1.0 to external walls
11-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
11-04	2	86	0	54	49	3.5	0	Yes	R1.0 to external walls
11-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
11-07	2	84	0	36	35	4.5	0	No	
11-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
11-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
11-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
11-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
12-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
12-04	2	86	0	54	49	3.5	0	Yes	R1.0 to external walls
12-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
12-07	2	84	0	36	34	4.5	0	No	
12-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
12-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
12-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
12-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
13-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
13-04	2	86	0	55	49	3.5	0	Yes	R1.0 to external walls
13-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
13-07	2	84	0	36	34	4.5	0	No	



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Thermal performance specifications									Page 5 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
13-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
13-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout	
13-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout	
13-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls	
14-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
14-04	2	86	0	55	49	3.5	0	Yes	R1.0 to external walls	
14-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls	
14-07	2	84	0	36	34	4.5	0	No		
14-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
14-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout	
14-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout	
14-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls	
15-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
15-04	2	86	0	55	48	3.5	0	Yes	R1.0 to external walls	
15-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls	
15-07	2	84	0	36	34	4.5	0	No		
15-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
15-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout	
15-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout	
15-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls	
16-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
16-04	2	86	0	60	48	3.0	0	Yes	R1.0 to external walls	
16-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls	
16-07	2	84	0	35	37	4.5	0	No		
16-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	



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Thermal performance specifications									Page 6 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
16-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
16-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
16-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
17-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
17-04	2	86	0	56	48	3.0	0	Yes	R1.0 to external walls
17-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
17-07	2	84	0	37	33	4.5	0	No	
17-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
17-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
17-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
17-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
18-01	2	87	0	49	25	4.5	1	No	R1.0 to external walls & low-e glazing throughout
18-04	2	86	0	56	47	3.5	0	Yes	R1.0 to external walls
18-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
18-07	2	84	0	37	33	4.5	0	No	
18-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
18-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
18-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
18-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
19-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
19-04	2	86	0	56	48	3.0	0	Yes	R1.0 to external walls
19-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
19-07	2	84	0	37	33	4.5	0	No	
19-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
19-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

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Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473
Thermal performance specifications									Page 7 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
19-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
19-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
20-01	2	93	0	39	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
20-04	2	86	0	56	46	3.5	0	Yes	R1.0 to external walls
20-05	2	83	0	49	12	5.0	0	No	R1.0 to external walls
20-07	2	84	0	37	33	4.5	0	No	
20-08	2	74	5	60	21	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
20-09	2	90	0	60	18	4.0	1	No	R1.0 to external walls & Low-E throughout
20-12	1	51	0	27	15	6.5	0	No	Low-e glazing throughout
20-13	1	53	0	48	24	4.5	0	Yes	R1.0 to external walls
21-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
21-04	2	86	0	56	46	3.5	0	Yes	R1.0 to external walls
21-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
21-07	2	84	0	38	33	4.5	0	No	
21-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
21-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
21-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
21-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
22-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
22-04	2	86	0	57	46	3.5	0	Yes	R1.0 to external walls
22-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
22-07	2	84	0	35	36	4.5	0	No	
22-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
22-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
22-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
22-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

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Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473
Thermal performance specifications									Page 8 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
23-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
23-04	2	86	0	57	46	3.5	0	Yes	R1.0 to external walls
23-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
23-07	2	84	0	38	32	4.5	0	No	
23-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
23-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
23-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
23-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
24-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
24-04	2	86	0	57	45	3.5	0	Yes	R1.0 to external walls
24-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
24-07	2	84	0	38	32	4.5	0	No	
24-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
24-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
24-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
24-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
25-01	2	87	0	50	25	4.5	1	No	R1.0 to external walls & low-e glazing throughout
25-04	2	86	0	58	45	3.5	0	Yes	R1.0 to external walls
25-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
25-07	2	84	0	38	32	4.5	0	No	
25-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
25-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
25-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
25-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
26-01	2	87	0	50	25	4.5	1	No	R1.0 to external walls & low-e glazing throughout



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Thermal performance specifications									Page 9 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
26-04	2	86	0	57	44	3.5	0	Yes	R1.0 to external walls
26-05	2	83	0	50	12	5.0	0	No	R1.0 to external walls
26-07	2	84	0	38	31	4.5	0	No	
26-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
26-09	2	90	0	61	18	4.0	1	No	R1.0 to external walls & Low-E throughout
26-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
26-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
27-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
27-04	2	86	0	58	45	3.5	0	Yes	R1.0 to external walls
27-05	2	83	0	52	12	5.0	0	No	R1.0 to external walls
27-07	2	84	0	35	37	4.5	0	No	
27-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
27-09	2	90	0	63	22	4.0	1	No	R1.0 to external walls & Low-E throughout
27-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
27-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
28-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
28-04	2	86	0	58	45	3.5	0	Yes	R1.0 to external walls
28-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
28-10	2	82	0	56	20	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
28-11	2	90	0	45	45	3.5	0	Yes	
28-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout
28-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls
29-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
29-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls
29-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen



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Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473	
Thermal performance specifications									Page 10 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
29-10	2	82	0	57	20	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
29-11	2	90	0	45	45	3.5	0	Yes		
29-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout	
29-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls	
30-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
30-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls	
30-08	2	74	5	61	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
30-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
30-11	2	90	0	45	44	3.5	0	Yes		
30-12	1	51	0	28	14	6.5	0	No	Low-e glazing throughout	
30-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls	
31-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
31-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls	
31-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
31-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
31-11	2	90	0	45	44	3.5	0	Yes		
31-12	1	51	0	29	14	6.5	0	No	Low-e glazing throughout	
31-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls	
32-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
32-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls	
32-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
32-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
32-11	2	90	0	45	44	3.5	0	Yes		
32-12	1	51	0	29	14	6.5	0	No	Low-e glazing throughout	
32-13	1	53	0	49	23	4.5	0	Yes	R1.0 to external walls	
33-01	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	



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Thermal performance specifications									Page 11 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
33-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls
33-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
33-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
33-11	2	90	0	45	44	3.5	0	Yes	
33-12	1	51	0	29	14	6.5	0	No	Low-e glazing throughout
33-13	1	53	0	52	23	4.5	0	Yes	R1.0 to external walls
34-04	2	86	0	58	43	3.5	0	Yes	R1.0 to external walls
34-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
34-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
34-11	2	90	0	46	44	3.5	0	Yes	
34-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
34-15	3	101	6	52	29	4.0	1	Yes	R1.0 to external walls
35-04	2	86	0	59	43	3.5	0	Yes	R1.0 to external walls
35-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
35-10	2	82	0	57	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
35-11	2	90	0	46	44	3.5	0	Yes	
35-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
35-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
36-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls
36-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
36-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
36-11	2	90	0	46	43	3.5	0	Yes	
36-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout
36-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls



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Thermal performance specifications									Page 12 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
37-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls	
37-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
37-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
37-11	2	90	0	46	43	3.5	0	Yes		
37-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
37-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
38-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls	
38-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
38-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
38-11	2	90	0	46	43	3.5	0	Yes		
38-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
38-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
39-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls	
39-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
39-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
39-11	2	90	0	46	43	3.5	0	Yes		
39-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
39-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
40-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls	
40-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
40-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
40-11	2	90	0	46	42	3.5	0	Yes		
40-14	2	93	0	41	24	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
40-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
41-04	2	86	0	60	42	3.5	0	Yes	R1.0 to external walls	



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Thermal performance specifications									Page 13 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
41-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
41-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
41-11	2	90	0	46	42	3.5	0	Yes		
41-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
41-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
42-04	2	86	0	59	42	3.5	0	Yes	R1.0 to external walls	
42-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
42-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
42-11	2	90	0	47	42	3.5	0	Yes		
42-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
42-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
43-04	2	86	0	60	42	3.5	0	Yes	R1.0 to external walls	
43-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
43-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
43-11	2	90	0	47	41	4.0	0	Yes		
43-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
43-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
44-04	2	86	0	60	42	3.5	0	Yes	R1.0 to external walls	
44-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
44-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
44-11	2	90	0	47	41	4.0	0	Yes		
44-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	



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Thermal performance specifications									Page 14 of 16	
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades	
		Con.	Uncon.	Heat	Cool (Sens & Lat)					
44-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
45-04	2	86	0	60	42	3.5	0	Yes	R1.0 to external walls	
45-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
45-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
45-11	2	90	0	47	41	4.0	0	Yes		
45-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
45-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
46-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls	
46-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
46-10	2	82	0	58	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
46-11	2	90	0	47	41	4.0	0	Yes		
46-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
46-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
47-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls	
47-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
47-10	2	82	0	59	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
47-11	2	90	0	47	40	4.0	0	Yes		
47-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	
47-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls	
48-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls	
48-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen	
48-10	2	82	0	59	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows	
48-11	2	90	0	47	40	4.0	0	Yes		
48-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout	



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Thermal performance specifications									Page 15 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
48-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
49-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls
49-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
49-10	2	82	0	59	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
49-11	2	90	0	47	40	4.0	0	Yes	
49-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout
49-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
50-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls
50-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
50-10	2	82	0	59	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
50-11	2	90	0	47	39	4.0	0	Yes	
50-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout
50-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
51-04	2	86	0	60	41	3.5	0	Yes	R1.0 to external walls
51-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
51-10	2	82	0	59	19	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
51-11	2	90	0	47	39	4.0	0	Yes	
51-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout
51-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
52-04	2	86	0	59	44	3.5	0	Yes	R1.0 to external walls
52-08	2	74	5	63	20	4.0	1	No	R1.0 to external walls & Low-E Living/kitchen
52-10	2	82	0	59	18	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
52-11	2	90	0	48	39	4.0	0	Yes	
52-14	2	93	0	42	23	5.0	1	No	R1.0 to external walls & low-e glazing throughout



Thermal Comfort Results

Riverfront Apartments

330 Church Street Parramatta, NSW

Issued in accordance with **BASIX** Thermal Comfort Simulation Method



Certificate # 14730311					Issued: 21/03/14		Accreditation #		VIC/BDAV/12/1473
Thermal performance specifications									Page 16 of 16
Unit number	Number of Bedrooms	Floor area (M ²)		Predict. loads (MJ/M ² /y)		Star Rating	Window in Bathroom	Window in Kitchen	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)				
52-15	3	101	6	50	28	4.0	1	Yes	R1.0 to external walls
53-04	2	86	0	49	30	4.0	0	Yes	R1.0 to external walls & Low-E throughout
53-08	2	74	5	64	17	4.0	1	No	R1.0 to external walls & Low-E throughout
53-10	2	82	0	66	17	4.0	1	Yes	R1.0 + Low-E throughout + 3 stud walls replacing windows
53-11	2	90	0	38	31	4.5	0	Yes	R1.0 to external walls & low-e glazing throughout
53-14	2	93	0	46	23	4.5	1	No	R1.0 to external walls & low-e glazing throughout
53-15	3	101	6	50	19	4.5	1	Yes	R1.0 to external walls & low-e glazing throughout



NatHERS Certificate

New Dwelling



4.0 Stars

Simulation Software

Software Name BERS Pro 4.2
Software Version Release 110811/A
Engine Version CHENATH V2.13

Simulation Details

Project Name H-100 5-08 Level 5_1
Date 3/21/2014
Location PARRAMATTA PC 2150
Climate file climat56.TXT
Adjusted Star Rating 4.0 Stars
Conditioned Area 73.79 m²
Unconditioned Area 4.89 m²
Adjusted Cooling 25.3 MJ/m²
Adjusted Heating 56.0 MJ/m²
Adjusted Total 81.3 MJ/m²

Dwelling Address



DP Number 788637
Unit Number
Lot Number 2 & 3
House Number
Street Name 330 Church Street
Development Name Riverfront Apartments - West Tower
Suburb Parramatta NSW 2150

Client Details

Name Meriton Group
Phone 02 9287 2590 Fax 02 9287 2790
Email
Postal Address
Street Details Level 11, Meriton Tower, 528 Kent Street, Sydney NSW 2000

Assessor Details

Name Tracey Cools
Phone 02 9970 6181 Fax 02 9944 0293
Email admin@efficientliving.com.au
Postal Address
Street Details 13/13 Lagoon Street, Narrabeen NSW 2101

		Energy Rating		Certificate Number 14730311
<input type="checkbox"/>	single-dwelling rating			4.0 stars
<input checked="" type="checkbox"/>	multi-unit development (attach listing of ratings) <small>If selected, data specified is the average across the entire development</small>	heating	51	MJ/m ²
		cooling	28	MJ/m ²
Recessed downlights confirmation:		<input type="checkbox"/> Rated with	<input checked="" type="checkbox"/> Rated without	
Assessor Name/Number		Tracey Cools VIC/BDAV/12/1473		
Assessor Signature				Date 21/03/14

Signed by the Assessor..........Date..... **21/03/14**

*Tilted roof windows with blinds cannot be modelled using this version of BERSPro.
All windows are modelled with Holland Blinds for regulatory purposes.*

Building Element Details

Project H-100 5-08 Level 5 Run 1
PARRAMATTA PC 2150 Lat -33.80 Long 151.00 Climate File climat56.TXT

Summary
Conditioned Area 73.8 m²
Unconditioned Area 4.9 m²
Total Floor Area 78.7 m²
Total Glazed Area 50.3 m²
Total External Solid door Area 1.8 m²
Glass to Floor Area 63.9 %
Gross External Wall Area 115.5 m²
Net External Wall Area 63.5 m²

Window
27.6 m² BGC-05-013a Affinity Windows Uval 6.83 SHGC 0.54
Glass 5mm Grey
Frame Aluminium 4-Lite Sliding Window - Single Glazed
22.7 m² GJA-05-029a G. James Glass & Aluminium Uval 4.68 SHGC 0.39
Glass 6.38mm Solect Grey
Frame GJames: Type 130: Aluminium Sliding Window


External Wall
60.1 m² PowerPanel to neighbour No Insulation
3.4 m² Tilt up concrete, lined Bulk Insulation R 1.0

Internal Wall
62.6 m² Cavity Panel 70mm gap No Insulation

External Floor
31.4 m² Concrete Slab, Unit Below Carpet 10mm No Insulation
12.2 m² Concrete Slab, Unit Below Ceramic Tiles 8mm No Insulation
35.1 m² Concrete Slab, Unit Below 60/40 Carpet 10mm/Ceramic No Insulation

External Ceiling
78.7 m² Plasterboard No Insulation Apartment above

Roof (Horizontal area)
78.7 m² Concrete No Insulation, Only an Air Gap 0° slope Skillion roof

**Energy Rating**

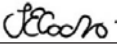
Certificate Number 14730311

☐ single-dwelling rating 4.0 stars

☒ multi-unit development (attach listing of ratings) heating 51 MJ/m²
If selected, data specified is the average across the entire development cooling 28 MJ/m²

Recessed downlights confirmation: ☐ Rated with ☒ Rated without

Assessor Name/Number Tracey Cools VIC/BDAV/12/1473

Assessor Signature  Date 21/03/14

BASIX[®]Certificate

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

Multi Dwelling

Certificate number: 374161M_03

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 Planning & Infrastructure. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 374161M lodged with the consent authority or certifier on 30 June 2011 with application MP10_0171.

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

Director-General

Date of issue: Friday, 21 March 2014

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



Planning &
Infrastructure

Project summary

Project name	Riverfront Apartments - West Tower_03
Street address	330 Church Street Parramatta 2150
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 788637
Lot no.	2 & 3
Section no.	-
No. of residential flat buildings	1
No. of units in residential flat buildings	378
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 20	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	Riverfront Apartments - West Tower_03
Street address	330 Church Street Parramatta 2150
Local Government Area	Parramatta City Council
Plan type and plan number	deposited 788637
Lot no.	2 & 3
Section no.	-

Project type

No. of residential flat buildings	1
No. of units in residential flat buildings	378
No. of multi-dwelling houses	0
No. of single dwelling houses	0

Site details

Site area (m²)	6763
Roof area (m²)	1193
Non-residential floor area (m²)	26661
Residential car spaces	301
Non-residential car spaces	408

Common area landscape

Common area lawn (m²)	100
Common area garden (m²)	709
Area of indigenous or low water use species (m²)	0

Assessor details

Assessor number	BDAV/12/1473
Certificate number	14730311
Climate zone	56

Project score

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

Description of project

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

Residential flat buildings - West Tower, 378 dwellings, 55 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)
1.01	2	75.0	0.0	0	0
1.05	1	47.0	4.0	0	0
2.01	2	75.0	0.0	0	0
2.05	1	47.0	4.0	0	0
3.01	2	75.0	0.0	0	0
3.05	1	47.0	4.0	0	0
4.01	2	93.0	0.0	0	0
4.08	2	74.0	5.0	0	0
5.01	2	93.0	0.0	0	0
5.08	2	74.0	5.0	0	0
6.01	2	87.0	0.0	0	0
6.08	2	74.0	5.0	0	0
7.01	2	87.0	0.0	0	0
7.08	2	74.0	5.0	0	0
8.01	2	93.0	0.0	0	0
8.08	2	80.0	5.0	0	0
9.01	2	93.0	0.0	0	0
9.08	2	74.0	5.0	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)
1.02	2	96.0	0.0	0	0
1.06	2	75.0	0.0	0	0
2.02	2	96.0	0.0	0	0
2.06	2	75.0	0.0	0	0
3.02	2	96.0	0.0	0	0
3.06	2	75.0	0.0	0	0
4.04	2	86.0	0.0	0	0
4.09	2	83.0	0.0	0	0
5.04	2	86.0	0.0	0	0
5.09	2	90.0	0.0	0	0
6.04	2	86.0	0.0	0	0
6.09	2	90.0	0.0	0	0
7.04	2	86.0	0.0	0	0
7.09	2	90.0	0.0	0	0
8.04	2	86.0	0.0	0	0
8.09	2	90.0	0.0	0	0
9.04	2	86.0	0.0	0	0
9.09	2	90.0	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)
1.03	2	87.0	0.0	0	0
1.07	2	78.0	5.0	0	0
2.03	2	87.0	0.0	0	0
2.07	2	78.0	5.0	0	0
3.03	2	87.0	0.0	0	0
3.07	2	78.0	5.0	0	0
4.05	2	83.0	0.0	0	0
4.12	1	51.0	0.0	0	0
5.05	2	83.0	0.0	0	0
5.12	1	51.0	0.0	0	0
6.05	2	83.0	0.0	0	0
6.12	1	51.0	0.0	0	0
7.05	2	83.0	0.0	0	0
7.12	1	51.0	0.0	0	0
8.05	2	83.0	0.0	0	0
8.12	1	51.0	0.0	0	0
9.05	2	83.0	0.0	0	0
9.12	1	51.0	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)
1.04	1	64.0	0.0	0	0
1.08	2	78.0	5.0	0	0
2.04	1	64.0	0.0	0	0
2.08	2	78.0	5.0	0	0
3.04	1	64.0	0.0	0	0
3.08	2	78.0	5.0	0	0
4.07	2	81.0	0.0	0	0
4.13	1	53.0	0.0	0	0
5.07	2	84.0	0.0	0	0
5.13	1	53.0	0.0	0	0
6.07	2	84.0	0.0	0	0
6.13	1	53.0	0.0	0	0
7.07	2	84.0	0.0	0	0
7.13	1	53.0	0.0	0	0
8.07	2	84.0	0.0	0	0
8.13	1	53.0	0.0	0	0
9.07	2	84.0	0.0	0	0
9.13	1	53.0	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)
10.01	2	93.0	0.0	0	0
10.08	2	74.0	5.0	0	0
11.01	2	93.0	0.0	0	0
11.08	2	74.0	5.0	0	0
12.01	2	93.0	0.0	0	0
12.08	2	74.0	5.0	0	0
13.01	2	93.0	0.0	0	0
13.08	2	74.0	5.0	0	0
14.01	2	93.0	0.0	0	0
14.08	2	74.0	5.0	0	0
15.01	2	93.0	0.0	0	0
15.08	2	74.0	5.0	0	0
16.01	2	93.0	0.0	0	0
16.08	2	74.0	5.0	0	0
17.01	2	93.0	0.0	0	0
17.08	2	74.0	5.0	0	0
18.01	2	87.0	0.0	0	0
18.08	2	74.0	5.0	0	0
19.01	2	93.0	0.0	0	0
19.08	2	74.0	5.0	0	0
20.01	2	93.0	0.0	0	0
20.08	2	74.0	5.0	0	0
21.01	2	93.0	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)
10.04	2	86.0	0.0	0	0
10.09	2	90.0	0.0	0	0
11.04	2	86.0	0.0	0	0
11.09	2	90.0	0.0	0	0
12.04	2	86.0	0.0	0	0
12.09	2	90.0	0.0	0	0
13.04	2	86.0	0.0	0	0
13.09	2	90.0	0.0	0	0
14.04	2	86.0	0.0	0	0
14.09	2	90.0	0.0	0	0
15.04	2	86.0	0.0	0	0
15.09	2	90.0	0.0	0	0
16.04	2	86.0	0.0	0	0
16.09	2	90.0	0.0	0	0
17.04	2	86.0	0.0	0	0
17.09	2	90.0	0.0	0	0
18.04	2	86.0	0.0	0	0
18.09	2	90.0	0.0	0	0
19.04	2	86.0	0.0	0	0
19.09	2	90.0	0.0	0	0
20.04	2	86.0	0.0	0	0
20.09	2	90.0	0.0	0	0
21.04	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)
10.05	2	83.0	0.0	0	0
10.12	1	51.0	0.0	0	0
11.05	2	83.0	0.0	0	0
11.12	1	51.0	0.0	0	0
12.05	2	83.0	0.0	0	0
12.12	1	51.0	0.0	0	0
13.05	2	83.0	0.0	0	0
13.12	1	51.0	0.0	0	0
14.05	2	83.0	0.0	0	0
14.12	1	51.0	0.0	0	0
15.05	2	83.0	0.0	0	0
15.12	1	51.0	0.0	0	0
16.05	2	83.0	0.0	0	0
16.12	1	51.0	0.0	0	0
17.05	2	83.0	0.0	0	0
17.12	1	51.0	0.0	0	0
18.05	2	83.0	0.0	0	0
18.12	1	51.0	0.0	0	0
19.05	2	83.0	0.0	0	0
19.12	1	51.0	0.0	0	0
20.05	2	83.0	0.0	0	0
20.12	1	51.0	0.0	0	0
21.05	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)
10.07	2	84.0	0.0	0	0
10.13	1	53.0	0.0	0	0
11.07	2	84.0	0.0	0	0
11.13	1	53.0	0.0	0	0
12.07	2	84.0	0.0	0	0
12.13	1	53.0	0.0	0	0
13.07	2	84.0	0.0	0	0
13.13	1	53.0	0.0	0	0
14.07	2	84.0	0.0	0	0
14.13	1	53.0	0.0	0	0
15.07	2	84.0	0.0	0	0
15.13	1	53.0	0.0	0	0
16.07	2	84.0	0.0	0	0
16.13	1	53.0	0.0	0	0
17.07	2	84.0	0.0	0	0
17.13	1	53.0	0.0	0	0
18.07	2	84.0	0.0	0	0
18.13	1	53.0	0.0	0	0
19.07	2	84.0	0.0	0	0
19.13	1	53.0	0.0	0	0
20.07	2	84.0	0.0	0	0
20.13	1	53.0	0.0	0	0
21.07	2	84.0	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)
21.08	2	74.0	5.0	0	0
22.01	2	93.0	0.0	0	0
22.08	2	74.0	5.0	0	0
23.01	2	93.0	0.0	0	0
23.08	2	74.0	5.0	0	0
24.01	2	93.0	0.0	0	0
24.08	2	74.0	5.0	0	0
25.01	2	87.0	0.0	0	0
25.08	2	74.0	5.0	0	0
26.01	2	87.0	0.0	0	0
26.08	2	74.0	5.0	0	0
27.01	2	93.0	0.0	0	0
27.08	2	74.0	5.0	0	0
28.01	2	93.0	0.0	0	0
28.11	2	90.0	0.0	0	0
29.04	2	86.0	0.0	0	0
29.12	1	51.0	0.0	0	0
30.08	2	74.0	5.0	0	0
30.13	1	53.0	0.0	0	0
31.10	2	82.0	0.0	0	0
32.01	2	93.0	0.0	0	0
32.11	2	90.0	0.0	0	0
33.04	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)
21.09	2	90.0	0.0	0	0
22.04	2	86.0	0.0	0	0
22.09	2	90.0	0.0	0	0
23.04	2	86.0	0.0	0	0
23.09	2	90.0	0.0	0	0
24.04	2	86.0	0.0	0	0
24.09	2	90.0	0.0	0	0
25.04	2	86.0	0.0	0	0
25.09	2	90.0	0.0	0	0
26.04	2	86.0	0.0	0	0
26.09	2	90.0	0.0	0	0
27.04	2	86.0	0.0	0	0
27.09	2	90.0	0.0	0	0
28.04	2	86.0	0.0	0	0
28.12	1	51.0	0.0	0	0
29.08	2	74.0	5.0	0	0
29.13	1	53.0	0.0	0	0
30.10	2	82.0	0.0	0	0
31.01	2	93.0	0.0	0	0
31.11	2	90.0	0.0	0	0
32.04	2	86.0	0.0	0	0
32.12	1	51.0	0.0	0	0
33.08	2	74.0	5.0	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)
21.12	1	51.0	0.0	0	0
22.05	2	83.0	0.0	0	0
22.12	1	51.0	0.0	0	0
23.05	2	83.0	0.0	0	0
23.12	1	51.0	0.0	0	0
24.05	2	83.0	0.0	0	0
24.12	1	51.0	0.0	0	0
25.05	2	83.0	0.0	0	0
25.12	1	51.0	0.0	0	0
26.05	2	83.0	0.0	0	0
26.12	1	51.0	0.0	0	0
27.05	2	83.0	0.0	0	0
27.12	1	51.0	0.0	0	0
28.08	2	74.0	5.0	0	0
28.13	1	53.0	0.0	0	0
29.10	2	82.0	0.0	0	0
30.01	2	93.0	0.0	0	0
30.11	2	90.0	0.0	0	0
31.04	2	86.0	0.0	0	0
31.12	1	51.0	0.0	0	0
32.08	2	74.0	5.0	0	0
32.13	1	53.0	0.0	0	0
33.10	2	82.0	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)
21.13	1	53.0	0.0	0	0
22.07	2	84.0	0.0	0	0
22.13	1	53.0	0.0	0	0
23.07	2	84.0	0.0	0	0
23.13	1	53.0	0.0	0	0
24.07	2	84.0	0.0	0	0
24.13	1	53.0	0.0	0	0
25.07	2	84.0	0.0	0	0
25.13	1	53.0	0.0	0	0
26.07	2	84.0	0.0	0	0
26.13	1	53.0	0.0	0	0
27.07	2	84.0	0.0	0	0
27.13	1	53.0	0.0	0	0
28.10	2	82.0	0.0	0	0
29.01	2	93.0	0.0	0	0
29.11	2	90.0	0.0	0	0
30.04	2	86.0	0.0	0	0
30.12	1	51.0	0.0	0	0
31.08	2	74.0	5.0	0	0
31.13	1	53.0	0.0	0	0
32.10	2	82.0	0.0	0	0
33.01	2	93.0	0.0	0	0
33.11	2	90.0	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)
33.12	1	51.0	0.0	0	0
34.10	2	82.0	0.0	0	0
35.04	2	86.0	0.0	0	0
35.14	2	93.0	0.0	0	0
36.10	2	82.0	0.0	0	0
37.04	2	86.0	0.0	0	0
37.14	2	93.0	0.0	0	0
38.10	2	82.0	0.0	0	0
39.04	2	86.0	0.0	0	0
39.14	2	93.0	0.0	0	0
40.10	2	82.0	0.0	0	0
41.04	2	86.0	0.0	0	0
41.14	2	93.0	0.0	0	0
42.10	2	82.0	0.0	0	0
43.04	2	86.0	0.0	0	0
43.14	2	93.0	0.0	0	0
44.10	2	82.0	0.0	0	0
45.04	2	86.0	0.0	0	0
45.14	2	93.0	0.0	0	0
46.10	2	82.0	0.0	0	0
47.04	2	86.0	0.0	0	0
47.14	2	93.0	0.0	0	0
48.10	2	82.0	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)
33.13	1	53.0	0.0	0	0
34.11	2	90.0	0.0	0	0
35.08	2	74.0	5.0	0	0
35.15	3	101.0	6.0	0	0
36.11	2	90.0	0.0	0	0
37.08	2	74.0	5.0	0	0
37.15	3	101.0	6.0	0	0
38.11	2	90.0	0.0	0	0
39.08	2	74.0	5.0	0	0
39.15	3	101.0	6.0	0	0
40.11	2	90.0	0.0	0	0
41.08	2	74.0	5.0	0	0
41.15	3	101.0	6.0	0	0
42.11	2	90.0	0.0	0	0
43.08	2	74.0	5.0	0	0
43.15	3	101.0	6.0	0	0
44.11	2	90.0	0.0	0	0
45.08	2	74.0	5.0	0	0
45.15	3	101.0	6.0	0	0
46.11	2	90.0	0.0	0	0
47.08	2	74.0	5.0	0	0
47.15	3	101.0	6.0	0	0
48.11	2	90.0	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)
34.04	2	86.0	0.0	0	0
34.14	2	93.0	0.0	0	0
35.10	2	82.0	0.0	0	0
36.04	2	86.0	0.0	0	0
36.14	2	93.0	0.0	0	0
37.10	2	82.0	0.0	0	0
38.04	2	86.0	0.0	0	0
38.14	2	93.0	0.0	0	0
39.10	2	82.0	0.0	0	0
40.04	2	86.0	0.0	0	0
40.14	2	93.0	0.0	0	0
41.10	2	82.0	0.0	0	0
42.04	2	86.0	0.0	0	0
42.14	2	93.0	0.0	0	0
43.10	2	82.0	0.0	0	0
44.04	2	86.0	0.0	0	0
44.14	2	93.0	0.0	0	0
45.10	2	82.0	0.0	0	0
46.04	2	86.0	0.0	0	0
46.14	2	93.0	0.0	0	0
47.10	2	82.0	0.0	0	0
48.04	2	86.0	0.0	0	0
48.14	2	93.0	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)
34.08	2	74.0	5.0	0	0
34.15	3	101.0	6.0	0	0
35.11	2	90.0	0.0	0	0
36.08	2	74.0	5.0	0	0
36.15	3	101.0	6.0	0	0
37.11	2	90.0	0.0	0	0
38.08	2	74.0	5.0	0	0
38.15	3	101.0	6.0	0	0
39.11	2	90.0	0.0	0	0
40.08	2	74.0	5.0	0	0
40.15	3	101.0	6.0	0	0
41.11	2	90.0	0.0	0	0
42.08	2	74.0	5.0	0	0
42.15	3	101.0	6.0	0	0
43.11	2	90.0	0.0	0	0
44.08	2	74.0	5.0	0	0
44.15	3	101.0	6.0	0	0
45.11	2	90.0	0.0	0	0
46.08	2	74.0	5.0	0	0
46.15	3	101.0	6.0	0	0
47.11	2	90.0	0.0	0	0
48.08	2	74.0	5.0	0	0
48.15	3	101.0	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)
49.04	2	86.0	0.0	0	0
49.14	2	93.0	0.0	0	0
50.10	2	82.0	0.0	0	0
51.04	2	86.0	0.0	0	0
51.14	2	93.0	0.0	0	0
52.10	2	82.0	0.0	0	0
53.04	2	86.0	0.0	0	0
53.14	2	93.0	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)
49.08	2	74.0	5.0	0	0
49.15	3	101.0	6.0	0	0
50.11	2	90.0	0.0	0	0
51.08	2	74.0	5.0	0	0
51.15	3	101.0	6.0	0	0
52.11	2	90.0	0.0	0	0
53.08	2	74.0	5.0	0	0
53.15	3	101.0	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)
49.10	2	82.0	0.0	0	0
50.04	2	86.0	0.0	0	0
50.14	2	93.0	0.0	0	0
51.10	2	82.0	0.0	0	0
52.04	2	86.0	0.0	0	0
52.14	2	93.0	0.0	0	0
53.10	2	82.0	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)
49.11	2	90.0	0.0	0	0
50.08	2	74.0	5.0	0	0
50.15	3	101.0	6.0	0	0
51.11	2	90.0	0.0	0	0
52.08	2	74.0	5.0	0	0
52.15	3	101.0	6.0	0	0
53.11	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 - West Tower

Common area	Floor area (m²)
Lift car (No. 1)	-
Lift car (No. 4)	-
Roof top plant	287
Hallways	2058

Common area	Floor area (m²)
Lift car (No. 2)	-
Lift car (No. 5)	-
Mail	12

Common area	Floor area (m²)
Lift car (No. 3)	-
Services	218
Ground Floor Lobbies	148

Common areas of the development (non-building specific)

Common area	Floor area (m²)
Pool	192
Car park area	18744
Plant	215
Carpark - Lift Lobbies	177

Common area	Floor area (m²)
Gym	37
Lift car (No. 6)	-
Pool toilets	13

Common area	Floor area (m²)
Sauna	16
Garbage rooms	319
Podium Lobbies	600

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - West Tower

(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 - West Tower

(a) Dwellings

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

	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
44.04, 44.08, 44.10, 44.11, 44.14, 44.15, 45.04, 45.08, 45.10, 45.11, 45.14, 45.15, 46.04, 46.08, 46.10, 46.11, 46.14, 46.15, 47.04, 47.08, 47.10, 47.11, 47.14, 47.15, 48.04, 48.08, 48.10, 48.11, 48.14, 48.15, 49.04, 49.08, 49.10	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
2.01, 2.03, 2.04, 2.05, 3.01, 3.02, 3.03, 3.04, 3.05, 3.06, 3.07, 3.08, 4.01, 4.04, 4.05, 4.07, 4.08, 5.01, 5.04, 5.05, 5.07, 5.08, 6.01, 6.04, 6.05, 6.07, 6.08, 7.01, 7.04, 7.05, 7.07, 7.08, 8.01, 8.04, 8.05, 8.07, 8.08, 9.01, 9.04, 9.05,	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
9.07, 9.08, 10.01, 10.04, 10.05, 10.07, 10.08, 11.01, 11.04, 11.05, 11.07, 11.08, 12.01, 12.04, 12.05, 12.07, 12.08, 13.01, 13.04, 13.05, 13.07, 13.08, 14.01, 14.04, 14.05, 14.07														

	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
29.11, 29.12, 29.13, 30.01, 30.04, 30.08, 30.10, 30.11, 30.12, 30.13, 31.01, 31.04, 31.08, 31.10, 31.11, 31.12, 31.13, 32.01, 32.04, 32.08, 32.10, 32.11, 32.12, 32.13, 33.01, 33.04, 33.08, 33.10, 33.11, 33.12, 33.13, 34.04, 34.08, 34.10, 34.11, 34.14, 34.15, 35.04, 35.08, 35.10,	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
35.11, 35.14, 35.15, 36.04, 36.08, 36.10, 36.11, 36.14, 36.15, 37.04, 37.08, 37.10, 37.11, 37.14, 37.15, 38.04, 38.08, 38.10, 38.11, 38.14, 38.15, 39.04, 39.08, 39.10, 39.11, 39.14, 39.15, 40.04, 40.08, 40.10, 40.11, 40.14, 40.15, 41.04, 41.08, 41.10, 41.11, 41.14, 41.15, 42.04,														

	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
42.08, 42.10, 42.11, 42.14, 42.15, 43.04, 43.08, 43.10, 43.11, 43.14, 43.15, 49.11, 49.14, 49.15, 50.04, 50.08, 50.10, 50.11, 50.14, 50.15, 51.04, 51.08, 51.10, 51.11, 51.14, 51.15, 52.04, 52.08, 52.10, 52.11, 52.14, 52.15, 53.04, 53.08, 53.10, 53.11, 53.14, 53.15														

	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
1.01, 1.02, 1.03, 1.04, 1.05, 1.06, 1.07, 1.08, 2.02, 2.06, 2.07, 2.08, 4.09, 4.12, 4.13, 5.09, 5.12, 5.13, 6.09, 6.12, 6.13, 7.09, 7.12, 7.13, 8.09, 8.12, 8.13, 9.09, 9.12, 9.13, 10.09, 10.12, 10.13, 11.09, 11.12, 11.13, 12.09, 12.12, 12.13, 13.09,	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
13.12, 13.13, 14.08, 14.09, 14.12, 14.13, 15.01, 15.04, 15.05, 15.07, 15.08, 15.09, 15.12, 15.13, 16.01, 16.04, 16.05, 16.07, 16.08, 16.09, 16.12, 16.13, 17.01, 17.04, 17.05, 17.07, 17.08, 17.09, 17.12, 17.13, 18.01, 18.04, 18.05, 18.07, 18.08, 18.09, 18.12, 18.13, 19.01, 19.04,														

	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
19.05, 19.07, 19.08, 19.09, 19.12, 19.13, 20.01, 20.04, 20.05, 20.07, 20.08, 20.09, 20.12, 20.13, 21.01, 21.04, 21.05, 21.07, 21.08, 21.09, 21.12, 21.13, 22.01, 22.04, 22.05, 22.07, 22.08, 22.09, 22.12, 22.13, 23.01, 23.04, 23.05, 23.07, 23.08, 23.09, 23.12, 23.13, 24.01, 24.04,														

	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
24.05, 24.07, 24.08, 24.09, 24.12, 24.13, 25.01, 25.04, 25.05, 25.07, 25.08, 25.09, 25.12, 25.13, 26.01, 26.04, 26.05, 26.07, 26.08, 26.09, 26.12, 26.13, 27.01, 27.04, 27.05, 27.07, 27.08, 27.09, 27.12, 27.13, 28-01, 28.04, 28.08, 28.10, 28.11, 28.12, 28.13, 29.01, 29.04, 29.08,														

	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
29.10														

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

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

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	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 on / timer off	individual fan, not ducted	manual switch on/off	individual fan, ducted to façade or roof	manual on / timer 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
1.05, 2.05, 3.05	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	yes	no	1	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
34.15, 35.15, 36.15, 37.15, 38.15, 39.15, 40.15, 41.15, 42.15, 43.15, 44.15, 45.15, 46.15, 47.15, 48.15, 49.15, 50.15, 51.15, 52.15, 53.15	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	yes	no	1	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
4.12, 5.12, 6.12, 7.12, 8.12, 9.12, 10.12, 11.12, 12.12, 13.12, 14.12, 15.12, 16.12, 17.12, 18.12, 19.12, 20.12, 21.12, 22.12, 23.12, 24.12, 25.12, 26.12, 27.12, 28.12, 29.12, 30.12, 31.12, 32.12, 33.12	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	yes	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
1.04, 2.04, 3.04, 4.13, 5.13, 6.13, 7.13, 8.13, 9.13, 10.13, 11.13, 12.13, 13.13, 14.13, 15.13, 16.13, 17.13, 18.13, 19.13, 20.13, 21.13, 22.13, 23.13, 24.13, 25.13, 26.13, 27.13, 28.13, 29.13, 30.13, 31.13, 32.13, 33.13	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	yes	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
1.01, 1.07, 1.08, 2.01, 2.07, 2.08, 3.01, 3.07, 3.08, 28.10, 29.10, 30.10, 31.10, 32.10, 33.10, 34.10, 35.10, 36.10, 37.10, 38.10, 39.10, 40.10, 41.10, 42.10, 43.10, 44.10, 45.10, 46.10, 47.10, 48.08, 49.10, 50.10, 51.10, 52.10, 53.10	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	yes	no	1	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
1.02, 1.06, 2.02, 2.06, 3.02, 3.06, 4.05, 4.07, 5.05, 5.07, 6.05, 6.07, 7.05, 7.07, 8.05, 8.07, 9.05, 9.07, 10.05, 10.07, 11.05, 11.07, 12.05, 12.07, 13.05, 13.07, 14.05, 14.07, 15.05, 15.07, 16.05, 16.07, 17.05, 17.07, 18.05, 18.07, 19.05, 19.07, 20.05,	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	yes	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
20.07, 21.05, 21.07, 22.05, 22.07, 23.05, 23.07, 24.05, 24.07, 25.05, 25.07, 26.05, 26.07, 27.05, 27.07, 48.10												

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
1.03, 2.03, 3.03, 4.04, 5.04, 6.04, 7.04, 8.04, 9.04, 10.04, 11.04, 12.04, 13.04, 14.04, 15.04, 16.04, 17.04, 18.04, 19.04, 20.04, 21.04, 22.04, 23.04, 24.04, 25.04, 26.04, 27.04, 28.04, 28.11, 29.04, 29.11, 30.04, 30.11, 31.04, 31.11, 32.04, 32.11, 33.04, 33.11,	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	yes	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
34.04, 34.11, 35.04, 35.11, 36.04, 36.11, 37.04, 37.11, 38.04, 38.11, 39.04, 39.11, 40.04, 40.11, 41.04, 41.11, 42.04, 42.11, 43.04, 43.11, 44.04, 44.11, 45.04, 45.11, 46.04, 46.11, 47.04, 47.11, 48.04, 48.11, 49.04, 49.11, 50.04, 50.11, 51.04, 51.11, 52.04, 52.11, 53.04,												

	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
53.11												

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
4.01, 4.08, 4.09, 5.01, 5.08, 5.09, 6.01, 6.08, 6.09, 7.01, 7.08, 7.09, 8.01, 8.08, 8.09, 9.01, 9.08, 9.09, 10.01, 10.08, 10.09, 11.01, 11.08, 11.09, 12.01, 12.08, 12.09, 13.01, 13.08, 13.09, 14.01, 14.08, 14.09, 15.01, 15.08, 15.09, 16.01, 16.08, 16.09,	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	yes	no	1	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
17.01, 17.08, 17.09, 18.01, 18.08, 18.09, 19.01, 19.08, 19.09, 20.01, 20.08, 20.09, 21.01, 21.08, 21.09, 22.01, 22.08, 22.09, 23.01, 23.08, 23.09, 24.01, 24.08, 24.09, 25.01, 25.08, 25.09, 26.01, 26.08, 26.09, 27.01, 27.08, 27.09, 28-01, 28.08, 29.01, 29.08, 30.01, 30.08,												

	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
31.01, 31.08, 32.01, 32.08, 33.01, 33.08, 34.08, 34.14, 35.08, 35.14, 36.08, 36.14, 37.08, 37.14, 38.08, 38.14, 39.08, 39.14, 40.08, 40.14, 41.08, 41.14, 42.08, 42.14, 43.08, 43.14, 44.08, 44.14, 45.08, 45.14, 46.08, 46.14, 47.08, 47.14, 48.14, 49.08, 49.14, 50.08, 50.14,												

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
51.08, 51.14, 52.08, 52.14, 53.08, 53.14												

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	2 star (new rating)	yes	3 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.			

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

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
1.01	65	48
1.03	50	16
1.04	66	22
1.05	53	31
1.06	65	16
1.07	65	39
1.08	66	38
2.01	49	53
2.02	62	41
2.03	66	24
2.05	55	26
2.06	65	14
2.07	64	31

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
2.08	66	32
3.01	66	30
3.02	66	43
3.04	57	21
3.05	59	24
3.07	66	44
3.08	66	42
4.01	46	28
4.04	66	52
4.05	61	11
4.07	55	31
4.08	60	27
4.09	66	23
4.12	58	29
6.04	53	55
7.04	53	53
8.08	47	54
9.04	54	52
9.07	34	40
10.04	66	51
10.07	35	35
11.07	36	35
15.04	55	38
16.04	60	48
18.01	49	25
18.04	56	47
21.07	38	33

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
24.04	57	45
26.04	57	44
27.05	52	12
27.09	63	22
28.10	56	20
29.10	57	20
34.15	52	29
35.04	59	43
42.11	47	42
52.04	59	44
52.10	59	18
52.11	48	39
53.04	49	30
53.10	66	17
53.14	46	23
53.15	50	19
1.02, 4.13	56	28
5.04, 8.04	52	54
5.07, 6.07	34	37
6.01, 7.01	45	30
2.04, 33.13	52	23
3.06, 53.08	64	17
11.04, 12.04	54	49
13.04, 14.04	55	49
16.07, 27.07	35	37
17.04, 19.04	56	48
20.04, 21.04	56	46

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
22.04, 23.04	57	46
25.01, 26.01	50	25
26.07, 53.11	38	31
28.11, 29.11	45	45
34.11, 35.11	46	44
40.11, 41.11	46	42
50.11, 51.11	47	39
7.07, 8.07, 22.07	35	36
23.07, 24.07, 25.07	38	32
25.04, 27.04, 28.04	58	45
31.12, 32.12, 33.12	29	14
47.11, 48.11, 49.11	47	40
5.01, 8.01, 9.01, 10.01	37	29
12.07, 13.07, 14.07, 15.07	36	34
17.07, 18.07, 19.07, 20.07	37	33
27.01, 28-01, 29.01, 30.01	62	33
30.11, 31.11, 32.11, 33.11	45	44
36.11, 37.11, 38.11, 39.11	46	43
41.04, 43.04, 44.04, 45.04	60	42
43.11, 44.11, 45.11, 46.11	47	41
5.08, 6.08, 7.08, 9.08, 10.08	56	25
47.10, 48.10, 49.10, 50.10, 51.10	59	19
5.05, 6.05, 7.05, 8.05, 9.05, 10.05	45	12
5.09, 6.09, 7.09, 8.09, 9.09, 10.09	64	26
5.12, 6.12, 7.12, 8.12, 9.12, 10.12	24	17
5.13, 6.13, 7.13, 8.13, 9.13, 10.13	44	28

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
21.05, 22.05, 23.05, 24.05, 25.05, 26.05	50	12
21.09, 22.09, 23.09, 24.09, 25.09, 26.09	61	18
29.04, 30.04, 31.04, 32.04, 33.04, 34.04	58	43
30.10, 31.10, 32.10, 33.10, 34.10, 35.10	57	19
36.04, 37.04, 38.04, 39.04, 40.04, 42.04	59	42
46.04, 47.04, 48.04, 49.04, 50.04, 51.04	60	41
11.01, 12.01, 13.01, 14.01, 15.01, 16.01, 17.01, 19.01, 20.01	39	24
11.05, 12.05, 13.05, 14.05, 15.05, 16.05, 17.05, 18.05, 19.05, 20.05	49	12
11.08, 12.08, 13.08, 14.08, 15.08, 16.08, 17.08, 18.08, 19.08, 20.08	60	21
11.12, 12.12, 13.12, 14.12, 15.12, 16.12, 17.12, 18.12, 19.12, 20.12	27	15
11.13, 12.13, 13.13, 14.13, 15.13, 16.13, 17.13, 18.13, 19.13, 20.13	48	24
21.08, 22.08, 23.08, 24.08, 25.08, 26.08, 27.08, 28.08, 29.08, 30.08	61	20
21.12, 22.12, 23.12, 24.12, 25.12, 26.12, 27.12, 28.12, 29.12, 30.12	28	14
3.03, 11.09, 12.09, 13.09, 14.09, 15.09, 16.09, 17.09, 18.09, 19.09, 20.09	60	18
36.10, 37.10, 38.10, 39.10, 40.10, 41.10, 42.10, 43.10, 44.10, 45.10, 46.10	58	19

Dwelling no.	Thermal loads	
	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
21.13, 22.13, 23.13, 24.13, 25.13, 26.13, 27.13, 28.13, 29.13, 30.13, 31.13, 32.13	49	23
41.14, 42.14, 43.14, 44.14, 45.14, 46.14, 47.14, 48.14, 49.14, 50.14, 51.14, 52.14	42	23
21.01, 22.01, 23.01, 24.01, 31.01, 32.01, 33.01, 34.14, 35.14, 36.14, 37.14, 38.14, 39.14, 40.14	41	24
35.15, 36.15, 37.15, 38.15, 39.15, 40.15, 41.15, 42.15, 43.15, 44.15, 45.15, 46.15, 47.15, 48.15, 49.15, 50.15, 51.15, 52.15	50	28
All other dwellings	63	20

(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
Lift car (No. 3)		-	light-emitting diode	connected to lift call button	No
Lift car (No. 4)		-	light-emitting diode	connected to lift call button	No
Lift car (No. 5)		-	light-emitting diode	connected to lift call button	No
Services	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Roof top plant	no mechanical ventilation	-	fluorescent	manual on / manual off	No
Mail	ventilation supply only	time clock or BMS controlled	compact fluorescent	manual on / manual off	No
Ground Floor Lobbies	ventilation supply only	none ie. continuous	compact fluorescent	zoned switching with motion sensor	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): 59
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 59
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 59
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 59
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 59

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)	20000	To collect run-off from at least: - 350 square metres of roof area of buildings in the development - 216 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 809 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Pool (No. 1)	Volume: 165 kLs	Location: Pool Pool shaded: no	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(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
Pool	ventilation exhaust only	time clock or BMS controlled	compact fluorescent	manual on / manual off	No
Gym	air conditioning system	time clock or BMS controlled	compact fluorescent	manual on / manual off	No
Sauna	ventilation exhaust only	time clock or BMS controlled	compact fluorescent	manual on / manual off	No
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No
Lift car (No. 6)		-	light-emitting diode	connected to lift call button	No
Garbage rooms	ventilation exhaust only	-	fluorescent	manual on / manual off	No
Plant	ventilation supply only	interlocked to light	fluorescent	manual on / manual off	No
Pool toilets	ventilation exhaust only	interlocked to light	compact fluorescent	manual on / manual off	No
Podium Lobbies	ventilation supply only	time clock or BMS controlled	compact fluorescent	zoned switching with motion sensor	No
Carpark - Lift Lobbies	ventilation supply only	none ie. continuous	compact fluorescent	zoned switching with motion sensor	No

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 250 peak kW
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 5
Pool (No. 1)	Heating source: electric heat pump	Pump controlled by timer: yes
Sauna (No. 1)	Heating source: gas	Efficiency measure: manual on / timer off
Sauna (No. 2)	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 " 
2. Commitments identified with a " 
3. Commitments identified with a " 