Hyside Projects Subtwo Pty Ltd

5 Powell St & 17-35 Parramatta Rd, Homebush

BASIX Assessment Report

ESD Synergy Pty Ltd
Contact No: +61 497 979 868
+61 413 591 688
Email: info@esdsynergy.com
Web: www.esdsynergy.com

Attention	Housein Karnib
Client	Hyside Projects Subtwo Pty Ltd C/O – Omaya Holdings
Author	Adriana Segovia
Reviewer	Henky Mantophani
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Subject	5 Powell St & 17-35 Parramatta Rd, Homebush – BASIX Assessment Report

1. SITE APPRECIATION

The proposed development is located at 5 Powell St & 17-35 Parramatta Rd, Homebush and consists of:

- 202 new residential units

2. BASIX WATER SECTION

The proposed development will meet the mandatory BASIX water target of 40% as long as the water commitments detailed in Table 1 are installed. For details of the requirements necessary to achieve this target, please refer to the BASIX Certificate No. 1061924M.

Table 1: BASIX Water Commitments

Common Areas and Central Systems	
Area of Indigenous or low water species	• Please refer to Appendix B
Rainwater collection	• None
Fire Sprinkler	• None
Private Dwellings	
Fixtures for apartments	• 3-star (Water Rating) showerheads with a flow rate > 6.0L/min & ≤ 7.5L/min • 4-star (Water Rating) toilets • 4-star (Water Rating) kitchen taps • 4-star (Water Rating) bathroom taps • 4-star (Water Rating) dishwashers

3. BASIX THERMAL COMFORT SECTION

The thermal performance of the development has been evaluated using BERS Pro 2nd Generation software. The BERS Pro computer simulation of residential developments forms part of the Nationwide House Energy Rating Scheme, and is used to assess the potential of a residential development to have low heating and cooling energy requirements once operational.

3.1 MODELLING ASSUMPTIONS

The "base-case" building fabric and glazing and associated thermal performance specifications are described in Table 2 below as these assumptions are based on the nominated preferred construction materials indicated by the architect.

Note: Table 2 must be read in conjunction with Table 3. Table 3 outlines additional thermal enhancements / treatments to meet the mandatory thermal load targets to achieve compliance.

Table 2: Base Case Assumptions on Construction and Fabric

Element	*Material*	*Detail*
External walls	Tilt concrete, lined	**Insulation: See Table 3**
		Light colour: Absorptance< 0.475
Internal walls	Plasterboard	
Party walls	75mm AAC	**Insulation: R1.0 both sides for fire safety**
		Common corridors
	75mm AAC	**Insulation: R1.0 both sides for fire safety**
		Neighbour
	Concrete panel, lined	**Insulation: None**
		Fire stairs & lifts
Windows	**Type 1 (Typical Single glazed clear glass with aluminium frame)**	Total Window System Properties **U-value 6.7 & SHGC 0.70 for sliding doors, sliding & fixed windows** **And** Total Window System Properties **U-value 6.7 & SHGC 0.57 for bifold doors, awning & casement windows**
	Type 2 Performance glazing	Total Window System Properties **U-value 5.6 & SHGC 0.41 for sliding doors, sliding & fixed windows** **And** Total Window System Properties **U-value 5.6 & SHGC 0.36 for bifold doors, awning & casement windows**
	Type 3	Total Window System Properties **U-value 4.3 &**

Element	*Material*	*Detail*
	Performance glazing	**SHGC 0.53 for sliding doors, sliding & fixed windows** **And** Total Window System Properties **U-value 4.3 & SHGC 0.47 for bifold doors, awning & casement windows**
	Type 4 Performance glazing	Total Window System Properties **U-value 3.4 & SHGC 0.53 for sliding doors, sliding & fixed windows** **And** Total Window System Properties **U-value 3.4 & SHGC 0.47 for bifold doors, awning & casement windows**
	Window Operability	Balcony windows: **30 or 45% (i.e. sliding)** Bedroom windows: **0% (i.e. fixed)** All other non-balcony windows: **0% (i.e. fixed)**
Skylight	None	
Roof	Concrete	**Insulation: See Table 3**
		Light colour: Absorptance< 0.475
Ceilings	Plasterboard	**Insulation: See Table 3**
Floors	Concrete	**Insulation: See Table 3**
		Tiles: Wet areas only
		Carpet: Elsewhere
Common corridors naturally ventilated		No
Recessed downlights assessed		No
Exhaust fans (kitchens, bathrooms, laundry)		**All assumed to be sealed**

3.2 BERS PRO RESULTS (THERMAL COMFORT)

The simulated heating and cooling loads per dwelling are summarized in Table 3 below. Where the dwellings have failed to meet the thermal load targets additional thermal enhancements / treatments are provided. This is typically in the form of bulk insulation. These additional thermal treatments are required to pass the BASIX Thermal performance requirements. Please refer to BASIX Certificate No. 1061924M & NatHERS Universal Certificate No. 0004489550 for details.

Table 3: BERS Pro Thermal Loads

Unit No.	*Additional Treatments Required*	*Heating Load (MJ/m².yr)*	*Cooling Load (MJ/m².yr)*	*Stars*	*Pass/Fail*
101	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	37.2	23.4	5.4	Pass

Unit No.	*Additional Treatments Required*	*Heating Load (MJ/m².yr)*	*Cooling Load (MJ/m².yr)*	*Stars*	*Pass/Fail*
102	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 2 windows	22.9	20.1	6.7	Pass
103	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 2 windows	23.5	23.0	6.4	Pass
104	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	28.4	17.7	6.4	Pass
105	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening	37.0	23.4	5.4	Pass
106	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge balcony glazed door to have a minimum 60% ventilation opening, South Bedroom glazed door to have a minimum 60% ventilation opening, South Lounge thin window to have a minimum 10% ventilation opening	34.3	24.5	5.4	Pass
107	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening	23.3	22.8	6.4	Pass
108	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening, West Lounge window to have a maximum glazed area 4.4m2	37.8	24.6	5.3	Pass
109	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows	19.6	21.3	6.9	Pass
110	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 2 windows	29.3	20.5	6.2	Pass
111	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening, North Bedroom 1 window to have a maximum glazed area 4.84m2, North Bedroom 2 window to have a maximum glazed area 4.84m2	11.6	23.9	7.3	Pass
201	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	30.0	24.8	5.8	Pass
202	R2.5 Bulk External Wall Insulation, Type 2 windows	22.1	19.6	6.8	Pass
203	R2.5 Bulk External Wall Insulation, Type 2 windows	22.7	22.0	6.6	Pass
204	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	21.4	17.6	7.0	Pass
205	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60%	30.0	23.7	5.9	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
	ventilation opening				
206	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge balcony glazed door to have a minimum 60% ventilation opening, South Bedroom glazed door to have a minimum 60% ventilation opening, South Lounge thin window to have a minimum 10% ventilation opening	24.0	23.6	6.3	Pass
207	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening	20.0	22.3	6.8	Pass
208	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening, West Lounge window to have a maximum glazed area 4.4m2	36.2	25.8	5.3	Pass
209	R2.5 Bulk External Wall Insulation, Type 2 windows	35.2	21.2	5.7	Pass
210	R2.5 Bulk External Wall Insulation, Type 2 windows	25.9	20.1	6.4	Pass
211	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening, North Bedroom 1 window to have a maximum glazed area 4.84m2, North Bedroom 2 window to have a maximum glazed area 4.84m2	7.0	25.5	7.4	Pass
301	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.7	19.2	5.8	Pass
302	R2.5 Bulk External Wall Insulation, Type 2 windows	26.2	17.7	6.6	Pass
303	R2.5 Bulk External Wall Insulation, Type 2 windows	27.2	18.8	6.4	Pass
304	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	23.9	13.7	7.1	Pass
305	R2.5 Bulk External Wall Insulation, Type 3 windows	34.5	20.5	5.8	Pass
306	R2.5 Bulk External Wall Insulation, Type 3 windows	28.0	24.0	5.9	Pass
307	R2.5 Bulk External Wall Insulation, Type 3 windows	23.2	17.4	6.9	Pass
308	R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening	34.5	20.4	5.8	Pass
309	R2.5 Bulk External Wall Insulation, Type 2 windows	39.2	18.9	5.4	Pass
310	R2.5 Bulk External Wall Insulation, Type 2 windows	29.3	18.1	6.3	Pass
311	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening	9.0	24.3	7.4	Pass
401	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	35.0	19.2	5.8	Pass
402	R2.5 Bulk External Wall Insulation, Type 2 windows	26.8	17.5	6.6	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
403	R2.5 Bulk External Wall Insulation, Type 2 windows	27.9	18.8	6.4	Pass
404	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	24.4	13.5	7.1	Pass
405	R2.5 Bulk External Wall Insulation, Type 3 windows	35.2	19.9	5.8	Pass
406	R2.5 Bulk External Wall Insulation, Type 3 windows	28.8	23.6	5.9	Pass
407	R2.5 Bulk External Wall Insulation, Type 3 windows	21.1	16.9	7.1	Pass
408	R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening	34.0	21.9	5.7	Pass
409	R2.5 Bulk External Wall Insulation, Type 2 windows	33.8	19.2	5.9	Pass
410	R2.5 Bulk External Wall Insulation, Type 2 windows	29.5	18.1	6.3	Pass
411	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening	6.2	23.5	7.7	Pass
501	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.9	19.3	5.8	Pass
502	R2.5 Bulk External Wall Insulation, Type 2 windows	27.3	17.2	6.6	Pass
503	R2.5 Bulk External Wall Insulation, Type 2 windows	28.5	18.5	6.4	Pass
504	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	27.6	14.2	6.8	Pass
505	R2.5 Bulk External Wall Insulation, Type 3 windows	35.7	19.9	5.7	Pass
506	R2.5 Bulk External Wall Insulation, Type 3 windows	29.3	23.4	5.9	Pass
507	R2.5 Bulk External Wall Insulation, Type 3 windows	23.8	17.1	6.9	Pass
508	R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening	30.5	25.1	5.7	Pass
509	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 75% ventilation opening	36.5	25.3	5.3	Pass
510	R2.5 Bulk External Wall Insulation, Type 2 windows	29.7	18.2	6.3	Pass
511	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening	9.1	24.9	7.4	Pass
601	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	35.0	19.3	5.8	Pass
602	R2.5 Bulk External Wall Insulation, Type 2 windows	27.7	17.4	6.4	Pass
603	R2.5 Bulk External Wall Insulation, Type 2 windows	29.1	18.1	6.4	Pass
604	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60%	28.0	14.1	6.8	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
	ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening				
605	R2.5 Bulk External Wall Insulation, Type 3 windows	36.3	19.6	5.7	Pass
606	R2.5 Bulk External Wall Insulation, Type 3 windows	29.8	22.6	5.9	Pass
607	R2.5 Bulk External Wall Insulation, Type 3 windows	23.9	17.2	6.9	Pass
608	R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, West Bedroom balcony glazed door to have a minimum 60% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening, South Bedroom thin window to have a minimum 10% ventilation opening, West Lounge window to have a maximum glazed area 5.28m2	26.7	24.6	5.9	Pass
609	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 75% ventilation opening, North Bedroom 1 thin window to have a minimum 10% ventilation opening, West Bedroom 1 thin window to have a minimum 10% ventilation opening, West Bedroom 2 thin window to have a minimum 10% ventilation opening	34.7	22.8	5.6	Pass
610	R2.5 Bulk External Wall Insulation, Type 2 windows	28.3	17.7	6.4	Pass
611	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening	9.2	25.3	7.4	Pass
701	R2.5 Bulk External Wall Insulation, Type 2 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	35.3	19.3	5.8	Pass
702	R2.5 Bulk External Wall Insulation, Type 2 windows	28.1	17.4	6.4	Pass
703	R2.5 Bulk External Wall Insulation, Type 2 windows	29.5	17.5	6.4	Pass
704	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	28.3	14.2	6.8	Pass
705	R2.5 Bulk External Wall Insulation, Type 3 windows, R2.5 Bulk Ceiling Insulation to exposed areas only	39.8	19.0	5.4	Pass
706	R2.5 Bulk External Wall Insulation, Type 3 windows, R2.5 Bulk Ceiling Insulation, R1.3 Anticon Roof Insulation	35.6	23.6	5.4	Pass
707	R2.5 Bulk External Wall Insulation, Type 3 windows, R2.5 Bulk Ceiling Insulation, R1.3 Anticon Roof Insulation	31.1	15.9	6.4	Pass
708	R2.5 Bulk External Wall Insulation, Type 4 windows, South Lounge balcony glazed door to have a minimum 75% ventilation opening, West Bedroom balcony glazed door to have a minimum 75% ventilation opening, West Lounge thin window to have a minimum 10% ventilation opening, South Bedroom thin window to have a minimum 10% ventilation opening, West Lounge window to have a maximum glazed area 5.28m2, R2.5 Bulk Ceiling Insulation, R1.3 Anticon Roof Insulation	33.2	25.0	5.4	Pass
709	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 75% ventilation opening, North Bedroom 1 thin window to have a minimum 10% ventilation opening, West Bedroom 2 thin window to have a minimum 10% ventilation	36.3	22.5	5.4	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
	opening, R2.5 Bulk Ceiling Insulation, R1.3 Anticon Roof Insulation, West Bedroom 1 window to be removed				
710	R2.5 Bulk External Wall Insulation, Type 2 windows, R2.5 Bulk Ceiling Insulation, R1.3 Anticon Roof Insulation	38.4	18.5	5.6	Pass
711	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom thin windows to have a minimum 10% ventilation opening	9.3	25.1	7.4	Pass
801	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	19.2	23.5	6.7	Pass
802	R2.5 Bulk External Wall Insulation, Type 3 windows	13.6	18.1	7.6	Pass
803	R2.5 Bulk External Wall Insulation, Type 3 windows	13.7	19.3	7.4	Pass
804	R2.5 Bulk External Wall Insulation, Type 4 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	30.7	17.4	6.3	Pass
805	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 1 window to have a minimum 10% ventilation opening	12.8	17.6	7.7	Pass
901	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	15.6	19.2	7.3	Pass
902	R2.5 Bulk External Wall Insulation, Type 2 windows	29.0	17.0	6.4	Pass
903	R2.5 Bulk External Wall Insulation, Type 2 windows	30.4	17.2	6.3	Pass
904	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	31.5	15.7	6.4	Pass
905	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows	33.4	19.4	5.9	Pass
906	R2.5 Bulk Floor Insulation adjacent to elevated areas only, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	39.9	16.6	5.7	Pass
907	R1.5 Bulk Floor Insulation adjacent to elevated areas only, R2.5 Bulk External Wall Insulation, Type 3 windows	37.4	24.9	5.3	Pass
908	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	10.7	24.6	7.3	Pass
1001	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.0	17.2	7.4	Pass
1002	R2.5 Bulk External Wall Insulation, Type 2 windows	31.2	15.5	6.4	Pass
1003	R2.5 Bulk External Wall Insulation, Type 2 windows	32.9	17.7	6.1	Pass
1004	R2.5 Bulk External Wall Insulation, Type 3 windows, North	33.2	14.0	6.4	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
	Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening				
1005	R2.5 Bulk External Wall Insulation, Type 3 windows	32.0	18.4	6.1	Pass
1006	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	35.1	15.6	6.0	Pass
1007	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	26.4	24.6	5.9	Pass
1008	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	11.4	23.6	7.3	Pass
1101	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.3	16.9	7.4	Pass
1102	R2.5 Bulk External Wall Insulation, Type 2 windows	31.5	15.4	6.4	Pass
1103	R2.5 Bulk External Wall Insulation, Type 2 windows	33.2	17.4	6.1	Pass
1104	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	33.5	13.9	6.3	Pass
1105	R2.5 Bulk External Wall Insulation, Type 3 windows	32.3	18.1	6.1	Pass
1106	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	35.4	15.4	6.0	Pass
1107	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	26.6	24.2	6.0	Pass
1108	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	11.7	23.3	7.3	Pass
1201	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.4	16.7	7.4	Pass
1202	R2.5 Bulk External Wall Insulation, Type 2 windows	31.7	15.6	6.4	Pass
1203	R2.5 Bulk External Wall Insulation, Type 2 windows	33.4	16.9	6.1	Pass
1204	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	33.6	13.8	6.3	Pass
1205	R2.5 Bulk External Wall Insulation, Type 3 windows	32.5	18.4	6.0	Pass
1206	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed	35.6	15.2	6.0	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
	door to have a maximum glazed area 11.2m2				
1207	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	26.8	24.1	6.0	Pass
1208	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	11.8	23.2	7.3	Pass
1301	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.6	16.6	7.4	Pass
1302	R2.5 Bulk External Wall Insulation, Type 2 windows	32.1	15.3	6.3	Pass
1303	R2.5 Bulk External Wall Insulation, Type 2 windows	33.8	16.6	6.1	Pass
1304	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	33.9	13.8	6.3	Pass
1305	R2.5 Bulk External Wall Insulation, Type 3 windows	32.8	18.1	6.0	Pass
1306	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	35.8	15.1	6.0	Pass
1307	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.0	23.8	6.0	Pass
1308	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.0	23.5	7.3	Pass
1401	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.7	16.5	7.4	Pass
1402	R2.5 Bulk External Wall Insulation, Type 2 windows	32.3	15.3	6.3	Pass
1403	R2.5 Bulk External Wall Insulation, Type 2 windows	34.0	16.7	6.1	Pass
1404	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.1	13.8	6.3	Pass
1405	R2.5 Bulk External Wall Insulation, Type 3 windows	33.0	18.0	6.0	Pass
1406	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	35.9	15.1	5.9	Pass
1407	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.1	23.4	6.1	Pass
1408	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.2	23.1	7.3	Pass
1501	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60%	17.8	16.6	7.4	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
	ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening				
1502	R2.5 Bulk External Wall Insulation, Type 2 windows	32.5	15.1	6.3	Pass
1503	R2.5 Bulk External Wall Insulation, Type 2 windows	34.2	16.7	6.0	Pass
1504	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.2	13.9	6.3	Pass
1505	R2.5 Bulk External Wall Insulation, Type 3 windows	33.1	18.0	5.9	Pass
1506	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.1	15.0	5.9	Pass
1507	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.3	23.3	6.1	Pass
1508	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.3	23.1	7.3	Pass
1601	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	17.9	16.6	7.4	Pass
1602	R2.5 Bulk External Wall Insulation, Type 2 windows	32.7	15.0	6.3	Pass
1603	R2.5 Bulk External Wall Insulation, Type 2 windows	34.3	16.6	6.0	Pass
1604	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.3	13.9	6.3	Pass
1605	R2.5 Bulk External Wall Insulation, Type 3 windows	33.3	17.9	5.9	Pass
1606	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.2	15.0	5.9	Pass
1607	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.3	22.8	6.1	Pass
1608	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.5	23.3	7.3	Pass
1701	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	18.1	16.5	7.4	Pass
1702	R2.5 Bulk External Wall Insulation, Type 2 windows	32.8	15.2	6.3	Pass
1703	R2.5 Bulk External Wall Insulation, Type 2 windows	34.5	16.5	5.9	Pass
1704	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge	34.5	13.9	6.3	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
	fixed window to have a minimum 20% ventilation opening				
1705	R2.5 Bulk External Wall Insulation, Type 3 windows	33.4	17.6	6.0	Pass
1706	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.3	14.9	5.9	Pass
1707	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.4	22.6	6.1	Pass
1708	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.5	23.0	7.3	Pass
1801	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	18.2	16.4	7.4	Pass
1802	R2.5 Bulk External Wall Insulation, Type 2 windows	33.0	15.0	6.3	Pass
1803	R2.5 Bulk External Wall Insulation, Type 2 windows	34.7	16.8	5.9	Pass
1804	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.6	13.9	6.3	Pass
1805	R2.5 Bulk External Wall Insulation, Type 3 windows	33.6	17.8	5.9	Pass
1806	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.4	14.4	6.0	Pass
1807	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.6	22.5	6.1	Pass
1808	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.7	22.7	7.3	Pass
1901	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	18.3	16.4	7.4	Pass
1902	R2.5 Bulk External Wall Insulation, Type 2 windows	33.1	14.8	6.3	Pass
1903	R2.5 Bulk External Wall Insulation, Type 2 windows	34.9	16.9	5.9	Pass
1904	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.7	13.8	6.3	Pass
1905	R2.5 Bulk External Wall Insulation, Type 3 windows	33.7	17.5	5.9	Pass
1906	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.5	13.9	6.1	Pass
1907	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75%	27.7	22.6	6.1	Pass

Unit No.	Additional Treatments Required	Heating Load (MJ/m².yr)	Cooling Load (MJ/m².yr)	Stars	Pass/Fail
	ventilation opening				
1908	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening	12.8	22.7	7.3	Pass
2001	R2.5 Bulk External Wall Insulation, Type 3 windows, South Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening, R2.5 Bulk Ceiling Insulation to exposed areas only	22.2	17.1	6.9	Pass
2002	R2.5 Bulk External Wall Insulation, Type 2 windows, R2.5 Bulk Ceiling Insulation to exposed areas only	36.8	15.0	5.9	Pass
2003	R2.5 Bulk External Wall Insulation, Type 2 windows, R2.5 Bulk Ceiling Insulation to exposed areas only	38.2	16.3	5.8	Pass
2004	R2.5 Bulk External Wall Insulation, Type 3 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, East Bedroom balcony glazed door to have a minimum 60% ventilation opening, East Lounge fixed window to have a minimum 20% ventilation opening	34.8	13.7	6.3	Pass
2005	R2.5 Bulk External Wall Insulation, Type 3 windows	33.9	17.4	5.9	Pass
2006	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.6	14.3	6.0	Pass
2007	R2.5 Bulk External Wall Insulation, Type 3 windows, East Bedroom balcony glazed door to have a minimum 75% ventilation opening	27.8	22.5	6.1	Pass
2008	R2.5 Bulk External Wall Insulation, Type 2 windows, North Lounge balcony glazed door to have a minimum 60% ventilation opening, R2.5 Bulk Ceiling Insulation to exposed areas only	15.6	23.3	7.0	Pass
2101	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge fixed window to have a minimum 20% ventilation opening	16.5	17.9	7.4	Pass
2102	R2.5 Bulk External Wall Insulation, Type 3 windows	15.8	17.5	7.4	Pass
2103	R2.5 Bulk External Wall Insulation, Type 3 windows	20.6	12.5	7.4	Pass
2104	R2.5 Bulk External Wall Insulation, Type 3 windows	34.0	17.6	5.9	Pass
2105	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.7	14.2	6.0	Pass
2106	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 1 balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 2 balcony glazed door to have a minimum 60% ventilation opening, West Bedroom 3 window to have a minimum 10% ventilation opening	22.8	24.6	6.4	Pass
2201	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge fixed window to have a minimum 20% ventilation opening	11.6	17.7	7.8	Pass
2202	R2.5 Bulk External Wall Insulation, Type 3 windows	10.1	17.8	7.9	Pass
2203	R2.5 Bulk External Wall Insulation, Type 3 windows	18.4	12.5	7.6	Pass
2204	R2.5 Bulk External Wall Insulation, Type 3 windows	34.1	17.5	5.9	Pass
2205	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall	36.8	14.1	6.0	Pass

Unit No.	Additional Treatments Required	Heating Load ($MJ/m^2.yr$)	Cooling Load ($MJ/m^2.yr$)	Stars	Pass/Fail
	Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2				
2206	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 1 balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 2 balcony glazed door to have a minimum 60% ventilation opening, West Bedroom 3 window to have a minimum 10% ventilation opening	19.4	24.4	6.7	Pass
2301	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge fixed window to have a minimum 20% ventilation opening	11.7	17.7	7.8	Pass
2302	R2.5 Bulk External Wall Insulation, Type 3 windows	10.2	17.5	7.9	Pass
2303	R2.5 Bulk External Wall Insulation, Type 3 windows	18.5	12.4	7.6	Pass
2304	R2.5 Bulk External Wall Insulation, Type 3 windows	34.3	17.5	5.9	Pass
2305	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, R0.5 Ceiling Insulation, South Lounge window to have a maximum glazed area 5.4m2, West Dining glazed door to have a maximum glazed area 11.2m2	36.9	14.0	6.0	Pass
2306	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 1 balcony glazed door to have a minimum 60% ventilation opening, North Bedroom 2 balcony glazed door to have a minimum 60% ventilation opening, West Bedroom 3 window to have a minimum 10% ventilation opening	19.5	24.7	6.6	Pass
2401	R2.5 Bulk External Wall Insulation, Type 3 windows, East Lounge fixed window to have a minimum 20% ventilation opening, R4.0 Bulk Ceiling Insulation, R2.3 Anticon Roof Insulation	17.3	19.9	7.2	Pass
2402	R2.5 Bulk External Wall Insulation, Type 3 windows, R4.0 Bulk Ceiling Insulation, R2.3 Anticon Roof Insulation	15.1	16.4	7.6	Pass
2403	R2.5 Bulk External Wall Insulation, Type 3 windows, R4.0 Bulk Ceiling Insulation, R2.3 Anticon Roof Insulation	24.5	11.9	7.2	Pass
2404	R2.5 Bulk External Wall Insulation, Type 3 windows, R4.0 Bulk Ceiling Insulation, R2.3 Anticon Roof Insulation	38.6	18.3	5.6	Pass
2405	R2.5 Bulk External Wall Insulation, R2.0 Internal Wall Insulation adjacent to common corridor only, Type 4 windows, South Ground Lounge window to have a maximum glazed area 5.4m2, West Ground Dining glazed door to have a maximum glazed area 11.2m2, West First floor Lounge glazed door to have a maximum glazed area 11.2m2, South First floor Lounge glazed door to have a maximum glazed area 14m2, R4.0 Bulk Ceiling Insulation to all exposed areas, R2.3 Anticon Roof Insulation to all exposed areas, Wall colour to be medium	39.4	20.8	5.4	Pass
2406	R2.5 Bulk External Wall Insulation, Type 3 windows, East Ground Lounge balcony glazed door to have a minimum 60% ventilation opening, North Ground Lounge window to have a minimum 10% ventilation opening, West Ground Bedroom 2 balcony glazed door to have a minimum 60% ventilation opening, North Ground Bedroom 3 balcony glazed door to have a minimum 60% ventilation opening, West Ground Study window to have a minimum 10% ventilation opening, West First floor Lounge glazed door to	35.0	26.0	5.4	Pass

Unit No.	*Additional Treatments Required*	*Heating Load (MJ/m².yr)*	*Cooling Load (MJ/m².yr)*	*Stars*	*Pass/Fail*
	have a minimum 75% ventilation opening, North First floor Lounge glazed door to have a minimum 60% ventilation opening, North Bedroom 1 glazed door to have a minimum 60% ventilation opening, West First floor Lounge glazed door to have a maximum glazed area 14m2, R4.0 Bulk Ceiling Insulation to all exposed areas, R2.3 Anticon Roof Insulation to all exposed areas				

4. BASIX ENERGY SECTION

The proposed development will meet the mandatory BASIX Energy target of 25% as long as the energy commitments detailed in Table 4 are installed.

Table 4: BASIX Energy Commitments

Component		*Commitment*
Common Areas and Central Systems	Hot Water System	• Centralised Gas-fired boiler with internal piping insulation of R0.6 (~25mm)
	Lifts	• All lifts to use Gearless traction with VVVF motor servicing all levels
	Ventilation	• Community room: Air conditioning system connected to time clock or BMS • Switch Room: Ventilation (supply only), continuous • Garbage Rooms: Ventilation (exhaust only), continuous • Plant/Service Rooms: Ventilation (supply only), thermostatically controlled • Hallways & lobbies: Ventilation (supply + exhaust only) connected to time clock or BMS
	Lighting	• Lift Cars: LED lighting connected to lift call button • Community room: LED lighting with manual on/off switch • Switch Room: LED lighting with manual on/off switch • Lift motor rooms: Fluorescent lighting with manual on/off switch • Garbage Rooms: LED lighting with motion sensors • Plant/Service Room: LED lighting with manual on/off switch • Hallways & lobbies: LED lighting with motion sensors + time clock
Private Dwellings	Hot Water System	• See Central Systems
	Ventilation	• Kitchen, Bathroom & Laundry Exhaust: Individual fan, ducted to roof or façade, with manual on/off switch
	Heating & Cooling	• Heating: Living & Beds to have individual 2.5 star (old label), 1-phase air-conditioning • Cooling: Living & Beds to have individual 2.5 star (old label), 1-phase air-conditioning

Component		Commitment
	Lighting	• At least 80% of light fittings (including the main light fitting) in all hallways, laundries, bathrooms, kitchens, bedrooms and living areas to use Fluorescent or LED lights with dedicated fittings[1]
	Other	• Gas cook top and electric oven • Install a 3.5-star (Energy Rating) dishwashers • Install a 2-star (Energy Rating) dryers

5. CONCLUSION

The proposed development has been assessed to optimise its thermal performance (passive and fabric design) using the Nationwide House Energy Rating scheme (NatHERS) and also been assessed in terms of its ability to conserve water and minimise energy consumption through BASIX Tool.

With the commitment recommendations contained within this report the proposed development is able to meet BASIX requirements and is BASIX compliant.

For further details, please refer to the BASIX Certificate No. 1061924M provided.

[1] Definition of dedicated fittings is a light fitting that is only capable of accepting fluorescent or LED (Light Emitting Diode) lamps. It will not accept incandescent, halogen or any other non-fluorescent or non-LED lamps.

APPENDIX A - ARCHITECTURAL DRAWINGS

The building sustainability performance assessment carried out in this report was based on the following architectural drawings supplied by SJB Architects received on 17th December 2019.

Sheet No	Sheet Name	Rev
0001	Cover	3
0101	Site Location	4
0102	Site Plan and Analysis	5
0103	Survey Plan	3
0201	Basement 4	6
0202	Basement 3	6
0203	Basement 2	6
0204	Basement 1	6
0205	Ground	8
0206	Level 1 - Level 4	8
0207	Level 5 - Level 7	4
0208	Level 8	9
0209	Level 9 - Level 20	8
0210	Level 21 - Level 23	8
0211	Level 24	2
0212	Roof	6
0501	Elevation - South (Parramatta Road)	6
0502	Elevation - East (Ismay Reserve)	6
0503	Elevation - North	6
0504	Elevation - West	6
0601	Section A	7
0602	Section B	6
0710	Facade Detail 1	1
0711	Facade Detail 2	1
0712	Facade Detail 3	1
1401	Apartment Types - Adaptable and Accessible Apartments	4
2901	Area Calculations - GFA	4
3101	Shadow Diagrams	4
3201	Analysis - Solar and Cross Ventilation	5
3301	3D Views	3
3401	External Material and Finishes	2
4001	Visualisation - View from Parramatta Road	3
4002	Visualisation - View from Ismay Reserve	3

APPENDIX B – Landscaping Areas

For BASIX, Garden Bed Area now is 400sqm, 0sqm for Turf and 0% Low Water Use Native Plants.