

### Deicorp Projects (Tallawong Station) Pty Ltd Tallawong Station Precinct South Stage: 1A and B Buildings A, B, C, D and E

To be built at 1-15 & 2-12 Conferta Avenue, Rouse Hill NSW 2155

Issue	File Ref	Description	Author	Date
A	19-0982	NatHERS and BASIX Assessment	AM	09/04/2020
B	20-0407	Update NatHERS to reflect plan changes	HE/NB/AC	08/05/2020

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Deicorp Projects (Tallawong Station) Pty Ltd. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



**Report Contact:** Haylea Edwards  
Email: haylea@efficientliving.com.au

**License Holder:** Tracey Cools  
Accreditation Number: HERA10033

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**Prepared For:**

Deicorp Projects (Tallawong Station) Pty Ltd  
Marvin Huang  
mhuang@deicorp.com.au

Level 3, 161 Redfern Street  
Redfern NSW 2016  
02 8665 4100

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**Introduction**

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 1-15 & 2-12 Conferta Avenue Rouse Hill NSW 2155.

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.4 thermal comfort simulation software. The report is based on the architectural drawings provided by Deicorp. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the following plans prepared by Turner: DA-111-007 3, DA-111-008 3, DA-111-009 3, DA-111-010 3, DA-111-015 3, DA-111-020 3, DA111-030 3, DA111-040 3, DA-111-070 3, DA-111-080 3, DA-111-090 3, DA-112-006 3, DA-112-007 3, DA-111-008 3, DA-111-009 3, DA-112-010 3, DA-112-015 3, DA-112-020 3, DA-112-030 3, DA-112-040 3, DA-112-050 3, DA-112-060 3, DA112-070 3, DA-112-080 3, DA-112-090 3, DA-211-001 3, DA-211-002 3, DA-212-001 3, DA-212-002 3, DA-212-003 3 AND DA-212-004 3.

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**Analysis**

The BASIX Assessment is divided into three sections; Water, Thermal Comfort and Energy, each independently measuring the efficiency of the Development.

BASIX requires a minimum target of 40% for the water section, a pass or fail for the thermal comfort section, and a minimum required target of 25% for the energy section.

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**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 toilet, the dish washer and clothes washing machine.

The size of the rainwater tank and number of connections may have a significant impact on your water score as does the area of gardens and lawns whether or not low water plant species are incorporated.

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**Thermal Comfort**

Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics are measured using BERS Pro Plus V4.4 Thermal Comfort Simulation Software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in megajoules per square metre of floor area (MJ/m<sup>2</sup>).

Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with than the individual unit caps.

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## Energy

The proposed Development has achieved the Energy target of 25% 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, cook top, oven, and clothes drying facilities.

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## Inclusions Summary

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

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## Thermal Comfort Scores

Average heating loads are 55% below allowable BASIX targets

Average cooling loads are 41% below allowable BASIX targets

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## Glazing Doors/Windows

The glazing was upgraded in consultation with the developer to achieve the projects Green Star objectives.

Industry default window values have been used to allow a range of window suppliers to tender. Once a supplier is selected their actual product values can be modeled. This will allow flexibility in U-Values and SHGC's.

## Glazing Doors/Windows

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±10%)

## Upgrades applied to selected units as per the NatHERS summary sheet;

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 2.9 (equal to or lower than) SHGC: 0.44 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

## Skylight:

U-value: 4.7 SHGC: 0.72

Given values are AFRC total window system values (glass and frame)

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## Roof and ceiling

Medium roof colour modelled

Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof is over

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### Ceiling Penetrations

Default modelled as per client's request. Once a product is selected modelling improvements can be made.

Sealed LED Downlights 1 per 2.5m<sup>2</sup>

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### External Wall

Cavity brick internally lined plasterboard on studs with R2.0 insulation required (Insulation only value)

### Upgrades applied to selected units as per the NatHERS summary sheet;

Cavity brick internally lined plasterboard on studs with R2.5 insulation required (Insulation only value)

### External Colour

Default colour modelled

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### Inter-tenancy walls

Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required

60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways

Minimum 200mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs.

60mm Pronto panels with plasterboard lining to services

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### Walls within dwellings

Plasterboard on studs - no insulation

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### Floors

Concrete with a minimum R1.2 insulation (insulation only value) required to units where part open subfloor or garage below

Concrete between levels, no insulation required

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### Floor coverings

Default floor coverings

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### External Shading

Shading as per stamped documentation

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### BASIX water inclusions

Score 40/40

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### Fixtures within units

Showerheads: 3 stars -Mid flow (>6L but ≤7.5L/min)

Toilets: 4.0 star

Kitchen taps: 5.0 star

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Bathroom vanity taps: 5.0 star

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**Appliances within units**

Dishwashers: 3.5 stars

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**Central rainwater storage**

Tank size: 8,000L

Collecting from 300m<sup>2</sup> roof area

Connected to outdoor tap for irrigation of landscaping common and private and car wash bay

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**Fire sprinkler test water**

Fire sprinkler test water contained in a closed loop system

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**BASIX Energy Inclusions**

Score 34/25

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**Hot water system**

Central gas fired boiler R1.0 pipe and ring main insulation

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**Lift motors**

All lifts to have gearless traction with VVVF motor

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**Appliances and other efficiency measures within units**

Gas cooktop & electric oven

Dishwashers: 3.5 star

Clothes dryers: 2.0 star

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**Heating and cooling within units**

All units to have individual, single phase, reverse cycle air conditioning to living areas, and at least 1 bedroom

A minimum efficiency of 3.0 – 3.5 stars is required for cooling; and

A minimum efficiency of 3.5 – 4.0 stars is required for heating

Day/Night zoning required. AC zoned switched to allow only one head on at a time. Bedroom and living room cannot be running simultaneously.

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**Artificial lighting within units**

All light fittings within each room are to have LED fixtures installed

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#### Ventilation within units

Bathroom: individual fan, ducted to roof or façade – manual on/off switch

Laundry: individual fan, ducted to roof or façade – manual on/off switch

Kitchen range hood: Individual fan, ducted to roof or façade – manual on/off switch

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#### Ventilation to common areas

Car park area – supply and exhaust air with a carbon monoxide monitor & VSD fan

Loading doc – supply and exhaust air with a carbon monoxide monitor & VSD fan

Waste rooms – Exhaust air, running continuously

Plant source air – No mechanical ventilation

Comms – Supply only, thermostatically controlled

Hot water plant – Supply only, interlocked to hot water plant operation (continuous selected in BASIX)

Pump rooms – Supply only, continuous

Bicycle storage – Exhaust air, running continuously

Plant exhaust air – No mechanical ventilation

Storage cage rooms – Exhaust air, running continuously

Electrical SR – Supply only, continuous

Hallways – No mechanical ventilation

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#### Artificial lighting to common areas

Lifts – Light emitting diodes (LEDs) connected to lift call button

Car park area – Light emitting diodes (LEDs) zone switching and motion sensors

Loading doc – Light emitting diodes (LEDs) zone switching and motion sensors

Waste rooms – Light emitting diodes (LEDs) motion sensors

Mechanical plant – Light emitting diodes (LEDs) manual on / manual off switch

Comms – Light emitting diodes (LEDs) manual on / manual off switch

Hot water plant – Light emitting diodes (LEDs) manual on / manual off switch

Pump rooms – Light emitting diodes (LEDs) manual on / manual off switch

Bicycle storage – Light emitting diodes (LEDs) motion sensors

Mechanical plant air – Light emitting diodes (LEDs) manual on / manual off switch

Storage cage rooms – Light emitting diodes (LEDs) motion sensors

Electrical SR – Light emitting diodes (LEDs) manual on / manual off switch

Hallways – Light emitting diodes (LEDs) zone switching and motion sensors



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8 May 2020

**Deicorp Projects (Tallawong Station) Pty Ltd**  
**Tallawong Station Precinct South**

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**Alternative Energy**

No PV required to pass BAISX. 117kW required for 5% energy saving

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
Building A						
A301	2	80	30.2	33.1	7.2	Glazing upgrade throughout
A302	2	73	17	41.3	7.4	None
A303	1	58	26.8	8.3	8.4	None
A304	1	58	27.3	9.3	8.4	None
A305	2	78	9.9	52.2	7.2	None
A306	2	85	19.1	38.8	7.4	None
A307	1	57	5.7	33	8.3	None
A308	2	80	13.2	36.2	7.8	None
A309	1	48	20.1	55.1	6.6	Glazing upgrade throughout
A310	1	59	15.4	31.3	7.9	None
A401	2	80	30.5	32.6	7.2	Glazing upgrade throughout
A402	2	73	17.3	40.8	7.4	None
A403	1	58	8.5	26.1	8.4	None
A404	1	58	9.5	27.2	8.4	None
A405	2	78	9.9	52.2	7.2	None
A406	2	85	19.5	38.8	7.4	None
A407	1	57	6.5	32.4	8.3	None
A408	2	80	13.5	35.8	7.8	None
A409	1	48	20.4	54.9	6.6	Glazing upgrade throughout
A410	1	49	15.7	31.2	7.9	None
A501	2	80	30.8	32.8	7.2	Glazing upgrade throughout
A502	2	73	40.4	17.6	7.4	None
A503	1	58	26.1	8.6	8.4	None
A504	1	58	9.7	27	8.4	None
A505	2	78	10	52	7.2	None
A506	2	85	19.7	38.5	7.4	None
A507	1	57	6.8	31.7	8.3	None
A508	2	80	13.7	35.3	7.8	None
A509	1	48	20.7	54.4	6.6	Glazing upgrade throughout
A510	1	49	15.9	31.2	7.9	None
A601	2	80	31.1	32.4	7.2	Glazing upgrade throughout
A602	2	73	15.9	34	7.8	None
A603	1	78	26.2	8.8	8.4	None
A604	1	58	9.9	26.9	8.4	None
A605	2	78	9.5	48.6	7.4	None
A606	1	85	38.4	19.9	7.4	None
A607	1	57	6.4	32.3	8.3	None
A608	2	80	13.9	35.2	7.8	None
A609	1	48	20.8	54.2	6.6	Glazing upgrade throughout
A610	1	49	16.2	31.3	7.9	None
A701	2	80	31.3	32.3	7.2	None
A702	2	73	16.1	33.6	7.8	None

**Tallawong Station Precinct South**  
**Stage 1A and 1B**  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
A703	2	77	26.6	15.7	8.1	None
A704	3	110	11.9	55	6.9	None
A705	3	107	29	11.5	8.2	None
A706	3	90	9	39.4	7.8	None
A707	2	77	31.7	47.8	6.4	None
A708	1	49	30.8	16.4	7.9	None
A801	2	80	37.1	53.2	5.9	Glazing upgrade throughout
A802	2	73	26.5	37.8	7.1	None
A803	2	77	27.5	30.7	7.4	None
A804	3	110	19.5	59.5	6.4	None
A805	3	107	26	20.4	7.9	None
A806	3	90	18.7	44.3	7.2	None
A807	2	75	34.9	52.8	5.9	None
A808	1	50	20.2	41.9	7.2	None
Building B						
B301	1	53	24.2	20.3	7.9	None
B302	2	79	2.1	36.4	8.3	None
B303	2	88	32.4	48.3	6.4	None
B304	1	52	32.4	21.8	7.6	None
B305	2	79	28.4	37.1	7	None
B306	1	55	45	16	7.3	None
B307	1	56	21	31.6	7.7	None
B308	2	78	22.2	35.5	7.4	None
B309	2	76	37.7	6.8	7.9	None
B310	2	74	7.5	45.2	7.7	None
B401	1	53	24.5	20	7.9	None
B402	2	79	5.5	35.6	8.2	None
B403	2	88	32.3	48.7	6.3	None
B404	1	52	22.1	32.1	7.6	None
B405	2	79	28.7	36.6	7.1	None
B406	1	55	16.3	44.3	7.3	None
B407	1	56	21.3	31.7	7.6	None
B408	2	78	22.4	35.3	7.4	None
B409	2	76	37.6	6.9	7.9	None
B410	2	74	6.8	46.8	7.6	None
B501	1	53	24.9	19.9	7.9	None
B502	2	79	1.1	38.8	8.3	None
B503	2	88	32.8	48.3	6.3	None
B504	1	52	22.5	31.8	7.6	None
B505	2	75	29.1	36.5	7	None
B506	1	55	16.7	43.9	7.3	None
B507	1	56	19.3	30.4	7.7	None
B508	2	79	22.7	35.3	7.4	None

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
B509	2	57	7	37.5	7.9	None
B510	2	74	5	46.5	7.7	None
B601	1	53	25	19.7	7.9	None
B602	2	79	1.1	38.4	8.3	None
B603	2	88	33	48	6.3	None
B604	1	52	22.8	31.5	7.6	None
B605	2	75	36	29.4	7.1	None
B606	1	55	16.9	43.5	7.3	None
B607	1	57	30.9	22	7.6	None
B608	2	79	22.8	35.7	7.4	None
B609	2	76	37.3	7.1	7.9	None
B610	2	74	4.5	46.8	7.7	None
B701	3	104	9.1	34.8	8	None
B702	2	85	22.1	29.9	7.7	None
B703	2	77	24.6	25.2	7.8	None
B704	2	75	29.6	36.2	7	None
B705	1	55	17.1	43.2	7.3	None
B706	1	57	22.3	30.9	7.6	None
B707	2	79	22.9	35.5	7.4	None
B708	2	76	7.2	37.2	7.9	None
B709	2	74	4.8	46.8	7.7	None
B801	3	104	14.8	38.5	7.6	None
B802	2	85	35.4	35.6	6.8	None
B803	2	77	25.2	53.1	6.4	None
B804	2	75	38.4	52.4	5.9	None
B805	3	108	35.6	52.7	5.9	None
B806	2	79	35.5	40.9	6.6	None
B807	2	76	14.8	42.5	7.4	None
B808	2	81	11.8	59.5	6.8	None
Building C						
C201	2	80	29	37.7	6.9	None
C202	2	85	21.8	35.8	7.4	Glazing upgrade throughout
C203	2	79	22.7	25.9	7.8	None
C204	1	57	41.3	24.3	7	Glazing upgrade throughout R2.5 External walls insulation
C205	1	57	57.7	26.5	6.2	None
C206	2	74	37.8	22.6	7.3	Glazing upgrade throughout
C207	2	72	37	26.2	7.2	None
C208	2	79	35.4	47.7	6.2	None
C301	2	80	40	28.8	6.9	None
C302	2	85	21.9	43.5	7.1	Glazing upgrade throughout
C303	2	79	21.1	27.6	7.8	None
C304	1	57	40.4	24.2	7	Glazing upgrade throughout R2.5 External walls insulation

**Tallawong Station Precinct South**  
**Stage 1A and 1B**  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
C305	1	57	57	26.9	6.2	None
C306	2	74	39.2	24.3	7.2	Glazing upgrade throughout
C307	2	72	34.6	25.5	7.3	None
C308	2	79	36.8	47.7	6.2	None
C401	2	80	28.1	41.5	6.9	None
C402	2	85	29.2	46.9	6.6	None
C403	2	79	29.6	18.5	7.9	None
C404	1	57	37.7	27.1	7.1	Glazing upgrade throughout R2.5 External walls insulation
C405	1	57	54.2	28.8	6.3	None
C406	2	74	39.2	24.3	7.2	Glazing upgrade throughout
C407	2	72	37	26.4	7.2	None
C408	2	79	36.7	48.5	6.1	None
C501	2	80	27.2	42.2	6.9	None
C502	3	100	17.2	47.5	7.1	Glazing upgrade throughout
C503	3	105	12.1	51.1	7.2	None
C504	2	80	13.9	22.3	8.4	None
C505	2	74	31.8	25.7	7.4	Glazing upgrade throughout
C506	2	72	37.4	26	7.2	None
C507	2	79	30.1	38.3	6.9	None
C601	2	80	27	42.6	6.9	None
C602	3	100	17	44.1	7.3	Glazing upgrade throughout
C603	3	105	12.7	53.5	6.9	None
C604	2	80	12.4	22.6	8.4	None
C605	2	74	25	27.4	7.7	Glazing upgrade throughout
C606	2	72	34.9	24.7	7.3	None
C607	2	79	34.5	55.9	5.9	None
C701	2	80	33.1	33.8	6.9	None
C702	3	100	36.7	25.6	7.2	Glazing upgrade throughout
C703	3	105	42.7	17.2	7.3	None
C704	2	80	19.4	20.1	8.3	None
C705	2	74	32.8	25.8	7.4	Glazing upgrade throughout
C706	2	72	42.7	46.8	5.9	None
C707	2	79	46.8	60.3	5.2	None
Building D						
D201	2	77	39.4	50.9	5.9	None
D202	2	75	13.6	45.2	7.4	Glazing upgrade throughout
D203	1	56	5.5	40.3	7.9	None
D204	2	81	7.1	22.5	8.8	None
D205	2	75	26.3	15.9	8.1	None
D206	2	75	25.2	13.3	8.3	None
D207	2	81	7.2	22.5	8.7	None
D208	1	56	49.1	9.6	7.4	None

**Tallawong Station Precinct South**  
**Stage 1A and 1B**  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
D209	2	75	52.7	6.3	7.4	None
D210	2	77	23.9	41.6	7	None
D301	2	77	50.2	39.8	5.9	None
D302	2	75	13.9	45.2	7.4	Glazing upgrade throughout
D303	1	56	5.8	39.5	7.9	None
D304	2	81	7.4	22.1	8.8	None
D305	2	75	16.2	25.9	8.1	None
D306	2	75	13.6	25.2	8.3	None
D307	2	81	20.6	8.9	8.8	None
D308	1	56	9.9	48.5	7.4	None
D309	2	75	51.4	6.6	7.4	None
D310	2	77	24.5	40.7	7.1	None
D401	2	77	43	43.1	6.1	None
D402	2	75	15.5	42.2	7.4	Glazing upgrade throughout
D403	1	56	7	35.3	8.1	None
D404	2	81	8.9	20.3	8.8	None
D405	2	75	17.7	23.8	8.2	None
D406	2	75	15	23.1	8.3	None
D407	2	81	9.1	19.8	8.8	None
D408	1	56	11.7	41.8	7.6	None
D409	2	75	7.5	46.3	7.6	None
D410	2	77	26.6	36.7	7.2	None
D501	2	77	43.3	43.2	6	None
D502	2	75	15.6	41.3	7.4	Glazing upgrade throughout
D503	1	56	7.1	35.7	8.1	None
D504	2	81	19.7	9	8.8	None
D505	2	75	17.9	23.6	8.2	None
D506	2	75	15.2	22.9	8.3	None
D507	2	81	9.3	19.9	8.8	None
D508	1	56	41.8	12	7.96	None
D509	2	75	7.7	45.5	7.6	None
D510	2	77	26.8	36.5	7.2	None
D601	2	77	43.6	42.7	6.1	None
D602	2	75	15.7	41.1	7.4	Glazing upgrade throughout
D603	1	56	7.4	35.5	8.1	None
D604	2	81	19.85	9.2	8.8	None
D605	2	75	18.2	23.8	8.2	None
D606	2	75	15.4	22.8	8.3	None
D607	2	81	9.4	19.4	8.8	None
D608	1	56	12.3	41.6	7.6	None
D609	2	75	7.8	45.2	7.6	None
D610	2	77	27.2	36.2	7.2	None
D701	2	77	36.2	33.2	6.9	None

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200

Accreditation # HERA10033

Thermal performance specifications

Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
D702	3	110	21.2	34.2	7.4	None
D703	2	80	9.4	19.5	8.8	None
D704	2	81	18.3	23.8	8.1	None
D705	2	75	32.2	29.6	7.2	None
D706	2	81	9.6	19.1	8.8	None
D707	3	110	14.1	28.2	8.1	None
D708	3	103	20.8	29.8	7.8	None
D801	2	77	45.6	50.7	5.7	None
D802	3	75	27.9	46.2	6.7	Glazing upgrade throughout
D803	2	80	21.9	23.7	7.9	None
D804	2	81	32.2	29.6	7.2	None
D805	2	75	29.3	28	7.4	None
D806	2	81	22.1	23.7	7.9	None
D807	3	110	22.4	32.8	7.4	None
D808	3	103	32.7	32.7	7.1	None
Building E						
E001	2	76	22.7	40.9	7.2	Glazing upgrade throughout
E002	2	81	24.6	28.3	7.6	Glazing upgrade throughout
E003	2	80	25.9	47	6.7	Glazing upgrade throughout
E101	2	76	8.6	50.4	7.4	None
E102	2	81	8.4	30.9	8.3	None
E103	2	80	12.1	60.3	6.8	None
E201	2	70	25.6	21.7	7.9	None
E202	2	76	22.4	30.1	7.7	None
E203	1	56	24.7	44.1	6.9	None
E204	2	76	16.7	44.8	7.3	None
E205	1	58	40.7	35.8	6.5	None
E206	1	61	14.7	40.1	7.5	None
E207	1	56	14.7	48.4	7.2	None
E208	1	53	23.8	42.9	6.9	None
E209	2	81	12.9	22	8.4	None
E210	1	50	18.3	30.7	7.8	None
E211	1	55	6.9	42.8	7.8	None
E212	2	75	11.5	57.8	6.9	Glazing upgrade throughout
E213	2	73	19.7	40.4	7.3	None
E214	2	81	12.7	22.2	8.4	None
E215	1	61	5.6	27.8	8.5	None
E216	1	61	7.2	61.6	6.9	None
E217	2	71	9.7	60.5	6.9	None
E218	2	83	21.5	40	7.3	None
E219	2	81	24.5	37.2	7.2	None
E220	2	77	33.1	33.7	6.9	None
E221	2	78	9.3	29.4	8.3	None

**Tallawong Station Precinct South**  
**Stage 1A and 1B**  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
E301	2	76	27.8	30.7	7.4	None
E302	2	76	22.4	25.9	7.9	None
E303	1	56	17.1	44.5	7.3	None
E304	2	76	19.2	33.9	7.6	Glazing upgrade throughout
E305	1	58	41.8	38.3	6.4	None
E306	1	61	14.7	40.1	7.5	None
E307	2	76	25.2	26	7.7	None
E308	1	53	43	23.5	6.9	None
E309	2	81	13.5	21.9	8.4	None
E310	1	50	18.1	28.8	7.9	None
E311	2	83	11.6	28.9	8.2	None
E312	2	75	11.7	56.6	6.9	Glazing upgrade throughout
E313	2	73	19.5	37.6	7.4	None
E314	2	81	13	21.8	8.4	None
E315	1	61	5.7	28	8.5	None
E316	1	61	5.9	59.1	7.1	Glazing upgrade throughout
E317	2	71	10.1	60	6.9	None
E318	2	83	20.2	43.6	7.2	None
E319	2	81	26.6	40.9	6.9	None
E320	2	78	33	34.5	6.9	None
E321	2	78	9.6	29.5	8.3	None
E401	2	76	43.4	31.6	6.6	None
E402	2	76	35.8	17.1	7.6	None
E403	3	116	35.4	29.4	7.1	None
E404	1	58	42.6	35.1	6.4	None
E405	1	61	31.2	41.7	6.7	None
E406	2	76	41	27.9	6.9	None
E407	1	53	25.3	38.4	7.2	None
E408	2	81	14.8	20.3	8.4	None
E409	1	50	20	25.9	7.9	None
E410	2	83	13.2	23.9	8.4	None
E411	2	75	12.9	49.8	7.2	Glazing upgrade throughout
E412	2	73	21.4	32.9	7.6	None
E413	2	81	14.6	20.3	8.4	None
E414	1	61	6.8	24.6	8.7	None
E415	1	61	6.9	50.8	7	Glazing upgrade throughout
E416	2	71	11.8	51.2	7.2	None
E417	2	83	22	38.5	7.3	None
E418	2	81	28.2	38.4	6.9	None
E419	2	78	36.5	31	6.9	None
E420	2	78	9.6	29.5	8.3	None
E501	2	83	13.4	23.6	8.4	None
E502	2	75	12.1	42.7	7.5	Glazing upgrade throughout

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004812200						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
E503	2	73	32.6	21.7	7.6	None
E504	2	73	19.5	34.8	7.6	None
E505	2	81	10.2	49.7	7.3	None
E506	2	77	26.8	38	7.1	None
E507	2	73	43.3	24.4	6.9	None
E508	1	61	6.9	24.5	8.7	None
E509	1	61	7	50.3	7.4	Glazing upgrade throughout
E510	2	71	12	51.1	7.2	None
E511	2	83	22.1	38.4	7.3	None
E512	2	81	26	36.8	7.2	None
E513	2	77	34.3	28.1	7.2	None
E514	2	78	11.2	27.1	8.3	None
E601	2	83	13.5	23.5	8.4	None
E602	2	75	11.6	40.3	7.7	Glazing upgrade throughout
E603	2	73	21.9	32	7.6	None
E604	2	73	19.9	34.1	7.6	None
E605	2	86	21.2	25.5	7.9	None
E606	2	77	25.1	40.5	7	None
E607	2	73	25.1	41.2	6.9	None
E608	1	61	7	24.8	8.6	None
E609	1	61	7.2	49.5	7.4	Glazing upgrade throughout
E610	2	71	12.5	51.1	7.2	None
E611	2	83	22.4	37.9	7.3	None
E612	2	81	27.8	38.1	7	None
E613	2	78	35	30.1	7.1	None
E614	2	78	11	27.1	8.3	None
E701	2	83	26.3	27	7.6	None
E702	2	75	16.3	34.4	7.7	Glazing upgrade throughout
E703	2	73	33.2	36.8	6.9	None
E704	2	73	31.6	37.6	6.9	None
E705	2	81	40.7	35	6.6	None
E706	2	77	29.4	31	7.3	None
E707	2	73	39.6	28.1	6.9	None
E708	1	61	17.5	28.6	7.9	None
E709	2	71	19	43.6	7.2	None
E710	2	83	36	42.2	6.4	None
E711	2	81	37.7	29.2	6.9	None
E712	2	78	43.4	26.9	6.9	None
E713	3	124	13.1	49	7.2	Glazing upgrade throughout

# Nationwide House Energy Rating Scheme\* — Class 2 summary



Certificate number: **0004812200**

Certificate Date: **07 May 2020**

★ Average Star rating: **7.5**

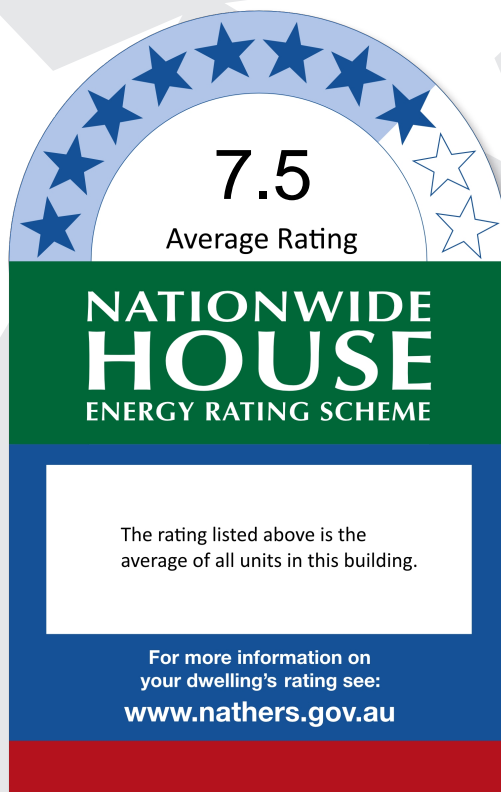
## Assessor details

Accreditation number: **HERA10033**  
Name: **Tracey Cools**  
Organisation: **Efficient Living Pty Ltd**  
Email: **admin@efficientliving.com.au**  
Phone: **02 9970 6181**  
Declaration of interest: **None**  
Software: **BERS Pro v4.4.0.0 (3.21)**  
  
AAO: **HERA**

## Dwelling details

Street: **Stage 1A-B: 2-12 Conferta Ave**  
Suburb: **Rouse Hill**  
State: **NSW**  
Postcode: **2155**

Scan to access this certificate online and confirm this is valid.



## Summary of all dwellings

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004741450-01	A301	30.2	33.1	63.2	7.2
0004741476-01	A302	17.0	41.3	58.3	7.4
0004741500-01	A303	8.3	26.8	35.1	8.4
0004741534-01	A304	9.3	27.3	36.6	8.4
0004741567-01	A305	9.9	52.2	62.1	7.2
0004741591-01	A306	19.1	38.8	57.9	7.4
0004741625-01	A307	5.7	33.0	38.7	8.3
0004741658-01	A308	13.2	36.2	49.4	7.8
0004741682-01	A309	20.1	55.1	75.2	6.6
0004741716-01	A310	15.4	31.3	46.6	7.9
0004741740-01	A401	30.5	32.6	63.1	7.2
0004741773-01	A402	17.3	40.8	58.1	7.4
0004741807-01	A403	8.5	26.1	34.6	8.4
0004741831-01	A404	9.5	27.2	36.7	8.4
0004741864-01	A405	9.9	52.2	62.1	7.2

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004741898-01	A406	19.5	38.8	58.2	7.4
0004741922-01	A407	6.5	32.4	38.8	8.3
0004741963-01	A408	13.5	35.8	49.3	7.8
0004741997-01	A409	20.4	54.9	75.3	6.6
0004742029-01	A410	15.7	31.2	46.9	7.9
0004741435-01	A501	30.8	32.8	63.6	7.2
0004741468-01	A502	17.6	40.4	58.0	7.4
0004741492-01	A503	8.6	26.5	35.1	8.4
0004741526-01	A504	9.7	27.0	36.7	8.4
0004741559-01	A505	10.2	52.0	62.2	7.2
0004741583-01	A506	19.7	38.5	58.2	7.4
0004741617-01	A507	6.8	31.7	38.5	8.3
0004741641-01	A508	13.7	35.3	49.0	7.8
0004741674-01	A509	20.7	54.4	75.1	6.6
0004741708-01	A510	15.9	31.2	47.2	7.9
0004741732-01	A601	31.1	32.4	63.4	7.2
0004741765-01	A602	15.9	34.0	49.9	7.8
0004741799-01	A603	8.8	26.2	35.0	8.4
0004741823-01	A604	9.9	26.9	36.7	8.4
0004741856-01	A605	9.5	48.6	58.2	7.4
0004741880-01	A606	19.9	38.4	58.3	7.4
0004741914-01	A607	6.4	32.3	38.7	8.3
0004741948-01	A608	13.9	35.2	49.1	7.8
0004741971-01	A609	20.8	54.2	75.0	6.6
0004742003-01	A610	16.2	31.3	47.5	7.9
0004741443-01	A701	31.3	32.3	63.6	7.2
0004741484-01	A702	16.1	33.6	49.7	7.8
0004741518-01	A703	15.7	26.6	42.3	8.1
0004741542-01	A704	11.9	55.0	67.0	6.9
0004741575-01	A705	11.5	29.0	40.5	8.2
0004741609-01	A706	9.0	39.4	48.5	7.8
0004741633-01	A707	31.7	47.8	79.5	6.4
0004741666-01	A708	16.4	30.8	47.2	7.9
0004741690-01	A801	37.1	53.2	90.3	5.9
0004741724-01	A802	26.5	37.8	64.4	7.1
0004741757-01	A803	27.5	30.7	58.1	7.4
0004741781-01	A804	19.5	59.5	79.0	6.4
0004741815-01	A805	20.4	26.0	46.4	7.9
0004741849-01	A806	18.7	44.3	63.0	7.2
0004741872-01	A807	34.9	52.8	87.7	5.9
0004741906-01	A808	20.2	41.9	62.1	7.2
0004741930-01	B301	24.2	20.3	44.6	7.9
0004741955-01	B302	2.1	36.4	38.5	8.3

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004741989-01	B303	32.4	48.3	80.7	6.4
0004742011-01	B304	21.8	32.4	54.2	7.6
0004742060-01	B305	28.4	37.1	65.5	7
0004742094-01	B306	16.0	45.0	61.1	7.3
0004742110-01	B307	21.0	31.6	52.5	7.7
0004742144-01	B308	22.2	35.5	57.7	7.4
0004742169-01	B309	6.8	37.7	44.4	7.9
0004742201-01	B310	7.5	45.2	52.7	7.7
0004742243-01	B401	24.5	20.0	44.4	7.9
0004742276-01	B402	5.5	35.6	41.1	8.2
0004742300-01	B403	32.3	48.7	81.0	6.3
0004742326-01	B404	22.2	32.1	54.3	7.6
0004742342-01	B405	28.7	36.6	65.3	7.1
0004742375-01	B406	16.3	44.3	60.6	7.3
0004742417-01	B407	21.3	31.7	53.1	7.6
0004742458-01	B408	22.4	35.3	57.7	7.4
0004742466-01	B409	6.9	37.6	44.5	7.9
0004742508-01	B410	6.8	46.8	53.6	7.6
0004742532-01	B501	24.9	19.9	44.7	7.9
0004742565-01	B502	1.1	38.3	39.4	8.3
0004742599-01	B503	32.8	48.3	81.1	6.3
0004742045-01	B504	22.5	31.8	54.3	7.6
0004742078-01	B505	29.1	36.5	65.6	7
0004742102-01	B506	16.7	43.9	60.6	7.3
0004742136-01	B507	21.7	31.0	52.7	7.7
0004742177-01	B508	22.7	35.3	58.0	7.4
0004742219-01	B509	7.1	37.3	44.4	7.9
0004742235-01	B510	5.0	46.5	51.5	7.7
0004742268-01	B601	25.0	19.7	44.7	7.9
0004742284-01	B602	1.1	38.4	39.5	8.3
0004742318-01	B603	33.0	48.0	81.0	6.3
0004742359-01	B604	22.8	31.5	54.3	7.6
0004742391-01	B605	29.4	36.0	65.4	7.1
0004742425-01	B606	16.9	43.5	60.4	7.3
0004742433-01	B607	22.0	30.9	52.9	7.6
0004742482-01	B608	22.8	35.7	58.5	7.4
0004742516-01	B609	7.1	37.3	44.4	7.9
0004742540-01	B610	4.5	46.8	51.2	7.7
0004742573-01	B701	9.1	34.8	43.9	8
0004742607-01	B702	22.1	29.9	52.1	7.7
0004742615-01	B703	24.6	25.2	49.8	7.8
0004742052-01	B704	29.6	36.2	65.8	7
0004742086-01	B705	17.1	43.2	60.4	7.3

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004742128-01	B706	22.3	30.9	53.2	7.6
0004742151-01	B707	22.9	35.5	58.5	7.4
0004742185-01	B708	7.2	37.2	44.4	7.9
0004742193-01	B709	4.8	46.8	51.6	7.7
0004742227-01	B801	14.8	38.5	53.3	7.6
0004742250-01	B802	35.4	35.6	70.9	6.8
0004742292-01	B803	25.2	53.1	78.3	6.4
0004742334-01	B804	38.4	52.4	90.8	5.9
0004742367-01	B805	35.6	52.7	88.4	5.9
0004742383-01	B806	35.5	40.9	76.4	6.6
0004742409-01	B807	35.5	40.9	76.4	6.6
0004742441-01	B808	11.8	59.5	71.3	6.8
0004742490-01	C201	29.0	37.7	66.7	6.9
0004742524-01	C202	21.8	35.8	57.6	7.4
0004742557-01	C203	22.7	25.9	48.6	7.8
0004742581-01	C204	41.3	24.3	65.6	7
0004742623-01	C205	57.7	26.5	84.2	6.2
0004742649-01	C206	37.8	22.6	60.4	7.3
0004742672-01	C207	37.0	26.2	63.1	7.2
0004742714-01	C208	35.4	47.7	83.2	6.2
0004742748-01	C301	28.8	40.0	68.8	6.9
0004742755-01	C302	21.9	43.5	65.4	7.1
0004742797-01	C303	21.1	27.6	48.8	7.8
0004742839-01	C304	40.4	25.2	65.5	7
0004742854-01	C305	57.0	26.9	83.8	6.2
0004742896-01	C306	37.3	22.6	59.9	7.3
0004742920-01	C307	33.2	23.4	56.6	7.4
0004742961-01	C308	37.7	50.5	88.3	5.9
0004742995-01	C401	28.1	41.5	69.6	6.9
0004743027-01	C402	29.2	46.9	76.1	6.6
0004743043-01	C403	18.5	29.6	48.1	7.9
0004743076-01	C404	37.7	27.1	64.8	7.1
0004743100-01	C405	54.2	28.8	83.0	6.3
0004743134-01	C406	39.2	24.3	63.5	7.2
0004743167-01	C407	37.0	26.4	63.4	7.2
0004743191-01	C408	36.7	48.5	85.2	6.1
0004743217-01	C501	27.2	42.2	69.4	6.9
0004742656-01	C502	17.2	43.0	60.2	7.3
0004742680-01	C503	12.1	51.1	63.1	7.2
0004742698-01	C504	13.9	22.3	36.2	8.4
0004742730-01	C505	31.8	25.7	57.5	7.4
0004742771-01	C506	37.4	26.0	63.3	7.2
0004742805-01	C507	30.1	38.3	68.4	6.9

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004742821-01	C601	27.0	42.6	69.5	6.9
0004742862-01	C602	17.0	44.1	61.2	7.3
0004742888-01	C603	12.7	53.5	66.2	6.9
0004742912-01	C604	12.4	22.6	35.0	8.4
0004742946-01	C605	25.0	27.4	52.4	7.7
0004742979-01	C606	34.9	24.7	59.6	7.3
0004743019-01	C607	34.5	55.9	90.5	5.9
0004743050-01	C701	33.1	33.8	66.9	6.9
0004743084-01	C702	25.6	36.7	62.3	7.2
0004743118-01	C703	17.2	42.7	59.9	7.3
0004743142-01	C704	19.4	20.1	39.5	8.3
0004743175-01	C705	32.8	25.8	58.6	7.4
0004743209-01	C706	42.7	46.8	89.5	5.9
0004743225-01	C707	46.8	60.3	107.1	5.2
0004742631-01	D201	39.4	50.9	90.3	5.9
0004742664-01	D202	13.6	45.2	58.8	7.4
0004742706-01	D203	5.5	40.3	45.8	7.9
0004742722-01	D204	7.1	22.5	29.6	8.8
0004742763-01	D205	15.9	26.3	42.2	8.1
0004742789-01	D206	13.3	25.2	38.5	8.3
0004742813-01	D207	7.2	22.5	29.7	8.7
0004742847-01	D208	9.6	49.1	58.8	7.4
0004742870-01	D209	6.3	52.7	59.0	7.4
0004742904-01	D210	23.9	41.6	65.5	7
0004742953-01	D301	39.8	50.2	90.0	5.9
0004742987-01	D302	13.9	45.2	59.1	7.4
0004743001-01	D303	5.8	39.5	45.3	7.9
0004743035-01	D304	7.4	22.1	29.5	8.8
0004743068-01	D305	16.2	25.9	42.1	8.1
0004743092-01	D306	13.6	25.2	38.8	8.3
0004743126-01	D307	8.9	20.6	29.5	8.8
0004743159-01	D308	9.9	48.5	58.4	7.4
0004743183-01	D309	6.6	51.4	58.0	7.4
0004743241-01	D310	24.5	40.7	65.3	7.1
0004743274-01	D401	43.0	43.1	86.1	6.1
0004743316-01	D402	15.5	42.2	57.7	7.4
0004743332-01	D403	7.0	35.3	42.3	8.1
0004743373-01	D404	8.9	20.3	29.2	8.8
0004743407-01	D405	17.7	23.8	41.5	8.2
0004743423-01	D406	15.0	23.1	38.1	8.3
0004743464-01	D407	9.1	19.8	29.0	8.8
0004743498-01	D408	11.7	41.8	53.6	7.6
0004743522-01	D409	7.5	46.3	53.8	7.6

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004743555-01	D410	26.6	36.7	63.3	7.2
0004743589-01	D501	43.3	43.2	86.5	6
0004743613-01	D502	15.6	41.3	56.8	7.4
0004743647-01	D503	7.1	35.7	42.9	8.1
0004743670-01	D504	9.0	19.7	28.8	8.8
0004743704-01	D505	17.9	23.6	41.4	8.2
0004743738-01	D506	15.2	22.9	38.0	8.3
0004743761-01	D507	9.3	19.9	29.2	8.8
0004743795-01	D508	12.0	41.8	53.8	7.6
0004743829-01	D509	7.7	45.5	53.2	7.6
0004743233-01	D510	26.8	36.5	63.3	7.2
0004743266-01	D601	43.6	42.7	86.3	6.1
0004743290-01	D602	15.7	41.1	56.8	7.4
0004743324-01	D603	7.4	35.5	42.9	8.1
0004743357-01	D604	9.2	19.5	28.8	8.8
0004743381-01	D605	18.2	23.8	41.9	8.2
0004743415-01	D606	15.4	22.8	38.2	8.3
0004743456-01	D607	9.4	19.4	28.9	8.8
0004743480-01	D608	12.3	41.6	53.8	7.6
0004743514-01	D609	7.8	45.2	53.0	7.6
0004743548-01	D610	27.2	36.2	63.4	7.2
0004743571-01	D701	36.2	33.2	69.4	6.9
0004743605-01	D702	21.2	34.2	55.4	7.4
0004743639-01	D703	9.4	19.5	28.9	8.8
0004743662-01	D704	18.3	23.8	42.1	8.1
0004743696-01	D705	15.5	22.6	38.2	8.3
0004743720-01	D706	9.6	19.1	28.7	8.8
0004743753-01	D707	14.1	28.2	42.3	8.1
0004743787-01	D708	20.8	29.8	50.5	7.8
0004743811-01	D801	45.6	50.7	96.4	5.7
0004743258-01	D802	27.9	46.2	74.1	6.7
0004743282-01	D803	21.9	23.7	45.6	7.9
0004743308-01	D804	32.2	29.6	61.8	7.2
0004743340-01	D805	29.3	28.0	57.3	7.4
0004743365-01	D806	22.1	23.7	45.8	7.9
0004743399-01	D807	22.4	32.8	55.2	7.4
0004743431-01	D808	32.7	32.7	65.4	7.1
0004743449-01	E001	22.7	40.9	63.6	7.2
0004743472-01	E002	24.6	28.3	52.9	7.6
0004743506-01	E003	25.8	46.9	72.8	6.7
0004743530-01	E101	8.6	50.4	59.0	7.4
0004743563-01	E102	8.4	30.9	39.3	8.3
0004743597-01	E103	12.1	60.3	72.4	6.8

## Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



### Summary of all dwellings continued

#### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004743621-01	E201	25.6	21.7	47.3	7.9
0004743654-01	E202	22.4	30.1	52.5	7.7
0004743688	E203	24.7	44.1	68.7	6.9
0004743712-01	E204	16.7	44.8	61.5	7.3
0004743746-01	E205	40.7	35.8	76.6	6.5
0004743779-01	E206	14.7	40.1	54.8	7.5
0004743803-01	E207	14.7	48.4	63.1	7.2
0004743852-01	E208	23.8	42.9	66.7	6.9
0004743878-01	E209	12.9	22.0	34.9	8.4
0004743910-01	E210	18.3	30.7	49.0	7.8
0004743936-01	E211	6.9	42.8	49.6	7.8
0004743977-01	E212	11.5	57.8	69.2	6.9
0004743993-01	E213	19.7	40.4	60.1	7.3
0004744025-01	E214	12.7	22.2	34.9	8.4
0004744058-01	E215	5.6	27.8	33.5	8.5
0004744082-01	E216	7.2	61.6	68.8	6.9
0004744116-01	E217	9.7	60.5	70.2	6.9
0004744140-01	E218	21.5	40.0	61.5	7.3
0004744173-01	E219	24.5	37.2	61.8	7.2
0004744207-01	E220	33.1	33.7	66.9	6.9
0004744231-01	E221	9.3	29.4	38.8	8.3
0004744264-01	E301	27.8	30.7	58.5	7.4
0004744280-01	E302	22.4	25.9	48.3	7.9
0004744314-01	E303	17.1	44.5	61.6	7.3
0004744355-01	E304	19.2	33.9	53.1	7.6
0004744389-01	E305	41.8	38.3	80.1	6.4
0004744413-01	E306	14.7	40.1	54.8	7.5
0004743845-01	E307	25.2	26.0	51.3	7.7
0004743886-01	E308	23.5	43.0	66.5	6.9
0004743902-01	E309	13.5	21.9	35.4	8.4
0004743928-01	E310	18.1	28.8	46.9	7.9
0004743951-01	E311	11.6	28.9	40.5	8.2
0004744009-01	E312	11.7	56.6	68.3	6.9
0004744033-01	E313	19.5	37.6	57.1	7.4
0004744066-01	E314	13.0	21.8	34.8	8.4
0004744090-01	E315	5.7	28.0	33.7	8.5
0004744124-01	E316	5.9	59.1	65.0	7.1
0004744157-01	E317	10.1	60.0	70.1	6.9
0004744181-01	E318	20.2	43.6	63.8	7.2
0004744215-01	E319	26.6	40.9	67.5	6.9
0004744249-01	E320	33.0	34.5	67.4	6.9
0004744272-01	E321	9.6	29.5	39.1	8.3
0004744306-01	E401	43.4	31.6	75.0	6.6

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004744330-01	E402	35.8	17.1	52.9	7.6
0004744363-01	E403	35.4	29.4	64.8	7.1
0004744397-01	E404	42.6	35.1	77.7	6.4
0004744421-01	E405	31.2	41.7	72.9	6.7
0004743837-01	E406	41.0	27.9	68.9	6.9
0004743860-01	E407	25.3	38.4	63.7	7.2
0004743894-01	E408	14.8	20.3	35.2	8.4
0004743944-01	E409	20.0	25.9	45.9	7.9
0004743969-01	E410	13.2	23.9	37.1	8.4
0004743985-01	E411	12.9	49.8	62.7	7.2
0004744017-01	E412	21.4	32.9	54.3	7.6
0004744041-01	E413	14.6	20.3	34.9	8.4
0004744074-01	E414	6.8	24.6	31.4	8.7
0004744108-01	E415	6.9	50.8	57.7	7.4
0004744132-01	E416	11.8	51.2	63.0	7.2
0004744165-01	E417	22.0	38.5	60.5	7.3
0004744199-01	E418	28.2	38.4	66.6	6.9
0004744223-01	E419	36.5	31.0	67.5	6.9
0004744256-01	E420	9.6	29.5	39.1	8.3
0004744298-01	E501	13.4	23.6	37.0	8.4
0004744322-01	E502	12.1	42.7	54.9	7.5
0004744348-01	E503	21.7	32.6	54.2	7.6
0004744371-01	E504	19.5	34.8	54.4	7.6
0004744405-01	E505	10.2	49.7	59.9	7.3
0004744454-01	E506	26.8	38.0	64.8	7.1
0004744488-01	E507	43.3	24.4	67.7	6.9
0004744512-01	E508	6.9	24.5	31.3	8.7
0004744546-01	E509	7.0	50.3	57.3	7.4
0004744579-01	E510	12.0	51.1	63.2	7.2
0004744603-01	E511	22.1	38.4	60.5	7.3
0004744645-01	E512	26.0	36.8	62.8	7.2
0004744660-01	E513	34.3	28.1	62.4	7.2
0004744686-01	E514	11.2	27.1	38.3	8.3
0004744702-01	E601	13.5	23.5	37.0	8.4
0004744728-01	E602	11.6	40.3	51.9	7.7
0004744744-01	E603	21.9	32.0	53.9	7.6
0004744769-01	E604	19.9	34.1	53.9	7.6
0004744785-01	E605	21.2	25.5	46.6	7.9
0004744801-01	E606	25.1	40.5	65.7	7
0004744439-01	E607	41.2	25.1	66.3	6.9
0004744470-01	E608	7.0	24.8	31.8	8.6
0004744504-01	E609	7.2	49.5	56.7	7.4
0004744520-01	E610	12.5	51.1	63.6	7.2

## Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004812200**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.5**



### Summary of all dwellings continued

#### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004744553-01	E611	22.4	37.9	60.3	7.3
0004744587-01	E612	27.8	38.1	65.9	7
0004744629-01	E613	35.0	30.1	65.2	7.1
0004744652-01	E614	11.0	27.1	38.1	8.3
0004744678-01	E701	26.3	27.0	53.3	7.6
0004744694-01	E702	16.3	34.4	50.7	7.7
0004744710-01	E703	33.2	36.8	70.0	6.9
0004744736-01	E704	31.6	37.6	69.2	6.9
0004744751-01	E705	40.7	35.0	75.8	6.6
0004744777-01	E706	29.4	31.0	60.4	7.3
0004744793-01	E707	39.6	28.1	67.7	6.9
0004744447-01	E708	17.5	28.6	46.1	7.9
0004744462-01	E709	19.0	43.6	62.7	7.2
0004744496-01	E710	36.0	42.2	78.2	6.4
0004744538-01	E711	37.7	29.2	66.8	6.9
0004744561-01	E712	43.4	26.9	70.3	6.9
0004744595-01	E713	13.1	49.0	62.1	7.2

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1089628M\_04

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 06/10/2017 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Friday, 08 May 2020

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Stage 1A & 1B Tallawong Station_04
Street address	2-12 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	294
Section no.	-
No. of residential flat buildings	5
No. of units in residential flat buildings	333
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 34	Target 25

### Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

# Description of project

## Project address

Project name	Stage 1A & 1B Tallawong Station_04
Street address	2-12 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	294
Section no.	-

## Project type

No. of residential flat buildings	5
No. of units in residential flat buildings	333
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	16241
Roof area (m²)	4938
Non-residential floor area (m²)	7160.7
Residential car spaces	387
Non-residential car spaces	326

## Common area landscape

Common area lawn (m²)	1704.6
Common area garden (m²)	3977.4
Area of indigenous or low water use species (m²)	-

## Assessor details

Assessor number	HERA10033
Certificate number	0004812200
Climate zone	28

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 34	Target 25

## Description of project

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

### Residential flat buildings - Building A, 56 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A301	2	80.0	0.0	0.0	0.0
A305	2	78.0	0.0	0.0	0.0
A309	1	48.0	0.0	0.0	0.0
A403	1	58.0	0.0	0.0	0.0
A407	1	57.0	0.0	0.0	0.0
A501	2	80.0	0.0	0.0	0.0
A505	2	78.0	0.0	0.0	0.0
A509	1	48.0	0.0	0.0	0.0
A603	1	78.0	0.0	0.0	0.0
A607	1	57.0	0.0	0.0	0.0
A701	2	80.0	0.0	0.0	0.0
A705	3	107.0	0.0	0.0	0.0
A801	2	80.0	0.0	0.0	0.0
A805	3	107.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A302	2	73.0	0.0	0.0	0.0
A306	2	85.0	0.0	0.0	0.0
A310	1	59.0	0.0	0.0	0.0
A404	1	58.0	0.0	0.0	0.0
A408	2	80.0	0.0	0.0	0.0
A502	2	73.0	0.0	0.0	0.0
A506	2	85.0	0.0	0.0	0.0
A510	1	49.0	0.0	0.0	0.0
A604	1	58.0	0.0	0.0	0.0
A608	2	80.0	0.0	0.0	0.0
A702	2	73.0	0.0	0.0	0.0
A706	3	90.0	0.0	0.0	0.0
A802	2	73.0	0.0	0.0	0.0
A806	3	90.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A303	1	58.0	0.0	0.0	0.0
A307	1	57.0	0.0	0.0	0.0
A401	2	80.0	0.0	0.0	0.0
A405	2	78.0	0.0	0.0	0.0
A409	1	48.0	0.0	0.0	0.0
A503	1	58.0	0.0	0.0	0.0
A507	1	57.0	0.0	0.0	0.0
A601	2	80.0	0.0	0.0	0.0
A605	2	78.0	0.0	0.0	0.0
A609	1	48.0	0.0	0.0	0.0
A703	2	77.0	0.0	0.0	0.0
A707	2	77.0	0.0	0.0	0.0
A803	2	77.0	0.0	0.0	0.0
A807	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
A304	1	58.0	0.0	0.0	0.0
A308	2	80.0	0.0	0.0	0.0
A402	2	73.0	0.0	0.0	0.0
A406	2	85.0	0.0	0.0	0.0
A410	1	49.0	0.0	0.0	0.0
A504	1	58.0	0.0	0.0	0.0
A508	2	80.0	0.0	0.0	0.0
A602	2	73.0	0.0	0.0	0.0
A606	1	85.0	0.0	0.0	0.0
A610	1	49.0	0.0	0.0	0.0
A704	3	110.0	0.0	0.0	0.0
A708	1	49.0	0.0	0.0	0.0
A804	3	110.0	0.0	0.0	0.0
A808	1	50.0	0.0	0.0	0.0

### Residential flat buildings - Building B, 57 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B301	1	53.0	0.0	0.0	0.0
B305	2	79.0	0.0	0.0	0.0
B309	2	76.0	0.0	0.0	0.0
B403	2	88.0	0.0	0.0	0.0
B407	1	56.0	0.0	0.0	0.0
B501	1	53.0	0.0	0.0	0.0
B505	2	75.0	0.0	0.0	0.0
B509	2	57.0	0.0	0.0	0.0
B603	2	88.0	0.0	0.0	0.0
B607	1	57.0	0.0	0.0	0.0
B701	3	104.0	0.0	0.0	0.0
B705	1	55.0	0.0	0.0	0.0
B709	2	74.0	0.0	0.0	0.0
B804	2	75.0	0.0	0.0	0.0
B808	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B302	2	79.0	0.0	0.0	0.0
B306	1	55.0	0.0	0.0	0.0
B310	2	74.0	0.0	0.0	0.0
B404	1	52.0	0.0	0.0	0.0
B408	2	78.0	0.0	0.0	0.0
B502	2	79.0	0.0	0.0	0.0
B506	1	55.0	0.0	0.0	0.0
B510	2	74.0	0.0	0.0	0.0
B604	1	52.0	0.0	0.0	0.0
B608	2	79.0	0.0	0.0	0.0
B702	2	85.0	0.0	0.0	0.0
B706	1	57.0	0.0	0.0	0.0
B801	3	104.0	0.0	0.0	0.0
B805	3	108.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B303	2	88.0	0.0	0.0	0.0
B307	1	56.0	0.0	0.0	0.0
B401	1	53.0	0.0	0.0	0.0
B405	2	79.0	0.0	0.0	0.0
B409	2	76.0	0.0	0.0	0.0
B503	2	88.0	0.0	0.0	0.0
B507	1	56.0	0.0	0.0	0.0
B601	1	53.0	0.0	0.0	0.0
B605	2	75.0	0.0	0.0	0.0
B609	2	76.0	0.0	0.0	0.0
B703	2	77.0	0.0	0.0	0.0
B707	2	79.0	0.0	0.0	0.0
B802	2	85.0	0.0	0.0	0.0
B806	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
B304	1	52.0	0.0	0.0	0.0
B308	2	78.0	0.0	0.0	0.0
B402	2	79.0	0.0	0.0	0.0
B406	1	55.0	0.0	0.0	0.0
B410	2	74.0	0.0	0.0	0.0
B504	1	52.0	0.0	0.0	0.0
B508	2	79.0	0.0	0.0	0.0
B602	2	79.0	0.0	0.0	0.0
B606	1	55.0	0.0	0.0	0.0
B610	2	74.0	0.0	0.0	0.0
B704	2	75.0	0.0	0.0	0.0
B708	2	76.0	0.0	0.0	0.0
B803	2	77.0	0.0	0.0	0.0
B807	2	76.0	0.0	0.0	0.0

### Residential flat buildings - Building C, 45 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C201	2	80.0	0.0	0.0	0.0
C205	1	57.0	0.0	0.0	0.0
C301	2	80.0	0.0	0.0	0.0
C305	1	57.0	0.0	0.0	0.0
C401	2	80.0	0.0	0.0	0.0
C405	1	57.0	0.0	0.0	0.0
C501	2	80.0	0.0	0.0	0.0
C505	2	74.0	0.0	0.0	0.0
C602	3	100.0	0.0	0.0	0.0
C606	2	72.0	0.0	0.0	0.0
C703	3	105.0	0.0	0.0	0.0
C707	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C202	2	85.0	0.0	0.0	0.0
C206	2	74.0	0.0	0.0	0.0
C302	2	85.0	0.0	0.0	0.0
C306	2	74.0	0.0	0.0	0.0
C402	2	85.0	0.0	0.0	0.0
C406	2	74.0	0.0	0.0	0.0
C502	3	100.0	0.0	0.0	0.0
C506	2	72.0	0.0	0.0	0.0
C603	3	105.0	0.0	0.0	0.0
C607	2	79.0	0.0	0.0	0.0
C704	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C203	2	79.0	0.0	0.0	0.0
C207	2	72.0	0.0	0.0	0.0
C303	2	79.0	0.0	0.0	0.0
C307	2	72.0	0.0	0.0	0.0
C403	2	79.0	0.0	0.0	0.0
C407	2	72.0	0.0	0.0	0.0
C503	3	105.0	0.0	0.0	0.0
C507	2	79.0	0.0	0.0	0.0
C604	2	80.0	0.0	0.0	0.0
C701	2	80.0	0.0	0.0	0.0
C705	2	74.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
C204	1	57.0	0.0	0.0	0.0
C208	2	79.0	0.0	0.0	0.0
C304	1	57.0	0.0	0.0	0.0
C308	2	79.0	0.0	0.0	0.0
C404	1	57.0	0.0	0.0	0.0
C408	2	79.0	0.0	0.0	0.0
C504	2	80.0	0.0	0.0	0.0
C601	2	80.0	0.0	0.0	0.0
C605	2	74.0	0.0	0.0	0.0
C702	3	100.0	0.0	0.0	0.0
C706	2	72.0	0.0	0.0	0.0

### Residential flat buildings - Building D, 66 dwellings, 11 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D201	2	77.0	0.0	0.0	0.0
D205	2	75.0	0.0	0.0	0.0
D209	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D202	2	75.0	0.0	0.0	0.0
D206	2	75.0	0.0	0.0	0.0
D210	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D203	1	56.0	0.0	0.0	0.0
D207	2	81.0	0.0	0.0	0.0
D301	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D204	2	81.0	0.0	0.0	0.0
D208	1	56.0	0.0	0.0	0.0
D302	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D303	1	56.0	0.0	0.0	0.0
D307	2	81.0	0.0	0.0	0.0
D401	2	77.0	0.0	0.0	0.0
D405	2	75.0	0.0	0.0	0.0
D409	2	75.0	0.0	0.0	0.0
D503	1	56.0	0.0	0.0	0.0
D507	2	81.0	0.0	0.0	0.0
D601	2	77.0	0.0	0.0	0.0
D605	2	75.0	0.0	0.0	0.0
D609	2	75.0	0.0	0.0	0.0
D703	2	80.0	0.0	0.0	0.0
D707	3	110.0	0.0	0.0	0.0
D803	2	80.0	0.0	0.0	0.0
D807	3	110.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D304	2	81.0	0.0	0.0	0.0
D308	1	56.0	0.0	0.0	0.0
D402	2	75.0	0.0	0.0	0.0
D406	2	75.0	0.0	0.0	0.0
D410	2	77.0	0.0	0.0	0.0
D504	2	81.0	0.0	0.0	0.0
D508	1	56.0	0.0	0.0	0.0
D602	2	75.0	0.0	0.0	0.0
D606	2	75.0	0.0	0.0	0.0
D610	2	77.0	0.0	0.0	0.0
D704	2	81.0	0.0	0.0	0.0
D708	2	103.0	0.0	0.0	0.0
D804	2	81.0	0.0	0.0	0.0
D808	3	103.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D305	2	75.0	0.0	0.0	0.0
D309	2	75.0	0.0	0.0	0.0
D403	1	56.0	0.0	0.0	0.0
D407	2	81.0	0.0	0.0	0.0
D501	2	77.0	0.0	0.0	0.0
D505	2	75.0	0.0	0.0	0.0
D509	2	75.0	0.0	0.0	0.0
D603	1	56.0	0.0	0.0	0.0
D607	2	81.0	0.0	0.0	0.0
D701	2	77.0	0.0	0.0	0.0
D705	2	75.0	0.0	0.0	0.0
D801	2	77.0	0.0	0.0	0.0
D805	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
D306	2	75.0	0.0	0.0	0.0
D310	2	77.0	0.0	0.0	0.0
D404	2	81.0	0.0	0.0	0.0
D408	1	56.0	0.0	0.0	0.0
D502	2	75.0	0.0	0.0	0.0
D506	2	75.0	0.0	0.0	0.0
D510	2	77.0	0.0	0.0	0.0
D604	2	81.0	0.0	0.0	0.0
D608	1	56.0	0.0	0.0	0.0
D702	3	110.0	0.0	0.0	0.0
D706	2	81.0	0.0	0.0	0.0
D802	3	75.0	0.0	0.0	0.0
D806	2	81.0	0.0	0.0	0.0

### Residential flat buildings - Building E, 109 dwellings, 10 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E001	2	76.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E002	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E003	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E101	2	76.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E102	2	81.0	0.0	0.0	0.0
E203	1	56.0	0.0	0.0	0.0
E207	1	56.0	0.0	0.0	0.0
E211	1	55.0	0.0	0.0	0.0
E215	1	61.0	0.0	0.0	0.0
E219	2	81.0	0.0	0.0	0.0
E302	2	76.0	0.0	0.0	0.0
E306	1	61.0	0.0	0.0	0.0
E310	1	50.0	0.0	0.0	0.0
E314	2	81.0	0.0	0.0	0.0
E318	2	83.0	0.0	0.0	0.0
E401	2	76.0	0.0	0.0	0.0
E405	1	61.0	0.0	0.0	0.0
E409	1	50.0	0.0	0.0	0.0
E413	2	81.0	0.0	0.0	0.0
E417	2	83.0	0.0	0.0	0.0
E501	2	83.0	0.0	0.0	0.0
E505	2	81.0	0.0	0.0	0.0
E509	1	61.0	0.0	0.0	0.0
E513	2	77.0	0.0	0.0	0.0
E603	2	73.0	0.0	0.0	0.0
E607	2	73.0	0.0	0.0	0.0
E611	2	83.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E103	2	80.0	0.0	0.0	0.0
E204	2	76.0	0.0	0.0	0.0
E208	1	53.0	0.0	0.0	0.0
E212	2	75.0	0.0	0.0	0.0
E216	1	61.0	0.0	0.0	0.0
E220	2	77.0	0.0	0.0	0.0
E303	1	56.0	0.0	0.0	0.0
E307	2	76.0	0.0	0.0	0.0
E311	2	83.0	0.0	0.0	0.0
E315	1	61.0	0.0	0.0	0.0
E319	2	81.0	0.0	0.0	0.0
E402	2	76.0	0.0	0.0	0.0
E406	2	76.0	0.0	0.0	0.0
E410	2	83.0	0.0	0.0	0.0
E414	1	61.0	0.0	0.0	0.0
E418	2	81.0	0.0	0.0	0.0
E502	2	75.0	0.0	0.0	0.0
E506	2	77.0	0.0	0.0	0.0
E510	2	71.0	0.0	0.0	0.0
E514	2	78.0	0.0	0.0	0.0
E604	2	73.0	0.0	0.0	0.0
E608	1	61.0	0.0	0.0	0.0
E612	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E201	2	70.0	0.0	0.0	0.0
E205	1	58.0	0.0	0.0	0.0
E209	2	81.0	0.0	0.0	0.0
E213	2	73.0	0.0	0.0	0.0
E217	2	71.0	0.0	0.0	0.0
E221	2	78.0	0.0	0.0	0.0
E304	2	76.0	0.0	0.0	0.0
E308	1	53.0	0.0	0.0	0.0
E312	2	75.0	0.0	0.0	0.0
E316	1	61.0	0.0	0.0	0.0
E320	2	78.0	0.0	0.0	0.0
E403	3	116.0	0.0	0.0	0.0
E407	1	53.0	0.0	0.0	0.0
E411	2	75.0	0.0	0.0	0.0
E415	1	61.0	0.0	0.0	0.0
E419	2	78.0	0.0	0.0	0.0
E503	2	73.0	0.0	0.0	0.0
E507	2	73.0	0.0	0.0	0.0
E511	2	83.0	0.0	0.0	0.0
E601	2	83.0	0.0	0.0	0.0
E605	2	86.0	0.0	0.0	0.0
E609	1	61.0	0.0	0.0	0.0
E613	2	78.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E202	2	76.0	0.0	0.0	0.0
E206	1	61.0	0.0	0.0	0.0
E210	1	50.0	0.0	0.0	0.0
E214	2	81.0	0.0	0.0	0.0
E218	2	83.0	0.0	0.0	0.0
E301	2	76.0	0.0	0.0	0.0
E305	1	58.0	0.0	0.0	0.0
E309	2	81.0	0.0	0.0	0.0
E313	2	73.0	0.0	0.0	0.0
E317	2	71.0	0.0	0.0	0.0
E321	2	78.0	0.0	0.0	0.0
E404	1	58.0	0.0	0.0	0.0
E408	2	81.0	0.0	0.0	0.0
E412	2	73.0	0.0	0.0	0.0
E416	2	71.0	0.0	0.0	0.0
E420	2	78.0	0.0	0.0	0.0
E504	2	73.0	0.0	0.0	0.0
E508	1	61.0	0.0	0.0	0.0
E512	2	81.0	0.0	0.0	0.0
E602	2	75.0	0.0	0.0	0.0
E606	2	77.0	0.0	0.0	0.0
E610	2	71.0	0.0	0.0	0.0
E614	2	78.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E701	2	83.0	0.0	0.0	0.0
E705	2	81.0	0.0	0.0	0.0
E709	2	71.0	0.0	0.0	0.0
E713	3	124.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E702	2	75.0	0.0	0.0	0.0
E706	2	77.0	0.0	0.0	0.0
E710	2	83.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E703	2	73.0	0.0	0.0	0.0
E707	2	73.0	0.0	0.0	0.0
E711	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
E704	2	73.0	0.0	0.0	0.0
E708	1	61.0	0.0	0.0	0.0
E712	2	78.0	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - Building A

Common area	Floor area (m <sup>2</sup> )
Lift car (No.1)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.2)	-

### Common areas of unit building - Building B

Common area	Floor area (m <sup>2</sup> )
Lift car (No.3)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.4)	-

### Common areas of unit building - Building C

Common area	Floor area (m <sup>2</sup> )
Lift car (No.5)	-

### Common areas of unit building - Building D

Common area	Floor area (m <sup>2</sup> )
Lift car (No.6)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.7)	-

### Common areas of unit building - Building E

Common area	Floor area (m <sup>2</sup> )
Lift car (No.8)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.9)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.10)	-

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

Common area	Floor area (m²)
Car park area	12573.0
Comms	21.0
Water plant room	14.9
Storage cage rooms	1163.0

Common area	Floor area (m²)
Waste room	634.02
Plant exhaust air	211.0
Bike storage	858.5
Hallways	188.49

Common area	Floor area (m²)
Hot water plant	160.3
Plant source air	182.5
Water pump room	60.0

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building A

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

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

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - Building C

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 4. Commitments for Residential flat buildings - Building D

### (a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

5. Commitments for Residential flat buildings - Building E

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

6. Commitments for multi-dwelling houses

7. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Building A

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	2 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
A704, A705, A706, A804, A805, A806	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
A303, A304, A307, A309, A310, A403, A404, A407, A409, A410, A503, A504, A507, A509, A510, A603, A604, A606, A607, A609, A610, A708, A808	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A301	30.2	33.1
A302	17.0	41.3
A303	26.8	8.3
A304	27.3	9.3
A306	19.1	38.8
A307	5.7	33.0
A308	13.2	36.2
A309	20.1	55.1
A310	15.4	31.3
A401	30.5	32.6
A402	17.3	40.8
A403	8.5	26.1
A404	9.5	27.2
A406	19.5	38.8
A407	6.5	32.4
A408	13.5	35.8
A409	20.4	54.9
A410	15.7	31.2
A501	30.8	32.8
A502	40.4	17.6
A503	26.1	8.6
A504	9.7	27.0
A505	10.0	52.0
A506	19.7	38.5
A507	6.8	31.7
A508	13.7	35.3
A509	20.7	54.4

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
A510	15.9	31.2
A601	31.1	32.4
A602	15.9	34.0
A603	26.2	8.8
A604	9.9	26.9
A605	9.5	48.6
A606	38.4	19.9
A607	6.4	32.2
A608	13.9	35.2
A609	20.8	54.2
A610	16.2	31.3
A701	31.3	32.3
A702	16.1	33.6
A703	26.6	15.7
A704	11.9	55.0
A705	29.0	11.5
A706	9.0	39.4
A707	31.7	47.8
A708	30.8	16.4
A801	37.1	53.2
A802	26.5	37.8
A803	27.5	30.7
A804	19.5	59.5
A805	26.0	20.4
A806	18.7	44.3
A807	34.9	52.8
A808	20.2	41.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
All other dwellings	9.9	52.2

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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	Yes
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 12
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 12

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

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	2 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
B701, B801, B805	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
B301, B304, B306, B307, B401, B404, B406, B407, B501, B504, B506, B507, B601, B604, B606, B607, B705, B706, B803	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
B301	24.2	20.3
B302	2.1	36.4
B303	32.4	48.3
B304	32.4	21.8
B305	28.4	37.1
B306	45.0	16.0
B307	21.0	31.6
B308	22.2	35.5
B309	37.7	6.8
B310	7.5	15.2
B401	24.5	20.0
B402	5.5	35.6
B403	32.3	48.7
B404	22.1	32.1
B405	28.7	36.6
B406	16.3	44.3
B407	21.3	31.7
B408	22.4	35.3
B409	37.6	6.9
B410	6.8	46.8
B501	24.9	19.9
B502	1.1	38.8
B503	32.8	48.3
B504	22.5	31.8
B505	29.1	36.5
B506	16.7	43.9
B507	19.3	30.4

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
B508	22.7	35.3
B509	7.0	37.5
B510	5.0	46.5
B601	25.0	19.7
B602	1.1	38.4
B603	33.0	48.0
B604	22.8	31.5
B605	36.0	29.4
B606	16.9	43.5
B607	30.9	22.0
B608	22.8	35.7
B609	37.3	7.1
B610	4.5	46.8
B701	9.1	34.8
B702	22.1	29.9
B703	24.6	25.2
B704	29.6	36.2
B705	17.1	43.2
B706	22.3	30.9
B707	22.9	35.5
B708	7.2	37.2
B709	4.8	46.8
B801	14.8	38.5
B802	35.4	35.6
B803	25.2	53.1
B804	38.4	52.4
B805	35.6	52.7

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
B806	35.5	40.9
B807	14.8	42.5
All other dwellings	11.8	59.5

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.3)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 12
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 12

### 3. Commitments for Residential flat buildings - Building C

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	2 star	-	-	-	-	-	-	-

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

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
C204, C205, C304, C305, C404, C405	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
C502, C503, C602, C603, C702, C703	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C201	29.0	37.7
C202	21.8	35.8
C203	22.7	25.9
C204	41.3	24.3
C205	57.7	26.5

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
C206	37.8	22.6
C207	37.0	26.2
C208	35.4	47.7
C301	40.0	28.8
C302	21.9	43.5
C303	21.1	27.6
C304	40.4	24.2
C305	57.0	26.9
C307	34.6	25.5
C308	36.8	47.7
C401	28.1	41.5
C402	29.2	46.9
C403	29.6	18.5
C404	37.7	27.1
C405	54.2	28.8
C407	37.0	26.4
C408	36.7	48.5
C501	27.2	42.2
C502	17.2	47.5
C503	12.1	51.1
C504	13.9	22.3
C505	31.8	25.7
C506	37.4	26.0
C507	30.1	38.3
C601	27.0	42.6
C602	17.0	44.1
C603	12.7	53.5

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
C604	12.4	22.6
C605	25.0	27.4
C606	34.9	24.7
C607	34.5	55.9
C701	33.1	33.8
C702	36.7	25.6
C703	42.7	17.2
C704	19.4	20.1
C705	32.8	25.8
C706	42.7	46.8
C707	46.8	60.3
All other dwellings	39.2	24.3

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.5)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 12

## 4. Commitments for Residential flat buildings - Building D

### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install:			
(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
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	2 star	-	-	-	-	-	-	-

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

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
D402	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	-	-	-	-	-	-	-	-
D702, D707, D802, D807	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
D203, D208, D303, D308, D403, D408, D503, D508, D603, D608	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
D201	39.4	50.9
D202	13.6	45.2
D203	5.5	40.3
D204	7.1	22.5
D205	26.3	15.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
D206	25.2	13.3
D207	7.2	22.5
D208	49.1	9.6
D209	52.7	6.3
D210	23.9	41.6
D301	50.2	39.8
D302	13.9	45.2
D303	5.8	39.5
D304	7.4	22.1
D305	16.2	25.9
D306	13.6	25.2
D307	20.6	8.9
D308	9.9	48.5
D309	51.4	6.6
D310	24.5	40.7
D401	43.0	43.1
D402	15.5	42.2
D403	7.0	35.3
D404	8.9	20.3
D405	17.7	23.8
D406	15.0	23.1
D407	9.1	19.8
D408	11.7	41.8
D409	7.5	46.3
D410	26.6	36.7
D501	43.3	43.2
D502	15.6	41.3

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
D503	7.1	35.7
D504	19.7	9.0
D505	17.9	23.6
D506	15.2	22.9
D507	9.3	19.9
D508	41.8	12.0
D509	7.7	45.5
D510	26.8	36.5
D601	43.6	42.7
D602	15.7	41.1
D603	7.4	35.5
D604	19.85	9.2
D605	18.2	23.8
D606	15.4	22.8
D607	9.4	19.4
D608	12.3	41.6
D609	7.8	45.2
D610	27.2	36.2
D701	36.2	33.2
D702	21.2	34.2
D703	9.4	19.5
D704	18.3	23.8
D706	9.6	19.1
D707	14.1	28.2
D708	20.8	29.8
D801	45.6	50.7
D802	27.9	46.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
D803	21.9	23.7
D805	29.3	28.0
D806	22.1	23.7
D807	22.4	32.8
D808	32.7	32.7
All other dwellings	32.2	29.6

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.6)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.7)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 12
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 11

## 5. Commitments for Residential flat buildings - Building E

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	2 star	-	-	-	-	-	-	-

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

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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
E403	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
E001, E002, E101, E102, E203, E205, E206, E210, E215, E216, E303, E305, E306, E310, E315, E316, E404, E405, E409, E414, E415, E508, E509, E608, E609, E708	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	no	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
E001	22.7	40.9
E002	24.6	28.3
E003	25.9	47.0
E101	8.6	50.4
E102	8.4	30.9
E103	12.1	60.3
E201	25.6	21.7
E202	22.4	30.1
E203	24.7	44.1
E204	16.7	44.8
E205	40.7	35.8
E207	14.7	48.4
E208	23.8	42.9
E209	12.9	22.0
E210	18.3	30.7
E211	6.9	42.8
E212	11.5	57.8
E213	19.7	40.4
E214	12.7	22.2
E215	5.6	27.8
E216	7.2	61.6
E217	9.7	60.5
E218	21.5	40.0
E219	24.5	37.2
E220	33.1	33.7
E221	9.3	29.4
E301	27.8	30.7

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
E302	22.4	25.9
E303	17.1	44.5
E304	19.2	33.9
E305	41.8	38.3
E307	25.2	26.0
E308	43.0	23.5
E309	13.5	21.9
E310	18.1	28.8
E311	11.6	28.9
E312	11.7	56.6
E313	19.5	37.6
E314	13.0	21.8
E315	5.7	28.0
E316	5.9	59.1
E317	10.1	60.0
E318	20.2	43.6
E319	26.6	40.9
E320	33.0	34.5
E401	43.4	31.6
E402	35.8	17.1
E403	35.4	29.4
E404	42.6	35.1
E405	31.2	41.7
E406	41.0	27.9
E407	25.3	38.4
E408	14.8	20.3
E409	20.0	25.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
E410	13.2	23.9
E411	12.9	49.8
E412	21.4	32.9
E413	14.6	20.3
E414	6.8	24.6
E415	6.9	50.8
E416	11.8	51.2
E417	22.0	38.5
E418	28.2	38.4
E419	36.5	31.0
E501	13.4	23.6
E502	12.1	42.7
E503	32.6	21.7
E504	19.5	34.8
E505	10.2	49.7
E506	26.8	38.0
E507	43.3	24.4
E508	6.9	24.5
E509	7.0	50.3
E510	12.0	51.1
E511	22.1	38.4
E512	26.0	36.8
E513	34.3	28.1
E514	11.2	27.1
E601	13.5	23.5
E602	11.6	40.3
E603	21.9	32.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
E604	19.9	34.1
E605	21.2	25.5
E606	25.1	40.5
E607	25.1	41.2
E608	7.0	24.8
E609	7.2	49.5
E610	12.5	51.1
E611	22.4	37.9
E612	27.8	38.1
E613	35.0	30.1
E614	11.0	27.1
E701	26.3	27.0
E702	16.3	34.4
E703	33.2	36.8
E704	31.6	37.6
E705	40.7	35.0
E706	29.4	31.0
E707	39.6	28.1
E708	17.5	28.6
E709	19.0	43.6
E710	36.0	42.2
E711	37.7	29.2
E712	43.4	26.9
E713	13.1	49.0
E206, E306	14.7	40.1
All other dwellings	9.6	29.5

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.8)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.9)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.10)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 8)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 9)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 10)	gearless traction with V V V F motor	Number of levels (including basement): 15

## 8. 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	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	8000.0	To collect run-off from at least: - 300.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 5682.0 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Fire sprinkler system (No. 2)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Waste room	ventilation exhaust only	-	light-emitting diode	motion sensors	Yes
Hot water plant	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Comms	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	Yes
Plant exhaust air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Plant source air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Water plant room	ventilation supply only	interlocked to light	light-emitting diode	manual on / manual off	Yes
Bike storage	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Water pump room	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Storage cage rooms	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes

	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
Hallways	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	Yes

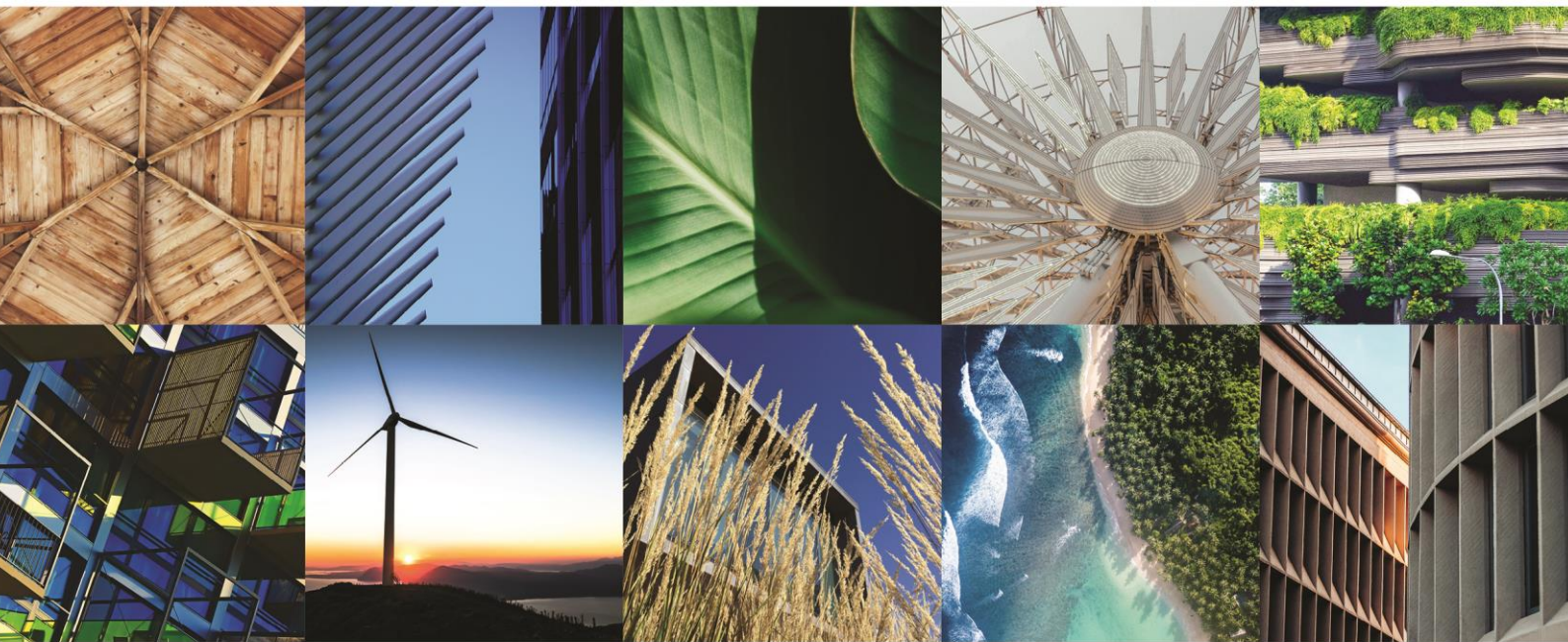
Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 117.0 peak kW

## Notes

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

## Legend

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



### Deicorp Projects (Tallawong Station) Pty Ltd Tallawong Station Precinct South Stage: 2A Buildings F, G, H, J, and K

To be built at 1-15 & 2-12 Conferta Avenue, Rouse Hill NSW 2155

Issue	File Ref	Description	Author	Date
A	19-0982	NatHERS and BASIX Assessment	HE/AM	08/04/2020
B	20-0407	Update to NatHERS assessment to reflect plan changes	HE/DG/NB/AG	08/05/2020

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Deicorp Projects (Tallawong Station) Pty Ltd. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



**Report Contact:** Haylea Edwards  
Email: haylea@efficientliving.com.au

**License Holder:** Tracey Cools  
Accreditation Number: HERA10033

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**Prepared For:**

Deicorp Projects (Tallawong Station) Pty Ltd  
Marvin Huang  
mhuang@deicorp.com.au

Level 3, 161 Redfern Street  
Redfern NSW 2016  
02 8665 4100

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**Introduction**

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 1-15 & 2-12 Conferta Avenue Rouse Hill NSW 2155.

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.4 thermal comfort simulation software. The report is based on the architectural drawings provided by Deicorp. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the following plans prepared by Turner: DA-113-006 3, DA-113-007 3, DA-113-008 3, DA-113-009 C, DA-003-010 3, DA-113-020 3, DA-113-030 3, DA-113-040 3, DA-113-050 3, DA-113-060 3, DA-113-070 3, DA-113-080 3, DA-113-090 3, DA-213-001 3, DA-213-002 3, DA-213-003 3 and DA-213-004 3.

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**Analysis**

The BASIX Assessment is divided into three sections; Water, Thermal Comfort and Energy, each independently measuring the efficiency of the Development.

BASIX requires a minimum target of 40% for the water section, a pass or fail for the thermal comfort section, and a minimum required target of 35% for the energy section.

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**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 toilet, the dish washer and clothes washing machine.

The size of the rainwater tank and number of connections may have a significant impact on your water score as does the area of gardens and lawns whether or not low water plant species are incorporated.

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**Thermal Comfort**

Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics are measured using BERS Pro Plus V4.4 Thermal Comfort Simulation Software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in megajoules per square metre of floor area (MJ/m<sup>2</sup>).

Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with than the individual unit caps.

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## Energy

The proposed Development has achieved the Energy target of 35% 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, cook top, oven, and clothes drying facilities.

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## Inclusions Summary

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

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## Thermal Comfort Scores

Average heating loads are 56% below allowable BASIX targets

Average cooling loads are 44% below allowable BASIX targets

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## Glazing Doors/Windows

The glazing was upgraded in consultation with the developer to achieve the projects Green Star objectives.

Industry default window values have been used to allow a range of window suppliers to tender. Once a supplier is selected their actual product values can be modeled. This will allow flexibility in U-Values and SHGC's.

## Glazing Doors/Windows

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±10%)

## Upgrades applied to selected units as per the NatHERS summary sheet;

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 2.9 (equal to or lower than) SHGC: 0.44 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

## Skylight:

U-value: 4.7 SHGC: 0.72

Given values are AFRC total window system values (glass and frame)

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## Roof and ceiling

Medium roof colour modelled

Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof is over

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### Ceiling Penetrations

Default modelled as per client's request. Once a product is selected modelling improvements can be made.

Sealed LED Downlights 1 per 2.5m<sup>2</sup>

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### External Wall

Cavity brick internally lined plasterboard on studs with R2.0 insulation required (Insulation only value)

#### Upgrades applied to selected units as per the NatHERS summary sheet;

Cavity brick internally lined plasterboard on studs with R2.5 insulation required (Insulation only value)

### External Colour

Default colour modelled

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### Inter-tenancy walls

Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required

60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways

Minimum 200mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs.

60mm Pronto panels with plasterboard lining to services

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### Walls within dwellings

Plasterboard on studs – no insulation

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### Floors

Concrete with a minimum R1.2 insulation (insulation only value) required to units where part open subfloor or garage below

Concrete between levels, no insulation required

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### Floor coverings

Default floor coverings

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### External Shading

Shading as per stamped documentation

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### BASIX water inclusions

Score 40/40

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### Fixtures within units

Showerheads: 3 stars -Mid flow (>6L but ≤7.5L/min)

Toilets: 4.0 star

Kitchen taps: 5.0 star

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Bathroom vanity taps: 5.0 star

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**Appliances within units**

Dishwashers: 3.5 stars

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**Central rainwater storage**

Tank size: 8,000L

Collecting from 300m<sup>2</sup> roof area

Connected to outdoor tap for irrigation of landscaping common and private and car wash bay

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**Fire sprinkler test water**

Fire sprinkler test water contained in a closed loop system

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**BASIX Energy Inclusions**

Score 33/25

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**Hot water system**

Central gas fired boiler R1.0 pipe and ring main insulation

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**Lift motors**

All lifts to have gearless traction with VVVF motor

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**Appliances and other efficiency measures within units**

Gas cooktop & electric oven

Dishwashers: 3.5 star

Clothes dryers: 2.0 star

Well ventilated fridge space – requires a mechanical vent or to be open as per BASIX specification

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**Heating and cooling within units**

All units to have individual, single phase, reverse cycle air conditioning to living areas, and at least 1 bedroom

A minimum efficiency of 3.0 – 3.5 EER is required for cooling; and

A minimum efficiency of 3.5 - 4.0 EER is required for heating

Day/Night zoning required not required

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**Artificial lighting within units**

All light fittings within each room are to have LED fixtures installed

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#### **Ventilation within units**

Bathroom: individual fan, ducted to roof or façade – manual on/off switch

Laundry: individual fan, ducted to roof or façade – manual on/off switch

Kitchen range hood: Individual fan, ducted to roof or façade – manual on/off switch

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#### **Ventilation to common areas**

Car park area – supply and exhaust air with a carbon monoxide monitor & VSD fan

Loading doc – supply and exhaust air with a carbon monoxide monitor & VSD fan

Waste rooms – Exhaust air, running continuously

Plant source air – No mechanical ventilation

Comms – Supply only, thermostatically controlled

Hot water plant – Supply only, interlocked to hot water plant operation (continuous selected in BASIX)

Pump rooms – Supply only, continuous

Bicycle storage – Exhaust air, running continuously

Plant exhaust air – No mechanical ventilation

Storage cage rooms – Exhaust air, running continuously

Electrical SR – Supply only, continuous

Hallways – No mechanical ventilation

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#### **Artificial lighting to common areas**

Lifts – Light emitting diodes (LEDs) connected to lift call button

Car park area – Light emitting diodes (LEDs) zone switching and motion sensors

Loading doc – Light emitting diodes (LEDs) zone switching and motion sensors

Waste rooms – Light emitting diodes (LEDs) motion sensors

Mechanical plant – Light emitting diodes (LEDs) manual on / manual off switch

Comms – Light emitting diodes (LEDs) manual on / manual off switch

How water plant – Light emitting diodes (LEDs) manual on / manual off switch

Pump rooms – Light emitting diodes (LEDs) manual on / manual off switch

Bicycle storage – Light emitting diodes (LEDs) motion sensors

Mechanical plant air – Light emitting diodes (LEDs) manual on / manual off switch

Storage cage rooms – Light emitting diodes (LEDs) motion sensors

Electrical SR – Light emitting diodes (LEDs) manual on / manual off switch

Hallways – Light emitting diodes (LEDs) zone switching and motion sensors



efficient  
LIVING

8 May 2020

**Deicorp Projects (Tallawong Station) Pty Ltd**  
**Tallawong Station Precinct South**

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**Alternative Energy**

50kW required for 5% energy saving

# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460						Accreditation # HERA10033	
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M²)		Predict. loads (MJ/M²/y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
Building F							
F101	2	75	0	8.3	24.8	8.6	None
F102	1	50	0	16	56.8	6.7	Glazing upgrade throughout
F103	2	73	0	49	37.6	6	R1.2 insulation to adjacent ot loading dock
F201	2	78	0	29.4	36.8	6.9	R1.2 insulation to adjacent ot loading dock
F202	2	73	0	5.5	39.5	7.9	None
F203	1	52	0	7.3	41.2	7.8	None
F301	1	66	0	11.7	32.5	7.9	None
F302	2	77	0	54.3	18.7	6.7	None
F303	2	80	0	43.2	26	6.9	None
F304	1	51	0	29.6	44.6	6.7	None
F305	1	51	0	40.2	35.6	6.6	None
F306	1	51	0	22.7	36.5	7.4	None
F307	2	73	0	6.4	32.2	8.3	None
F308	1	52	0	6.2	34.9	8.1	None
F401	1	66	0	12.7	31.5	7.9	None
F402	2	77	0	33.7	22.4	7.4	None
F403	2	80	0	20.1	27.5	7.9	None
F404	1	51	0	12.2	50.8	7.2	None
F405	1	51	0	17.9	40.3	7.4	None
F406	1	51	0	16.3	35.9	7.7	None
F407	2	73	0	6.7	31.3	8.4	None
F408	1	52	0	5	36.1	8.2	None
F501	1	66	0	14	28.4	8.1	None
F502	2	77	0	33.9	22.8	7.4	None
F503	2	80	0	22.1	24.8	7.9	None
F504	2	78	0	15	24.3	8.3	None
F505	2	78	0	16.3	23.6	8.3	None
F506	2	73	0	8	28.2	8.4	None
F507	1	52	0	5.2	33	8.3	None
F601	1	66	0	28.1	12.2	8.2	None
F602	2	77	0	32.4	23.2	7.4	None

# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460

Accreditation # HERA10033

### Thermal performance specifications

Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
F603	2	80	0	22.5	24.6	7.9	None
F604	2	78	0	15.2	23.9	8.3	None
F605	2	78	0	16.6	23.4	8.3	None
F606	2	73	0	8.1	27.9	8.4	None
F607	1	52	0	5.2	32.7	8.4	None
F701	1	51	0	14.7	29	8	None
F702	2	77	0	28.1	25.4	7.6	None
F703	2	80	0	22.3	23	7.9	None
F704	2	78	0	17.4	25.6	8.1	None
F705	2	78	0	17.6	25	8.1	None
F706	2	73	0	8.3	27.5	8.4	None
F707	1	52	0	5.2	32.7	8.4	None
F801	3	117	0	17.7	33.8	7.7	None
F802	2	77	0	18.2	37.6	7.4	None
F803	2	80	0	24.2	31.6	7.4	None
F804	2	78	0	18.7	36.9	7.4	None
F805	2	78	0	15.7	39.3	7.5	None
F806	2	73	0	17.9	32	7.8	None
Building G							
G101	2	93	0	14	22.9	8.4	None
G102	2	93	0	7	20.5	8.8	None
G103	2	93	0	13.8	23.6	8.4	None
G104	2	93	0	21.6	24.2	7.9	None
G105	2	93	0	26.2	25.3	7.7	None
G201	1	51	0	19.9	48.8	6.9	None
G301	2	90	0	18.7	35.5	7.6	None
G302	2	81	0	24.8	31.5	7.4	None
G303	2	81	0	21.6	30.4	7.7	None
G304	2	81	0	26.4	36.1	7.2	None
G305	2	81	0	34	37.8	6.8	None
G306	2	90	0	30	28.2	7.4	None
Building H							

# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460

Accreditation # HERA10033

### Thermal performance specifications

Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
H101	2	93	0	18.6	16.9	8.4	None
H102	2	93	0	15.1	15.3	8.7	None
H103	2	93	0	20.6	17.1	8.4	None
H104	2	93	0	23.1	16.9	8.2	None
H105	2	93	0	27.8	19.1	7.9	None
H201	1	51	0	19.3	47.6	6.9	None
H301	2	90	0	19.9	30.6	7.8	None
H302	2	81	0	29.9	26.1	7.4	None
H303	2	81	0	27.9	25.5	7.6	None
H304	2	81	0	30.5	30.6	7.3	None
H305	2	81	0	40.6	34.1	6.7	None
H306	2	90	0	33.5	28	7.3	None
Building J							
J101	1	63	0	52.8	26.4	6.4	None
J102	2	80	0	22.1	24.1	7.9	None
J103	1	52	0	52.8	22.4	6.6	None
J104	2	73	0	43.3	23.7	6.9	None
J105	2	76	0	17.8	19.4	8.4	None
J106	1	54	0	57	39.7	5.6	Glazing upgrade throughout
J201	1	59	0	41.6	33.2	6.6	None
J202	2	79	0	11.7	20.1	8.7	None
J203	2	80	0	4.8	55.1	7.3	None
J204	2	77	0	15.6	31.9	7.9	None
J205	2	76	0	12.8	25.9	8.3	None
J206	1	60	0	31.7	52.2	6.2	Glazing upgrade throughout
J301	1	59	0	32	37.9	6.9	Glazing upgrade throughout
J302	2	79	0	9.4	19.4	8.8	None
J303	2	80	0	5	54.1	7.4	None
J304	2	77	0	8.6	36	7.9	None
J305	2	76	0	9.7	27.1	8.4	None
J306	1	60	0	30.7	52.5	6.2	Glazing upgrade throughout
J401	1	59	0	34.2	40.4	6.7	Glazing upgrade throughout
J402	2	79	0	9.4	19.8	8.8	None

# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460

Accreditation # HERA10033

### Thermal performance specifications

Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
J403	2	80	0	5.2	53	7.4	None
J404	2	77	0	6.2	39.8	7.9	None
J405	2	76	0	8.3	27.8	8.4	None
J406	1	60	0	29.4	53.5	6.3	Glazing upgrade throughout
J501	1	59	0	33.5	35.5	6.9	Glazing upgrade throughout
J502	2	79	0	10.6	17.4	8.8	None
J503	2	80	0	6.7	45.6	7.7	None
J504	2	77	0	7.2	35.6	8.1	None
J505	2	76	0	9.4	26.5	8.4	None
J506	1	60	0	31.5	47.5	6.4	Glazing upgrade throughout
J601	1	59	0	33.7	35.5	6.9	Glazing upgrade throughout
J602	2	79	0	10.8	17.4	8.8	None
J603	2	80	0	6.9	45.3	7.7	None
J604	2	77	0	7.4	34.6	8.2	None
J605	2	76	0	9	26.8	8.4	None
J606	1	60	0	29.2	48.3	6.4	Glazing upgrade throughout
J701	1	59	0	46.9	38.8	6.1	None
J702	2	79	0	13.2	19.1	8.6	None
J703	2	80	0	7	44.2	7.7	None
J704	2	77	0	7.6	34.7	8.1	None
J705	2	76	0	8.1	27.1	8.4	None
J706	1	60	0	41.7	51.8	5.8	None
J801	2	80	0	45.1	24.8	6.9	Glazing upgrade throughout
J802	3	94	0	17.2	34.9	7.7	None
J803	3	96	0	15.6	34.5	7.8	None
J804	2	73	0	26	29.7	7.4	Glazing upgrade throughout
Building K							
K101	1	62	0	61.8	25	6	Glazing upgrade throughout
K102	1	53	0	48.8	25	6.7	None
K103	1	53	0	46.7	21.4	6.9	None
K104	2	74	0	39.4	27.2	6.9	None
K105	2	73	0	51.1	21.6	6.7	None

# Thermal Comfort Results

Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460							Accreditation # HERA10033
Thermal performance specifications							
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
K106	1	55	0	62.5	32.5	5.7	Glazing upgrade throughout, R2.5 external wall insulation and R1.2 insulation to stairs
K201	1	59	0	36.7	32.3	6.9	Glazing upgrade throughout
K202	2	74	0	19	20.4	8.3	None
K203	2	74	0	26.4	38.7	7.1	None
K204	2	77	0	18.4	33.8	7.7	None
K205	2	79	0	18.1	24.2	8.1	None
K206	1	64	0	47.5	34.3	6.3	Glazing upgrade throughout
K301	1	59	0	36.8	32.2	6.9	Glazing upgrade throughout
K302	2	74	0	19.1	20.6	8.3	None
K303	2	74	0	17.9	40.8	7.4	None
K304	2	77	0	15.1	32.2	7.9	None
K305	2	79	0	16.2	24.8	8.2	None
K306	1	64	0	47.4	37.5	6.2	Glazing upgrade throughout
K401	1	59	0	36.2	32.7	6.9	Glazing upgrade throughout
K402	2	74	0	12.8	22.5	8.4	None
K403	2	74	0	8.9	49.5	7.4	None
K404	2	77	0	8.3	42.8	7.7	None
K405	2	79	0	12.7	26.1	8.3	None
K406	1	64	0	46.6	38.6	6.1	Glazing upgrade throughout
K501	1	59	0	37	30.4	6.9	Glazing upgrade throughout
K502	2	74	0	13.9	21.4	8.4	None
K503	2	74	0	9.3	36.7	7.9	None
K504	2	77	0	7.1	40	7.9	None
K505	2	79	0	12.5	25.1	8.4	
K506	1	64	0	45.4	37.5	6.3	Glazing upgrade throughout
K601	1	59	0	36.1	31.4	6.9	Glazing upgrade throughout
K602	2	74	0	13.7	21.3	8.4	None
K603	2	74	0	9.6	36.3	7.9	None
K604	2	77	0	7.2	40.3	7.9	None
K605	2	79	0	11.4	27.2	8.3	None
K606	1	64	0	36.3	39.3	6.6	Glazing upgrade throughout
K701	1	59	0	46.3	36.1	6.3	Glazing upgrade throughout

## Thermal Comfort Results

Proposed Residential Development

Tallawong Station Precinct South  
Stage 2A  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004810460

Accreditation # HERA10033

### Thermal performance specifications

Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )		Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
K702	2	74	0	14.8	22.9	8.4	None
K703	2	74	0	9.8	36.6	7.9	None
K704	2	77	0	7.4	39.8	7.9	None
K705	2	79	0	8.3	29.9	8.3	None
K706	1	64	0	54.3	44.8	5.4	Glazing upgrade throughout
K801	2	77	0	45.1	24.8	6.9	None
K802	3	98	0	13.7	33.9	7.9	None
K803	3	98	0	13.5	32.4	7.9	None
K804	2	77	0	30.5	25.4	7.4	None

# Nationwide House Energy Rating Scheme\* — Class 2 summary



Certificate number: **0004810460**

Certificate Date: **06 May 2020**

★ Average Star rating: **7.6**

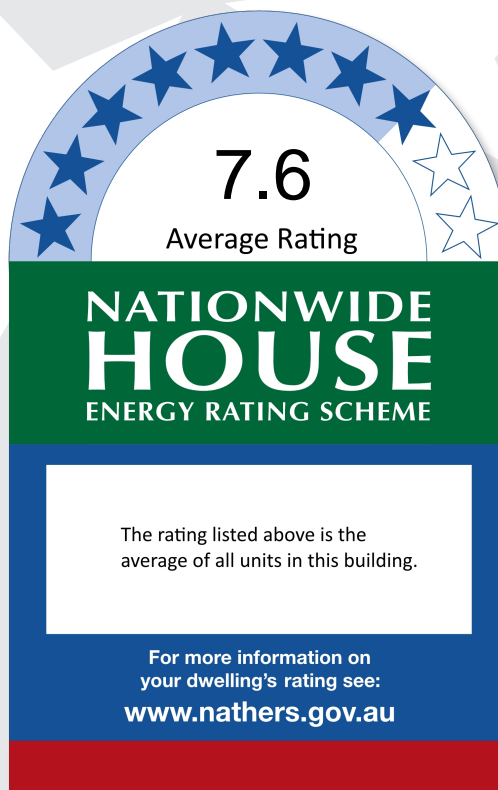
## Assessor details

Accreditation number: **HERA10033**  
Name: **Tracey Cools**  
Organisation: **Efficient Living Pty Ltd**  
Email: **admin@efficientliving.com.au**  
Phone: **02 9970 6181**  
Declaration of interest: **None**  
Software: **BERS Pro v4.4.0.0 (3.21)**  
  
AAO: **HERA**

## Dwelling details

Street: **Stage 2A: 1-15 Conferta Ave**  
Suburb: **Rouse Hill**  
State: **NSW**  
Postcode: **2155**

Scan to access this certificate online and confirm this is valid.



## Summary of all dwellings

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004734349-01	F101	8.3	24.8	33.1	8.6
0004734380-01	F102	16.0	56.8	72.8	6.7
0004734406-01	F103	49.0	37.6	86.6	6
0004734414-01	F201	29.4	36.8	66.3	6.9
0004734448-01	F202	5.5	39.5	45.0	7.9
0004734471-01	F203	7.3	41.2	48.5	7.8
0004734356-01	F301	11.7	32.5	44.2	7.9
0004734372-01	F302	54.3	18.7	73.0	6.7
0004734489-01	F303	43.2	26.0	69.1	6.9
0004734513-01	F304	29.6	44.6	74.2	6.7
0004734539-01	F305	40.2	35.6	75.8	6.6
0004734547-01	F306	22.7	36.5	59.2	7.4
0004734554-01	F307	6.4	32.2	38.6	8.3
0004734562-01	F308	6.2	34.9	41.1	8.2
0004734570-01	F401	12.7	31.5	44.2	7.9

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004810460**

Certificate Date:

**06 May 2020**

★ Average Star rating: **7.6**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004734331-01	F402	33.7	22.4	56.1	7.4
0004734364-01	F403	20.1	27.5	47.5	7.9
0004734398-01	F404	12.2	50.8	63.0	7.2
0004734422-01	F405	17.9	40.3	58.3	7.4
0004734430-01	F406	16.3	35.9	52.2	7.7
0004734463-01	F407	6.7	31.3	37.9	8.4
0004734497-01	F408	5.0	36.1	41.1	8.2
0004734521-01	F501	14.0	28.4	42.4	8.1
0004734604-01	F502	33.9	22.8	56.7	7.4
0004734638-01	F503	22.1	24.8	46.9	7.9
0004734661-01	F504	15.0	24.3	39.4	8.3
0004734687-01	F505	16.3	23.6	40.0	8.3
0004734711-01	F506	8.0	28.2	36.2	8.4
0004734745-01	F507	5.2	33.0	38.2	8.3
0004734778-01	F601	12.2	28.1	40.4	8.2
0004734810-01	F602	32.4	23.2	55.6	7.4
0004734836-01	F603	22.5	24.6	47.1	7.9
0004734851-01	F604	15.2	23.9	39.0	8.3
0004734885-01	F605	16.6	23.4	40.0	8.3
0004734919-01	F606	8.1	27.9	36.0	8.4
0004734935-01	F607	5.2	32.7	38.0	8.4
0004734968-01	F701	14.7	29.0	43.7	8
0004734992-01	F702	28.1	25.4	53.5	7.6
0004735023-01	F703	22.3	23.0	45.3	7.9
0004735056-01	F704	17.4	25.6	43.0	8.1
0004735080-01	F705	17.6	25.0	42.6	8.1
0004735122-01	F706	8.3	27.5	35.8	8.4
0004735155-01	F707	5.2	32.7	37.9	8.4
0004734588-01	F801	17.7	33.8	51.5	7.7
0004734612-01	F802	18.2	37.6	55.8	7.4
0004734653-01	F803	24.2	31.6	55.7	7.4
0004734695-01	F804	18.7	36.9	55.6	7.4
0004734729-01	F805	15.7	39.3	55.0	7.5
0004734752-01	F806	17.9	32.0	50.0	7.8
0004734786-01	G.101	14.0	22.9	36.9	8.4
0004734802-01	G.102	7.0	20.5	27.5	8.8
0004734844-01	G.103	13.8	23.6	37.5	8.4
0004734869-01	G.104	21.6	24.2	45.8	7.9
0004734893-01	G.105	26.2	25.3	51.5	7.7
0004734679-03	G.201	19.9	48.8	68.7	6.9
0004734943-01	G.301	18.7	35.5	54.2	7.6
0004734976-01	G.302	24.8	31.5	56.3	7.4
0004735015-01	G.303	21.6	30.4	52.0	7.7

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004810460**

Certificate Date:

**06 May 2020**

★ Average Star rating: **7.6**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004735049-01	G.304	26.4	36.1	62.5	7.2
0004735072-01	G.305	34.0	37.8	71.8	6.8
0004735106-01	G.306	30.0	28.2	58.2	7.4
0004735130-01	H.101	18.6	16.9	35.5	8.4
0004735163-01	H.102	15.1	15.3	30.5	8.7
0004734596-01	H.103	20.6	17.1	37.7	8.4
0004734620-01	H.104	23.1	16.9	40.0	8.2
0004734646-01	H.105	27.8	19.1	46.9	7.9
0004738373-01	H.201	19.3	47.6	66.9	6.9
0004734703-01	H.301	19.9	30.6	50.4	7.8
0004734737-01	H.302	29.9	26.1	55.9	7.4
0004734760-01	H.303	27.9	25.5	53.4	7.6
0004734794-01	H.304	30.5	30.6	61.0	7.3
0004734828-01	H.305	40.6	34.1	74.7	6.7
0004734877-01	H.306	33.5	28.0	61.6	7.3
0004734901-01	J101	52.8	26.4	79.2	6.4
0004734927-01	J102	22.1	24.1	46.2	7.9
0004734984-01	J104	43.3	23.7	67.0	6.9
0004735007-01	J105	17.8	19.4	37.2	8.4
0004735031-01	J106	57.1	39.7	96.8	5.6
0004735064-01	J201	33.2	41.6	74.8	6.6
0004735098-01	J202	11.7	20.1	31.7	8.7
0004735114-01	J203	4.8	55.1	59.9	7.3
0004735148-01	J204	15.6	31.9	47.5	7.9
0004735189-01	J205	12.8	25.9	38.7	8.3
0004735213-01	J206	31.7	52.2	83.9	6.2
0004735247-01	J301	32.0	37.9	69.9	6.9
0004735262-01	J302	9.4	19.4	28.7	8.8
0004735304-01	J303	5.0	54.1	59.1	7.4
0004735320-01	J304	8.6	36.0	44.6	7.9
0004735353-01	J305	9.7	27.1	36.8	8.4
0004735403-01	J306	30.7	52.5	83.2	6.2
0004735411-01	J401	34.2	40.4	74.6	6.7
0004735452-01	J402	9.4	19.8	29.2	8.8
0004735478-01	J403	5.2	53.0	58.2	7.4
0004735502-01	J404	6.2	39.8	46.0	7.9
0004735544-01	J405	8.3	27.8	36.1	8.4
0004735577-01	J406	29.4	53.5	82.9	6.3
0004735601-01	J501	33.5	35.5	69.0	6.9
0004735635-01	J502	10.6	17.4	28.0	8.8
0004735668-01	J503	6.7	45.6	52.2	7.7
0004735692-01	J504	7.2	35.6	42.8	8.1
0004735726-01	J505	9.4	26.5	35.8	8.4

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004810460**

Certificate Date:

**06 May 2020**

★ Average Star rating: **7.6**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004735759-01	J506	31.5	47.5	79.0	6.4
0004735197-01	J601	33.7	35.5	69.2	6.9
0004735221-01	J602	10.8	17.4	28.2	8.8
0004735254-01	J603	6.9	45.3	52.1	7.7
0004735288-01	J604	7.4	34.6	42.0	8.2
0004735296-01	J605	9.0	26.8	35.9	8.4
0004735346-01	J606	29.2	48.3	77.4	6.4
0004735379-01	J701	46.9	38.8	85.7	6.1
0004735395-01	J702	13.2	19.1	32.4	8.6
0004735437-01	J703	7.0	44.2	51.2	7.7
0004735445-01	J704	7.6	34.7	42.3	8.1
0004735494-01	J705	8.1	27.1	35.2	8.4
0004735528-01	J706	41.7	51.8	93.5	5.8
0004735551-01	J801	45.1	24.8	69.9	6.9
0004735593-01	J802	17.2	34.9	52.1	7.7
0004735627-01	J803	15.6	34.5	50.2	7.8
0004735643-01	J804	26.0	29.7	55.7	7.4
0004735676-01	K.101	61.8	25.0	86.8	6
0004735700-01	K.102	48.8	25.0	73.8	6.7
0004735734-01	K.103	46.7	21.4	68.1	6.9
0004735767-01	K.104	39.4	27.2	66.6	6.9
0004735171-01	K.105	51.1	21.6	72.7	6.7
0004735205-01	K.106	62.5	32.5	95.1	5.7
0004735239-01	K.201	36.7	32.3	69.0	6.9
0004735270-01	K.202	19.0	20.4	39.4	8.3
0004735312-01	K.203	26.4	38.7	65.1	7.1
0004735338-01	K.204	18.4	33.8	52.2	7.7
0004735361-01	K.205	18.1	24.2	42.3	8.1
0004735387-01	K.206	47.5	34.3	81.8	6.3
0004735429-01	K.301	36.8	32.2	69.0	6.9
0004735460-01	K.302	19.1	20.6	39.7	8.3
0004735486-01	K.303	17.9	40.8	58.7	7.4
0004735510-01	K.304	15.1	32.2	47.3	7.9
0004735536-01	K.305	16.2	24.8	41.0	8.2
0004735585-02	K.306	47.4	37.5	84.9	6.2
0004735619-01	K.401	36.2	32.7	68.9	6.9
0004735650-01	K.402	12.8	22.5	35.3	8.4
0004735684-01	K.403	8.9	49.5	58.4	7.4
0004735718-01	K.404	8.3	42.8	51.1	7.7
0004735742-01	K.405	12.7	26.1	38.8	8.3
0004735791-01	K.501	37.0	30.4	67.4	6.9
0004735833-01	K.502	13.9	21.4	35.3	8.4
0004735866-01	K.503	9.3	36.7	46.0	7.9

## Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004810460**

Certificate Date:

**06 May 2020**

★ Average Star rating: **7.6**



### Summary of all dwellings continued

#### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004735882-01	K.504	7.1	40.4	47.6	7.9
0004735924-01	K.505	12.5	25.1	37.6	8.4
0004735940-01	K.506	45.4	37.5	82.9	6.3
0004735965-01	K.601	36.1	31.4	67.6	6.9
0004736013-01	K.602	13.7	21.3	35.0	8.4
0004736021-01	K.603	9.6	36.3	46.0	7.9
0004736070-01	K.604	7.2	40.3	47.5	7.9
0004736088-01	K.605	11.4	27.2	38.6	8.3
0004736138-01	K.606	36.3	39.3	75.6	6.6
0004736153-01	K.701	46.3	36.1	82.4	6.3
0004736187-01	K.702	14.8	22.9	37.7	8.4
0004736211-01	K.703	9.8	36.6	46.4	7.9
0004736245-01	K.704	7.4	39.8	47.2	7.9
0004736260-01	K.705	8.3	29.9	38.2	8.3
0004736294-01	K.706	54.3	44.8	99.1	5.4
0004736328-01	K.801	45.1	24.8	69.9	6.9
0004809463	K.802	13.7	33.9	47.6	7.9
0004736377-01	K.803	13.5	32.4	45.9	7.9
0004735783-01	K.804	30.5	25.4	56.0	7.4

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1089643M\_04

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 06/10/2017 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Friday, 08 May 2020

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Stage 2A Tallawong Station_04
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na
No. of residential flat buildings	5
No. of units in residential flat buildings	165
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

### Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

# Description of project

## Project address

Project name	Stage 2A Tallawong Station_04
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na

## Project type

No. of residential flat buildings	5
No. of units in residential flat buildings	165
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	4764
Roof area (m²)	1931
Non-residential floor area (m²)	0.0
Residential car spaces	188
Non-residential car spaces	0

## Common area landscape

Common area lawn (m²)	425.0
Common area garden (m²)	992.0
Area of indigenous or low water use species (m²)	0.0

## Assessor details

Assessor number	HERA10033
Certificate number	0004810460
Climate zone	28

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

## Description of project

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

### Residential flat buildings - Building F, 49 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
F101	2	75.0	0.0	0.0	0.0
F202	2	73.0	0.0	0.0	0.0
F303	2	80.0	0.0	0.0	0.0
F307	2	73.0	0.0	0.0	0.0
F403	2	80.0	0.0	0.0	0.0
F407	2	73.0	0.0	0.0	0.0
F503	2	80.0	0.0	0.0	0.0
F507	1	52.0	0.0	0.0	0.0
F604	2	78.0	0.0	0.0	0.0
F701	1	51.0	0.0	0.0	0.0
F705	2	78.0	0.0	0.0	0.0
F802	2	77.0	0.0	0.0	0.0
F806	2	73.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
F102	1	50.0	0.0	0.0	0.0
F203	1	52.0	0.0	0.0	0.0
F304	1	51.0	0.0	0.0	0.0
F308	1	52.0	0.0	0.0	0.0
F404	1	51.0	0.0	0.0	0.0
F408	1	52.0	0.0	0.0	0.0
F504	2	78.0	0.0	0.0	0.0
F601	1	66.0	0.0	0.0	0.0
F605	2	78.0	0.0	0.0	0.0
F702	2	77.0	0.0	0.0	0.0
F706	2	73.0	0.0	0.0	0.0
F803	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
F103	2	73.0	0.0	0.0	0.0
F301	1	66.0	0.0	0.0	0.0
F305	1	51.0	0.0	0.0	0.0
F401	1	66.0	0.0	0.0	0.0
F405	1	51.0	0.0	0.0	0.0
F501	1	66.0	0.0	0.0	0.0
F505	2	78.0	0.0	0.0	0.0
F602	2	77.0	0.0	0.0	0.0
F606	2	73.0	0.0	0.0	0.0
F703	2	80.0	0.0	0.0	0.0
F707	1	52.0	0.0	0.0	0.0
F804	2	78.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
F201	1	78.0	0.0	0.0	0.0
F302	2	77.0	0.0	0.0	0.0
F306	1	51.0	0.0	0.0	0.0
F402	2	77.0	0.0	0.0	0.0
F406	1	51.0	0.0	0.0	0.0
F502	2	77.0	0.0	0.0	0.0
F506	2	73.0	0.0	0.0	0.0
F603	2	80.0	0.0	0.0	0.0
F607	1	52.0	0.0	0.0	0.0
F704	2	78.0	0.0	0.0	0.0
F801	3	117.0	0.0	0.0	0.0
F805	2	78.0	0.0	0.0	0.0

### Residential flat buildings - Building G, 12 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
G101	2	93.0	0.0	0.0	0.0
G105	2	93.0	0.0	0.0	0.0
G303	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
G102	2	93.0	0.0	0.0	0.0
G201	1	51.0	0.0	0.0	0.0
G304	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
G103	2	93.0	0.0	0.0	0.0
G301	2	90.0	0.0	0.0	0.0
G305	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
G104	2	93.0	0.0	0.0	0.0
G302	2	81.0	0.0	0.0	0.0
G306	2	90.0	0.0	0.0	0.0

### Residential flat buildings - Building H, 12 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
H101	2	93.0	0.0	0.0	0.0
H105	2	93.0	0.0	0.0	0.0
H303	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
H102	2	93.0	0.0	0.0	0.0
H201	1	51.0	0.0	0.0	0.0
H304	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
H103	2	93.0	0.0	0.0	0.0
H301	2	90.0	0.0	0.0	0.0
H305	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
H104	2	93.0	0.0	0.0	0.0
H302	2	81.0	0.0	0.0	0.0
H306	2	90.0	0.0	0.0	0.0

### Residential flat buildings - Building J, 46 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J101	1	63.0	0.0	0.0	0.0
J105	2	76.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J102	2	80.0	0.0	0.0	0.0
J106	1	54.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J103	1	52.0	0.0	0.0	0.0
J201	1	59.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J104	2	73.0	0.0	0.0	0.0
J202	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J203	2	80.0	0.0	0.0	0.0
J301	1	59.0	0.0	0.0	0.0
J305	2	76.0	0.0	0.0	0.0
J403	2	80.0	0.0	0.0	0.0
J501	1	59.0	0.0	0.0	0.0
J505	2	76.0	0.0	0.0	0.0
J603	2	80.0	0.0	0.0	0.0
J701	1	59.0	0.0	0.0	0.0
J705	2	76.0	0.0	0.0	0.0
J803	3	96.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J204	2	77.0	0.0	0.0	0.0
J302	2	79.0	0.0	0.0	0.0
J306	1	60.0	0.0	0.0	0.0
J404	2	77.0	0.0	0.0	0.0
J502	2	79.0	0.0	0.0	0.0
J506	1	60.0	0.0	0.0	0.0
J604	2	77.0	0.0	0.0	0.0
J702	2	79.0	0.0	0.0	0.0
J706	1	60.0	0.0	0.0	0.0
J804	2	73.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J205	2	76.0	0.0	0.0	0.0
J303	2	80.0	0.0	0.0	0.0
J401	1	59.0	0.0	0.0	0.0
J405	2	76.0	0.0	0.0	0.0
J503	2	80.0	0.0	0.0	0.0
J601	1	59.0	0.0	0.0	0.0
J605	2	76.0	0.0	0.0	0.0
J703	2	80.0	0.0	0.0	0.0
J801	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
J206	1	60.0	0.0	0.0	0.0
J304	2	77.0	0.0	0.0	0.0
J402	2	79.0	0.0	0.0	0.0
J406	1	60.0	0.0	0.0	0.0
J504	2	77.0	0.0	0.0	0.0
J602	2	79.0	0.0	0.0	0.0
J606	1	60.0	0.0	0.0	0.0
J704	2	77.0	0.0	0.0	0.0
J802	3	94.0	0.0	0.0	0.0

### Residential flat buildings - Building K, 46 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K101	1	62.0	0.0	0.0	0.0
K105	2	73.0	0.0	0.0	0.0
K203	2	74.0	0.0	0.0	0.0
K301	1	59.0	0.0	0.0	0.0
K305	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K102	1	53.0	0.0	0.0	0.0
K106	1	55.0	0.0	0.0	0.0
K204	2	77.0	0.0	0.0	0.0
K302	2	74.0	0.0	0.0	0.0
K306	1	64.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K103	1	53.0	0.0	0.0	0.0
K201	1	59.0	0.0	0.0	0.0
K205	2	79.0	0.0	0.0	0.0
K303	2	74.0	0.0	0.0	0.0
K401	1	59.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K104	2	74.0	0.0	0.0	0.0
K202	2	74.0	0.0	0.0	0.0
K206	1	64.0	0.0	0.0	0.0
K304	2	77.0	0.0	0.0	0.0
K402	2	74.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K403	2	74.0	0.0	0.0	0.0
K501	1	59.0	0.0	0.0	0.0
K505	2	79.0	0.0	0.0	0.0
K603	2	74.0	0.0	0.0	0.0
K701	1	59.0	0.0	0.0	0.0
K705	2	79.0	0.0	0.0	0.0
K803	3	98.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K404	2	77.0	0.0	0.0	0.0
K502	2	74.0	0.0	0.0	0.0
K506	1	64.0	0.0	0.0	0.0
K604	2	77.0	0.0	0.0	0.0
K702	2	74.0	0.0	0.0	0.0
K706	1	64.0	0.0	0.0	0.0
K804	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K405	2	79.0	0.0	0.0	0.0
K503	2	74.0	0.0	0.0	0.0
K601	1	59.0	0.0	0.0	0.0
K605	2	79.0	0.0	0.0	0.0
K703	2	74.0	0.0	0.0	0.0
K801	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
K406	1	64.0	0.0	0.0	0.0
K504	2	77.0	0.0	0.0	0.0
K602	2	74.0	0.0	0.0	0.0
K606	1	64.0	0.0	0.0	0.0
K704	2	77.0	0.0	0.0	0.0
K802	3	98.0	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - Building F

Common area	Floor area (m <sup>2</sup> )
Lift car (No.1)	-

### Common areas of unit building - Building G

Common area	Floor area (m <sup>2</sup> )
Lift car (No.2)	-

### Common areas of unit building - Building H

Common area	Floor area (m <sup>2</sup> )
Lift car (No.3)	-

### Common areas of unit building - Building J

Common area	Floor area (m <sup>2</sup> )
Lift car (No.4)	-

### Common areas of unit building - Building K

Common area	Floor area (m <sup>2</sup> )
Lift car (No.5)	-

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

Common area	Floor area (m²)
Car park area	9314.63
Plant exhaust air	67.0
Pump rooms	47.35
Storage cages	410.51

Common area	Floor area (m²)
Loading doc	257.37
Comms	12.0
Bicycle storage	404.0
Electrical SR	19.98

Common area	Floor area (m²)
Waste rooms	321.98
Hot water plant	82.7
Plant source air	65.0
Hallways	1027.22

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building F

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

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

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - Building H

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 4. Commitments for Residential flat buildings - Building J

### (a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

5. Commitments for Residential flat buildings - Building K

(a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

6. Commitments for multi-dwelling houses

7. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Building F

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
F101	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2	1	yes	yes	yes	yes	0	no
F103	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
F801	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
F806	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	-	-	-	-	-	-	-	-
F102, F201, F301, F304, F305, F306, F308, F401, F404, F405, F406, F408, F501, F507, F601, F607, F701, F707	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
F101	8.3	24.8
F102	16.0	56.8
F103	49.0	37.6
F201	29.4	36.8
F202	5.5	39.5
F203	7.3	41.2
F301	11.7	32.5
F302	54.3	18.7
F303	43.2	26.0
F304	29.6	44.6
F305	40.2	35.6
F306	22.7	36.5
F307	6.4	32.2
F308	6.2	34.9
F401	12.7	31.5
F402	33.7	22.4
F403	20.1	27.5
F404	12.2	50.8
F405	17.9	40.3
F406	16.3	35.9
F407	6.7	31.3
F408	5.0	36.1
F501	14.0	28.4
F502	33.9	22.8
F503	22.1	24.8
F504	15.0	24.3
F505	16.3	23.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
F506	8.0	28.2
F507	5.2	33.0
F601	28.1	12.2
F602	32.4	23.2
F603	22.5	24.6
F604	15.2	23.9
F605	16.6	23.4
F606	8.1	27.9
F701	14.7	29.0
F702	28.1	25.4
F703	22.3	23.0
F704	17.4	25.6
F705	17.6	25.0
F706	8.3	27.5
F801	17.7	33.8
F802	18.2	37.6
F803	24.2	31.6
F804	18.7	36.9
F805	15.7	39.3
F806	17.9	32.0
All other dwellings	5.2	32.7

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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	Yes

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

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

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	-	3.5 star	-	-	-	-	-	-	-

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


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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
G201	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

(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.	✓	✓	✓

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
G101	14.0	22.9
G102	7.0	20.5
G103	13.8	23.6
G104	21.6	24.2
G105	26.2	25.3
G201	19.9	48.8
G301	18.7	35.5
G302	24.8	31.5
G303	21.6	30.4
G304	26.4	36.1
G305	34.0	37.8
All other dwellings	30.0	28.2

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.2)	-	-	light-emitting diode	connected to lift call button	Yes

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

### 3. Commitments for Residential flat buildings - Building H

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	-	3.5 star	-	-	-	-	-	-	-

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


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

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

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
H201	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

(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.	✓	✓	✓

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
H101	18.6	16.9
H102	15.1	15.3
H103	20.6	17.1
H104	23.1	16.9
H105	27.8	19.1
H201	19.3	47.6
H301	19.9	30.6
H302	29.9	26.1
H303	27.9	25.5
H304	30.5	30.6
H305	40.6	34.1
All other dwellings	33.5	28.0

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.3)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 11

#### 4. Commitments for Residential flat buildings - Building J

##### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
J802, J803	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
J101, J106, J201, J206, J301, J306, J401, J406, J501, J506, J601, J606, J701, J706	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
J101	52.8	26.4
J102	22.1	24.1
J103	52.8	23.7
J104	43.3	23.7
J105	17.8	19.4

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
J106	57.0	39.7
J201	41.6	33.2
J202	11.7	20.1
J203	4.8	55.1
J204	15.6	31.9
J205	12.8	25.9
J206	31.7	52.2
J301	32.0	37.9
J302	9.4	19.4
J303	5.0	54.1
J304	8.6	36.0
J305	9.7	27.1
J306	30.7	52.5
J401	34.2	40.4
J402	9.4	19.8
J403	5.2	53.0
J404	6.2	39.8
J405	8.3	27.8
J406	29.4	53.5
J501	33.5	35.5
J502	10.6	17.4
J503	6.7	45.6
J504	7.2	35.6
J505	9.4	26.5
J506	31.5	47.5
J601	33.7	35.5
J602	10.8	17.4

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
J603	6.9	45.3
J604	7.4	34.6
J605	9.0	26.8
J606	29.2	48.3
J701	46.9	38.8
J702	13.2	19.1
J703	7.0	44.2
J704	7.6	34.7
J705	8.1	27.1
J706	41.7	51.8
J801	45.1	24.8
J802	17.2	34.9
J803	15.6	34.5
All other dwellings	26.0	29.7

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.4)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 11

## 5. Commitments for Residential flat buildings - Building K

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
K802, K803	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
K101, K102, K106, K201, K206, K301, K306, K401, K406, K501, K505, K506, K601, K606, K701, K706	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
K101	61.8	25.0
K102	48.8	25.0
K103	46.7	21.4
K104	39.4	27.2
K105	51.1	21.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
K106	62.5	32.5
K201	36.7	32.3
K202	19.0	20.4
K203	26.4	38.7
K204	18.4	33.8
K205	18.1	24.2
K206	47.5	34.3
K301	36.8	32.2
K302	19.1	20.6
K303	17.9	40.8
K304	15.1	32.2
K305	16.2	24.8
K306	47.4	37.5
K401	36.2	32.7
K402	12.8	22.5
K403	8.9	49.5
K404	8.3	42.8
K405	12.7	26.1
K406	46.6	38.6
K501	37.0	30.4
K502	13.9	21.4
K503	9.3	36.7
K504	7.1	40.0
K505	12.5	25.1
K506	45.4	37.5
K601	36.1	31.4
K602	13.7	21.3

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
K603	9.6	36.3
K604	7.2	40.3
K605	11.4	27.2
K606	36.3	39.3
K701	46.3	36.1
K702	14.8	22.9
K703	9.8	36.6
K704	7.4	39.8
K705	8.3	29.9
K706	54.3	44.8
K801	45.1	24.8
K802	13.7	33.9
K803	13.5	32.4
All other dwellings	30.5	25.4

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.5)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 12

## 8. 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	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	8000.0	To collect run-off from at least: - 300.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 1417.0 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Fire sprinkler system (No. 2)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Loading doc	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Waste rooms	ventilation exhaust only	-	light-emitting diode	motion sensors	Yes
Plant exhaust air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Comms	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	Yes
Hot water plant	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Pump rooms	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Bicycle storage	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Plant source air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes

Common area	Common area ventilation system		Common area lighting		
	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Storage cages	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Electrical SR	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Hallways	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	Yes

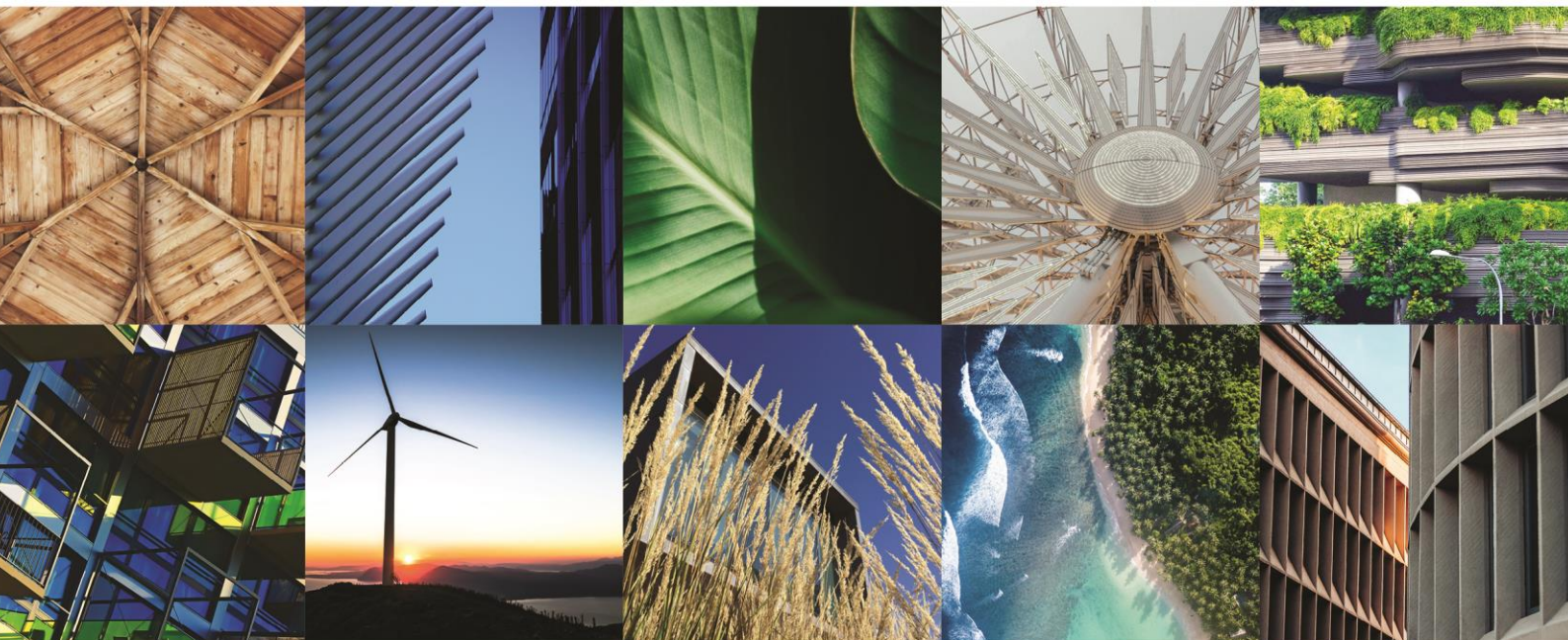
Central energy systems	Type	Specification
Central hot water system (No. 1)	gas-fired boiler	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 50.0 peak kW
Other	Building management system installed?: yes	-

## Notes

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

## Legend

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



### Deicorp Projects (Tallawong Station) Pty Ltd Tallawong Station Precinct South Stage: 2B, C and E Buildings M, N, P and L

To be built at 1-15 & 2-12 Conferta Avenue, Rouse Hill NSW 2155

Issue	File Ref	Description	Author	Date
A	19-0982	NatHERS and BASIX Assessment	FM/AM	09/04/2020
B	20-0407	Updated Assessment to reflect design changes	HE/AG/DG	08/05/2020

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Deicorp Projects (Tallawong Station) Pty Ltd. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



**Report Contact:** Haylea Edwards  
Email: haylea@efficientliving.com.au

**License Holder:** Tracey Cools  
Accreditation Number: HERA10033

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**Prepared For:**

Deicorp Projects (Tallawong Station) Pty Ltd  
Marvin Huang  
mhuang@deicorp.com.au

Level 3, 161 Redfern Street  
Redfern NSW 2016  
02 8665 4100

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**Introduction**

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 1-15 & 2-12 Conferta Avenue, Rouse Hill NSW 2155.

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.4 thermal comfort simulation software. The report is based on the architectural drawings provided by Deicorp. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the following plans prepared by Turner: DA-114-007 3, DA-114-008 3, DA-114-009 3, DA-114-010 3, DA-114-020 3, DA-114-030 3, DA-114-040 3, DA-114-050 3, DA-114-060 3, DA-114-070 3, DA-114-080 3, DA-114-090 3, DA-215-001 3, DA-215-002 3, DA-215-003 3 and DA-215-004 3.

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**Analysis**

The BASIX Assessment is divided into three sections; Water, Thermal Comfort and Energy, each independently measuring the efficiency of the Development.

BASIX requires a minimum target of 40% for the water section, a pass or fail for the thermal comfort section, and a minimum required target of 25% for the energy section.

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**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 toilet, the dish washer and clothes washing machine.

The size of the rainwater tank and number of connections may have a significant impact on your water score as does the area of gardens and lawns whether or not low water plant species are incorporated.

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**Thermal Comfort**

Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics are measured using BERS Pro Plus V4.4 Thermal Comfort Simulation Software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in megajoules per square metre of floor area (MJ/m<sup>2</sup>).

Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with than the individual unit caps.

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## Energy

The proposed Development has achieved the Energy target of 25% 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, cook top, oven, and clothes drying facilities.

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## Inclusions Summary

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

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## Thermal Comfort Scores

Average heating loads are 46% below allowable BASIX targets

Average cooling loads are 32% below allowable BASIX targets

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## Thermal Comfort Scores

Average heating loads are 44% below allowable BASIX targets

Average cooling loads are 44% below allowable BASIX targets

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## Glazing Doors/Windows

The glazing was upgraded in consultation with the developer to achieve the projects Green Star objectives.

Industry default window values have been used to allow a range of window suppliers to tender. Once a supplier is selected their actual product values can be modeled. This will allow flexibility in U-Values and SHGC's.

## Glazing Doors/Windows

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±10%)

## Upgrades applied to selected units as per the NatHERS summary sheet;

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 2.9 (equal to or lower than) SHGC: 0.44 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

## Skylight:

U-value: 4.7 SHGC: 0.72

Given values are AFRC total window system values (glass and frame)

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### Roof and ceiling

Medium roof colour modelled

Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof is over

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### Ceiling Penetrations

Default modelled as per client's request. Once a product is selected modelling improvements can be made.

Sealed LED Downlights 1 per 2.5m<sup>2</sup>

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### External Wall

Cavity brick internally lined plasterboard on studs with R2.0 insulation required (Insulation only value)

#### Upgrades applied to selected units as per the NatHERS summary sheet;

Cavity brick internally lined plasterboard on studs with R2.5 insulation required (Insulation only value)

### External Colour

Default colour modelled

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### Inter-tenancy walls

Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required

60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways

Minimum 200mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs.

60mm Pronto panels with plasterboard lining to services

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### Walls within dwellings

Plasterboard on studs - no insulation

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### Floors

Concrete with a minimum R1.2 insulation (insulation only value) required to units where part open subfloor or garage below

Concrete between levels, no insulation required

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### Floor coverings

Default floor coverings

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### External Shading

Shading as per stamped documentation

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### BASIX water inclusions

Score 40/40

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**Fixtures within units**

Showerheads: 3 stars -Mid flow (>6L but ≤7.5L/min)

Toilets: 4.0 star

Kitchen taps: 5.0 star

Bathroom vanity taps: 5.0 star

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**Appliances within units**

Dishwashers: 3.5 stars

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**Central rainwater storage**

Tank size: 8,000L

Collecting from 300m<sup>2</sup> roof area

Connected to outdoor tap for irrigation of landscaping common and private and car wash bay

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**Fire sprinkler test water**

Fire sprinkler test water contained in a closed loop system

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**BASIX Energy Inclusions**

Score 33/25

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**Hot water system**

Central gas fired boiler R1.0 pipe and ring main insulation

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**Lift motors**

All lifts to have gearless traction with VVVF motor

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**Appliances and other efficiency measures within units**

Gas cooktop & electric oven

Dishwashers: 3.5 star

Clothes dryers: 2.0 star

Well ventilated fridge space – requires a mechanical vent or to be open as per BASIX specification

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**Heating and cooling within units**

All units to have individual, single phase, reverse cycle air conditioning to living areas, and at least 1 bedroom

A minimum efficiency of 3.0 – 3.5 stars is required for cooling; and

A minimum efficiency of 3.5 – 4.0 stars is required for heating

Day/Night zoning required. AC zoned switched to allow only one head on at a time. Bedroom and living room cannot be running simultaneously.

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#### Artificial lighting within units

All light fittings within each room are to have LED fixtures installed

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#### Ventilation within units

Bathroom: individual fan, ducted to roof or façade – manual on/off switch

Laundry: individual fan, ducted to roof or façade – manual on/off switch

Kitchen range hood: Individual fan, ducted to roof or façade – manual on/off switch

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#### Ventilation to common areas

Car park area – supply and exhaust air with a carbon monoxide monitor & VSD fan

Loading doc – supply and exhaust air with a carbon monoxide monitor & VSD fan

Waste rooms – Exhaust air, running continuously

Plant source air – No mechanical ventilation

Comms – Supply only, thermostatically controlled

Hot water plant – Supply only, interlocked to hot water plant operation (continuous selected in BASIX)

Pump rooms – Supply only, continuous

Bicycle storage – Exhaust air, running continuously

Plant exhaust air – No mechanical ventilation

Storage cage rooms – Exhaust air, running continuously

Electrical SR – Supply only, continuous

Hallways – No mechanical ventilation

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#### Artificial lighting to common areas

Lifts – Light emitting diodes (LEDs) connected to lift call button

Car park area – Light emitting diodes (LEDs) zone switching and motion sensors

Loading doc – Light emitting diodes (LEDs) zone switching and motion sensors

Waste rooms – Light emitting diodes (LEDs) motion sensors

Mechanical plant – Light emitting diodes (LEDs) manual on / manual off switch

Comms – Light emitting diodes (LEDs) manual on / manual off switch

Hot water plant – Light emitting diodes (LEDs) manual on / manual off switch

Pump rooms – Light emitting diodes (LEDs) manual on / manual off switch

Bicycle storage – Light emitting diodes (LEDs) motion sensors

Mechanical plant air – Light emitting diodes (LEDs) manual on / manual off switch

Storage cage rooms – Light emitting diodes (LEDs) motion sensors

Electrical SR – Light emitting diodes (LEDs) manual on / manual off switch



efficient  
LIVING

8 May 2020

**Deicorp Projects (Tallawong Station) Pty Ltd**  
**Tallawong Station Precinct South**

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Hallways - Light emitting diodes (LEDs) zone switching and motion sensors

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**Alternative Energy**

Not required to pass BASIX. 93kW required for 5% energy saving

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# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2B, 2C 2E  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004748140					Accreditation # HERA10033	
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
Building M						
M101	1	59	27.5	79.4	5.2	R2.5 ins. to Ext. wall R1.5 ins. to subfloor with garage below and glazing upgrade throughout
M102	1	50	63.3	30.1	5.8	R2.5 ins. to Ext. wall R1.5 ins. to subfloor with garage below Kitchen/living sliding door glazing reduction from 3600mm to 2900mm width Glazing upgrade throughout
M103	1	52	62.9	40.7	5.4	R2.5 ins. to Ext. wall R1.5 ins. to subfloor with garage below Glazing upgrade throughout
M104	1	49	18.6	55	6.7	Glazing upgrade throughout
M105	2	78	14.9	55.3	6.9	Glazing upgrade throughout
M106	2	79	35.9	59.9	5.7	Glazing upgrade throughout
M107	3	117	17.7	39.7	7.4	None
M108	2	88	54	16.3	6.9	None
M109	2	88	57	15.6	6.8	None
M110	2	88	45.7	18.1	7.2	None
M111	2	88	54.2	14.2	6.9	None
M112	2	88	61.6	20.1	6.3	Glazing upgrade throughout
M113	2	88	48	14	7.2	Glazing upgrade throughout
M201	2	79	23.3	45.5	6.9	None
M202	2	77	48.6	46.4	5.7	None
M203	1	56	48.5	43.5	5.8	None
M204	2	80	5.6	27.7	8.6	None
M205	2	79	21.6	39.7	7.3	None
M206	2	86	12.9	36.4	7.8	Glazing upgrade throughout
M207	1	52	6.4	38.3	7.9	Glazing upgrade throughout
M209	1	53	42.9	26.9	6.9	None
M301	2	79	20.3	44.4	7.1	None
M302	2	77	46.2	57.2	5.4	None

# Thermal Comfort Results

## Proposed Residential Development

Tallawong Station Precinct South  
Stage 2B, 2C 2E  
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Rouse Hill NSW 2155

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
M303	1	56	45.4	50.8	5.7	None
M304	2	80	6	27.3	8.6	None
M305	2	79	25.3	43.1	6.9	None
M306	1	52	36.3	28.2	7.1	None
M307	2	73	37.3	22.1	7.4	None
M308	2	75	13.6	29.2	8.1	None
M309	1	56	12	31.6	8	None
M310	1	53	11.1	30.9	8.1	None
M311	1	53	11.1	36.4	7.9	None
M312	2	81	14.5	51.7	6.9	None
M313	2	78	11.3	44.4	7.4	None
M314	2	80	7.8	30.9	8.3	None
M315	2	89	43.8	48.3	5.8	None
M316	2	78	43.1	42.5	6.1	None
M317	2	78	45.1	42.6	5.9	None
M318	2	78	43.5	37.3	6.4	None
M319	2	78	35.7	47.1	6.3	None
M320	2	78	39.6	44.2	6.2	None
M321	2	78	36.8	46.7	6.2	None
M322	2	89	20.5	46.6	6.9	None
M401	2	79	20.7	44.3	7.1	None
M402	2	77	37.8	55.8	5.8	None
M403	1	56	40.9	56.5	5.6	Glazing upgrade throughout
M404	2	80	5.3	28.9	8.4	None
M405	2	79	25.6	42.7	6.9	None
M406	1	52	23.5	28.9	7.7	None
M407	2	73	27.7	26.8	7.5	None
M408	2	75	9.3	31.2	8.2	None
M409	1	56	7.3	34.3	8.2	None
M410	1	53	7.7	37.9	7.9	None
M411	1	53	7.3	37.9	7.9	None
M412	2	81	10.8	53.4	7.1	None

## Thermal Comfort Results

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
M413	2	78	11.6	43.8	7.4	None
M414	2	80	8	30.4	8.3	None
M501	2	79	26	39.2	7.1	None
M502	2	77	34.7	47.6	6.3	Glazing upgrade throughout
M503	1	56	41.7	46.4	5.9	None
M504	2	80	4.9	24	8.8	None
M505	2	79	25.7	37.3	7.2	None
M506	1	52	27.6	27.5	7.4	None
M507	2	75	31.4	36.7	6.9	None
M508	2	76	12.9	32.6	7.9	None
M509	1	56	8.5	31.8	8.2	None
M510	1	53	9.2	35.8	7.9	None
M511	1	53	8.3	34.5	8.1	None
M512	2	81	12	45.4	7.4	None
M513	2	78	13.2	37.9	7.7	None
M514	2	80	9.4	27	8.4	None
M601	2	79	26.1	39.5	7	None
M602	2	77	49.6	50.7	5.4	Glazing upgrade throughout
M603	1	56	41.7	52.1	5.8	None
M604	2	80	5.7	28	8.5	None
M605	2	79	26.1	36.8	7.2	None
M606	1	52	25.5	24.9	7.8	None
M607	2	75	30.7	38.2	6.9	None
M608	2	76	14.6	35.1	7.8	None
M609	1	56	12	33.1	7.9	None
M610	1	53	9	34.9	8	None
M611	1	53	8.5	34.1	8.1	None
M612	2	81	12.3	44.5	7.4	None
M613	2	78	13.5	37.8	7.7	None
M614	2	80	7.1	26.9	8.5	None
M701	2	79	26.1	39.9	6.9	None
M702	3	96	45.8	51.4	5.6	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
M703	3	109	6.2	28.8	8.4	None
M704	2	79	25.8	37	7.2	None
M705	1	52	28.2	26.6	7.5	None
M706	2	75	30.6	34.6	7.1	None
M707	2	76	13.8	32.1	7.9	None
M708	2	80	17.3	28	7.9	None
M709	2	84	6.9	28.1	8.4	None
M710	2	81	12.4	44.6	7.4	None
M711	2	78	13.7	37.3	7.7	None
M712	2	80	6.8	25.1	8.6	None
M801	2	79	37.9	43.5	6.3	None
M802	3	96	48.3	52.5	5.4	None
M803	3	109	22.5	34	7.4	None
M804	2	79	36.5	40.4	6.5	None
M805	1	52	23.6	53.2	6.5	None
M806	2	75	33.1	59.2	5.8	None
M807	2	76	25.3	40.7	7	None
M808	2	80	28.6	32.5	7.3	None
M809	2	84	15.6	29.5	7.9	None
M810	2	81	20.1	49	6.9	None
M811	2	78	22.5	41.1	7.2	None
M812	2	80	20.8	34.6	7.4	None
Building L						
L101	1	62	49.8	21.3	6.8	None
L102	1	51	36.7	51.9	5.9	None
L103	1	53	41.2	30.1	6.8	None
L104	2	75	21	24.5	7.9	None
L105	2	84	40.4	25	7.1	None
L106	2	88	50.3	50.4	5.4	None
L107	2	88	27.1	34.5	7.2	None
L108	2	88	35.8	43.3	6.4	None
L109	2	88	38.9	53.7	5.8	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
L110	2	88	27	23.9	7.7	None
L111	2	88	25.3	21.6	7.9	None
L112	2	88	10.7	18.9	8.8	None
L113	2	88	18.5	21.6	8.2	None
L114	2	88	27.9	23.4	7.7	None
L115	2	88	30.1	22.2	7.7	None
L201	1	62	41.9	39.3	6.3	None
L202	2	75	15.6	28.4	8	None
L203	2	74	11.5	34.5	7.9	None
L204	1	53	18.1	50.7	6.9	None
L205	1	63	13.7	27.8	8.2	None
L206	1	64	40.2	32.2	6.8	None
L207	1	53	6.8	34.3	8.2	None
L301	1	62	39.9	40.1	6.4	None
L302	2	75	13.5	51.2	7.1	None
L303	2	74	9.4	39.6	7.8	None
L304	1	53	12.2	48.4	7.3	None
L305	1	53	12.9	37.9	7.7	None
L306	1	64	37.3	35	6.8	None
L307	2	89	19.4	49.5	6.9	Glazing upgrade throughout
L308	2	78	20.9	51.3	6.8	None
L309	2	78	33.3	51.2	6.2	None
L310	2	78	43.9	57.6	5.4	None
L311	2	89	31.1	34.4	7	None
L312	2	78	40.3	45.7	6.1	None
L313	2	78	40.2	41.9	6.3	None
L314	2	78	29.1	32.1	7.3	None
L315	2	78	34	34.6	6.9	None
L316	2	78	39.3	38.9	6.4	None
L317	2	89	37.5	43.4	6.4	None
L401	1	62	41.1	37.9	6.4	None
L402	2	75	15.2	26.1	8.2	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
L403	2	74	9.2	36.4	7.9	None
L404	1	53	12.6	43.8	7.4	None
L405	1	63	10.1	29.9	8.3	None
L406	1	64	40.1	32.1	6.8	None
L501	1	62	41.6	36.5	6.4	None
L502	2	75	14.8	26.1	8.2	None
L503	2	75	9.4	38.6	7.9	None
L504	2	75	6.7	38.7	7.9	None
L505	1	63	10.3	29.8	8.2	None
L506	1	55	49.9	36.6	6.0	None
L601	1	62	41.2	36.4	6.4	None
L602	2	75	15	26	8.2	None
L603	2	75	8.9	37.2	7.9	None
L604	2	75	8.7	33.4	8.1	None
L605	2	74	14.1	34	7.9	None
L606	1	55	46.3	39.4	6.1	None
L701	1	62	58.5	45.1	5.4	None
L702	2	75	18.7	28.6	7.9	None
L703	2	75	11.4	44.8	7.4	None
L704	2	75	9.9	38.6	7.8	None
L705	2	74	19.1	44.6	7.2	None
L706	1	55	58.9	39.1	5.6	Glazing upgrade throughout
L801	2	78	44.6	43.7	5.9	None
L802	3	91	16.5	31.5	7.9	None
L803	3	91	17.4	33.2	7.7	None
L804	2	75	28.7	34.8	7.2	None
Building N						
N101	1	54	41	19.3	7.3	None
N102	2	82	49.6	31.5	6.3	None
N103	2	71	35	23	7.4	None
N104	1	55	53.7	31.6	6.1	None
N105	2	77	35.9	34.1	6.9	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
N106	2	79	24.6	32	7.4	None
N107	2	80	51.1	41.2	5.8	None
N201	2	82	30.6	22.2	7.7	None
N202	2	82	24.2	23.7	7.9	None
N203	2	75	15.1	23.5	8.3	None
N204	2	77	19.6	20.7	8.2	None
N205	2	77	15.9	31.9	7.9	None
N206	2	79	7	30.4	8.4	None
N207	2	80	31.4	39.7	6.8	None
N301	2	82	31.3	21.9	7.6	None
N302	2	82	32.2	31	7.2	None
N303	2	75	14.8	24.2	8.3	None
N304	2	77	17.2	21.7	8.3	None
N305	2	77	15.1	28.2	8.1	None
N306	2	79	7.4	29.5	8.4	None
N307	2	80	33.5	38.9	6.8	None
N401	2	82	31.5	22	7.6	None
N402	2	82	32.3	32.3	7.1	None
N403	2	75	14.2	25.3	8.3	None
N404	2	77	16.5	21.8	8.3	None
N405	2	77	15.1	27.6	8.1	None
N406	2	79	7.5	29.3	8.4	None
N407	2	80	41.1	38.2	6.4	None
N501	2	82	33.6	21	7.5	None
N502	2	82	34.2	29.8	7.1	None
N503	2	75	15.1	23.3	8.3	None
N504	2	77	17.9	20.1	8.4	None
N505	2	77	16.8	28.9	7.9	None
N506	2	79	8.8	27.1	8.8	None
N507	2	80	36.1	35.2	6.6	None
N601	2	82	33.9	21.2	7.4	None
N602	2	82	34.1	30	7.1	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
N603	2	75	14.5	23.6	8.3	None
N604	2	77	17.4	19.9	8.4	None
N605	2	77	15.4	29.2	7.9	None
N606	2	79	8.6	27.2	8.4	None
N607	2	80	35.3	35.9	6.8	None
N701	2	82	33.4	21.7	7.4	None
N702	2	82	34	29.9	7.1	None
N703	2	75	14.6	23.8	8.3	None
N704	2	77	17.6	19.7	8.4	None
N705	2	77	14.8	29.3	7.9	None
N706	2	79	8.7	27.3	8.4	None
N707	2	80	35.7	35.6	6.8	None
N801	2	84	38.6	37.1	6.6	None
N802	3	119	59.8	30.1	5.9	Glazing upgrade throughout + R4.0 ceiling insulation
N803	3	99	59.5	24.2	6.2	Glazing upgrade throughout
N804	2	77	24.9	32.8	7.4	None
N805	2	79	20.8	31.7	7.7	None
N806	2	80	51.4	38.9	5.9	None
Building P						
P101	1	49	43.1	25.5	6.9	None
P102	2	79	37.1	45.4	6.3	None
P103	2	91	33.8	39.2	6.7	Glazing upgrade throughout
P104	1	51	38.1	26.7	7.1	None
P105	1	56	58	36.3	5.7	Glazing upgrade throughout
P106	2	82	52.8	29	6.3	None
P107	2	80	45.9	34.2	6.4	None
P108	1	56	50.5	44.6	5.7	None
P109	2	77	47.1	35.5	6.3	None
P110	2	81	43.9	25	6.9	None
P111	2	81	21.4	32.1	7.6	None
P201	2	74	17.9	22.1	8.2	None
P202	2	81	20	35.7	7.4	None

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Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
P203	2	80	22.9	47.1	6.9	None
P204	1	59	17.7	29	7.9	None
P205	1	60	45.4	43.5	5.9	None
P206	2	82	28.2	28.8	7.4	None
P207	2	80	25.8	43	6.9	None
P208	1	56	23.5	40.9	7.1	None
P209	2	77	27.8	39.4	6.9	None
P210	2	81	29.4	22.8	7.7	None
P211	2	79	16.5	16.5	7.7	None
P301	2	74	16.1	30.3	7.9	None
P302	2	81	21.3	34.2	7.4	None
P303	2	80	23.5	44.2	6.9	None
P304	1	59	19.4	30.4	7.8	None
P305	1	60	45.9	43.3	5.9	None
P306	2	82	29	33.5	7.2	None
P307	2	80	26.4	42.1	6.9	None
P308	1	56	24.8	50	6.6	None
P309	2	77	20.8	32.4	7.6	None
P310	2	81	22.2	29.8	7.7	None
P311	2	79	16.7	33.9	7.8	None
P401	2	74	16.2	29.8	7.9	None
P402	2	81	20.3	35.7	7.4	None
P403	2	80	18	41.2	7.4	Glazing upgrade throughout
P404	1	59	18.5	27.6	7.9	None
P405	1	60	46.7	43.2	5.9	None
P406	2	82	28.8	28.1	7.4	None
P407	2	80	26.7	41.8	6.9	None
P408	1	56	18.6	36	7.5	None
P409	2	77	25.9	40.1	7	None
P410	2	81	19.2	29.8	7.8	None
P411	2	79	16.5	33.9	7.8	None
P501	2	74	13.6	21.6	8.4	None

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Stage 2B, 2C 2E  
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Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
P502	2	81	21.2	32.7	7.6	None
P503	2	80	24.3	39.5	7.2	None
P504	1	59	20.4	25.4	7.9	None
P505	1	60	50.1	39.2	5.9	None
P506	2	82	29.8	24.7	7.5	None
P507	2	80	26	32.8	7.4	None
P508	1	56	28.4	45.7	6.7	None
P509	2	77	25.8	29.5	7.4	None
P510	2	81	19.4	28.1	7.9	None
P511	2	79	17.4	31	7.9	None
P601	2	74	13.1	21.9	8.4	None
P602	2	81	20.9	31.6	7.7	None
P603	2	80	21.4	38.6	7.3	Glazing upgrade throughout
P604	1	59	22	27.2	7.8	None
P605	1	60	50.6	39.5	5.9	None
P606	2	82	31.7	29.3	7.3	None
P607	2	80	26.3	32.2	7.4	None
P608	1	56	21.6	39.1	7.3	Glazing upgrade throughout
P609	2	77	23.8	27.8	7.7	None
P610	2	81	17.9	28.6	7.9	None
P611	2	79	16.6	31.1	7.9	None
P701	2	74	13	21.8	8.4	None
P702	2	81	18.3	33.7	7.7	None
P703	2	80	22.2	39.5	7.2	Glazing upgrade throughout
P704	1	59	22.3	27	7.8	None
P705	1	60	50.5	40.3	5.9	None
P706	2	82	33.4	30.1	7.2	None
P707	2	80	26.5	32.3	7.4	None
P708	1	56	22.9	34.7	7.4	Glazing upgrade to living kitchen area
P709	2	77	21.9	31.3	7.6	Glazing upgrade throughout
P710	2	81	18.1	29.7	7.9	None
P711	2	79	15.1	31.4	7.9	None

## Thermal Comfort Results

Proposed Residential Development

Tallawong Station Precinct South  
Stage 2B, 2C 2E  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004748140						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
P801	3	104	36.2.	30.3	6.9	None
P802	3	107	42.6	44.3	6	None
P803	1	59	27.7	45.7	6.7	None
P804	1	60	44	60	5.4	None
P805	2	82	48	32.3	6.4	None
P806	2	80	43.8	41.8	6.1	None
P807	2	80	43.3	24.9	6.1	None
P808	2	83	31.8	36.5	6.9	Glazing upgrade throughout
P809	3	111	42.9	43.2	6.1	None

# Nationwide House Energy Rating Scheme — Class 2 summary

## NatHERS Certificate No. 0004815540

Generated on 07 May 2020 using BERS Pro v4.4.0.0 (3.21)

### Property

**Address** Stage 2BCE: 1-15 Conferta Ave ,  
Rouse Hill , NSW , 2155

**Lot/DP** 293/1213279

**NatHERS climate zone** 28

**Accredited assessor**



Tracey Cools

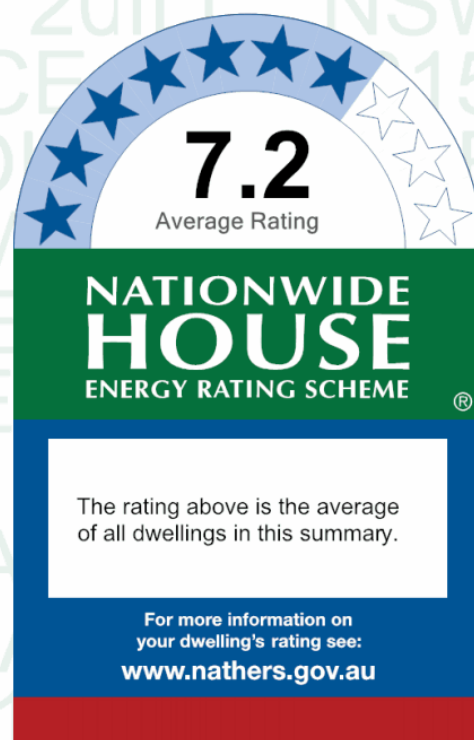
Efficient Living Pty Ltd

admin@efficientliving.com.au

02 9970 6181

**Accreditation No.** HERA10033

**Assessor Accrediting Organisation** HERA



### Verification

To verify this certificate, scan the QR code or visit [hstar.com.au/QR/Generate?p=AqTFPIldco](https://hstar.com.au/QR/Generate?p=AqTFPIldco).  
When using either link, ensure you are visiting [hstar.com.au](https://hstar.com.au)

### Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m <sup>2</sup> /p.a.)	Cooling load (MJ/m <sup>2</sup> /p.a.)	Total load (MJ/m <sup>2</sup> /p.a.)	Star rating
<a href="#">0004746327-01</a>	L101	49.8	21.3	71.1	6.8
<a href="#">0004746350-01</a>	L102	36.7	51.9	88.6	5.9
<a href="#">0004746384-01</a>	L103	41.2	30.1	71.3	6.8
<a href="#">0004746418-01</a>	L104	21	24.5	45.5	7.9
<a href="#">0004746434-01</a>	L105	40.4	25	65.4	7.1

Continued Over

### National Construction Code (NCC) requirements

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

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

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

## Summary of all dwellings (continued)

Certificate number and link	Unit Number	Heating load (MJ/m <sup>2</sup> /p.a.)	Cooling load (MJ/m <sup>2</sup> /p.a.)	Total load (MJ/m <sup>2</sup> /p.a.)	Star rating
<a href="#">0004746475-01</a>	L106	50.3	50.4	100.7	5.4
<a href="#">0004746491-01</a>	L107	27.1	34.5	61.6	7.2
<a href="#">0004746533-01</a>	L108	35.8	43.3	79.1	6.4
<a href="#">0004746566-01</a>	L109	38.9	53.7	92.6	5.8
<a href="#">0004746590-01</a>	L110	27	23.9	50.9	7.7
<a href="#">0004746624-01</a>	L111	25.3	21.6	46.9	7.9
<a href="#">0004746657-01</a>	L112	10.7	18.9	29.6	8.8
<a href="#">0004746673-01</a>	L113	18.5	21.6	40	8.2
<a href="#">0004746707-01</a>	L114	27.9	23.4	51.3	7.7
<a href="#">0004746731-01</a>	L115	30.1	22.2	52.4	7.7
<a href="#">0004746764-01</a>	L201	41.9	39.3	81.1	6.3
<a href="#">0004746806-01</a>	L202	15.6	28.4	43.9	8
<a href="#">0004746822-01</a>	L203	11.5	34.5	46	7.9
<a href="#">0004746855-01</a>	L204	18.1	50.7	68.8	6.9
<a href="#">0004746889-01</a>	L205	13.7	27.8	41.5	8.2
<a href="#">0004746921-01</a>	L206	40.2	32.2	72.4	6.8
<a href="#">0004746947-01</a>	L207	6.8	34.3	41.1	8.2
<a href="#">0004746962-01</a>	L301	39.9	40.1	80.1	6.4
<a href="#">0004746319-01</a>	L302	22.7	32.8	55.4	7.4
<a href="#">0004746343-01</a>	L303	9.4	39.6	49	7.8
<a href="#">0004746376-01</a>	L304	12.2	48.4	60.7	7.3
<a href="#">0004746400-01</a>	L305	12.9	37.9	50.8	7.7
<a href="#">0004746442-02</a>	L306	37.3	35	72.3	6.8
<a href="#">0004746467-02</a>	L307	19.4	49.5	68.8	6.9
<a href="#">0004746509-02</a>	L308	20.9	51.3	72.2	6.8
<a href="#">0004746525-02</a>	L309	33.3	51.2	84.5	6.2
<a href="#">0004746558-02</a>	L310	43.9	57.6	101.4	5.4
<a href="#">0004746582-01</a>	L311	31.1	34.4	65.6	7
<a href="#">0004746616-01</a>	L312	40.3	45.7	86	6.1
<a href="#">0004746640-01</a>	L313	40.2	41.9	82.1	6.3
<a href="#">0004746681-02</a>	L314	29.1	32.1	61.2	7.3
<a href="#">0004746715-02</a>	L315	34	34.6	68.6	6.9
<a href="#">0004746749-02</a>	L316	39.3	38.9	78.1	6.4
<a href="#">0004746772-02</a>	L317	37.5	43.4	80.9	6.4
<a href="#">0004746798-01</a>	L401	41.1	37.9	78.9	6.4
<a href="#">0004746830-01</a>	L402	15.2	26.1	41.3	8.2
<a href="#">0004746863-01</a>	L403	9.2	36.4	45.6	7.9
<a href="#">0004746897-02</a>	L404	12.6	43.8	56.5	7.4
<a href="#">0004746913-02</a>	L405	10.1	29.9	40	8.3
<a href="#">0004746939-02</a>	L406	40.1	32.1	72.2	6.8

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004746954-01</a>	L501	41.6	36.5	78.1	6.4
<a href="#">0004746301-02</a>	L502	14.8	26.1	40.9	8.2
<a href="#">0004746335-01</a>	L503	9.4	38.6	48	7.9
<a href="#">0004746368-02</a>	L504	6.7	38.7	45.4	7.9
<a href="#">0004746392-01</a>	L505	10.3	29.8	40.1	8.2
<a href="#">0004746426-01</a>	L506	49.9	36.6	86.6	6
<a href="#">0004746459-01</a>	L601	41.1	36.4	77.5	6.4
<a href="#">0004746483-01</a>	L602	15	26	41	8.2
<a href="#">0004746517-01</a>	L603	8.9	37.2	46.2	7.9
<a href="#">0004746541-01</a>	L604	8.7	33.4	42.2	8.1
<a href="#">0004746574-01</a>	L605	14.1	34	48.1	7.9
<a href="#">0004746608-01</a>	L606	46.3	39.4	85.7	6.1
<a href="#">0004746632-01</a>	L701	58.5	45.1	103.6	5.4
<a href="#">0004746665-01</a>	L702	18.7	28.6	47.3	7.9
<a href="#">0004746699-01</a>	L703	11.4	44.8	56.2	7.4
<a href="#">0004746723-01</a>	L704	9.9	38.6	48.5	7.8
<a href="#">0004746756-01</a>	L705	19.1	44.6	63.6	7.2
<a href="#">0004746780-01</a>	L706	58.9	39.1	98	5.6
<a href="#">0004746814-01</a>	L801	38.5	37.3	75.8	6.6
<a href="#">0004746848-01</a>	L802	16.5	31.5	48	7.9
<a href="#">0004746871-01</a>	L803	17.4	33.2	50.7	7.7
<a href="#">0004746905-01</a>	L804	28.7	34.8	63.5	7.2
<a href="#">0004746996-01</a>	M101	27.5	79.4	106.9	5.2
<a href="#">0004747028-01</a>	M102	63.3	30.1	93.4	5.8
<a href="#">0004747051-01</a>	M103	62.9	40.7	103.6	5.4
<a href="#">0004747085-01</a>	M104	18.6	55	73.6	6.7
<a href="#">0004747127-01</a>	M105	14.9	55.3	70.3	6.9
<a href="#">0004747150-01</a>	M106	35.9	59.9	95.8	5.7
<a href="#">0004747184-01</a>	M107	17.7	39.7	57.5	7.4
<a href="#">0004747218-01</a>	M108	303.2	1291.8	1594.9	0
<a href="#">0004747234-01</a>	M109	57	15.6	72.6	6.8
<a href="#">0004747267-01</a>	M110	65.8	14.4	80.2	6.4
<a href="#">0004747309-01</a>	M111	40.2	39.6	79.8	6.4
<a href="#">0004747325-01</a>	M112	64.7	14.2	79	6.4
<a href="#">0004747358-01</a>	M113	305	1280	1584.9	0
<a href="#">0004747382-01</a>	M201	23.3	45.5	68.9	6.9
<a href="#">0004747424-01</a>	M202	48.6	46.4	95	5.7
<a href="#">0004747457-01</a>	M203	48.5	43.4	91.9	5.8
<a href="#">0004747481-01</a>	M204	5.6	27.7	33.3	8.6
<a href="#">0004747515-01</a>	M205	21.6	39.7	61.2	7.3
<a href="#">0004747549-01</a>	M206	12.9	36.4	49.3	7.8
<a href="#">0004747564-01</a>	M207	6.4	38.3	44.7	7.9

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004747036-01</a>	M209	42.9	26.9	69.7	6.9
<a href="#">0004747069-01</a>	M301	20.3	44.4	64.7	7.1
<a href="#">0004747119-01</a>	M303	45.4	50.8	96.2	5.7
<a href="#">0004747143-01</a>	M304	6	27.3	33.2	8.6
<a href="#">0004747176-01</a>	M305	25.3	43.1	68.3	6.9
<a href="#">0004747200-01</a>	M306	36.3	28.2	64.5	7.1
<a href="#">0004747242-01</a>	M307	37.3	22.1	59.4	7.4
<a href="#">0004747275-01</a>	M308	13.6	29.2	42.8	8.1
<a href="#">0004747291-01</a>	M309	11.9	31.3	43.2	8.1
<a href="#">0004747333-01</a>	M310	10.9	31.1	42	8.2
<a href="#">0004747366-01</a>	M311	11.1	36.4	47.5	7.9
<a href="#">0004747390-01</a>	M312	14.5	51.7	66.3	6.9
<a href="#">0004747416-01</a>	M313	11.3	44.4	55.8	7.4
<a href="#">0004747440-02</a>	M314	7.8	30.9	38.7	8.3
<a href="#">0004747473-01</a>	M315	45.9	56	101.9	5.4
<a href="#">0004747507-01</a>	M316	43.1	42.5	85.6	6.1
<a href="#">0004747531-01</a>	M317	45.1	42.6	87.7	5.9
<a href="#">0004747572-01</a>	M318	43.5	37.3	80.8	6.4
<a href="#">0004746988-01</a>	M319	35.7	47.1	82.8	6.3
<a href="#">0004747010-01</a>	M320	39.6	44.2	83.7	6.2
<a href="#">0004747044-01</a>	M321	36.8	46.7	83.5	6.2
<a href="#">0004747077-01</a>	M322	20.5	46.6	67.1	6.9
<a href="#">0004747101-01</a>	M401	20.7	44.3	65	7.1
<a href="#">0004747135-01</a>	M402	37.8	55.8	93.6	5.8
<a href="#">0004747168-01</a>	M403	40.9	56.5	97.3	5.6
<a href="#">0004747192-01</a>	M404	5.3	28.9	34.2	8.4
<a href="#">0004747226-01</a>	M405	25.6	42.7	68.3	6.9
<a href="#">0004747259-01</a>	M406	23.5	28.9	52.3	7.7
<a href="#">0004747283-01</a>	M407	27.7	26.8	54.6	7.5
<a href="#">0004747317-01</a>	M408	9.3	31.2	40.5	8.2
<a href="#">0004747341-01</a>	M409	7.3	34.3	41.6	8.2
<a href="#">0004747374-01</a>	M410	7.7	37.6	45.3	7.9
<a href="#">0004747408-01</a>	M411	7.3	37.9	45.2	7.9
<a href="#">0004747432-01</a>	M412	10.8	53.4	64.2	7.1
<a href="#">0004747465-01</a>	M413	11.6	43.8	55.4	7.4
<a href="#">0004747499-01</a>	M414	8	30.4	38.4	8.3
<a href="#">0004747523-01</a>	M501	26	39.2	65.2	7.1
<a href="#">0004747556-01</a>	M502	34.7	47.6	82.3	6.3
<a href="#">0004747606-01</a>	M503	41.7	46.4	88.2	5.9
<a href="#">0004747622-01</a>	M504	4.9	24	28.9	8.8
<a href="#">0004747655-01</a>	M505	25.7	37.3	63	7.2
<a href="#">0004747689-01</a>	M506	27.6	27.5	55.1	7.4

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004747721-01</a>	M507	31.4	36.7	68.1	6.9
<a href="#">0004747754-01</a>	M508	12.9	32.6	45.6	7.9
<a href="#">0004747788-01</a>	M509	8.5	31.8	40.3	8.2
<a href="#">0004747812-01</a>	M510	9.2	35.8	45	7.9
<a href="#">0004747846-01</a>	M511	8.3	34.5	42.8	8.1
<a href="#">0004747861-01</a>	M512	12	45.4	57.4	7.4
<a href="#">0004747903-01</a>	M513	13.2	37.9	51.1	7.7
<a href="#">0004747937-01</a>	M514	9.4	27	36.4	8.4
<a href="#">0004747952-01</a>	M601	26.1	39.5	65.7	7
<a href="#">0004747986-01</a>	M602	49.6	50.7	100.3	5.4
<a href="#">0004748018-01</a>	M603	41.7	52.1	93.8	5.8
<a href="#">0004748042-01</a>	M604	5.7	28	33.7	8.5
<a href="#">0004748075-01</a>	M605	26.1	36.8	62.9	7.2
<a href="#">0004747580-01</a>	M606	25.5	24.9	50.5	7.8
<a href="#">0004747614-01</a>	M607	30.7	38.2	68.9	6.9
<a href="#">0004747648-01</a>	M608	14.6	35.1	49.7	7.8
<a href="#">0004747671-01</a>	M609	12	33.1	45.1	7.9
<a href="#">0004747705-01</a>	M610	9	34.9	43.8	8
<a href="#">0004747739-01</a>	M611	8.5	34.1	42.5	8.1
<a href="#">0004747762-01</a>	M612	12.3	44.5	56.8	7.4
<a href="#">0004747796-01</a>	M613	13.5	37.8	51.3	7.7
<a href="#">0004747820-01</a>	M614	7.1	26.9	34	8.5
<a href="#">0004747853-01</a>	M701	26.1	39.9	66	6.9
<a href="#">0004747887-01</a>	M702	45.8	51.4	97.2	5.6
<a href="#">0004747911-01</a>	M703	6.2	28.8	35	8.4
<a href="#">0004747945-01</a>	M704	25.8	37	62.8	7.2
<a href="#">0004747978-01</a>	M705	28.2	26.6	54.8	7.5
<a href="#">0004748000-01</a>	M706	30.6	34.6	65.1	7.1
<a href="#">0004748034-01</a>	M707	13.8	32.1	46	7.9
<a href="#">0004748067-01</a>	M708	17.3	28	45.3	7.9
<a href="#">0004747598-01</a>	M709	6.9	28.1	35.1	8.4
<a href="#">0004747630-01</a>	M710	12.4	44.6	57	7.4
<a href="#">0004747663-01</a>	M711	13.7	37.3	51	7.7
<a href="#">0004747697-01</a>	M712	6.8	25.1	31.9	8.6
<a href="#">0004747713-01</a>	M801	37.9	43.5	81.4	6.3
<a href="#">0004747747-01</a>	M802	48.3	52.5	100.8	5.4
<a href="#">0004747770-01</a>	M803	22.5	34	56.5	7.4
<a href="#">0004747804-01</a>	M804	36.5	40.4	76.9	6.5
<a href="#">0004747838-01</a>	M805	23.6	53.2	76.8	6.5
<a href="#">0004747879-01</a>	M806	33.1	59.2	92.4	5.8
<a href="#">0004747895-01</a>	M807	25.3	40.7	65.9	7
<a href="#">0004747929-01</a>	M808	28.6	32.5	61.2	7.3

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004747960-01</a>	M809	15.6	29.5	45.1	7.9
<a href="#">0004747994-01</a>	M810	20.1	49	69.1	6.9
<a href="#">0004748026-01</a>	M811	22.5	41.1	63.6	7.2
<a href="#">0004748059-01</a>	M812	20.8	34.6	55.4	7.4
<a href="#">0004745758-01</a>	N101	41	19.3	60.2	7.3
<a href="#">0004745790-01</a>	N102	49.6	31.5	81.1	6.3
<a href="#">0004745824-01</a>	N103	35	23	58	7.4
<a href="#">0004745865-01</a>	N104	53.7	31.6	85.4	6.1
<a href="#">0004745899-01</a>	N105	35.9	34.1	70	6.9
<a href="#">0004745915-01</a>	N106	24.6	32	56.6	7.4
<a href="#">0004745949-01</a>	N107	51.1	41.2	92.4	5.8
<a href="#">0004745980-01</a>	N201	30.6	22.2	52.8	7.7
<a href="#">0004746012-01</a>	N202	24.2	23.7	47.9	7.9
<a href="#">0004746046-01</a>	N203	15.1	23.5	38.6	8.3
<a href="#">0004746079-01</a>	N204	19.6	20.7	40.3	8.2
<a href="#">0004746095-01</a>	N205	15.9	31.9	47.8	7.9
<a href="#">0004746137-01</a>	N206	7	30.4	37.5	8.4
<a href="#">0004746160-01</a>	N207	31.4	39.7	71.1	6.8
<a href="#">0004746194-01</a>	N301	31.3	21.9	53.1	7.6
<a href="#">0004746228-01</a>	N302	32.2	31	63.2	7.2
<a href="#">0004746251-01</a>	N303	14.8	24.2	38.9	8.3
<a href="#">0004746269-01</a>	N304	17.2	21.7	38.9	8.3
<a href="#">0004746293-01</a>	N305	15.1	28.2	43.3	8.1
<a href="#">0004745774-01</a>	N306	7.4	29.5	37	8.4
<a href="#">0004745808-01</a>	N307	33.5	38.9	72.4	6.8
<a href="#">0004745832-01</a>	N401	31.5	22	53.5	7.6
<a href="#">0004745840-01</a>	N402	32.3	32.2	64.4	7.1
<a href="#">0004745881-01</a>	N403	14.2	25.3	39.5	8.3
<a href="#">0004745923-01</a>	N404	16.5	21.8	38.3	8.3
<a href="#">0004745956-01</a>	N405	15.1	27.6	42.6	8.1
<a href="#">0004745972-01</a>	N406	7.5	29.3	36.8	8.4
<a href="#">0004746004-01</a>	N407	41.1	38.2	79.2	6.4
<a href="#">0004746038-01</a>	N501	33.6	21	54.6	7.5
<a href="#">0004746061-01</a>	N502	34.2	29.8	64	7.1
<a href="#">0004746103-01</a>	N503	15.1	23.3	38.4	8.3
<a href="#">0004746129-01</a>	N504	17.9	20.1	38	8.4
<a href="#">0004746152-01</a>	N505	16.8	28.9	45.7	7.9
<a href="#">0004746186-01</a>	N506	8.8	27.1	36	8.4
<a href="#">0004746210-01</a>	N507	36.1	35.2	71.4	6.8
<a href="#">0004746244-01</a>	N601	33.9	21.2	55.1	7.4
<a href="#">0004746277-01</a>	N602	34.1	30	64.1	7.1
<a href="#">0004746285-01</a>	N603	14.5	23.6	38.1	8.3

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004745766-01</a>	N604	17.4	19.9	37.4	8.4
<a href="#">0004745782-01</a>	N605	15.4	29.2	44.6	7.9
<a href="#">0004745816-01</a>	N606	8.6	27.2	35.9	8.4
<a href="#">0004745857-01</a>	N607	35.3	35.9	71.2	6.8
<a href="#">0004745873-01</a>	N701	33.4	21.7	55	7.4
<a href="#">0004745907-01</a>	N702	34	29.9	63.9	7.1
<a href="#">0004745931-01</a>	N703	14.6	23.8	38.5	8.3
<a href="#">0004745964-01</a>	N704	17.6	19.7	37.3	8.4
<a href="#">0004745998-01</a>	N705	14.8	29.3	44.1	7.9
<a href="#">0004746020-01</a>	N706	8.7	27.3	36	8.4
<a href="#">0004746053-01</a>	N707	35.7	35.6	71.2	6.8
<a href="#">0004746087-02</a>	N801	38.6	37.1	75.7	6.6
<a href="#">0004746111-01</a>	N802	59.8	30.1	89.8	5.9
<a href="#">0004746145-01</a>	N803	59.5	24.2	83.6	6.2
<a href="#">0004746178-01</a>	N804	24.9	32.8	57.7	7.4
<a href="#">0004746202-01</a>	N805	20.8	31.7	52.5	7.7
<a href="#">0004746236-01</a>	N806	51.4	38.9	90.3	5.9
<a href="#">0004744827-01</a>	P101	30.1	38.2	68.3	6.9
<a href="#">0004744843-01</a>	P102	37.1	45.4	82.5	6.3
<a href="#">0004744876-01</a>	P103	33.8	39.2	72.9	6.7
<a href="#">0004744900-01</a>	P104	38.1	26.7	64.8	7.1
<a href="#">0004744934-01</a>	P105	58	36.3	94.4	5.7
<a href="#">0004744967-01</a>	P106	52.8	29	81.9	6.3
<a href="#">0004745006-01</a>	P107	45.9	34.2	80	6.4
<a href="#">0004745030-01</a>	P108	50.5	44.6	95.1	5.7
<a href="#">0004745063-01</a>	P109	47.1	35.5	82.7	6.3
<a href="#">0004745097-01</a>	P110	43.9	25	68.9	6.9
<a href="#">0004745121-01</a>	P111	21.4	32.1	53.5	7.6
<a href="#">0004745154-01</a>	P201	17.9	22.1	40	8.2
<a href="#">0004745188-01</a>	P202	20	35.7	55.7	7.4
<a href="#">0004745212-01</a>	P203	22.9	47.1	70	6.9
<a href="#">0004745246-01</a>	P204	17.7	29	46.7	7.9
<a href="#">0004745279-01</a>	P205	45.4	43.5	88.9	5.9
<a href="#">0004745303-01</a>	P206	28.2	28.8	57	7.4
<a href="#">0004745337-01</a>	P207	25.8	43	68.7	6.9
<a href="#">0004745360-01</a>	P208	23.5	40.9	64.5	7.1
<a href="#">0004745394-01</a>	P209	27.8	39.4	67.2	6.9
<a href="#">0004745428-01</a>	P210	22.8	29.6	52.4	7.7
<a href="#">0004745451-01</a>	P211	16.5	34.4	50.9	7.7
<a href="#">0004745485-01</a>	P301	16.1	30.3	46.4	7.9
<a href="#">0004745519-01</a>	P302	21.3	34.2	55.5	7.4
<a href="#">0004745543-01</a>	P303	23.5	44.2	67.7	6.9

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004745576-01</a>	P304	19.4	30.4	49.7	7.8
<a href="#">0004745600-01</a>	P305	45.9	43.3	89.2	5.9
<a href="#">0004745634-01</a>	P306	29	33.5	62.6	7.2
<a href="#">0004745659-01</a>	P307	26.4	42.1	68.5	6.9
<a href="#">0004744819-01</a>	P308	24.8	50	74.8	6.6
<a href="#">0004744868-01</a>	P309	20.8	32.4	53.2	7.6
<a href="#">0004744892-01</a>	P310	22.2	29.8	52	7.7
<a href="#">0004744926-01</a>	P311	16.7	33.9	50.6	7.8
<a href="#">0004744959-01</a>	P401	16.2	29.8	46	7.9
<a href="#">0004744975-01</a>	P402	20.3	35.7	56	7.4
<a href="#">0004744991-01</a>	P403	18	41.2	59.2	7.4
<a href="#">0004745022-01</a>	P404	18.5	27.6	46.1	7.9
<a href="#">0004745055-01</a>	P405	46.7	43.2	89.9	5.9
<a href="#">0004745089-01</a>	P406	28.8	28.1	57	7.4
<a href="#">0004745113-01</a>	P407	26.7	41.8	68.5	6.9
<a href="#">0004745147-01</a>	P408	18.6	36	54.7	7.5
<a href="#">0004745170-01</a>	P409	21	35.1	56.1	7.4
<a href="#">0004745204-01</a>	P410	19.2	29.8	49	7.8
<a href="#">0004745238-01</a>	P411	16.5	33.9	50.4	7.8
<a href="#">0004745261-01</a>	P501	13.6	21.6	35.2	8.4
<a href="#">0004745295-01</a>	P502	21.2	32.7	53.9	7.6
<a href="#">0004745329-01</a>	P503	24.3	39.5	63.8	7.2
<a href="#">0004745352-01</a>	P504	20.4	25.4	45.8	7.9
<a href="#">0004745386-01</a>	P505	50.1	39.2	89.4	5.9
<a href="#">0004745410-01</a>	P506	29.8	24.7	54.5	7.5
<a href="#">0004745444-01</a>	P507	26	32.8	58.8	7.4
<a href="#">0004745477-01</a>	P508	28.4	45.7	74.1	6.7
<a href="#">0004745501-01</a>	P509	25.8	29.5	55.3	7.4
<a href="#">0004745535-01</a>	P510	19.4	28.1	47.5	7.9
<a href="#">0004745568-01</a>	P511	17.4	31	48.4	7.9
<a href="#">0004745592-01</a>	P601	13.1	21.9	35	8.4
<a href="#">0004745626-01</a>	P602	20.9	31.6	52.5	7.7
<a href="#">0004745642-01</a>	P603	21.4	38.6	60	7.3
<a href="#">0004745667-01</a>	P604	22	27.2	49.2	7.8
<a href="#">0004744835-01</a>	P605	50.6	39.5	90.1	5.9
<a href="#">0004744850-01</a>	P606	31.7	29.3	61	7.3
<a href="#">0004744884-01</a>	P607	26.3	32.2	58.5	7.4
<a href="#">0004744918-01</a>	P608	21.6	39.1	60.6	7.3
<a href="#">0004744942-01</a>	P609	23.8	27.8	51.6	7.7
<a href="#">0004744983-01</a>	P610	17.9	28.6	46.5	7.9
<a href="#">0004745014-01</a>	P611	16.6	31.1	47.7	7.9
<a href="#">0004745048-01</a>	P701	13	21.8	34.8	8.4

Certificate number and link	Unit Number	Heating load (MJ/m /p.a.)	Cooling load (MJ/m /p.a.)	Total load (MJ/m /p.a.)	Star rating
<a href="#">0004745071-01</a>	P702	18.3	33.7	52	7.7
<a href="#">0004745105-01</a>	P703	22.2	39.5	61.6	7.2
<a href="#">0004745139-01</a>	P704	22.3	27	49.2	7.8
<a href="#">0004745162-01</a>	P705	50.5	40.3	90.8	5.9
<a href="#">0004745196-01</a>	P706	33.4	30.1	63.5	7.2
<a href="#">0004745220-01</a>	P707	26.5	32.3	58.7	7.4
<a href="#">0004745253-01</a>	P708	22.9	34.7	57.7	7.4
<a href="#">0004745287-01</a>	P709	21.9	31.3	53.2	7.6
<a href="#">0004745311-01</a>	P710	18.1	29.7	47.8	7.9
<a href="#">0004745345-01</a>	P711	15.1	31.4	46.5	7.9
<a href="#">0004745378-01</a>	P801	36.2	30.3	66.6	6.9
<a href="#">0004745402-01</a>	P802	42.6	44.3	86.9	6
<a href="#">0004745436-01</a>	P803	27.7	45.7	73.4	6.7
<a href="#">0004745469-01</a>	P804	44	60	104	5.4
<a href="#">0004745493-01</a>	P805	48	32.3	80.2	6.4
<a href="#">0004745527-01</a>	P806	43.8	41.8	85.6	6.1
<a href="#">0004745550-01</a>	P807	43.3	42.9	86.2	6.1
<a href="#">0004745584-01</a>	P808	31.8	36.5	68.3	6.9
<a href="#">0004745618-01</a>	P809	32.6	41.8	74.4	6.7
Average		28.14	43.09	71.23	7.18

## Explanatory Notes

### About this report

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

### Accredited Assessors

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

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

### Disclaimer

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

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1090592M\_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 06/10/2017 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Friday, 08 May 2020

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Stage 2B, 2C & 2E Tallawong Station _03
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na
No. of residential flat buildings	4
No. of units in residential flat buildings	317
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

### Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

# Description of project

## Project address

Project name	Stage 2B, 2C & 2E Tallawong Station _03
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na

## Project type

No. of residential flat buildings	4
No. of units in residential flat buildings	317
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	11570
Roof area (m²)	2877
Non-residential floor area (m²)	0.0
Residential car spaces	361
Non-residential car spaces	0

## Common area landscape

Common area lawn (m²)	1888.0
Common area garden (m²)	4406.0
Area of indigenous or low water use species (m²)	-

## Assessor details

Assessor number	HERA10033
Certificate number	0004815540
Climate zone	28

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

## Description of project

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

### Residential flat buildings - Building M, 109 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M101	1	59.0	0.0	0.0	0.0
M105	2	78.0	0.0	0.0	0.0
M109	2	88.0	0.0	0.0	0.0
M113	2	88.0	0.0	0.0	0.0
M204	2	80.0	0.0	0.0	0.0
M209	1	53.0	0.0	0.0	0.0
M304	2	80.0	0.0	0.0	0.0
M308	2	75.0	0.0	0.0	0.0
M312	2	81.0	0.0	0.0	0.0
M316	2	78.0	0.0	0.0	0.0
M320	2	78.0	0.0	0.0	0.0
M402	2	77.0	0.0	0.0	0.0
M406	1	52.0	0.0	0.0	0.0
M410	1	53.0	0.0	0.0	0.0
M414	2	80.0	0.0	0.0	0.0
M504	2	80.0	0.0	0.0	0.0
M508	2	76.0	0.0	0.0	0.0
M512	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M102	1	50.0	0.0	0.0	0.0
M106	2	79.0	0.0	0.0	0.0
M110	2	88.0	0.0	0.0	0.0
M201	2	79.0	0.0	0.0	0.0
M205	2	79.0	0.0	0.0	0.0
M301	2	79.0	0.0	0.0	0.0
M305	2	79.0	0.0	0.0	0.0
M309	1	56.0	0.0	0.0	0.0
M313	2	78.0	0.0	0.0	0.0
M317	2	78.0	0.0	0.0	0.0
M321	2	78.0	0.0	0.0	0.0
M403	1	56.0	0.0	0.0	0.0
M407	2	73.0	0.0	0.0	0.0
M411	1	53.0	0.0	0.0	0.0
M501	2	79.0	0.0	0.0	0.0
M505	2	79.0	0.0	0.0	0.0
M509	1	56.0	0.0	0.0	0.0
M513	2	78.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M103	1	52.0	0.0	0.0	0.0
M107	3	117.0	0.0	0.0	0.0
M111	2	88.0	0.0	0.0	0.0
M202	2	77.0	0.0	0.0	0.0
M206	2	86.0	0.0	0.0	0.0
M302	2	77.0	0.0	0.0	0.0
M306	1	52.0	0.0	0.0	0.0
M310	1	53.0	0.0	0.0	0.0
M314	2	80.0	0.0	0.0	0.0
M318	2	78.0	0.0	0.0	0.0
M322	2	89.0	0.0	0.0	0.0
M404	2	80.0	0.0	0.0	0.0
M408	2	75.0	0.0	0.0	0.0
M412	2	81.0	0.0	0.0	0.0
M502	2	77.0	0.0	0.0	0.0
M506	1	52.0	0.0	0.0	0.0
M510	1	53.0	0.0	0.0	0.0
M514	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M104	1	49.0	0.0	0.0	0.0
M108	2	88.0	0.0	0.0	0.0
M112	2	88.0	0.0	0.0	0.0
M203	1	56.0	0.0	0.0	0.0
M207	1	52.0	0.0	0.0	0.0
M303	1	56.0	0.0	0.0	0.0
M307	2	73.0	0.0	0.0	0.0
M311	1	53.0	0.0	0.0	0.0
M315	2	89.0	0.0	0.0	0.0
M319	2	78.0	0.0	0.0	0.0
M401	2	79.0	0.0	0.0	0.0
M405	2	79.0	0.0	0.0	0.0
M409	1	56.0	0.0	0.0	0.0
M413	2	78.0	0.0	0.0	0.0
M503	1	56.0	0.0	0.0	0.0
M507	2	75.0	0.0	0.0	0.0
M511	1	53.0	0.0	0.0	0.0
M601	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M602	2	77.0	0.0	0.0	0.0
M606	1	52.0	0.0	0.0	0.0
M610	1	53.0	0.0	0.0	0.0
M614	2	80.0	0.0	0.0	0.0
M704	2	79.0	0.0	0.0	0.0
M708	2	80.0	0.0	0.0	0.0
M712	2	80.0	0.0	0.0	0.0
M804	2	79.0	0.0	0.0	0.0
M808	2	80.0	0.0	0.0	0.0
M812	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M603	1	56.0	0.0	0.0	0.0
M607	2	75.0	0.0	0.0	0.0
M611	1	53.0	0.0	0.0	0.0
M701	2	79.0	0.0	0.0	0.0
M705	1	52.0	0.0	0.0	0.0
M709	2	84.0	0.0	0.0	0.0
M801	2	79.0	0.0	0.0	0.0
M805	1	52.0	0.0	0.0	0.0
M809	2	84.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M604	2	80.0	0.0	0.0	0.0
M608	2	76.0	0.0	0.0	0.0
M612	2	81.0	0.0	0.0	0.0
M702	3	96.0	0.0	0.0	0.0
M706	2	75.0	0.0	0.0	0.0
M710	2	81.0	0.0	0.0	0.0
M802	3	96.0	0.0	0.0	0.0
M806	2	75.0	0.0	0.0	0.0
M810	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
M605	2	79.0	0.0	0.0	0.0
M609	1	56.0	0.0	0.0	0.0
M613	2	78.0	0.0	0.0	0.0
M703	3	109.0	0.0	0.0	0.0
M707	2	76.0	0.0	0.0	0.0
M711	2	78.0	0.0	0.0	0.0
M803	3	109.0	0.0	0.0	0.0
M807	2	76.0	0.0	0.0	0.0
M811	2	78.0	0.0	0.0	0.0

### Residential flat buildings - Building L, 67 dwellings, 9 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L101	1	62.0	0.0	0.0	0.0
L105	2	84.0	0.0	0.0	0.0
L109	2	88.0	0.0	0.0	0.0
L113	2	88.0	0.0	0.0	0.0
L202	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L102	1	51.0	0.0	0.0	0.0
L106	2	88.0	0.0	0.0	0.0
L110	2	88.0	0.0	0.0	0.0
L114	2	88.0	0.0	0.0	0.0
L203	2	74.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L103	1	53.0	0.0	0.0	0.0
L107	2	88.0	0.0	0.0	0.0
L111	2	88.0	0.0	0.0	0.0
L115	2	88.0	0.0	0.0	0.0
L204	1	53.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L104	2	75.0	0.0	0.0	0.0
L108	2	88.0	0.0	0.0	0.0
L112	2	88.0	0.0	0.0	0.0
L201	1	62.0	0.0	0.0	0.0
L205	1	63.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L206	1	64.0	0.0	0.0	0.0
L303	2	74.0	0.0	0.0	0.0
L307	2	89.0	0.0	0.0	0.0
L311	2	89.0	0.0	0.0	0.0
L315	2	78.0	0.0	0.0	0.0
L402	2	75.0	0.0	0.0	0.0
L406	1	64.0	0.0	0.0	0.0
L504	2	75.0	0.0	0.0	0.0
L602	2	75.0	0.0	0.0	0.0
L606	1	55.0	0.0	0.0	0.0
L704	2	75.0	0.0	0.0	0.0
L802	3	91.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L207	1	53.0	0.0	0.0	0.0
L304	1	53.0	0.0	0.0	0.0
L308	2	78.0	0.0	0.0	0.0
L312	2	78.0	0.0	0.0	0.0
L316	2	78.0	0.0	0.0	0.0
L403	2	74.0	0.0	0.0	0.0
L501	1	62.0	0.0	0.0	0.0
L505	1	63.0	0.0	0.0	0.0
L603	2	75.0	0.0	0.0	0.0
L701	1	62.0	0.0	0.0	0.0
L705	2	74.0	0.0	0.0	0.0
L803	3	91.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L301	1	62.0	0.0	0.0	0.0
L305	1	53.0	0.0	0.0	0.0
L309	2	78.0	0.0	0.0	0.0
L313	2	78.0	0.0	0.0	0.0
L317	2	89.0	0.0	0.0	0.0
L404	1	53.0	0.0	0.0	0.0
L502	2	75.0	0.0	0.0	0.0
L506	1	55.0	0.0	0.0	0.0
L604	2	75.0	0.0	0.0	0.0
L702	2	75.0	0.0	0.0	0.0
L706	1	55.0	0.0	0.0	0.0
L804	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
L302	2	75.0	0.0	0.0	0.0
L306	1	64.0	0.0	0.0	0.0
L310	2	78.0	0.0	0.0	0.0
L314	2	78.0	0.0	0.0	0.0
L401	1	62.0	0.0	0.0	0.0
L405	1	63.0	0.0	0.0	0.0
L503	2	75.0	0.0	0.0	0.0
L601	1	62.0	0.0	0.0	0.0
L605	2	74.0	0.0	0.0	0.0
L703	2	75.0	0.0	0.0	0.0
L801	2	78.0	0.0	0.0	0.0

### Residential flat buildings - Building N, 55 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N101	1	54.0	0.0	0.0	0.0
N105	2	77.0	0.0	0.0	0.0
N202	2	82.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N102	2	82.0	0.0	0.0	0.0
N106	2	79.0	0.0	0.0	0.0
N203	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N103	2	71.0	0.0	0.0	0.0
N107	2	80.0	0.0	0.0	0.0
N204	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N104	1	55.0	0.0	0.0	0.0
N201	2	82.0	0.0	0.0	0.0
N205	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N206	2	79.0	0.0	0.0	0.0
N303	2	75.0	0.0	0.0	0.0
N307	2	80.0	0.0	0.0	0.0
N404	2	77.0	0.0	0.0	0.0
N501	2	82.0	0.0	0.0	0.0
N505	2	77.0	0.0	0.0	0.0
N602	2	82.0	0.0	0.0	0.0
N606	2	79.0	0.0	0.0	0.0
N703	2	75.0	0.0	0.0	0.0
N707	2	80.0	0.0	0.0	0.0
N804	2	77.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N207	2	80.0	0.0	0.0	0.0
N304	2	77.0	0.0	0.0	0.0
N401	2	82.0	0.0	0.0	0.0
N405	2	77.0	0.0	0.0	0.0
N502	2	82.0	0.0	0.0	0.0
N506	2	79.0	0.0	0.0	0.0
N603	2	75.0	0.0	0.0	0.0
N607	2	80.0	0.0	0.0	0.0
N704	2	77.0	0.0	0.0	0.0
N801	2	84.0	0.0	0.0	0.0
N805	2	79.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N301	2	82.0	0.0	0.0	0.0
N305	2	77.0	0.0	0.0	0.0
N402	2	82.0	0.0	0.0	0.0
N406	2	79.0	0.0	0.0	0.0
N503	2	75.0	0.0	0.0	0.0
N507	2	80.0	0.0	0.0	0.0
N604	2	77.0	0.0	0.0	0.0
N701	2	82.0	0.0	0.0	0.0
N705	2	77.0	0.0	0.0	0.0
N802	3	119.0	0.0	0.0	0.0
N806	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
N302	2	82.0	0.0	0.0	0.0
N306	2	79.0	0.0	0.0	0.0
N403	2	75.0	0.0	0.0	0.0
N407	2	80.0	0.0	0.0	0.0
N504	2	77.0	0.0	0.0	0.0
N601	2	82.0	0.0	0.0	0.0
N605	2	77.0	0.0	0.0	0.0
N702	2	82.0	0.0	0.0	-
N706	2	79.0	0.0	0.0	0.0
N803	3	99.0	0.0	0.0	0.0

### Residential flat buildings - Building P, 86 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P101	1	49.0	0.0	0.0	0.0
P105	1	56.0	0.0	0.0	0.0
P109	2	77.0	0.0	0.0	0.0
P202	2	81.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P102	2	79.0	0.0	0.0	0.0
P106	2	82.0	0.0	0.0	0.0
P110	2	81.0	0.0	0.0	0.0
P203	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P103	2	91.0	0.0	0.0	0.0
P107	2	80.0	0.0	0.0	0.0
P111	2	81.0	0.0	0.0	0.0
P204	1	59.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P104	1	51.0	0.0	0.0	0.0
P108	1	56.0	0.0	0.0	0.0
P201	2	74.0	0.0	0.0	0.0
P205	1	60.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P206	2	82.0	0.0	0.0	0.0
P210	2	81.0	0.0	0.0	0.0
P303	2	80.0	0.0	0.0	0.0
P307	2	80.0	0.0	0.0	0.0
P311	2	79.0	0.0	0.0	0.0
P404	1	59.0	0.0	0.0	0.0
P408	1	56.0	0.0	0.0	0.0
P501	2	74.0	0.0	0.0	0.0
P505	1	60.0	0.0	0.0	0.0
P509	2	77.0	0.0	0.0	0.0
P602	2	81.0	0.0	0.0	0.0
P606	2	82.0	0.0	0.0	0.0
P610	2	81.0	0.0	0.0	0.0
P703	2	80.0	0.0	0.0	0.0
P707	2	80.0	0.0	0.0	0.0
P711	2	79.0	0.0	0.0	0.0
P804	1	60.0	0.0	0.0	0.0
P808	2	83.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P207	2	80.0	0.0	0.0	0.0
P211	2	79.0	0.0	0.0	0.0
P304	1	59.0	0.0	0.0	0.0
P308	1	56.0	0.0	0.0	0.0
P401	2	74.0	0.0	0.0	0.0
P405	1	60.0	0.0	0.0	0.0
P409	2	77.0	0.0	0.0	0.0
P502	2	81.0	0.0	0.0	0.0
P506	2	82.0	0.0	0.0	0.0
P510	2	81.0	0.0	0.0	0.0
P603	2	80.0	0.0	0.0	0.0
P607	2	80.0	0.0	0.0	0.0
P611	2	79.0	0.0	0.0	0.0
P704	1	59.0	0.0	0.0	0.0
P708	1	56.0	0.0	0.0	0.0
P801	3	104.0	0.0	0.0	0.0
P805	2	82.0	0.0	0.0	0.0
P809	3	111.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P208	1	56.0	0.0	0.0	0.0
P301	2	74.0	0.0	0.0	0.0
P305	1	60.0	0.0	0.0	0.0
P309	2	77.0	0.0	0.0	0.0
P402	2	81.0	0.0	0.0	0.0
P406	2	82.0	0.0	0.0	0.0
P410	2	81.0	0.0	0.0	0.0
P503	2	80.0	0.0	0.0	0.0
P507	2	80.0	0.0	0.0	0.0
P511	2	79.0	0.0	0.0	0.0
P604	1	59.0	0.0	0.0	0.0
P608	1	56.0	0.0	0.0	0.0
P701	2	74.0	0.0	0.0	0.0
P705	1	60.0	0.0	0.0	0.0
P709	2	77.0	0.0	0.0	0.0
P802	3	107.0	0.0	0.0	0.0
P806	2	80.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
P209	2	77.0	0.0	0.0	0.0
P302	2	81.0	0.0	0.0	0.0
P306	2	82.0	0.0	0.0	0.0
P310	2	81.0	0.0	0.0	0.0
P403	2	80.0	0.0	0.0	0.0
P407	2	80.0	0.0	0.0	0.0
P411	2	79.0	0.0	0.0	0.0
P504	1	59.0	0.0	0.0	0.0
P508	1	56.0	0.0	0.0	0.0
P601	2	74.0	0.0	0.0	0.0
P605	1	60.0	0.0	0.0	0.0
P609	2	77.0	0.0	0.0	0.0
P702	2	81.0	0.0	0.0	0.0
P706	2	82.0	0.0	0.0	0.0
P710	2	81.0	0.0	0.0	0.0
P803	1	59.0	0.0	0.0	0.0
P807	2	80.0	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - Building M

Common area	Floor area (m <sup>2</sup> )
Lift car (No.1)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.2)	-

### Common areas of unit building - Building L

Common area	Floor area (m <sup>2</sup> )
Lift car (No.7)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.8)	-

### Common areas of unit building - Building N

Common area	Floor area (m <sup>2</sup> )
Lift car (No.3)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.4)	-

### Common areas of unit building - Building P

Common area	Floor area (m <sup>2</sup> )
Lift car (No.5)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.6)	-

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

Common area	Floor area (m <sup>2</sup> )
Car park area	14501.0
Plant exhaust air	196.0
Hot water plant	117.7
Storage cages	1193.0

Common area	Floor area (m <sup>2</sup> )
Loading doc	294.6
Plant source air	134.3
Pump rooms	63.33
Electrical SR	30.0

Common area	Floor area (m <sup>2</sup> )
Waste rooms	566.3
Bicycle storage	742.5
Comms	12.0
Hallways	2652.3

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building M

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

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

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - Building N

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 4. Commitments for Residential flat buildings - Building P

### (a) Dwellings

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

(b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

5. Commitments for multi-dwelling houses

6. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Building M

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
M209	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1	1	yes	yes	yes	yes	0	no
M808	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	-	-	-	-	-	-	-	-
M702, M703, M802, M803	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	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
M102, M103, M104, M202, M203, M207, M303, M306, M309, M310, M311, M403, M406, M409, M410, M411, M503, M506, M509, M510, M511, M603, M606, M609, M610, M611, M705, M805	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
M101	27.5	63.7
M102	63.2	30.1
M103	62.9	40.7
M104	18.6	55.0
M105	14.9	55.3
M106	35.9	59.9
M107	17.7	39.7
M108	54.0	16.3
M109	57.0	15.6
M110	45.7	18.1
M111	54.2	14.2
M112	61.6	20.1
M113	48.0	14.0
M201	23.3	45.5
M202	48.6	46.4
M203	48.5	43.5
M204	5.6	27.7
M205	21.6	39.7
M206	12.9	36.4
M207	6.4	38.3
M209	42.9	26.9
M301	20.3	44.4
M302	46.2	57.2
M303	45.4	50.8
M304	6.0	27.3
M305	25.3	43.1
M306	36.3	28.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
M307	37.3	22.1
M308	13.6	29.2
M309	12.0	31.6
M310	11.1	30.9
M311	11.1	36.4
M312	14.5	51.7
M313	11.3	44.4
M314	7.8	30.9
M315	43.8	48.3
M316	43.1	42.5
M317	45.1	42.6
M318	43.5	37.3
M319	35.7	47.1
M320	39.6	44.2
M321	36.8	46.7
M322	20.5	46.6
M401	20.7	44.3
M402	37.8	55.8
M403	40.9	56.5
M404	5.3	28.9
M405	25.6	42.7
M406	23.5	28.9
M407	27.7	26.8
M408	9.3	31.2
M409	7.3	34.3
M410	7.7	37.9
M411	7.3	37.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
M412	10.8	53.4
M413	11.6	43.8
M414	8.0	30.4
M501	26.0	39.2
M502	34.7	47.6
M503	41.7	46.4
M504	4.9	24.0
M505	25.7	37.3
M506	27.6	27.5
M507	31.4	36.7
M508	12.9	32.6
M509	8.5	31.8
M510	9.2	35.8
M511	8.3	34.5
M512	12.0	45.4
M513	13.2	37.9
M514	9.4	27.0
M601	26.1	39.5
M602	49.6	50.7
M603	41.7	52.1
M604	5.7	28.0
M605	26.1	36.8
M606	25.5	24.9
M607	30.7	38.2
M608	14.6	35.1
M609	12.0	33.1
M610	9.0	34.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
M611	8.5	34.1
M612	12.3	44.5
M613	13.5	37.8
M614	7.1	26.9
M701	26.1	39.9
M702	45.8	51.4
M703	6.2	28.8
M704	25.8	37.0
M705	28.2	26.6
M706	30.6	34.6
M707	13.8	32.1
M708	17.3	28.0
M709	6.9	28.1
M710	12.4	44.6
M711	13.7	37.3
M712	6.8	25.1
M801	37.9	43.5
M802	48.3	52.5
M803	22.5	34.0
M804	36.5	40.4
M805	23.6	53.2
M806	33.1	59.2
M807	25.3	40.7
M808	28.6	32.5
M809	15.6	29.5
M810	20.1	49.0
M811	22.5	41.1

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
All other dwellings	20.8	34.6

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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	Yes
Lift car (No.2)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 6
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 6

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

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
L207	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	-	-	-	-	-	-	-	-
L802, L803	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
L101, L102, L104, L201, L204, L205, L206, L301, L304, L305, L306, L401, L404, L405, L406, L501, L506, L601, L606, L701, L706	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
L101	49.8	21.3
L102	36.7	51.9
L103	41.2	30.1
L104	21.0	24.5
L105	40.4	25.0
L106	50.3	50.4
L107	27.1	34.5
L108	35.8	43.3
L109	38.9	53.7
L110	27.0	23.9
L111	25.3	21.6
L112	10.7	18.9
L113	18.5	21.6
L114	27.9	23.4
L115	30.1	22.2
L201	41.9	39.3
L202	15.6	28.4
L203	11.5	34.5
L204	18.1	50.7
L205	13.7	27.8
L206	40.2	32.2
L207	6.8	34.3
L301	39.9	40.1
L302	13.5	51.2
L303	9.4	39.6
L304	12.2	48.4
L305	12.9	37.9

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
L306	37.3	35.0
L307	19.4	49.5
L308	20.9	51.3
L309	33.3	51.2
L310	43.9	57.6
L311	31.1	34.4
L312	40.3	45.7
L313	40.2	41.9
L314	29.1	32.1
L315	34.0	34.6
L316	39.3	38.9
L317	37.5	43.4
L401	41.1	37.9
L402	15.2	26.1
L403	9.2	36.4
L404	12.6	43.8
L405	10.1	29.9
L406	40.1	32.1
L501	41.6	36.5
L502	14.8	26.1
L503	9.4	38.6
L504	6.7	38.7
L505	10.3	29.8
L506	49.9	36.6
L601	41.2	36.4
L602	15.0	26.0
L603	8.9	37.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
L604	8.7	33.4
L605	14.1	34.0
L606	46.3	39.4
L701	58.5	45.1
L702	18.7	28.6
L703	11.4	44.8
L704	9.9	38.6
L705	19.1	44.6
L706	58.9	39.1
L801	44.6	43.7
L802	16.5	31.5
L803	17.4	33.2
All other dwellings	28.7	34.8

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.7)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.8)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 8)	gearless traction with V V V F motor	Number of levels (including basement): 11

### 3. Commitments for Residential flat buildings - Building N

#### (a) Dwellings

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

Dwelling no.	Fixtures					Appliances		Individual pool				Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
N101, N104	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
N802, N803	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

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

	<b>Thermal loads</b>	
<b>Dwelling no.</b>	<b>Area adjusted heating load (in mJ/m<sup>2</sup>/yr)</b>	<b>Area adjusted cooling load (in mJ/m<sup>2</sup>/yr)</b>
N101	41.0	19.3
N102	49.6	31.5
N103	35.0	23.0
N104	53.7	31.6
N105	35.9	34.1
N106	24.6	32.0
N107	51.1	41.2
N201	30.6	22.2
N202	24.2	23.7
N203	15.1	23.5
N204	19.6	20.7

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
N205	15.9	31.9
N206	7.0	30.4
N207	31.4	39.7
N301	31.3	21.9
N302	32.3	31.0
N303	14.8	24.2
N304	17.2	21.7
N305	15.1	28.2
N306	7.4	29.5
N307	33.5	38.9
N401	31.5	22.0
N402	32.3	32.3
N403	14.2	25.3
N404	16.5	21.8
N405	15.1	27.6
N406	7.5	29.3
N407	41.1	38.2
N501	33.6	21.0
N502	34.2	29.8
N503	15.1	23.3
N504	17.9	20.1
N505	16.8	28.9
N506	8.8	27.1
N507	36.1	35.2
N601	33.9	21.2
N602	34.1	30.0
N603	14.5	23.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
N604	17.4	19.9
N605	15.4	29.2
N606	8.6	27.2
N607	35.3	35.9
N701	33.4	21.7
N702	34.0	29.9
N703	14.6	23.8
N704	17.6	19.7
N705	14.8	29.3
N706	8.7	27.3
N707	35.7	35.6
N801	38.6	37.1
N802	59.8	30.1
N803	59.5	24.2
N804	24.9	32.8
N805	20.8	31.7
All other dwellings	51.4	38.9

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.3)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 10

## 4. Commitments for Residential flat buildings - Building P

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
P801	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
P101, P104, P105, P108, P201, P204, P205, P208, P304, P305, P308, P404, P405, P408, P504, P505, P508, P604, P605, P608, P704, P705, P708, P803, P804, P809	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no
All other dwellings	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.0 - 3.5	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning EER 3.5 - 4.0	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no

	Individual pool		Individual spa		Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
P101	43.1	25.5
P102	37.1	45.4
P103	33.8	39.2
P104	38.1	26.7
P105	58.0	36.3
P106	52.8	29.0
P107	45.9	34.2
P108	50.5	44.6
P109	47.1	35.5
P110	43.9	25.0
P111	21.4	32.1
P201	17.9	22.1
P202	20.0	35.7
P203	22.9	47.1
P204	17.7	29.0
P205	45.4	43.5
P206	28.2	28.8
P207	25.8	43.0
P208	23.5	40.9
P209	27.8	39.4
P210	29.4	22.8
P211	16.5	16.5
P301	16.1	30.3
P302	21.3	34.2
P303	23.5	44.2
P304	19.4	30.4
P305	45.9	43.3

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
P306	29.0	33.5
P307	26.4	42.1
P308	24.8	50.0
P309	20.8	32.4
P310	22.2	29.8
P311	16.7	33.9
P401	16.2	29.8
P402	20.3	35.7
P403	18.0	41.2
P404	18.5	27.6
P405	46.7	43.2
P406	28.8	28.1
P407	26.7	41.8
P408	18.6	36.0
P409	25.9	40.1
P410	19.2	29.8
P411	16.5	33.9
P501	13.6	21.6
P502	21.2	32.7
P503	24.3	39.5
P504	20.4	25.4
P505	50.1	39.2
P506	29.8	24.7
P507	26.0	32.8
P508	28.4	45.7
P509	25.8	29.5
P510	19.4	28.1

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
P511	17.4	31.0
P601	13.1	21.9
P602	20.9	31.6
P603	21.4	38.6
P604	22.0	27.2
P605	50.6	39.5
P606	31.7	29.3
P607	26.3	32.2
P608	21.6	39.1
P609	23.8	27.8
P610	17.9	28.6
P611	16.6	31.1
P701	13.0	21.8
P702	18.3	33.7
P703	22.2	39.5
P704	22.3	27.0
P705	50.5	40.3
P706	33.4	30.1
P707	26.5	32.3
P708	22.9	34.7
P709	21.9	31.3
P710	18.1	29.7
P711	15.1	31.4
P801	36.2	30.3
P802	42.6	44.3
P803	27.7	45.7
P804	44.0	60.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
P805	48.0	32.3
P806	43.8	41.8
P807	43.3	24.9
P808	31.8	36.5
All other dwellings	42.9	43.2

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.5)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.6)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 10

## 7. 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	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	8000.0	To collect run-off from at least: - 300.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 6294.0 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Fire sprinkler system (No. 2)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Loading doc	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Waste rooms	ventilation exhaust only	-	light-emitting diode	motion sensors	Yes
Plant exhaust air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Plant source air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Bicycle storage	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Hot water plant	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Pump rooms	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Comms	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	Yes

	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
Storage cages	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Electrical SR	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Hallways	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	Yes

Central energy systems	Type	Specification
Central hot water system (No. 1)	gas instantaneous	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 93.0 peak kW
Other	Building management system installed?: yes	-

## Notes

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

## Legend

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



### Deicorp Projects (Tallawong Station) Pty Ltd Tallawong Station Precinct South Stage: 2D Buildings Q, R and S

To be built at 1-15 & 2-12 Conferta Avenue, Rouse Hill NSW 2155

Issue	File Ref	Description	Author	Date
A	19-0982	NatHERS and BASIX Assessment	SF/HE	08/04/2020
B	20-0407	Update NatHERS assessment to reflect design changes	AC/HE	07/05/2020

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Deicorp Projects (Tallawong Station) Pty Ltd. Efficient Living prepares all reports in accordance with the BASIX Thermal Comfort Protocol and is backed by professional indemnity insurance. This report takes into account our Client's instructions and preferred building inclusions.



**Report Contact:** Haylea Edwards  
Email: haylea@efficientliving.com.au

**License Holder:** Tracey Cools  
Accreditation Number: HERA10033

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**Prepared For:**

Deicorp Projects (Tallawong Station) Pty Ltd  
Marvin Huang  
mhuang@deicorp.com.au

Level 3, 161 Redfern Street  
Redfern NSW 2016  
02 8665 4100

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**Introduction**

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development to be built at 1-15 & 2-12 Conferta Avenue Rouse Hill NSW 2155.

Heating and cooling loads for the development have been determined using BERS Pro Plus 4.4 thermal comfort simulation software. The report is based on the architectural drawings provided by Deicorp. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the following plans prepared by Turner: DA-113-006 3, DA-113-007 3, DA-113-008 3, DA-113-009 3, DA-003-010 3, DA-113-020 3, DA-113-030 3, DA-113-040 3, DA-113-050 3, DA-113-060 3, DA-113-070 3, DA-113-080 3, DA-113-090 3, DA-216-001 3, DA-216-002 3 and DA-216-003 3.

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**Analysis**

The BASIX Assessment is divided into three sections; Water, Thermal Comfort and Energy, each independently measuring the efficiency of the Development.

BASIX requires a minimum target of 40% for the water section, a pass or fail for the thermal comfort section, and a minimum required target of 25% for the energy section.

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**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 toilet, the dish washer and clothes washing machine.

The size of the rainwater tank and number of connections may have a significant impact on your water score as does the area of gardens and lawns whether or not low water plant species are incorporated.

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**Thermal Comfort**

Thermal Comfort targets are set by the Department of Planning in the form of heating and cooling caps. The buildings thermal physics are measured using BERS Pro Plus V4.4 Thermal Comfort Simulation Software. This calculates the expected level of energy required to heat and cool each dwelling per annum, expressed in megajoules per square metre of floor area (MJ/m<sup>2</sup>).

Each unit has individual heating and cooling caps applied. Accompanying these individual caps are average heating and cooling caps applied to the whole development. The average caps are lower, or harder to comply with than the individual unit caps.

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## Energy

The proposed Development has achieved the Energy target of 25% 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, cook top, oven, and clothes drying facilities.

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## Inclusions Summary

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

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## Thermal Comfort Scores

Average heating loads are 44% below allowable BASIX targets

Average cooling loads are 44% below allowable BASIX targets

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## Glazing Doors/Windows

The glazing was upgraded in consultation with the developer to achieve the projects Green Star objectives.

Industry default window values have been used to allow a range of window suppliers to tender. Once a supplier is selected their actual product values can be modeled. This will allow flexibility in U-Values and SHGC's.

## Glazing Doors/Windows

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±10%)

## Upgrades applied to selected units as per the NatHERS summary sheet;

**Group A** – awning + bifold + casement windows + hinged glazed doors

U-value: 2.9 (equal to or lower than) SHGC: 0.44 (±10%)

**Group B** – sliding doors/windows + fixed glazing + louvred windows

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

## Skylight:

U-value: 4.7 SHGC: 0.72

Given values are AFRC total window system values (glass and frame)

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## Roof and ceiling

Medium roof colour modelled

Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof is over

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### Ceiling Penetrations

Default modelled as per client's request. Once a product is selected modelling improvements can be made.

Sealed LED Downlights 1 per 2.5m<sup>2</sup>

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### External Wall

Cavity brick internally lined plasterboard on studs with R2.0 insulation required (Insulation only value)

#### Upgrades applied to selected units as per the NatHERS summary sheet;

Cavity brick internally lined plasterboard on studs with R2.5 insulation required (Insulation only value)

### External Colour

Default colour modelled

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### Inter-tenancy walls

Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required

60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways

Minimum 200mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs.

60mm Pronto panels with plasterboard lining to services

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### Walls within dwellings

Plasterboard on studs - no insulation

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### Floors

Concrete with a minimum R1.2 insulation (insulation only value) required to units where part open subfloor or garage below

Concrete between levels, no insulation required

Concrete between levels, no insulation required

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### Floor coverings

Default floor coverings

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### External Shading

Shading as per stamped documentation

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### BASIX water inclusions

Score 40/40

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**Fixtures within units**

Showerheads: 3 stars -Mid flow (>6L but ≤7.5L/min)

Toilets: 4.0 star

Kitchen taps: 5.0 star

Bathroom vanity taps: 5.0 star

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**Appliances within units**

Dishwashers: 3.5 stars

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**Central rainwater storage**

Tank size: 8,000L

Collecting from 300m<sup>2</sup> roof area

Connected to outdoor tap for irrigation of landscaping common and private and carwash bay

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**Fire sprinkler test water**

Fire sprinkler test water contained in a closed loop system

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**BASIX Energy Inclusions**

Score 33/25

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**Hot water system**

Central gas fired boiler R1.0 pipe and ring main insulation

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**Lift motors**

All lifts to have gearless traction with VVVF motor

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**Appliances and other efficiency measures within units**

Gas cooktop & electric oven

Dishwashers: 3.5 star

Clothes dryers: 2.0 star

Well ventilated fridge space – requires a mechanical vent or to be open as per BASIX specification

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**Heating and cooling within units**

All units to have individual, single phase, reverse cycle air conditioning to living areas, and at least 1 bedroom

A minimum efficiency of 3.0 – 3.5 stars is required for cooling; and

A minimum efficiency of 3.5 – 4.0 stars is required for heating

Day/Night zoning required. AC zoned switched to allow only one head on at a time. Bedroom and living room cannot be running simultaneously.

### Artificial lighting within units

All light fittings within each room are to have LED fixtures installed

### Ventilation within units

Bathroom: individual fan, ducted to roof or façade – manual on/off switch

Laundry: individual fan, ducted to roof or façade – manual on/off switch

Kitchen range hood: Individual fan, ducted to roof or façade – manual on/off switch

### Ventilation to common areas

Car park area – supply and exhaust air with a carbon monoxide monitor & VSD fan

Loading doc – supply and exhaust air with a carbon monoxide monitor & VSD fan

Waste rooms – Exhaust air, running continuously

Plant source air – No mechanical ventilation

Comms – Supply only, thermostatically controlled

Hot water plant – Supply only, interlocked to hot water plant operation (continuous selected in BASIX)

Pump rooms – Supply only, continuous

Bicycle storage – Exhaust air, running continuously

Plant exhaust air – No mechanical ventilation

Storage cage rooms – Exhaust air, running continuously

Electrical SR – Supply only, continuous

Hallways – No mechanical ventilation

### Artificial lighting to common areas

Lifts – Light emitting diodes (LEDs) connected to lift call button

Car park area – Light emitting diodes (LEDs) zone switching and motion sensors

Loading doc – Light emitting diodes (LEDs) zone switching and motion sensors

Waste rooms – Light emitting diodes (LEDs) motion sensors

Mechanical plant – Light emitting diodes (LEDs) manual on / manual off switch

Comms – Light emitting diodes (LEDs) manual on / manual off switch

Hot water plant – Light emitting diodes (LEDs) manual on / manual off switch

Pump rooms – Light emitting diodes (LEDs) manual on / manual off switch

Bicycle storage – Light emitting diodes (LEDs) motion sensors

Mechanical plant air – Light emitting diodes (LEDs) manual on / manual off switch

Storage cage rooms – Light emitting diodes (LEDs) motion sensors

Electrical SR – Light emitting diodes (LEDs) manual on / manual off switch



efficient  
LIVING

8 May 2020

**Deicorp Projects (Tallawong Station) Pty Ltd**  
**Tallawong Station Precinct South**

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Hallways - Light emitting diodes (LEDs) zone switching and motion sensors

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**Alternative Energy**

8kW to pass BASIX and additional 57kW 5% energy savings

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## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
Building Q						
Q101	1	61	52.9	39.8	5.8	R1.2 to walls adjacent to loading dock
Q102	1	63	54.5	33	5.9	R1.2 to walls adjacent to recycling area + Glazing upgrade throughout
Q103	2	65	50.2	52.6	5.4	Glazing upgrade throughout
Q201	2	79	18.3	28.2	7.9	None
Q202	1	62	48.8	51.6	5.4	R1.2 to walls adjacent to loading dock
Q203	2	66	37	51.9	5.9	Glazing upgrade throughout, R2.5 external wall insulation
Q204	2	76	27	17.8	7.9	None
Q301	2	82	21.9	27	7.8	None
Q302	2	77	38.1	39.2	6.4	None
Q303	1	55	38.1	55	5.8	None
Q304	2	80.8	54.4	52	5.3	None
Q305	1	57	26	29	7.4	None
Q306	1	58	17.5	39.1	7.4	None
Q307	1	59	55.3	30.5	6.1	Glazing upgrade throughout
Q308	1	57	27	24.8	7.7	None
Q401	2	81	25	27.1	7.7	None
Q402	2	77	29.1	31.4	7.3	None
Q403	1	55	28.9	33.9	7.2	None
Q404	2	82.6	23.9	44.4	6.9	None
Q405	2	75.5	13.1	34.1	7.9	None
Q406	2	75	23.1	26.6	7.9	None
Q501	2	81	26.8	18.9	7.9	None
Q502	2	77	31.6	28.8	7.3	None
Q503	1	54.8	31.2	29.2	7.3	None
Q504	2	82.6	30.4	41.7	6.8	None
Q505	2	75.5	31.6	15	7.9	None
Q506	2	75	25	25.2	7.8	None
Q601	2	80.9	26.5	19	7.9	None
Q602	2	77	32	28.4	7.3	None
Q603	1	54.8	29.6	29	7.4	None
Q604	2	82.6	30.2	41.5	6.8	None

## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
Q605	2	75.5	31.4	24	7.9	None
Q606	2	75	25.1	25	7.8	None
Q701	2	80.9	26.7	19	7.9	None
Q702	2	77	32.3	28.2	7.3	None
Q703	1	54.8	29.9	28.1	7.4	None
Q704	2	82.6	24.2	43.5	6.9	None
Q705	2	75.5	31.3	15.4	7.9	None
Q706	2	75	25.6	24.5	7.8	None
Q801	2	80.9	42.6	22.6	7.1	None
Q802	2	77	46.9	33.4	6.4	None
Q803	1	54.8	47.4	33.2	6.4	None
Q804	2	82.6	36	48.2	6.2	None
Q805	2	75.5	35.8	26.2	7.2	None
Q806	2	75	24.2	19.3	8	None
Building R						
R101	1	53	57.4	25.6	6.3	None
R102	1	53	29.9	26.2	7.4	None
R103	1	53	30	26.1	7.4	None
R104	2	74.3	61.5	24.2	6.1	Glazing upgrade throughout
R105	2	76.2	58.9	44.1	5.4	None
R106	2	79	56	48.9	5.3	None
R107	2	83.2	18.9	22.1	8.2	None
R108	2	83.5	40.6	52.8	5.8	None
R201	2	72.5	53.2	20	6.7	None
R202	1	52.4	17.7	38.9	7.4	None
R203	2	73.5	16.7	27.9	7.9	None
R204	1	52.4	16.7	35.7	7.9	None
R205	2	74.2	14.9	30.6	7.9	None
R206	1	51.9	24.9	24.6	7.8	None
R207	1	56.3	18.9	60.1	6.4	None
R208	2	78.1	29.8	22.8	7.7	None
R209	2	83.2	26.3	21.1	7.9	None

## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
R210	2	83.5	21.1	27.9	7.8	None
R301	2	72.5	51.1	18.3	6.9	None
R302	1	52.4	32.5	61.1	5.8	Ceiling Insulation R2.5
R303	2	73.5	14.5	27.9	8.1	None
R304	1	52.4	30.9	47.8	6.4	None
R305	2	74.2	27.7	19	7.9	None
R306	1	51.9	25.1	24.7	7.8	None
R307	1	56.3	17.7	53	6.8	None
R308	2	78.1	30.5	22.3	7.7	None
R309	2	83.2	26.4	22.7	7.8	None
R310	2	83.5	21.3	27.7	7.8	None
R401	3	104.9	33.8	62.4	5.7	None
R402	2	74.5	46	32.2	6.4	None
R403	3	108.1	27	23.1	7.8	None
R404	2	78.1	30.6	22.4	7.6	None
R405	2	83.2	26.9	23.2	7.8	None
R406	1	57.7	21.1	21.1	8.1	None
R501	2	77.9	20.9	36.7	7.4	None
R502	2	74.8	14.4	34.1	7.8	None
R503	1	55.7	11	28.2	8.3	None
R504	1	54.7	34.6	24.4	7.4	None
R505	2	78.1	30.4	19.6	7.8	None
R506	2	83.2	28.6	21.9	7.8	None
R507	2	83.5	23.5	25.3	7.8	None
R601	2	77.9	20.1	36.9	7.4	None
R602	2	74.8	14.7	33.8	7.8	None
R603	1	55.7	7.4	40.1	7.9	None
R604	1	54.7	34.9	24.3	7.4	None
R605	2	78.1	30.7	19.6	7.8	None
R606	2	83.2	28.7	22	7.7	None
R607	2	83.5	23.6	25	7.8	None
R701	2	77.9	19.6	37.6	7.4	None

## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
R702	2	74.8	14.1	34.6	7.8	None
R703	3	113	13.9	30.9	7.9	None
R704	2	78.1	30.8	19.7	7.8	None
R705	2	83.2	28.3	22.8	7.7	None
R706	2	83.5	22.7	27.8	7.8	None
R801	2	77.9	32.4	44	6.6	None
R802	2	74.8	22.7	39.6	7.2	None
R803	3	113	25.6	36.7	7.2	None
R804	2	78.1	45.9	22.9	6.9	None
R805	2	83.2	44.9	27.8	6.7	None
R806	2	83.5	38.2	35.6	6.7	None
Building S						
S101	2	80	24.9	15	8.3	None
S102	2	75	33.4	24.1	7.4	None
S103	1	54	38.6	32.2	6.8	None
S104	2	75	33.4	24.1	7.4	None
S105	2	76	31.7	29.8	7.3	None
S106	2	88	50.2	57.8	5.2	None
S107	2	76	27.8	25	6.7	None
S108	1	60	62.3	29.8	5.8	None
S109	1	61	54	19.2	6.7	None
S110	2	76	38.6	41.5	6.4	None
S201	2	78	26	19.6	7.9	None
S202	2	75	21.6	22.4	8	None
S203	2	76	18.6	23.4	8.2	None
S204	2	75	15.6	23.4	8.3	None
S205	2	76	31.7	29.8	7.3	None
S206	2	77	11.6	31.1	8.1	None
S207	1	58	19.3	31.6	7.7	None
S208	2	76	20.9	31.4	7.7	None
S209	1	60	36.1	32.1	6.9	None
S210	1	61	24.7	23	7.9	None

## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
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Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
S211	2	74	22.7	25.6	7.9	None
S301	2	78	24.2	19.8	8	None
S302	2	75	26.9	34.9	7.2	None
S303	2	76	26.8	32.2	7.4	None
S304	2	75	28.9	42.9	6.8	None
S305	2	76	31.7	29.8	7.3	None
S306	2	76	15.8	40.9	7.4	None
S307	1	59	38.9	31.9	6.8	None
S308	2	76	18.8	31.8	7.7	None
S309	1	60	62.8	26.4	5.9	None
S310	1	61	25.2	22.9	7.9	None
S311	2	76	20.4	20.4	8.2	None
S401	3	95	21.5	44.5	6.9	None
S402	3	104.8	23.5	42.8	6.9	None
S403	1	77	13	39.2	7.7	None
S404	2	59	38.9	31.5	6.8	None
S405	2	76	20.5	31.8	7.7	None
S406	2	82	28.6	26.5	7.4	None
S407	2	83	22.9	22	7.9	None
S501	3	95	21.7	44.2	7	None
S502	2	75	16.9	22.4	8.3	None
S503	2	88	11	41.1	7.7	None
S504	2	86	18	26	7.9	None
S505	2	76	18.3	28.6	7.9	None
S506	2	82	28.8	26.9	7.4	None
S507	2	83	23.5	21.4	7.9	None
S601	3	95	28	47.1	6.6	None
S602	2	75	15.6	22.6	8.3	None
S603	2	88	9.8	42.3	7.7	None
S604	2	86	16.4	26.4	8.1	None
S605	2	76	17.2	28.6	7.9	None
S606	2	82	28.6	27.5	7.4	None

## Thermal Comfort Results

### Proposed Residential Development

Tallawong Station Precinct South  
Stage 2D  
1-15 2-12 Conferta Ave,  
Rouse Hill NSW 2155 Australia

Issued in accordance with BASIX Thermal Comfort Simulation Method

Certificate # 0004813500						Accreditation # HERA10033
Thermal performance specifications						
Unit number	Number of Bedrooms	Floor area (M <sup>2</sup> )	Predict. loads (MJ/M <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Heat	Cool (Sens & Lat)		
S607	2	83	23.1	23.6	7.9	None
S701	3	95	28.1	46.8	6.6	None
S702	2	75	14.9	22.9	8.4	None
S703	2	88	7.6	42.6	7.8	None
S704	2	86	13.2	26.8	8.3	None
S705	2	76	14.5	28.6	8.1	None
S706	2	82	27.8	28.4	7.4	None
S707	2	83	22	24.2	7.9	None
S801	3	89	42.3	52	5.7	None
S802	2	75	27.1	27.6	7.5	None
S803	2	88	24.6	31.3	7.4	None
S804	1	59	32	37.2	6.9	None
S805	2	76	27	32.6	7.3	None
S806	2	82	42.8	35.4	6.4	None
S807	2	83	21.3	25.3	7.9	None

# Nationwide House Energy Rating Scheme\* — Class 2 summary



Certificate number: **0004813500**

Certificate Date: **07 May 2020**

★ Average Star rating: **7.3**

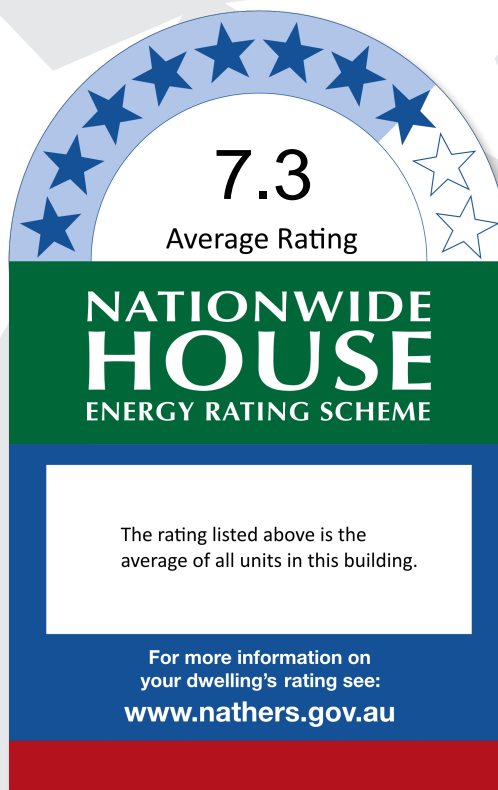
## Assessor details

Accreditation number: **HERA10033**  
Name: **Tracey Cools**  
Organisation: **Efficient Living Pty Ltd**  
Email: **admin@efficientliving.com.au**  
Phone: **02 9970 6181**  
Declaration of interest: **None**  
Software: **BERS Pro v4.4.0.0 (3.21)**  
  
AAO: **HERA**

## Dwelling details

Street: **Stage 2D: 1-15 Conferta Ave**  
Suburb: **Rouse Hill**  
State: **NSW**  
Postcode: **2155**

Scan to access this certificate online and confirm this is valid.



## Summary of all dwellings

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004810552	703	13.9	30.9	44.9	7.9
0004810560	803	25.6	36.7	62.3	7.2
0004735858-01	Q101	39.8	52.9	92.8	5.8
0004735874-01	Q102	61.9	26.4	88.3	5.9
0004735908-01	Q103	50.2	52.6	102.8	5.4
0004735957-01	Q201	18.3	28.2	46.5	7.9
0004735981-01	Q202	48.8	51.6	100.4	5.4
0004736005-01	Q203	37.0	51.9	88.9	5.9
0004736039-01	Q204	27.0	17.8	44.8	7.9
0004736096-01	Q301	21.9	27.0	48.9	7.8
0004736112-01	Q302	38.1	39.2	77.3	6.4
0004736146-01	Q303	38.1	54.5	92.6	5.8
0004736179-01	Q304	24.3	45.1	69.4	6.9
0004736203-01	Q305	26.0	29.0	55.1	7.4
0004736237-01	Q306	17.5	39.1	56.7	7.4

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004813500**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.3**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004736278-01	Q307	55.3	30.5	85.8	6.1
0004736302-01	Q308	27.0	24.8	51.8	7.7
0004736336-01	Q401	25.0	27.1	52.1	7.7
0004736351-01	Q402	29.1	31.4	60.6	7.3
0004735809-02	Q403	28.9	33.9	62.8	7.2
0004735825-01	Q404	23.9	44.4	68.3	6.9
0004735841-01	Q405	13.1	34.1	47.2	7.9
0004735890-02	Q406	23.1	26.6	49.7	7.8
0004735916-01	Q501	26.8	18.9	45.8	7.9
0004735932-01	Q502	31.6	28.8	60.4	7.3
0004735973-02	Q503	31.2	29.2	60.4	7.3
0004735999-01	Q504	30.4	41.7	72.2	6.8
0004736047-01	Q505	30.8	24.2	54.9	7.5
0004736062-01	Q506	25.0	25.2	50.1	7.8
0004736104-01	Q601	26.5	19.0	45.5	7.9
0004736120-01	Q602	32.0	28.4	60.4	7.3
0004736161-01	Q603	29.6	29.0	58.6	7.4
0004736195-01	Q604	30.2	41.5	71.7	6.8
0004736229-01	Q605	15.2	31.4	46.5	7.9
0004736252-01	Q606	25.1	25.0	50.1	7.8
0004736286-01	Q701	26.7	19.0	45.7	7.9
0004736310-01	Q702	32.3	28.2	60.6	7.3
0004736344-01	Q703	29.9	28.1	58.0	7.4
0004736369-01	Q704	24.2	43.5	67.7	6.9
0004736401-01	Q705	15.4	31.3	46.7	7.9
0004736427-01	Q706	25.6	24.5	50.0	7.8
0004736443-01	Q801	42.6	22.6	65.1	7.1
0004736476-01	Q802	46.9	33.4	80.4	6.4
0004736500-01	Q803	47.4	33.2	80.6	6.4
0004736534-01	Q804	36.0	48.2	84.3	6.2
0004736567-01	Q805	26.2	35.8	62.0	7.2
0004736591-01	Q806	24.2	19.3	43.5	8
0004736625-01	R101	57.4	25.6	82.9	6.3
0004736658-01	R102	30.0	26.1	56.2	7.4
0004736682-01	R103	31.5	24.9	56.4	7.4
0004736724-01	R104	61.5	24.2	85.6	6.1
0004736740-01	R105	58.9	44.1	103.0	5.4
0004736773-01	R106	56.0	48.9	105.0	5.3
0004736807-01	R107	18.9	22.1	41.0	8.2
0004736831-01	R108	40.6	52.8	93.4	5.8
0004736872-01	R201	53.2	20.0	73.2	6.7
0004736906-01	R202	17.7	38.9	56.6	7.4
0004736922-01	R203	16.7	27.9	44.6	7.9

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004813500**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.3**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004736955-01	R204	14.9	30.6	45.5	7.9
0004736385-01	R205	26.4	19.1	45.6	7.9
0004736435-01	R206	24.9	24.6	49.5	7.8
0004736468-01	R207	18.9	60.1	79.0	6.4
0004736484-01	R208	29.8	22.8	52.6	7.7
0004736518-01	R209	26.3	21.1	47.4	7.9
0004736559-01	R210	21.1	27.9	49.0	7.8
0004736583-01	R301	51.1	18.3	69.4	6.9
0004736617-01	R302	32.5	61.1	93.6	5.8
0004736641-01	R303	14.5	27.9	42.4	8.1
0004736674-01	R304	30.9	47.8	78.7	6.4
0004736708-01	R305	27.7	19.0	46.7	7.9
0004736732-01	R306	25.1	24.7	49.9	7.8
0004736757-01	R307	17.7	53.0	70.7	6.8
0004736799-01	R308	30.5	22.3	52.7	7.7
0004736815-01	R309	26.4	22.7	49.2	7.8
0004736856-01	R310	21.3	27.7	49.0	7.8
0004736880-01	R401	33.8	62.4	96.2	5.7
0004736898-01	R402	33.3	24.2	57.4	7.4
0004736948-01	R403	13.5	31.6	45.1	7.9
0004736971-01	R404	30.6	22.4	53.0	7.6
0004736393-01	R405	26.9	23.2	50.0	7.8
0004736419-01	R406	21.1	21.1	42.2	8.1
0004736450-01	R501	20.8	36.5	57.3	7.4
0004736492-01	R502	14.4	34.1	48.6	7.8
0004736526-01	R503	11.0	28.2	39.2	8.3
0004736542-01	R504	34.6	24.4	59.1	7.4
0004736575-01	R505	30.4	19.6	50.0	7.8
0004736609-01	R506	28.6	21.9	50.4	7.8
0004736633-01	R507	23.5	25.3	48.8	7.8
0004736666-01	R601	20.1	36.9	57.0	7.4
0004736690-01	R602	14.7	33.8	48.6	7.8
0004736716-01	R603	7.4	40.1	47.5	7.9
0004736765-01	R604	34.9	24.3	59.2	7.4
0004736781-01	R605	30.7	19.6	50.3	7.8
0004736823-01	R606	28.7	22.2	50.9	7.7
0004736849-01	R607	23.6	25.0	48.6	7.8
0004736864-01	R701	19.6	37.6	57.3	7.4
0004736914-01	R702	14.1	34.6	48.8	7.8
0004736930	R703	26.6	24.6	51.2	7.7
0004736963-01	R704	30.8	19.7	50.5	7.8
0004736989-01	R705	28.3	22.8	51.0	7.7
0004737003-01	R706	22.7	27.8	50.5	7.8

# Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004813500**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.3**



## Summary of all dwellings continued

### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004737045-01	R801	32.4	44.0	76.3	6.6
0004737060-01	R802	22.7	39.6	62.3	7.2
0004737094	R803	40.1	30.2	70.3	6.9
0004737128-01	R804	48.3	23.8	72.0	6.8
0004737151-01	R805	44.9	27.8	72.7	6.7
0004737177-01	R806	38.2	35.6	73.7	6.7
0004737201-01	S101	24.9	15.0	40.0	8.3
0004737235-01	S102	33.4	24.1	57.5	7.4
0004737250-01	S103	38.6	32.2	70.8	6.8
0004737276-02	S104	33.4	24.1	57.5	7.4
0004737300-01	S105	31.7	29.8	61.5	7.3
0004737326-01	S106	50.2	57.8	108.0	5.2
0004737342-01	S107	47.8	25.0	72.8	6.7
0004737409-01	S108	62.3	29.8	92.1	5.8
0004737425-01	S109	54.0	19.2	73.1	6.7
0004737474-01	S110	38.6	41.5	80.1	6.4
0004737532-01	S201	28.7	20.4	49.1	7.8
0004737557-01	S202	30.5	25.6	56.1	7.4
0004737565-01	S203	18.6	23.4	42.0	8.2
0004737581-02	S204	15.6	23.4	39.0	8.3
0004737615-01	S205	31.7	29.8	61.5	7.3
0004737631-01	S206	11.6	31.1	42.7	8.1
0004737649-01	S207	19.3	31.6	51.0	7.7
0004737672-01	S208	23.1	32.6	55.7	7.4
0004737680-01	S209	39.0	32.8	71.7	6.8
0004737706-01	S210	24.7	23.0	47.8	7.9
0004737722-01	S211	22.7	25.6	48.3	7.9
0004737748-01	S301	24.2	19.8	44.0	8
0004736997-01	S302	26.9	34.9	61.9	7.2
0004737011-01	S303	26.8	32.2	59.0	7.4
0004737037-01	S304	28.9	42.9	71.7	6.8
0004737078-01	S305	31.7	29.8	61.5	7.3
0004737102-01	S306	15.8	40.9	56.7	7.4
0004737136-01	S307	38.6	31.9	70.5	6.8
0004737169-01	S308	21.2	32.2	53.4	7.6
0004737185-01	S309	62.8	26.4	89.1	5.9
0004737219-01	S310	25.2	22.9	48.1	7.9
0004737243-01	S311	20.4	20.4	40.8	8.2
0004737268-01	S401	21.5	44.5	66.0	6.9
0004737284-01	S402	27.2	43.2	70.4	6.9
0004737318-01	S403	14.7	39.1	53.9	7.6
0004737334-01	S404	38.9	31.5	70.4	6.8
0004737359-01	S405	18.1	31.6	49.7	7.8

## Nationwide House Energy Rating Scheme\* - Class 2 summary

Certificate number: **0004813500**

Certificate Date:

**07 May 2020**

★ Average Star rating: **7.3**



### Summary of all dwellings continued

#### Certificate Details

Certificate number	Unit number	Heating load	Cooling load	Total load	Star Rating
0004737417-01	S406	28.6	26.5	55.1	7.4
0004737433-01	S407	22.9	22.0	44.9	7.9
0004737482-01	S501	21.7	44.2	65.9	7
0004737524-01	S502	16.9	22.4	39.3	8.3
0004737540-01	S503	11.0	41.1	52.1	7.7
0004737573-01	S504	18.0	26.0	44.0	7.9
0004737599-01	S505	18.3	28.6	46.9	7.9
0004737607-01	S506	28.8	26.9	55.7	7.4
0004737623-01	S507	23.5	21.4	44.9	7.9
0004737656-01	S601	28.0	47.1	75.1	6.6
0004737664-01	S602	15.6	22.6	38.2	8.3
0004737698-01	S603	9.8	42.3	52.1	7.7
0004737714-01	S604	16.4	26.4	42.9	8.1
0004737730-01	S605	17.2	28.6	45.7	7.9
0004737755-01	S606	28.6	27.5	56.1	7.4
0004738332-01	S607	23.1	23.6	46.8	7.9
0004737029-01	S701	28.1	46.8	74.9	6.6
0004737052-01	S702	14.9	22.9	37.8	8.4
0004737086-01	S703	7.6	42.6	50.2	7.8
0004737110-01	S704	13.2	26.8	40.0	8.3
0004737144-01	S705	14.5	28.6	43.1	8.1
0004810495	S706	27.8	28.4	56.2	7.4
0004737193-01	S707	22.0	24.2	46.2	7.9
0004737227-01	S801	42.3	52.0	94.3	5.7
0004738357-01	S802	27.1	27.6	54.7	7.5
0004738340-01	S803	24.6	31.3	55.9	7.4
0004737292-01	S804	32.0	37.2	69.2	6.9
0004738399-01	S805	27.0	32.6	59.6	7.3
0004738324-02	S806	42.8	35.4	78.2	6.4
0004738316-01	S807	21.3	25.3	46.6	7.9

# BASIX<sup>®</sup>Certificate

Building Sustainability Index [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

## Multi Dwelling

Certificate number: 1090615M\_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 06/10/2017 published by the Department. This document is available at [www.basix.nsw.gov.au](http://www.basix.nsw.gov.au)

Secretary

Date of issue: Friday, 08 May 2020

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



Planning,  
Industry &  
Environment

### Project summary

Project name	Stage 2D Tallawong Station_03
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na
No. of residential flat buildings	3
No. of units in residential flat buildings	172
No. of multi-dwelling houses	0
No. of single dwelling houses	0

### Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

### Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

# Description of project

## Project address

Project name	Stage 2D Tallawong Station_03
Street address	1-15 Conferta Avenue Rouse Hill 2155
Local Government Area	Hills Shire Council
Plan type and plan number	deposited 1213279
Lot no.	293
Section no.	na

## Project type

No. of residential flat buildings	3
No. of units in residential flat buildings	172
No. of multi-dwelling houses	0
No. of single dwelling houses	0

## Site details

Site area (m²)	6119
Roof area (m²)	1328
Non-residential floor area (m²)	0.0
Residential car spaces	198
Non-residential car spaces	0

## Common area landscape

Common area lawn (m²)	812.0
Common area garden (m²)	1895.0
Area of indigenous or low water use species (m²)	-

## Assessor details

Assessor number	HERA10033
Certificate number	0004813500
Climate zone	28

## Project score

Water	✓ 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 33	Target 25

## Description of project

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

### Residential flat buildings - Building Q, 45 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
Q101	1	61.0	0.0	0.0	0.0
Q202	1	62.0	0.0	0.0	0.0
Q302	2	77.0	0.0	0.0	0.0
Q306	1	58.0	0.0	0.0	0.0
Q402	2	77.0	0.0	0.0	0.0
Q406	2	75.0	0.0	0.0	0.0
Q504	2	82.6	0.0	0.0	0.0
Q602	2	77.0	0.0	0.0	0.0
Q606	2	75.0	0.0	0.0	0.0
Q704	2	82.6	0.0	0.0	0.0
Q802	2	77.0	0.0	0.0	0.0
Q806	2	75.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
Q102	1	63.0	0.0	0.0	0.0
Q203	2	66.0	0.0	0.0	0.0
Q303	1	55.0	0.0	0.0	0.0
Q307	1	59.0	0.0	0.0	0.0
Q403	1	55.0	0.0	0.0	0.0
Q501	2	81.0	0.0	0.0	0.0
Q505	2	75.5	0.0	0.0	0.0
Q603	1	54.8	0.0	0.0	0.0
Q701	2	80.9	0.0	0.0	0.0
Q705	2	75.5	0.0	0.0	0.0
Q803	1	54.8	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
Q103	2	65.0	0.0	0.0	0.0
Q204	2	76.0	0.0	0.0	0.0
Q304	2	80.8	0.0	0.0	0.0
Q308	1	57.0	0.0	0.0	0.0
Q404	2	82.6	0.0	0.0	0.0
Q502	2	77.0	0.0	0.0	0.0
Q506	2	75.0	0.0	0.0	0.0
Q604	2	82.6	0.0	0.0	0.0
Q702	2	77.0	0.0	0.0	0.0
Q706	2	75.0	0.0	0.0	0.0
Q804	2	82.6	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
Q201	2	79.0	0.0	0.0	0.0
Q301	2	82.0	0.0	0.0	0.0
Q305	1	57.0	0.0	0.0	0.0
Q401	2	81.0	0.0	0.0	0.0
Q405	2	75.5	0.0	0.0	0.0
Q503	1	54.8	0.0	0.0	0.0
Q601	2	80.9	0.0	0.0	0.0
Q605	2	75.5	0.0	0.0	0.0
Q703	1	54.8	0.0	0.0	0.0
Q801	2	80.9	0.0	0.0	0.0
Q805	2	75.5	0.0	0.0	0.0

### Residential flat buildings - Building R, 60 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
R101	1	53.0	0.0	0.0	0.0
R105	2	76.2	0.0	0.0	0.0
R201	2	72.5	0.0	0.0	0.0
R205	2	74.2	0.0	0.0	0.0
R209	2	83.2	0.0	0.0	0.0
R303	2	73.5	0.0	0.0	0.0
R307	1	56.3	0.0	0.0	0.0
R401	3	105.0	0.0	0.0	0.0
R405	2	83.2	0.0	0.0	0.0
R503	1	55.7	0.0	0.0	0.0
R507	2	83.5	0.0	0.0	0.0
R604	1	54.7	0.0	0.0	0.0
R701	2	77.9	0.0	0.0	0.0
R705	2	83.2	0.0	0.0	0.0
R803	3	113.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
R102	1	53.0	0.0	0.0	0.0
R106	2	79.0	0.0	0.0	0.0
R202	1	52.4	0.0	0.0	0.0
R206	1	51.9	0.0	0.0	0.0
R210	2	83.5	0.0	0.0	0.0
R304	1	52.4	0.0	0.0	0.0
R308	2	78.1	0.0	0.0	0.0
R402	2	74.5	0.0	0.0	0.0
R406	1	57.7	0.0	0.0	0.0
R504	1	54.7	0.0	0.0	0.0
R601	2	77.9	0.0	0.0	0.0
R605	2	78.1	0.0	0.0	0.0
R702	2	74.8	0.0	0.0	0.0
R706	2	83.5	0.0	0.0	0.0
R804	2	78.1	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
R103	1	53.0	0.0	0.0	0.0
R107	2	83.2	0.0	0.0	0.0
R203	2	73.5	0.0	0.0	0.0
R207	1	56.3	0.0	0.0	0.0
R301	2	72.5	0.0	0.0	0.0
R305	2	74.2	0.0	0.0	0.0
R309	2	83.2	0.0	0.0	0.0
R403	3	108.0	0.0	0.0	0.0
R501	2	77.9	0.0	0.0	0.0
R505	2	78.1	0.0	0.0	0.0
R602	2	74.8	0.0	0.0	0.0
R606	2	83.2	0.0	0.0	0.0
R703	3	113.0	0.0	0.0	0.0
R801	2	77.9	0.0	0.0	0.0
R805	2	83.2	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
R104	2	74.3	0.0	0.0	0.0
R108	2	83.5	0.0	0.0	0.0
R204	1	52.4	0.0	0.0	0.0
R208	2	78.1	0.0	0.0	0.0
R302	1	52.4	0.0	0.0	0.0
R306	1	51.9	0.0	0.0	0.0
R310	2	83.5	0.0	0.0	0.0
R404	2	78.1	0.0	0.0	0.0
R502	2	74.8	0.0	0.0	0.0
R506	2	83.2	0.0	0.0	0.0
R603	1	55.7	0.0	0.0	0.0
R607	2	83.5	0.0	0.0	0.0
R704	2	78.1	0.0	0.0	0.0
R802	2	74.8	0.0	0.0	0.0
R806	2	83.5	0.0	0.0	0.0

### Residential flat buildings - Building S, 67 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
S101	2	80.0	0.0	0.0	0.0
S105	2	76.0	0.0	0.0	0.0
S109	1	61.0	0.0	0.0	0.0
S203	2	76.0	0.0	0.0	0.0
S207	1	58.0	0.0	0.0	0.0
S211	2	74.0	0.0	0.0	0.0
S304	2	75.0	0.0	0.0	0.0
S308	2	76.0	0.0	0.0	0.0
S401	3	95.0	0.0	0.0	0.0
S405	2	76.0	0.0	0.0	0.0
S502	2	75.0	0.0	0.0	0.0
S506	2	82.0	0.0	0.0	0.0
S603	2	88.0	0.0	0.0	0.0
S607	2	83.0	0.0	0.0	0.0
S704	2	86.0	0.0	0.0	0.0
S801	3	89.0	0.0	0.0	0.0
S805	2	76.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
S102	2	75.0	0.0	0.0	0.0
S106	2	88.0	0.0	0.0	0.0
S110	2	76.0	0.0	0.0	0.0
S204	2	75.0	0.0	0.0	0.0
S208	2	76.0	0.0	0.0	0.0
S301	2	78.0	0.0	0.0	0.0
S305	2	76.0	0.0	0.0	0.0
S309	1	60.0	0.0	0.0	0.0
S402	3	105.0	0.0	0.0	0.0
S406	2	82.0	0.0	0.0	0.0
S503	2	88.0	0.0	0.0	0.0
S507	2	83.0	0.0	0.0	0.0
S604	2	86.0	0.0	0.0	0.0
S701	3	95.0	0.0	0.0	0.0
S705	2	76.0	0.0	0.0	0.0
S802	2	75.0	0.0	0.0	0.0
S806	2	82.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
S103	1	54.0	0.0	0.0	0.0
S107	2	76.0	0.0	0.0	0.0
S201	2	78.0	0.0	0.0	0.0
S205	2	76.0	0.0	0.0	0.0
S209	1	60.0	0.0	0.0	0.0
S302	2	75.0	0.0	0.0	0.0
S306	2	76.0	0.0	0.0	0.0
S310	1	61.0	0.0	0.0	0.0
S403	1	77.0	0.0	0.0	0.0
S407	2	83.0	0.0	0.0	0.0
S504	2	86.0	0.0	0.0	0.0
S601	3	95.0	0.0	0.0	0.0
S605	2	76.0	0.0	0.0	0.0
S702	2	75.0	0.0	0.0	0.0
S706	2	82.0	0.0	0.0	0.0
S803	2	88.0	0.0	0.0	0.0
S807	2	83.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m <sup>2</sup> )	Unconditioned floor area (m <sup>2</sup> )	Area of garden & lawn (m <sup>2</sup> )	Indigenous species (min area m <sup>2</sup> )
S104	2	75.0	0.0	0.0	0.0
S108	1	60.0	0.0	0.0	0.0
S202	2	75.0	0.0	0.0	0.0
S206	2	77.0	0.0	0.0	0.0
S210	1	61.0	0.0	0.0	0.0
S303	2	76.0	0.0	0.0	0.0
S307	1	59.0	0.0	0.0	0.0
S311	2	76.0	0.0	0.0	0.0
S404	2	59.0	0.0	0.0	0.0
S501	3	95.0	0.0	0.0	0.0
S505	2	76.0	0.0	0.0	0.0
S602	2	75.0	0.0	0.0	0.0
S606	2	82.0	0.0	0.0	0.0
S703	2	88.0	0.0	0.0	0.0
S707	2	83.0	0.0	0.0	0.0
S804	1	59.0	0.0	0.0	0.0

## Description of project

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

### Common areas of unit building - Building Q

Common area	Floor area (m <sup>2</sup> )
Lift car (No.1)	-

### Common areas of unit building - Building R

Common area	Floor area (m <sup>2</sup> )
Lift car (No.2)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.4)	-

### Common areas of unit building - Building S

Common area	Floor area (m <sup>2</sup> )
Lift car (No.3)	-

Common area	Floor area (m <sup>2</sup> )
Lift car (No.5)	-

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

Common area	Floor area (m <sup>2</sup> )
Car park area	7659.39
Plant source air	73.0
Pump rooms	90.8
Electrical SR	20.0

Common area	Floor area (m <sup>2</sup> )
Waste rooms	217.2
Bicycle storage	427.0
Comms	12.0
Hallways	1077.61

Common area	Floor area (m <sup>2</sup> )
Plant exhaust air	73.0
Hot water plant	99.6
Storage cages	1143.5

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building Q

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

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

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 3. Commitments for Residential flat buildings - Building S

### (a) Dwellings

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

### (b) Common areas and central systems/facilities

- (i) Water
- (ii) Energy

## 4. Commitments for multi-dwelling houses

## 5. Commitments for single dwelling houses

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

- (i) Water
- (ii) Energy

## Schedule of BASIX commitments

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

### 1. Commitments for Residential flat buildings - Building Q

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
Q101, Q102, Q202, Q203, Q303, Q305, Q306, Q307, Q308, Q403, Q503, Q603, Q703, Q803	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes

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	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
Q101	52.9	39.8
Q102	54.5	33.0
Q103	50.2	52.6
Q201	18.3	28.2
Q202	48.8	51.6

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
Q203	37.0	51.9
Q204	27.0	17.8
Q301	21.9	27.0
Q302	38.1	39.2
Q303	38.1	55.0
Q304	54.4	52.0
Q305	26.0	29.0
Q306	17.5	39.1
Q307	55.3	30.5
Q308	27.0	24.8
Q401	25.0	27.1
Q402	29.1	31.4
Q403	28.9	33.9
Q404	23.9	44.4
Q405	13.1	34.1
Q406	23.1	26.6
Q501	26.8	18.9
Q502	31.6	28.8
Q503	31.2	29.2
Q504	30.4	41.7
Q505	31.6	15.0
Q506	25.0	25.5
Q601	26.5	19.0
Q602	32.0	28.4
Q603	29.6	29.0
Q604	30.2	41.5
Q605	31.4	24.0

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
Q606	25.1	25.0
Q701	26.7	19.0
Q702	32.3	28.2
Q703	29.9	28.1
Q704	24.2	43.5
Q705	31.3	15.4
Q706	25.6	24.5
Q801	42.6	22.6
Q802	46.9	33.4
Q803	47.4	33.2
Q804	36.0	48.2
Q805	35.8	26.2
All other dwellings	24.2	19.3

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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	Yes

Central energy systems	Type	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 11

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

### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
R401, R403, R703, R803	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	3 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
R101, R102, R103, R202, R204, R206, R207, R302, R304, R306, R307, R406, R503, R504, R603, R604	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes

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	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
R101	57.4	25.6
R102	29.9	26.2
R103	30.0	26.1
R104	61.5	24.2
R105	58.9	44.1

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
R106	56.0	48.9
R107	18.9	22.1
R108	40.6	52.8
R201	53.2	20.0
R202	17.7	38.9
R203	16.7	27.9
R204	16.7	35.7
R205	14.9	30.6
R206	24.9	24.6
R207	18.9	60.1
R208	29.8	22.8
R209	26.3	21.1
R210	21.1	27.9
R301	51.1	18.3
R302	32.5	61.1
R303	14.5	27.9
R304	30.9	47.8
R305	27.7	19.0
R306	25.1	24.7
R307	17.7	53.0
R308	30.5	22.3
R309	26.4	22.7
R310	21.3	27.7
R401	33.8	62.4
R402	46.0	32.2
R403	27.0	23.1
R404	30.6	22.4

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
R405	26.9	23.2
R406	21.1	21.1
R501	20.9	36.7
R502	14.4	34.1
R503	11.0	28.2
R504	34.6	24.4
R505	30.4	19.6
R506	28.6	21.9
R507	23.5	25.3
R601	20.1	36.9
R602	14.7	33.8
R603	7.4	40.1
R604	34.9	24.3
R605	30.7	19.6
R606	28.7	22.0
R607	23.6	25.0
R701	19.6	37.6
R702	14.1	34.6
R703	13.9	30.9
R704	30.8	19.7
R705	28.3	22.8
R706	22.7	27.8
R801	32.4	44.0
R802	22.7	39.6
R803	25.6	36.7
R804	45.9	22.9
R805	44.9	27.8

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
All other dwellings	38.2	35.6

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.2)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 11

### 3. Commitments for Residential flat buildings - Building S

#### (a) Dwellings

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

	Fixtures					Appliances		Individual pool				Individual spa		
Dwelling no.	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	-	3.5 star	-	-	-	-	-	-	-

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

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

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

	<b>Hot water</b>	<b>Bathroom ventilation system</b>		<b>Kitchen ventilation system</b>		<b>Laundry ventilation system</b>	
<b>Dwelling no.</b>	<b>Hot water system</b>	<b>Each bathroom</b>	<b>Operation control</b>	<b>Each kitchen</b>	<b>Operation control</b>	<b>Each laundry</b>	<b>Operation control</b>
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Dwelling no.	Cooling		Heating		Artificial lighting						Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen
S103, S108, S109, S207, S209, S210, S307, S309, S310, S404, S407, S503, S804	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes
All other dwellings	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.0 - 3.5 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	1-phase airconditioning EER 3.5 - 4.0 (zoned)	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes

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	-	yes	3.5 star	-	2 star	no	no

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

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
S101	24.9	15.0
S103	38.6	32.2
S106	50.2	57.8
S107	27.8	25.0
S108	62.3	29.8

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
S109	54.0	19.2
S110	38.6	41.5
S201	26.0	19.6
S202	21.6	22.4
S203	18.6	23.4
S204	15.6	23.4
S206	11.6	31.1
S207	19.3	31.6
S208	20.9	31.4
S209	36.1	32.1
S210	24.7	23.0
S211	22.7	25.6
S301	24.2	19.8
S302	26.9	34.9
S303	26.8	32.2
S304	28.9	42.9
S306	15.8	40.9
S307	38.9	31.9
S308	18.8	31.8
S309	62.8	26.4
S310	25.2	22.9
S311	20.4	20.4
S401	25.1	44.5
S402	23.5	42.8
S403	13.0	39.2
S404	38.9	31.5
S405	20.5	31.8

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m²/yr)	Area adjusted cooling load (in mJ/m²/yr)
S406	28.6	26.5
S407	22.9	22.0
S501	21.7	44.2
S502	16.9	22.4
S503	11.0	41.1
S504	18.0	26.0
S505	18.3	28.6
S506	28.8	26.9
S507	23.5	21.4
S601	28.0	47.1
S602	15.6	22.6
S603	9.8	42.3
S604	16.4	26.4
S605	17.2	28.6
S606	28.6	27.5
S607	23.1	23.6
S701	28.1	46.8
S702	14.9	22.9
S703	7.6	42.6
S704	13.2	26.8
S705	14.5	28.6
S706	27.8	28.4
S707	22.0	24.2
S801	42.3	52.0
S802	27.1	27.6
S803	24.6	24.8
S804	32.0	37.2

	Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in mJ/m <sup>2</sup> /yr)
S805	27.0	32.6
S806	42.8	35.4
S807	21.3	25.3
S102, S104	33.4	24.1
All other dwellings	31.7	29.8

**(b) Common areas and central systems/facilities**

<b>(i) Water</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.		✓	✓

<b>Common area</b>	<b>Showerheads rating</b>	<b>Toilets rating</b>	<b>Taps rating</b>	<b>Clothes washers rating</b>
All common areas	no common facility	no common facility	no common facility	no common laundry facility

<b>(ii) Energy</b>	<b>Show on DA plans</b>	<b>Show on CC/CDC plans &amp; specs</b>	<b>Certifier check</b>
(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.3)	-	-	light-emitting diode	connected to lift call button	Yes
Lift car (No.5)	-	-	light-emitting diode	connected to lift call button	Yes

Central energy systems	Type	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 11

## 6. 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	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	8000.0	To collect run-off from at least: - 300.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 2707.0 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Fire sprinkler system (No. 2)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-

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

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	Yes
Waste rooms	ventilation exhaust only	-	light-emitting diode	motion sensors	Yes
Plant exhaust air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Plant source air	no mechanical ventilation	-	light-emitting diode	manual on / manual off	Yes
Bicycle storage	ventilation exhaust only	none ie. continuous	light-emitting diode	motion sensors	Yes
Hot water plant	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Pump rooms	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Comms	ventilation supply only	thermostatically controlled	light-emitting diode	manual on / manual off	Yes
Storage cages	ventilation exhaust only	none ie. continuous	light-emitting diode	manual on / manual off	Yes
Electrical SR	ventilation supply only	none ie. continuous	light-emitting diode	manual on / manual off	Yes

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
Hallways	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	Yes

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): 65.0 peak kW
Other	Building management system installed?: yes	-

## Notes

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

## Legend

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

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Notified Engineer 8665, AS/NZS 3845:2014

KEY PLAN

LEGEND

- PLENUM - EXHAUST AIR  
■ PLENUM - SOURCE AIR

NatHERS Thermal Comfort Inclusions

Glazing Doors/Windows

Group A - awning + bifold + casement windows + hinged glazed doors

U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±10%)

Group B - sliding doors/windows + fixed glazing + louvred windows

U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±10%)

Upgrades applied to selected units as per the NatHERS summary sheet;

Group A - awning + bifold + casement windows + hinged glazed doors

U-value: 2.9 (equal to or lower than) SHGC: 0.44 (±10%)

Group B - sliding doors/windows + fixed glazing + louvred windows

U-value: 2.9 (equal to or lower than) SHGC: 0.51 (±10%)

Skylight:

U-value: 4.7 SHGC: 0.72

Given values are AFRC total window system values (glass and frame)

Roof and ceiling

Medium roof colour modelled

Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above

Plasterboard ceiling with R3.0 insulation (insulation only value) to soffit of concrete where roof is over

Ceiling Penetrations

Default modelled as per client's request. Once a product is selected modelling improvements can be made

Sealed LED Downlights 1 per 2.5m<sup>2</sup>

External Wall

Cavity brick internally lined plasterboard on studs with R2.0 insulation required (Insulation only value)

Upgrades applied to selected units as per the NatHERS summary sheet;

Cavity brick internally lined plasterboard on studs with R2.5 insulation required (Insulation only value)

External Colour

Default colour modelled

Inter-tenancy walls

Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required

60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways

Minimum 200mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs

60mm Pronto panels with plasterboard lining to services

Walls within dwellings

Plasterboard on studs - no insulation

Floors

Concrete with a minimum R1.2 insulation (insulation only value) required to units where part open subfloor or garage below

Concrete between levels, no insulation required

Floor coverings

Default floor coverings

External Shading

Shading as per stamped documentation



Rev	Date	Approved by	Issue Name
J	16/01/20	YO	PRELIMINARY
K	24/2/20	AH	PRELIMINARY
L	6/2/20	AH	PRELIMINARY
M	11/2/20	YO	PRELIMINARY
N	17/2/20	YO	PRELIMINARY
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V	8/4/20	YO	For Coordination
W	15/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
**Tallawong Station Precinct South**  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

**GA Plans Overall**  
**Basement 03 & 02**

Scale  
**1:500 @A1, 50% @A3**

Project No. **18095** Drawn by **TURNER**

Sheet No. **DA-110-006** Rev **03**

For Development Application

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA

T +61 2 8668 0000  
F +61 2 8668 0088  
turner@turner.com.au

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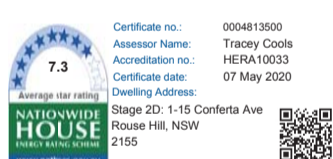
DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Notified Engineer 8895, AS/NZS 684:2004 911

KEY PLAN

LEGEND

PLENUM - EXHAUST AIR

PLENUM - SOURCE AIR



Rev	Date	Approved by	Issue Name
J	16/01/20	YO	PRELIMINARY
K	24/2/20	AH	PRELIMINARY
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02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Delcorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@delcorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Basement 02 & 01

Scale

1:500 @A1, 50% @A3

Status

For Development Application

Project No.

18095

Drawn by

TURNER

Rev

03

TURNER

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA

T +61 2 8668 0000  
F +61 2 8668 0068  
turner@turner.com.au

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Notified Architect Notified Engineer 8665, AS/NZS 604.084 911

KEY PLAN

LEGEND

PLENUM - EXHAUST AIR

PLENUM - SOURCE AIR



Certificate no. 000411200  
Assessor Name: Tracy Cook  
Assessment no. HERSA10033  
Certificate date: 07 May 2020  
Rating address: 1/15 Conforta Ave, Rouse Hill, NSW 2155  
www.nsw.gov.au



Certificate no. 000410965  
Assessor Name: Tracy Cook  
Assessment no. HERSA10033  
Certificate date: 08 May 2020  
Rating address: 1/15 Conforta Ave, Rouse Hill, NSW 2155  
www.nsw.gov.au



Certificate no. 000411546  
Assessor Name: Tracy Cook  
Assessment no. HERSA10033  
Certificate date: 07 May 2020  
Rating address: 1/15 Conforta Ave, Rouse Hill, NSW 2155  
www.nsw.gov.au



Certificate no. 000410909  
Assessor Name: Tracy Cook  
Assessment no. HERSA10033  
Certificate date: 07 May 2020  
Rating address: 1/15 Conforta Ave, Rouse Hill, NSW 2155  
www.nsw.gov.au

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03	6/5/20	YO	For Development Application

CLIENT  
Delcorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@delcorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Basement 01, Mezz. & Level 1

Scale  
1:500 @A1, 50% @A3  
Project No. 18095  
Drawing No. 03  
Status For Development Application  
Drawn by TURNER  
Rev 03

TURNER

Level 1 ONE Oxford Street  
Darlinghurst NSW 2010  
AUSTRALIA

T +61 2 8668 0000  
F +61 2 8668 0088  
turner@turner.com.au

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Notified Architect Notified Engineer 8665, AS/NZS 604.084 911

KEY PLAN

LEGEND

PLENUM - EXHAUST AIR

PLENUM - SOURCE AIR



Rev	Date	Approved by	Issue Name
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03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
**Tallawong Station Precinct South**  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

**GA Plans Overall**  
**Mezzanines, Level 01 & 02**

Scale  
**1:500 @A1, 50% @A3**

Project No.  
**18095**

Drawn by  
**TURNER**

Status  
**For Development Application**

Dwg No.  
**DA-110-010**

Rev  
**03**

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA

T +61 2 8668 0000  
F +61 2 8668 0088  
turner@turner.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Nominated Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND

NATHERS Thermal Comfort Inclusions  
Glazing Doors/Windows:  
Group A - awning + bifold + casement windows + hinged glazed doors  
U-value: 4.10 (equal to or lower than) SHGC: 0.47 (1.00%)  
Group B - sliding doors/windows + fixed glazing + hinged windows  
U-value: 4.10 (equal to or lower than) SHGC: 0.52 (1.00%)  
Group C - sliding doors/windows + fixed glazing + hinged windows  
U-value: 2.9 (equal to or lower than) SHGC: 0.46 (1.00%)  
Group D - sliding doors/windows + fixed glazing + hinged windows  
U-value: 2.9 (equal to or lower than) SHGC: 0.53 (1.00%)  
Given values are AFRC total window system values (glass and frame)

Roof  
Concrete roof, no insulation  
External Colour  
Medium colour modelled

Ceiling  
Plasterboard ceiling with R1.5 insulation (insulation only value) where balconies are above  
Plasterboard ceiling with R2.5 insulation (insulation only value) where balconies are above as per assessor certificate  
Plasterboard ceiling with R3.0 insulation (insulation only value) to soffits of concrete where roof is over  
Plasterboard ceiling, no insulation where neighbouring units are above

Ceiling Penetrations  
Downlights 1 per 2.5m<sup>2</sup>

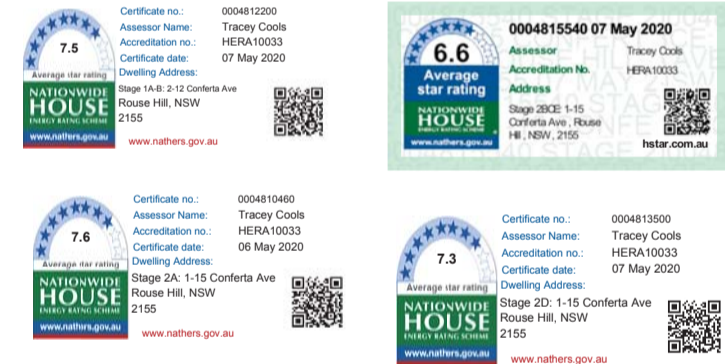
External Wall  
Cavity brick internally lined plasterboard on studs with R2.0 insulation required (insulation only value)  
Cavity brick internally lined plasterboard on studs with R2.0 insulation required (insulation only value) as per assessor certificate  
External Colour  
Default colour modelled

Inter-tenancy walls  
Pronto panels with plasterboard lining on both sides to walls adjacent to neighbours, no insulation required  
60mm Pronto panels with plasterboard lining on both sides to walls adjacent to hallways  
Minimum 200mm concrete with turning channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs  
60mm Pronto panels with plasterboard lining to services  
Walls within dwellings  
Plasterboard on studs - no insulation

Floors  
Concrete with a minimum R1.2 insulation (insulation only value) required to units with garage below  
Concrete with a minimum R1.2 insulation (insulation only value) required to units where open subfloor is below  
Concrete between levels, no insulation required

Floor coverings  
Default floor coverings

External Shading  
Shading as per stamped documentation  
Default floor coverings



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01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conferta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Level 01,02 & 03

Scale  
1:500, 1:1.51 @A1, 50% @A3  
Project No.  
18095  
Drawn by  
TURNER  
Status  
For Development Application  
Dwg No.  
DA-110-020  
Rev  
03

TURNER

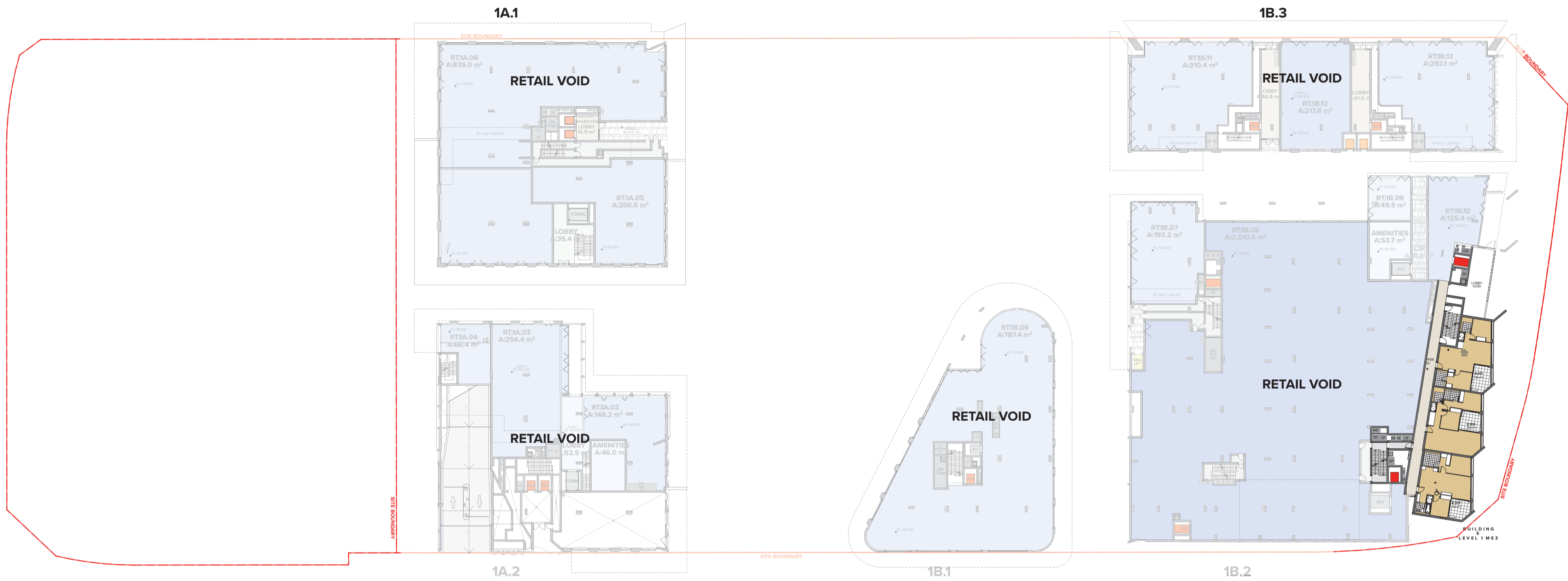
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Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turner@turner.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND



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B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
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02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Level 01,02,03 & 04

Scale  
1:500 @A1, 50% @A3  
Project No. 18095  
Status For Development Application  
Drawing No. DA-110-030  
Drawn by TURNER  
Rev 03  
North

TURNER

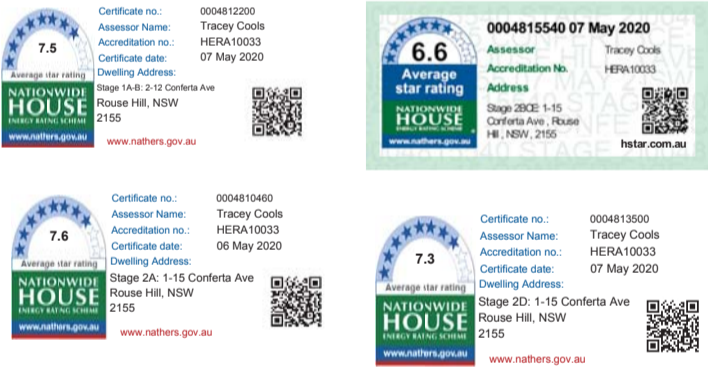
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Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0200  
F +61 2 8668 0268  
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Notified Architect Notified Turner 8665, ASB 86 064 084 911

KEY PLAN

LEGEND



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02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 101 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title  
GA Plans Overall  
Level 02,03,04 & 05  
Scale  
1:500 @A1, 50% @A3  
Project No.  
18095  
Drawn by  
TURNER  
Status  
For Development Application  
DA-110-040  
Rev  
03  
North  
↑

TURNER  
Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turner@tdo.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND



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CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Level 03,04,05 & 06

Scale  
1:500 @A1, 50% @A3  
Project No. 18095  
Drawing No. 03  
Status For Development Application  
Drawn by TURNER  
Rev 03

TURNER

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turner@tdo.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Nicholas Turner 8665, ABN 88 064 084 911

KEY PLAN

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J	8/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
**Tallawong Station Precinct South**  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

**GA Plans Overall**  
**Level 04,05,06 & 07**

Scale  
**1:500 @A1, 50% @A3**

Project No. **18095** Drawn by **TURNER** North  
Status **For Development Application** Drawing No. **DA-110-060** Rev **03**

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turnerstudio.com.au



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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND



Rev	Date	Approved by	Issue Name
A	11/2/20	YO	PRELIMINARY
B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
D	6/3/20	YO	For Coordination
E	13/3/20	YO	For Coordination
F	20/3/20	YO	For Coordination
G	22/3/20	YO	For Coordination
H	30/3/20	YO	For Coordination
I	31/3/20	YO	For Coordination
J	8/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title  
GA Plans Overall  
Level 05,06,07 & 08  
Scale  
1:500 @A1, 50% @A3  
Project No.  
18095  
Drawn by  
TURNER  
Status  
For Development Application  
Dwg No.  
DA-110-070  
Rev  
03  
North

TURNER

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turnerstudio.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Notified Engineer 8665, AS/NZS 684:2004 911

KEY PLAN

LEGEND



Rev	Date	Approved by	Issue Name
A	11/2/20	YO	PRELIMINARY
B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
D	6/3/20	YO	For Coordination
E	13/3/20	YO	For Coordination
F	20/3/20	YO	For Coordination
G	23/3/20	YO	For Coordination
H	30/3/20	YO	For Coordination
I	31/3/20	YO	For Coordination
J	8/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title  
GA Plans Overall  
Level 06,07,08 & Roof

Scale  
1:500 @A1, 50% @A3  
Project No. 18095  
Drawing No. DA-110-080  
Status For Development Application  
Drawn by TURNER  
Rev 03  
North

TURNER

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turnerstudio.com.au

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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Notified Engineer 8865, AS/NZS 684:2004 911

KEY PLAN

LEGEND



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A	11/2/20	YO	PRELIMINARY
B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
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E	13/3/20	YO	For Coordination
F	20/3/20	YO	For Coordination
G	23/3/20	YO	For Coordination
H	30/3/20	YO	For Coordination
I	31/3/20	YO	For Coordination
J	6/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Delcorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8865 4100  
@delcorp.com.au

Project Title  
**Tallawong Station Precinct South**  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

**GA Plans Overall**  
**Level 07,08 & Roof**

Scale  
**1:500 @A1, 50% @A3**

Project No. **18095** Drawn by **TURNER** North  
Status **For Development Application** Dwg No. **DA-110-090** Rev **03**

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turnerstudio.com.au



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DL25 Quality Endorsed Company ISO 9001:2015, Registration Number 28475  
Notified Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND



Rev	Date	Approved by	Issue Name
A	11/2/20	YO	PRELIMINARY
B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
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F	20/3/20	YO	For Coordination
G	23/3/20	YO	For Coordination
H	30/3/20	YO	For Coordination
I	31/3/20	YO	For Coordination
J	6/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
**Tallawong Station Precinct South**  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

**GA Plans Overall**  
**Level 08 & Roof**

Scale  
**1:500 @A1, 50%@A3**

Project No. **18095** Drawn by **TURNER**

Status **For Development Application** Drawing No. **DA-110-100** Rev **03**

**TURNER**

Level 7 ONE Oxford Street  
Sydney NSW 2010  
AUSTRALIA

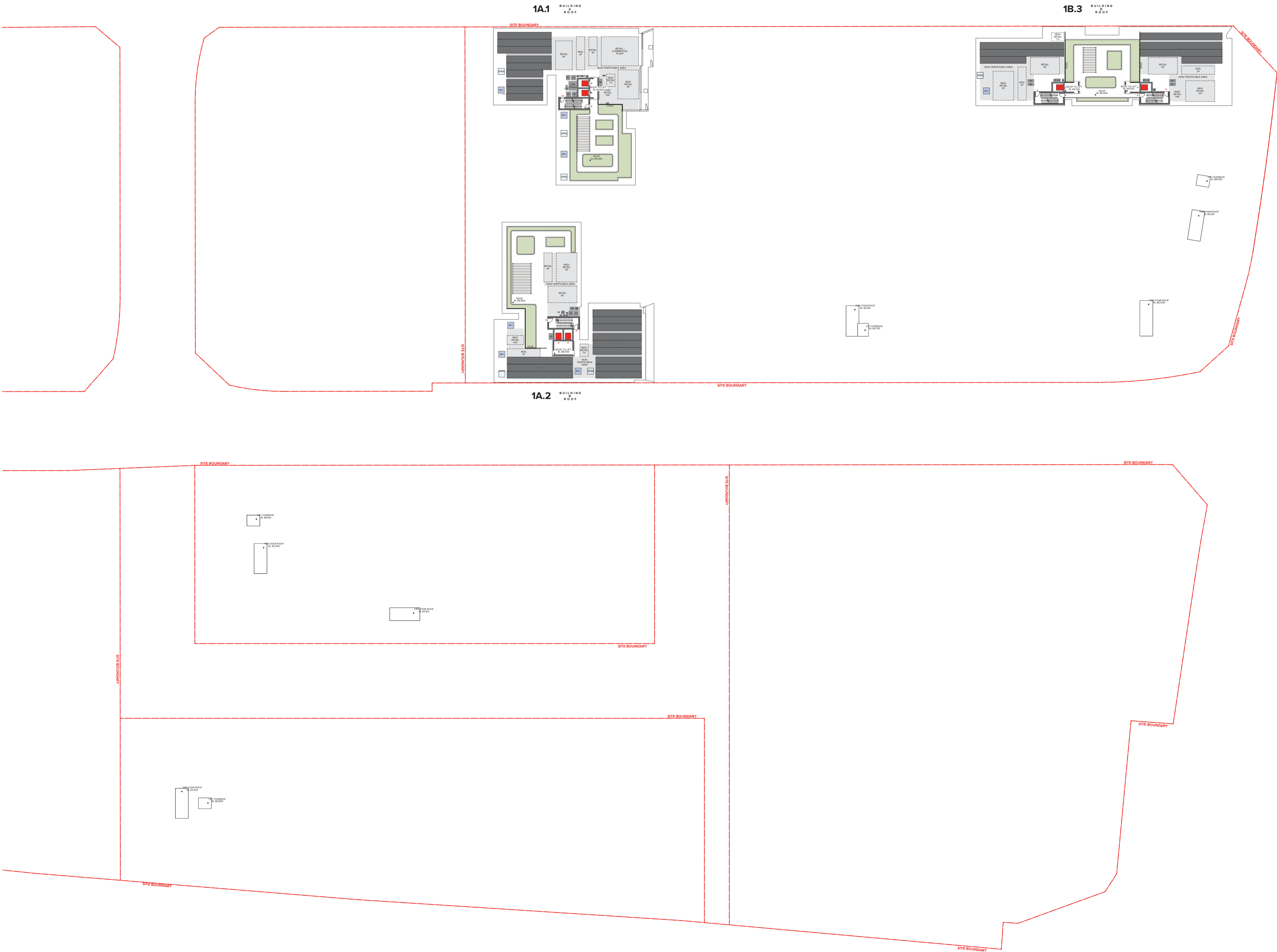
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Notified Architect Nicholas Turner 8665, ABN 66 064 084 911

KEY PLAN

LEGEND



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A	11/2/20	YO	PRELIMINARY
B	17/2/20	YO	PRELIMINARY
C	24/2/20	YO	For Coordination
D	6/3/20	YO	For Coordination
E	13/3/20	YO	For Coordination
F	20/3/20	YO	For Coordination
G	27/3/20	YO	For Coordination
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I	31/3/20	YO	For Coordination
J	6/4/20	YO	For Coordination
01	15/4/20	YO	Draft Development Application
02	20/4/20	YO	Draft Development Application
03	6/5/20	YO	For Development Application

CLIENT  
Deicorp  
Level 4, 161 Redfern Street Redfern NSW 2016 Australia  
8665 4100  
@deicorp.com.au

Project Title  
Tallawong Station Precinct South  
1-15 & 2-12 Conforta Avenue Rouse Hill NSW 2155

Drawing Title

GA Plans Overall  
Roof Level

Scale  
1:500 @A1, 50% @A3  
Status  
For Development Application

Project No.  
18095  
Dwg No.  
DA-110-110

Drawn by  
TURNER  
Rev  
03

North  
↑

TURNER

Level 7 ONE Oxford Street  
Caringbah NSW 2010  
AUSTRALIA  
T +61 2 8668 0000  
F +61 2 8668 0088  
turnerstudio.com.au