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LIVING

## NatHERS and BASIX Assessment



### Sundale Developments Proposed Residential Development

To be built at 12-16 Bent Street Lindfield NSW 2070

Issue	File Ref	Description	Author	Date
-	2401268	Draft - NatHERS and BASIX Assessment	MF/SC	06/03/25
A	2401268	NatHERS and BASIX Assessment	MF/SC	18/03/25
B	-	Update BASIX – Private open area units 207, 208, 211, 212 and 213	MF	29/07/25
C	2502133	NatHERS and BASIX Assessment - Update	MF/SC	07/10/2025

This report has been prepared by Efficient Living Pty Ltd on behalf of our client Sundale Developments. 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.



**Sustainable Building Consultants**

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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 12-16 Bent Street Lindfield.

Heating and cooling loads for the development have been determined using Hero v4.1 thermal comfort simulation software. The report is based on the architectural drawings provided by Sundale Developments. For further details refer to the individual BASIX Certificate(s) and Efficient Living's inclusions summary respectively.

This report is based on the floor plans, elevations and sections prepared by PTW Architects received on 28/02/2025.

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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 60% 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 Hero v4.1 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 60% 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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## Materials

The proposed development has achieved a Materials score of -93.

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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 Inclusions

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### Glazing Doors / Windows

Glazed windows and doors:

#### Group A – awning

U-value: 4.80 (equal to or lower than) SHGC: 0.51 (±5%)

#### Group B – sliding doors + fixed glazing

U-value: 4.80 (equal to or lower than) SHGC: 0.59 (±5%)

#### Upgrade 1 as per thermal comfort table:

##### Group A – awning

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

##### Group B – sliding doors + fixed glazing

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

#### Upgrade 2 as per thermal comfort table:

##### Group A – awning

U-value: 2.6 (equal to or lower than) SHGC: 0.50 (±10%)

##### Group B – sliding doors + fixed glazing

U-value: 2.6 (equal to or lower than) SHGC: 0.53 (±10%)

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

Note: BASIX Thermal Comfort Protocol Table 1 SHGC value of the unit should be within the range specified on the Assessor Certificate.

## Window Frame Colour

Monument SA < 0.73

## Window Restrictors

Window restrictors are modelled in bedrooms to all windows with a sill height under 1.7m and a fall height over 2m from the floor level of the room.



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### Roof and Ceiling

Concrete roof, no insulation above

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

Plasterboard ceiling with R4.0 insulation (insulation only value) to soffit of concrete where roof or terrace is over

Plasterboard ceiling, no insulation where neighbouring units are above

Upgrades applied as per thermal comfort upgrades table:

Plasterboard ceiling with R4.0 insulation (insulation only value) where balconies are above

### External Colour

Medium ( $0.475 < SA < 0.7$ )

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### Ceiling Penetrations

Sealed LED downlights at a maximum of one every 5.0m<sup>2</sup>, 100mm diameter with 50mm clearance

Sealed Exhaust fans to Kitchen, laundry and bathroom, 250mm diameter with 50mm clearance

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### External Wall

BR Brick veneer (metal) stud wall with R2.5 insulation (insulation only value)

AL/CF Lightweight cladding FC (CF) or metal (AL) on 75mm Hebel Power Panel (metal) stud wall with a minimum R2.5 insulation (insulation only value)

### External Colour

Medium ( $0.475 < SA < 0.7$ )

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### Inter-tenancy Walls

75mm Hebel Power Panel to walls adjacent to neighbours, no insulation required

75mm Hebel Power Panel to walls adjacent to common corridor with R1.0 insulation (insulation value only)

Minimum 150mm Concrete walls with plasterboard lining and R1.0 insulation (insulation value only) adjacent to carpark

Minimum 150mm concrete with furring channel and plasterboard lining to all walls adjacent to lift shafts and fire stairs.  
No insulation required

### Walls within Dwellings

Plasterboard on studs – no insulation

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### Floors

Minimum 200mm Concrete with a minimum R1.5 insulation (insulation only value) required where carpark is below

Minimum 200mm Concrete with a minimum R1.0 insulation (insulation only value) required where part open subfloor is below

Concrete between levels, no insulation required

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### Floor Coverings

Tiles to bathrooms and laundry, timber elsewhere.

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### External Shading

Eaves and screens as per stamped documentation

Canopies and fixed awning modelled as solid horizontal shading

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### BASIX water inclusions

Score 40/40

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### Fixtures within units

Showerheads: 4 star (>6L but ≤7.5L/min)

Toilets: 4 star

Kitchen taps: 5 star

Bathroom vanity taps: 5 star

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### Fixtures within common areas

Showerheads: 4 star (>6L but ≤7.5L/min)

Toilets: 4 star

Taps: 5 star

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### Appliances within units

Dishwashers: 4.0 stars

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### Central rainwater storage

Tank size: 1,000L

Collecting from 450m<sup>2</sup> roof area

Connected to outdoor taps for irrigation of 1,160m<sup>2</sup> Ground level common area landscaping and 1 car wash bay

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### Fire sprinkler test water

Two sprinkler systems nominated in BASIX: one for basement levels, one for apartment levels.

Both systems: Fire sprinkler test water must be contained in a closed loop system (tank required)

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## BASIX Energy Inclusions

Score 60/60

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### Hot water system

Central electric heat pump – air sourced with unit efficiency of  $2.5 < COP \leq 3.0$  and R1.0 (~38mm) insulation to ring main and supply risers

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### Lift motors

All lifts to have gearless traction with VVVF motor with lift load capacity of  $\geq 1,001\text{kg}$  to  $\leq 1,500\text{kg}$

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### Appliances and other efficiency measures within units

Gas cooktop & electric oven

Dishwashers: 3.5 star

Clothes dryers: 7.0 star

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### Heating and cooling within units

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

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

A minimum efficiency EER 3.0 – 3.5 is required for heating

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### Artificial lighting within units

Minimum of 80% of all light fittings within each room are to have dedicated LED fixtures installed

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### Ventilation within units

Bathroom: individual fan, ducted to roof or façade – interlocked to light with timer off

Laundry: individual fan, ducted to roof or façade – interlocked to light

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

Garbage rooms – Exhaust air, running continuously

Plant and service rooms – Supply and exhaust air, thermostatically controlled

Indoor Bicycle Parking – Supply only, time clock or BMS controlled

Outdoor Bicycle Parking – Naturally ventilated

Gym – Air conditioning, time clock or BMS controlled

Communal WC / Change rooms – Supply and Exhaust air, time clock or BMS controlled

Sauna – Supply only, time clock or BMS controlled



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Building Management room – Supply only, time clock or BMS controlled

Lobbies and hallways – Supply only, time clock or BMS controlled

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

Lighting control system / BMS : No

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

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

Garbage rooms – Light emitting diodes (LEDs) with motion sensor

Plant and service rooms – Light emitting diodes (LEDs) with manual on / manual off switch

Indoor Bicycle Parking – Light emitting diodes (LEDs) with motion sensor

Outdoor Bicycle Parking – Light emitting diodes (LEDs) with motion sensor

Gym – Light emitting diodes (LEDs) with time clocks

Communal WC / Change rooms – Light emitting diodes (LEDs) with manual on / manual off switch

Sauna – Light emitting diodes (LEDs) with time clocks

Building Management room – Light emitting diodes (LEDs) with manual on / manual off switch

Lobbies and hallways – Light emitting diodes (LEDs) with time clock and motion sensors

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#### **Alternative Energy**

No BASIX requirement

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#### **Sauna**

Electric resistance heating source, manual on / timer off

Certificate #HR-TZ142Y-01

Accreditation # HERA10213

Thermal performance specifications

Unit Number	Number of Bedrooms	Floor area (m <sup>2</sup> )		Predicted loads (MJ/m <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
101	2	94.3	0	29.9	5.7	6.3	
102	4	192.1	0	25.2	8.6	6.5	Glazing upgrade 1
103	4	198.3	0	23	11.4	6.4	
104	2	85.3	0	7.3	6.6	8.8	
105	2	84.1	0	5.4	17.7	7.7	
106	3	98.5	0	5.3	7.8	8.9	
107	3	122.1	0	24.3	10.6	6.4	Glazing upgrade 1
108	3	117.9	0	20.8	11	6.8	
201	3	104.7	0	19.1	5.9	7.5	
202	2	87.2	0	20.3	15.5	6.3	
203	2	96	0	11.7	18	7	Glazing upgrade 1
204	2	77.6	0	2.3	8.5	9.2	
205	2	84.1	0	2.1	19.4	7.9	
206	3	101.3	0	4.3	7.6	9	
207	2	94.7	0	21.7	6.5	7.2	
208	3	115.8	0	25.6	6.5	6.7	Glazing upgrade 1
209	3	99.3	0	15.2	15.3	6.9	Glazing upgrade 1
210	3	133	0	22.7	12.7	6.3	
211	1	61.1	0	24.8	10.5	6.3	Glazing upgrade 1
212	1	61	0	20.6	11.5	6.7	Glazing upgrade 1
213	3	123.7	0	20.4	11.5	6.8	
214	2	77.4	0	15.2	11.5	7.3	
215	3	103.8	0	24	11.6	6.3	
301	3	104.7	0	25.1	5.6	6.9	
302	2	87.2	0	16.4	12.8	7.1	Glazing upgrade 1
303	2	96	0	15.4	17.7	6.6	Glazing upgrade 1
304	2	85.9	0	1.7	10.7	8.9	
305	2	84.1	0	3.9	14.9	8.2	
306	3	101.3	0	6.7	7.2	8.8	
307	2	94.7	0	23.5	5.5	7.1	
308	3	115.8	0	22.5	7.1	7	
309	3	99.3	0	17.7	11.7	7.1	Glazing upgrade 1
310	3	133	0	15.8	15.9	6.8	Glazing upgrade 1
311	1	61.1	0	24.5	9.1	6.5	Glazing upgrade 1
312	1	61	0	27.5	9.4	6.1	Glazing upgrade 1

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Unit Number	Number of Bedrooms	Floor area (m <sup>2</sup> )		Predicted loads (MJ/m <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
313	1	61.1	0	19.3	7.9	7.3	Glazing upgrade 2
314	2	75.2	0	20.2	10	6.9	Glazing upgrade 1
315	2	77.4	0	18.9	9.6	7.1	
316	3	103.9	0	27.7	7.9	6.3	
401	2	78.9	0	29.9	6.4	6.2	
402	3	107.2	0	17.7	14	6.8	
403	4	151.7	0	2.5	11.4	8.8	
404	2	84.2	0	0.9	18.7	8.1	Glazing upgrade 2
405	3	101.5	0	6.7	6.9	8.8	
406	2	94.7	0	17.4	6.4	7.6	
407	3	115.8	0	23.2	7.1	6.9	
408	3	99.3	0	18.7	11.5	6.9	Glazing upgrade 1
409	3	133	0	15.7	21.1	6.2	Glazing upgrade 1
410	1	61.1	0	28.3	9.6	6	Glazing upgrade1
411	1	61	0	26.5	10.2	6.2	Glazing upgrade1
412	1	61.1	0	18.8	8.2	7.3	Glazing upgrade 2
413	2	75.2	0	20	9.8	7	Glazing upgrade 1
414	2	77.4	0	19.4	10.1	7.1	
415	3	103.8	0	21.9	7.6	7	Glazing upgrade 1
501	2	78.9	0	30.5	6.4	6.1	
502	3	107.2	0	19.2	14.3	6.6	
503	4	151.7	0	5	14.8	8.1	
504	2	84.3	0	2	20.9	7.8	Glazing upgrade 1
505	3	101.2	0	6.8	9.7	8.4	
506	2	94.7	0	20.4	5.8	7.4	
507	3	115.8	0	23.9	6.7	6.9	
508	3	99.3	0	19.2	11.7	6.9	Glazing upgrade 1
509	3	133	0	11.3	20	6.8	Glazing upgrade 2
510	1	61.1	0	23.4	8.5	6.8	Glazing upgrade 2
511	1	61	0	27.2	10.3	6.1	Glazing upgrade 1
512	1	61.1	0	19	8.1	7.3	Glazing upgrade 2
513	3	105.1	0	21.5	9.8	6.8	Glazing upgrade 1
514	4	126.2	0	22.1	11	6.6	Glazing upgrade 1
601	2	294.6	0	20.8	9.2	6.9	
602	2	84.1	0	4.5	14.1	8.2	

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Thermal performance specifications

Unit Number	Number of Bedrooms	Floor area (m <sup>2</sup> )		Predicted loads (MJ/m <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
603	3	102.1	0	7	6.9	8.8	
604	2	95.3	0	28	6.4	6.4	
605	3	115.6	0	25.6	6.7	6.7	
606	3	99.3	0	17.5	12.7	6.9	Glazing upgrade 1
607	3	133.2	0	22.2	13.9	6.2	
608	3	121.9	0	27.3	7.5	6.4	
609	1	61.1	0	15.4	9.1	7.6	Glazing upgrade 2
610	2	83.5	0	18.9	9.2	7.2	Glazing upgrade 2
611	2	82.9	0	21.1	8.3	7.1	Glazing upgrade 1
701	4	148.8	0	21.8	9.2	6.9	Glazing upgrade 2
702	3	122.7	0	16.2	18.2	6.4	
703	2	84.2	0	4.7	14.6	8.2	
704	3	102.1	0	7.3	6.6	8.8	
705	2	95.3	0	28.1	6.4	6.4	
706	3	115.6	0	25.9	6.7	6.7	
707	3	99.3	0	17.9	12	7	Glazing upgrade 1
708	3	133.2	0	20.6	14.4	6.4	
709	3	121.9	0	23.2	7.7	6.9	
710	1	61.1	0	12.4	9.3	7.9	Glazing upgrade 2
711	2	83.5	0	18.7	12.1	6.9	Glazing upgrade 2
712	2	82.9	0	21.7	10.3	6.8	Glazing upgrade 1
801	3	110.5	0	25.4	12	6.1	Glazing upgrade 2
802	3	135.5	0	11.7	16.1	7.2	
803	4	136.7	0	5.6	8	8.8	
804	2	95.3	0	20.8	5.3	7.4	Glazing upgrade 1
805	3	115.6	0	19.3	6.2	7.4	Glazing upgrade 1
806	3	99.3	0	12.8	10	7.8	Glazing upgrade 2
807	3	133.2	0	20.6	15.1	6.3	
808	3	121.9	0	12.9	7.5	8.1	Glazing upgrade 1
809	1	61.1	0	11.7	10	7.9	Glazing upgrade 2
810	2	83.5	0	17.7	12	7	Glazing upgrade 2
811	2	82.9	0	21.1	9.1	6.9	Glazing upgrade 2, R4.0 to ceiling
901	3	115.9	0	12.2	18.2	6.9	
902	2	95.3	0	11.6	14.7	7.4	
903	2	87.4	0	11.8	11.3	7.7	

Certificate #HR-TZ142Y-01

Accreditation # HERA10213

Thermal performance specifications

Unit Number	Number of Bedrooms	Floor area (m <sup>2</sup> )		Predicted loads (MJ/m <sup>2</sup> /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heat	Cool (Sens & Lat)		
904	3	121.9	0	14.3	9.6	7.6	
905	4	161	0	13	10.8	7.7	Glazing upgrade 1
906	3	99.3	0	26.1	11.8	6	Glazing upgrade 2
907	3	126.8	0	23.4	11.8	6.4	Glazing upgrade 2
1001	5	255.6	0	20.3	10.5	6.9	
1002	5	275.7	0	18	10.8	7.1	

# Nationwide House Energy Rating Scheme® Class 2 Summary

## NatHERS® Certificate No. #HR-TZ142Y-01

Generated on 07 Oct 2025 using Hero 4.1

### Property

**Address** 12-16 Bent Street, Lindfield, NSW, 2070  
**Lot/DP** 1//DP935936  
**NatHERS climate zone** 56 - Mascot AMO



### Accredited assessor

**Name** Haylea Edwards  
**Business name** Efficient Living Pty Ltd  
**Email** haylea@efficientliving.com.au  
**Phone** +61 9970 6181  
**Accreditation No.** 10213  
**Assessor Accrediting Organisation** HERA

### Verification

To verify this certificate, scan the QR code or visit <http://www.hero-software.com.au/pdf/HR-TZ142Y-01>.  
When using either link, ensure you are visiting <http://www.hero-software.com.au>



### National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J3D3 and J3D15 of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at [www.abcb.gov.au](http://www.abcb.gov.au).

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

### Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m <sup>2</sup> .yr)	Cooling load (load limit) (MJ/m <sup>2</sup> .yr)	Total load (MJ/m <sup>2</sup> .yr)	Star Rating	Whole of Home Rating
<a href="#">HR-B2ISW7-01</a>	1001	20.3 (34)	10.5 (21)	30.7	6.9	n/a
<a href="#">HR-PS7BBB-01</a>	1002	18.0 (34)	10.8 (21)	28.8	7.1	n/a
<a href="#">HR-GVF07E-01</a>	101	29.9 (34)	5.7 (21)	35.5	6.3	n/a

## Thermal performance Star rating



**NATIONWIDE HOUSE**  
ENERGY RATING SCHEME®

The rating above is the average of all dwellings in this summary.

For more information on your dwelling's rating see:  
[www.nathers.gov.au](http://www.nathers.gov.au)

## NCC heating and cooling maximum loads MJ/m<sup>2</sup>.yr

Limits taken from ABCB Standard 2022

	Heating	Cooling
<b>Average load</b>	17.6	10.7
<b>Maximum load</b>	30.5	21.1
<b>Average limit</b>	28.1	20.0
<b>Maximum limit</b>	34.4	21.4

## Whole of Home performance rating

No Whole of Home performance rating generated for this certificate or not completed for all dwellings.



## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m <sup>2</sup> .yr)	Cooling load (load limit) (MJ/m <sup>2</sup> .yr)	Total load (MJ/m <sup>2</sup> .yr)	Star Rating	Whole of Home Rating
<a href="#">HR-L3TI31-01</a>	102	25.2 (34)	8.6 (21)	33.8	6.5	n/a
<a href="#">HR-TY8334-01</a>	103	23.0 (34)	11.4 (21)	34.4	6.4	n/a
<a href="#">HR-7YKZ65-01</a>	104	7.3 (34)	6.6 (21)	13.9	8.8	n/a
<a href="#">HR-C9VR0C-01</a>	105	5.4 (34)	17.7 (21)	23.1	7.7	n/a
<a href="#">HR-BH5C3U-01</a>	106	5.3 (34)	7.8 (21)	13.1	8.9	n/a
<a href="#">HR-8KC44Y-01</a>	107	24.3 (34)	10.6 (21)	34.9	6.4	n/a
<a href="#">HR-X4NEL7-01</a>	108	20.8 (34)	11.0 (21)	31.8	6.8	n/a
<a href="#">HR-EQ39FR-01</a>	201	19.1 (34)	5.9 (21)	25.0	7.5	n/a
<a href="#">HR-G7ZBJJ-01</a>	202	20.3 (34)	15.5 (21)	35.7	6.3	n/a
<a href="#">HR-B4BG4B-01</a>	203	11.7 (34)	18.0 (21)	29.7	7.0	n/a
<a href="#">HR-DGF3S1-01</a>	204	2.3 (34)	8.5 (21)	10.7	9.2	n/a
<a href="#">HR-2LM4XB-01</a>	205	2.1 (34)	19.4 (21)	21.5	7.9	n/a
<a href="#">HR-4TGXVL-01</a>	206	4.3 (34)	7.6 (21)	11.9	9.0	n/a
<a href="#">HR-7RTUJY-01</a>	207	21.7 (34)	6.5 (21)	28.2	7.2	n/a
<a href="#">HR-ZQPPGK-01</a>	208	25.6 (34)	6.5 (21)	32.1	6.7	n/a
<a href="#">HR-GD78BR-01</a>	209	15.2 (34)	15.3 (21)	30.5	6.9	n/a
<a href="#">HR-LKZ7C0-01</a>	210	22.7 (34)	12.7 (21)	35.4	6.3	n/a
<a href="#">HR-D9O1I0-01</a>	211	24.8 (34)	10.5 (21)	35.3	6.3	n/a
<a href="#">HR-3Z0Y1G-01</a>	212	20.6 (34)	11.5 (21)	32.1	6.7	n/a
<a href="#">HR-NBR5QZ-01</a>	213	20.4 (34)	11.5 (21)	31.9	6.8	n/a
<a href="#">HR-9PX07P-01</a>	214	15.2 (34)	11.5 (21)	26.7	7.3	n/a
<a href="#">HR-6YJ0U4-01</a>	215	24.0 (34)	11.6 (21)	35.6	6.3	n/a
<a href="#">HR-1KJJS5-01</a>	301	25.1 (34)	5.6 (21)	30.7	6.9	n/a
<a href="#">HR-ZSM3EN-01</a>	302	16.4 (34)	12.8 (21)	29.2	7.1	n/a
<a href="#">HR-8P7VBB-01</a>	303	15.4 (34)	17.7 (21)	33.1	6.6	n/a
<a href="#">HR-UQ40AN-01</a>	304	1.7 (34)	10.7 (21)	12.5	8.9	n/a
<a href="#">HR-TV16H9-01</a>	305	3.9 (34)	14.9 (21)	18.8	8.2	n/a
<a href="#">HR-5WRS4H-01</a>	306	6.7 (34)	7.2 (21)	13.8	8.8	n/a
<a href="#">HR-Y1SWW1-01</a>	307	23.5 (34)	5.5 (21)	29.0	7.1	n/a



## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m <sup>2</sup> .yr)	Cooling load (load limit) (MJ/m <sup>2</sup> .yr)	Total load (MJ/m <sup>2</sup> .yr)	Star Rating	Whole of Home Rating
<a href="#">HR-AKVQAR-01</a>	308	22.5 (34)	7.1 (21)	29.6	7.0	n/a
<a href="#">HR-ZZ4L88-01</a>	309	17.7 (34)	11.7 (21)	29.4	7.1	n/a
<a href="#">HR-Y2UGF7-01</a>	310	15.8 (34)	15.9 (21)	31.7	6.8	n/a
<a href="#">HR-HZO01X-01</a>	311	24.5 (34)	9.1 (21)	33.6	6.5	n/a
<a href="#">HR-5BBSUA-01</a>	312	27.5 (34)	9.4 (21)	36.9	6.1	n/a
<a href="#">HR-FXZ3KE-01</a>	313	19.3 (34)	7.9 (21)	27.2	7.3	n/a
<a href="#">HR-KYD3S9-01</a>	314	20.2 (34)	10.0 (21)	30.2	6.9	n/a
<a href="#">HR-GEW4LP-01</a>	315	18.9 (34)	9.6 (21)	28.5	7.1	n/a
<a href="#">HR-VA1WTV-01</a>	316	27.7 (34)	7.9 (21)	35.6	6.3	n/a
<a href="#">HR-5RBOM1-01</a>	401	29.9 (34)	6.4 (21)	36.4	6.2	n/a
<a href="#">HR-VG98RO-01</a>	402	17.7 (34)	14.0 (21)	31.7	6.8	n/a
<a href="#">HR-9ZR6HN-01</a>	403	2.5 (34)	11.4 (21)	14.0	8.8	n/a
<a href="#">HR-4EN3Y2-01</a>	404	0.9 (34)	18.7 (21)	19.6	8.1	n/a
<a href="#">HR-44HBQL-01</a>	405	6.7 (34)	6.9 (21)	13.6	8.8	n/a
<a href="#">HR-SJGXMx-01</a>	406	17.4 (34)	6.4 (21)	23.8	7.6	n/a
<a href="#">HR-LB2QZ5-01</a>	407	23.2 (34)	7.1 (21)	30.3	6.9	n/a
<a href="#">HR-6193XJ-01</a>	408	18.7 (34)	11.5 (21)	30.1	6.9	n/a
<a href="#">HR-SE99G6-01</a>	409	15.7 (34)	21.1 (21)	36.7	6.2	n/a
<a href="#">HR-X2OXTX-01</a>	410	28.3 (34)	9.6 (21)	37.9	6.0	n/a
<a href="#">HR-MFOOZZ-01</a>	411	26.5 (34)	10.2 (21)	36.7	6.2	n/a
<a href="#">HR-WJ21NM-01</a>	412	18.8 (34)	8.2 (21)	27.0	7.3	n/a
<a href="#">HR-HL0ZZ4-01</a>	413	20.0 (34)	9.8 (21)	29.8	7.0	n/a
<a href="#">HR-TRHE6D-01</a>	414	19.4 (34)	10.1 (21)	29.5	7.1	n/a
<a href="#">HR-L20ZCY-01</a>	415	21.9 (34)	7.6 (21)	29.5	7.0	n/a
<a href="#">HR-HJC2XN-01</a>	501	30.5 (34)	6.4 (21)	36.9	6.1	n/a
<a href="#">HR-VQSYAT-01</a>	502	19.2 (34)	14.3 (21)	33.5	6.6	n/a
<a href="#">HR-0SGMCX-01</a>	503	5.0 (34)	14.8 (21)	19.8	8.1	n/a
<a href="#">HR-XQ2ZLA-01</a>	504	2.0 (34)	20.9 (21)	22.9	7.8	n/a
<a href="#">HR-67PU1F-01</a>	505	6.8 (34)	9.7 (21)	16.5	8.4	n/a



## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m <sup>2</sup> .yr)	Cooling load (load limit) (MJ/m <sup>2</sup> .yr)	Total load (MJ/m <sup>2</sup> .yr)	Star Rating	Whole of Home Rating
<a href="#">HR-8BAJY3-01</a>	506	20.4 (34)	5.8 (21)	26.2	7.4	n/a
<a href="#">HR-HFKHTV-01</a>	507	23.9 (34)	6.7 (21)	30.6	6.9	n/a
<a href="#">HR-N32RAN-01</a>	508	19.2 (34)	11.7 (21)	30.9	6.9	n/a
<a href="#">HR-RM7FVF-01</a>	509	11.3 (34)	20.0 (21)	31.3	6.8	n/a
<a href="#">HR-QPIBHH-01</a>	510	23.4 (34)	8.5 (21)	31.8	6.8	n/a
<a href="#">HR-YTZXUD-01</a>	511	27.2 (34)	10.3 (21)	37.5	6.1	n/a
<a href="#">HR-EZ3TNX-01</a>	512	19.0 (34)	8.1 (21)	27.1	7.3	n/a
<a href="#">HR-QWAHFO-01</a>	513	21.5 (34)	9.8 (21)	31.3	6.8	n/a
<a href="#">HR-P59HGS-01</a>	514	22.1 (34)	11.0 (21)	33.1	6.6	n/a
<a href="#">HR-TG8AGV-01</a>	601	20.8 (34)	9.2 (21)	30.0	6.9	n/a
<a href="#">HR-SKSRS4-01</a>	602	4.5 (34)	14.1 (21)	18.6	8.2	n/a
<a href="#">HR-2Y2SIU-01</a>	603	7.0 (34)	6.9 (21)	13.9	8.8	n/a
<a href="#">HR-0FQE7F-01</a>	604	28.0 (34)	6.4 (21)	34.4	6.4	n/a
<a href="#">HR-0IEWN8-01</a>	605	25.6 (34)	6.7 (21)	32.3	6.7	n/a
<a href="#">HR-K8U5JG-01</a>	606	17.5 (34)	12.7 (21)	30.2	6.9	n/a
<a href="#">HR-AC0B8Y-01</a>	607	22.2 (34)	13.9 (21)	36.1	6.2	n/a
<a href="#">HR-Z1176I-01</a>	608	27.3 (34)	7.5 (21)	34.8	6.4	n/a
<a href="#">HR-YN8PIE-01</a>	609	15.4 (34)	9.1 (21)	24.4	7.6	n/a
<a href="#">HR-U94W5G-01</a>	610	18.9 (34)	9.2 (21)	28.1	7.2	n/a
<a href="#">HR-E7IPXJ-01</a>	611	21.1 (34)	8.3 (21)	29.5	7.1	n/a
<a href="#">HR-E24LPC-01</a>	701	21.8 (34)	9.2 (21)	31.0	6.9	n/a
<a href="#">HR-Y8T3V1-01</a>	702	16.2 (34)	18.2 (21)	34.4	6.4	n/a
<a href="#">HR-O6A2QA-01</a>	703	4.7 (34)	14.6 (21)	19.3	8.2	n/a
<a href="#">HR-B2U555-01</a>	704	7.3 (34)	6.6 (21)	13.9	8.8	n/a
<a href="#">HR-L5K48H-01</a>	705	28.1 (34)	6.4 (21)	34.5	6.4	n/a
<a href="#">HR-AHP7RM-01</a>	706	25.9 (34)	6.7 (21)	32.6	6.7	n/a
<a href="#">HR-VG4P51-01</a>	707	17.9 (34)	12.0 (21)	29.9	7.0	n/a
<a href="#">HR-6E0RDZ-01</a>	708	20.6 (34)	14.4 (21)	34.9	6.4	n/a
<a href="#">HR-QUHIU5-01</a>	709	23.2 (34)	7.7 (21)	30.9	6.9	n/a

## Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m <sup>2</sup> .yr)	Cooling load (load limit) (MJ/m <sup>2</sup> .yr)	Total load (MJ/m <sup>2</sup> .yr)	Star Rating	Whole of Home Rating
<a href="#">HR-ULG55J-01</a>	710	12.4 (34)	9.3 (21)	21.7	7.9	n/a
<a href="#">HR-AJ3NRZ-01</a>	711	18.7 (34)	12.1 (21)	30.8	6.9	n/a
<a href="#">HR-ODKIOD-01</a>	712	21.7 (34)	10.3 (21)	32.0	6.8	n/a
<a href="#">HR-U0WUPG-01</a>	801	25.4 (34)	12.0 (21)	37.4	6.1	n/a
<a href="#">HR-0NMDLW-01</a>	802	11.7 (34)	16.1 (21)	27.8	7.2	n/a
<a href="#">HR-W6YAWF-01</a>	803	5.6 (34)	8.0 (21)	13.7	8.8	n/a
<a href="#">HR-CB08EU-01</a>	804	20.8 (34)	5.3 (21)	26.2	7.4	n/a
<a href="#">HR-6V0OB6-01</a>	805	19.3 (34)	6.2 (21)	25.5	7.4	n/a
<a href="#">HR-MXW3S9-01</a>	806	12.8 (34)	10.0 (21)	22.8	7.8	n/a
<a href="#">HR-3U2SKD-01</a>	807	20.6 (34)	15.1 (21)	35.7	6.3	n/a
<a href="#">HR-7PP8MA-01</a>	808	12.9 (34)	7.5 (21)	20.4	8.1	n/a
<a href="#">HR-LU5DFP-01</a>	809	11.7 (34)	10.0 (21)	21.7	7.9	n/a
<a href="#">HR-K0B8VM-01</a>	810	17.7 (34)	12.0 (21)	29.6	7.0	n/a
<a href="#">HR-IAIL97-01</a>	811	21.1 (34)	9.1 (21)	30.1	6.9	n/a
<a href="#">HR-UIJ636-01</a>	901	12.2 (34)	18.2 (21)	30.4	6.9	n/a
<a href="#">HR-ANS1O9-01</a>	902	11.6 (34)	14.7 (21)	26.3	7.4	n/a
<a href="#">HR-JWQTA6-01</a>	903	11.8 (34)	11.3 (21)	23.1	7.7	n/a
<a href="#">HR-75YWK5-01</a>	904	14.3 (34)	9.6 (21)	23.8	7.6	n/a
<a href="#">HR-BQTWKO-01</a>	905	13.0 (34)	10.8 (21)	23.8	7.7	n/a
<a href="#">HR-3V00DU-01</a>	906	26.1 (34)	11.8 (21)	37.8	6.0	n/a
<a href="#">HR-QANNGW-01</a>	907	23.4 (34)	11.8 (21)	35.2	6.4	n/a
Averages	111x (Total)	17.6	10.7	28.3	7.2	n/a
Maximum Loads and Minimum Ratings		30.5	21.1	37.9	6.0	n/a

## Explanatory notes

### About the ratings

The thermal performance star rating in this Certificate is the average rating of all NCC Class 2 dwellings in an apartment block. The Whole of Home performance rating in this Certificate is the lowest rating for the apartment block. Individual unit ratings are listed in the 'Summary of all dwellings' section of this Certificate.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the energy loads and societal cost. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy production and storage to estimate the home's societal cost. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

### Accredited Assessors

For high quality NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and are not quality assured.

Licensed assessors in the Australian Capital Territory (ACT) can produce assessments for regulatory purposes only, using endorsed software, as listed on the ACT licensing register.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

### Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in certificates is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy use, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

Not all assumptions made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

# BASIX™ Certificate

Building Sustainability Index

[www.planningportal.nsw.gov.au/development-and-assessment/basix](http://www.planningportal.nsw.gov.au/development-and-assessment/basix)

## Multi Dwelling

Certificate number: 1787853M\_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 10/09/2020 published by the Department. This document is available at [www.planningportal.nsw.gov.au/definitions](http://www.planningportal.nsw.gov.au/definitions)

This certificate is a revision of certificate number 1787853M\_02 submitted to the consent authority or certifier on 30 July 2025 with application SSD-78156462.

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

Secretary

Date of issue: Tuesday, 07 October 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate HR-TZ142Y-01.

Project summary		
Project name	14-16 Bent Street, Lindfield_03	
Street address	14 BENT STREET LINDFIELD 2070	
Local Government Area	KU-RING-GAI	
Plan type and plan number	Deposited Plan 935936	
Lot No.	1	
Section no.	-	
No. of residential flat buildings	1	
Residential flat buildings: no. of dwellings	111	
Multi-dwelling housing: no. of dwellings	0	
No. of single dwelling houses	0	
Project score		
Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 60	Target 60
Materials	✓ -93	Target n/a

Certificate Prepared by
Name / Company Name: Efficient Living Pty Ltd
ABN (if applicable): 82116346082

# Description of project

## Project address

Project name	14-16 Bent Street, Lindfield_03
Street address	14 BENT STREET LINDFIELD 2070
Local Government Area	KU-RING-GAI
Plan type and plan number	Deposited Plan 935936
Lot No.	1
Section no.	-

## Project type

No. of residential flat buildings	1
Residential flat buildings: no. of dwellings	111
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0

## Site details

Site area (m <sup>2</sup> )	4324
Roof area (m <sup>2</sup> )	1460
Non-residential floor area (m <sup>2</sup> )	0
Residential car spaces	145
Non-residential car spaces	0

## Common area landscape

Common area lawn (m <sup>2</sup> )	0
Common area garden (m <sup>2</sup> )	1345
Area of indigenous or low water use species (m <sup>2</sup> )	0

## Assessor details and thermal loads

Assessor number	HERA10213
Certificate number	HR-TZ142Y-01
Climate zone	56

## Project score

Water	✔ 40	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 60	Target 60
Materials	✔ -93	Target n/a

## Description of project

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

### Residential flat buildings - Building1, 111 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> )
1001	4+	255.6	0	0	0
103	4+	198.3	0	0	0
107	3	122.1	0	0	0
203	2	96	0	0	0
207	2	94.7	0	0	0
211	1	61.1	0	0	0
215	3	103.8	0	0	0
304	2	85.9	0	0	0
308	3	115.8	0	0	0
312	1	61	0	0	0
316	3	103.9	0	0	0
404	2	84.2	0	0	0
408	3	99.3	0	0	0
412	1	61.1	0	0	0
501	2	78.9	0	0	0
505	3	101.2	0	0	0
509	3	133	0	0	0
513	3	105.1	0	0	0
603	3	102.1	0	0	0
607	3	133.2	0	0	0
611	2	82.9	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> )
1002	4+	275.7	0	0	0
104	2	85.3	0	0	0
108	3	117.9	0	0	0
204	2	77.6	0	0	0
208	3	115.8	0	0	0
212	1	61	0	0	0
301	3	104.7	0	0	0
305	2	84.1	0	0	0
309	3	99.3	0	0	0
313	1	61.1	0	0	0
401	2	78.9	0	0	0
405	3	101.5	0	0	0
409	3	133	0	0	0
413	2	75.2	0	0	0
502	3	107.2	0	0	0
506	2	94.7	0	0	0
510	1	61.1	0	0	0
514	4+	126.2	0	0	0
604	2	95.3	0	0	0
608	3	121.9	0	0	0
701	4+	148.8	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> )
101	2	94.3	0	0	0
105	2	84.1	0	0	0
201	3	104.7	0	0	0
205	2	84.1	0	0	0
209	3	99.3	0	0	0
213	3	123.7	0	0	0
302	2	87.2	0	0	0
306	3	101.3	0	0	0
310	3	133	0	0	0
314	2	75.2	0	0	0
402	3	107.2	0	0	0
406	2	94.7	0	0	0
410	1	61.1	0	0	0
414	2	77.4	0	0	0
503	4+	151.7	0	0	0
507	3	115.8	0	0	0
511	1	61	0	0	0
601	2	294.6	0	0	0
605	3	115.6	0	0	0
609	1	61.1	0	0	0
702	3	122.7	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> )
102	4+	192.1	0	0	0
106	3	98.5	0	0	0
202	2	87.2	0	0	0
206	3	101.3	0	0	0
210	3	133	0	0	0
214	2	77.4	0	0	0
303	2	96	0	0	0
307	2	94.7	0	0	0
311	1	61.1	0	0	0
315	2	77.4	0	0	0
403	4+	151.7	0	0	0
407	3	115.8	0	0	0
411	1	61	0	0	0
415	3	103.8	0	0	0
504	2	84.3	0	0	0
508	3	99.3	0	0	0
512	1	61.1	0	0	0
602	2	84.1	0	0	0
606	3	99.3	0	0	0
610	2	83.5	0	0	0
703	2	84.2	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> )
704	3	102.1	0	0	0
708	3	133.2	0	0	0
712	2	82.9	0	0	0
804	2	95.3	0	0	0
808	3	121.9	0	0	0
901	3	115.9	0	0	0
905	4+	161	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> )
705	2	95.3	0	0	0
709	3	121.9	0	0	0
801	3	110.5	0	0	0
805	3	115.6	0	0	0
809	1	61.1	0	0	0
902	2	95.3	0	0	0
906	3	99.3	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> )
706	3	115.6	0	0	0
710	1	61.1	0	0	0
802	3	135.5	0	0	0
806	3	99.3	0	0	0
810	2	83.5	0	0	0
903	2	87.4	0	0	0
907	3	126.8	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> )
707	3	99.3	0	0	0
711	2	83.5	0	0	0
803	4+	136.7	0	0	0
807	3	133.2	0	0	0
811	2	82.9	0	0	0
904	3	121.9	0	0	0

## Description of project

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

### Common areas of unit building - Building1

Common area	Floor area (m <sup>2</sup> )
Lift bank (No. 1)	-
Basement	8165
Sauna	22
Outdoor Bicycle Parking	110

Common area	Floor area (m <sup>2</sup> )
Lift bank (No. 2)	-
Plant/Service Room	188
Communal Bathroom/Change room	75
Building Management	31

Common area	Floor area (m <sup>2</sup> )
Gym area	96
Garbage room	243
Indoor Bicycle Parking	159
Lobbies and hallways	1055

# Schedule of BASIX commitments

## 1. Commitments for Residential flat buildings - Building1

### (a) Buildings

(i) Materials

### (b) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance

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

(i) Water

(ii) Energy

## 2. Commitments for multi-dwelling housing

### (a) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance and Materials

## 3. Commitments for single dwelling houses

### (a) Dwellings

(i) Water

(ii) Energy

(iii) Thermal Performance and Materials

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

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

(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 - Building1

#### (a) Buildings

(i) Materials	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) 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 "Floor types", "External wall types", "Internal wall types", "Ceiling and roof types", "Frames" and "Glazing" tables below.			✓
(b) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all specifications included in the tables below.		✓	
(c) The applicant must construct the floors, walls, roof, ceiling and roof, windows, glazed doors and skylights of the development in accordance with the specifications listed in the tables below. In the case of glazing, a 5% variance from the area values listed in the "Frames" and "Glazing" tables is permitted.	✓	✓	✓
(d) The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the below tables.			✓

#### Floor types

Floor type	Area (m2)	Insulation	Low emissions option
concrete slab on ground, frame:	112	-	none
suspended floor above open subfloor, frame: suspended concrete slab	1656	-	-
suspended floor above garage, frame: suspended concrete slab	7450	-	-
garage floor, frame: concrete slab on ground	2263	-	none
floors above habitable rooms, frame: suspended concrete slab	10956	-	-

#### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	AAC veneer, frame: light steel frame	6278	-	-

### External wall types

External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 2	brick veneer,frame:light steel frame	562	-	-
External wall type 3	off form concrete,frame:no frame	870	none	-

### Internal wall types

Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	9307	-
Internal wall type 2	75 mm AAC panel, frame:light steel frame	2933	-
Internal wall type 3	cavity brick wall, frame:light steel frame	2276	-

### Reinforcement concrete frames/columns

Building has reinforced concrete frame/columns?	Volume (m³)	Low emissions option
yes	143	-

### Ceiling and roof types

Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: light steel frame	1460	-	-

### Glazing types

### Frame types

Single glazing (m²)	Double glazing (m²)	Triple glazing (m²)	Aluminium frames (m²)	Timber frames (m²)	uPVC frames (m²)	Steel frames (m²)	Composite frames (m²)
-	3763	-	3763	-	-	-	-

**(b) Dwellings**

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✔	✔	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✔	✔
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✔	✔
(e) The applicant must install: <ul style="list-style-type: none"> <li>(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</li> <li>(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.</li> </ul>		✔ ✔	✔ ✔
(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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	4 star	-	-	-	-	-	-	-

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

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

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

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

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
101, 205, 305, 901	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	0	yes
All other dwellings	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	1-phase airconditioning - ducted / EER 3.0 - 3.5	0	no

	Individual pool			Individual spa		Appliances other efficiency measures				
Dwelling no.	Pool heating system	Pool Pump	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Dishwasher	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	-	gas cooktop & electric oven	3.5 star	7.0 star	no	no

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

<b>Thermal loads</b>			
Dwelling no.	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
206	4.30	7.6	11.900
209	15.20	15.3	30.500
501	30.50	6.4	36.900
502	19.20	14.3	33.500

Dwelling no.	Thermal loads		
	Area adjusted heating load (in MJ/m <sup>2</sup> /yr)	Area adjusted cooling load (in MJ/m <sup>2</sup> /yr)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
503	5	14.8	19.800
504	2	20.9	22.900
505	6.80	9.7	16.500
506	20.40	5.8	26.200
507	23.90	6.7	30.600
508	19.20	11.7	30.900
509	11.30	20	31.300
510	23.40	8.5	31.900
511	27.20	10.3	37.500
512	19.00	8.1	27.100
513	21.50	9.8	31.300
514	22.10	11	33.100
601	20.80	9.2	30.000
602	4.50	14.1	18.600
603	7	6.9	13.900
604	28.00	6.4	34.400
605	25.60	6.7	32.300
606	17.50	12.7	30.200
607	22.20	13.9	36.100
608	27.30	7.50	34.800
610	18.90	9.2	28.100
611	21.10	8.3	29.400
701	21.80	9.2	31.000
702	16.20	18.2	34.400
703	4.70	14.60	19.300
704	7.30	6.6	13.900
705	28.10	6.4	34.500
706	25.90	6.7	32.600
707	17.90	12	29.900
708	20.60	14.4	35.000
709	23.20	7.7	30.900

	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)	Area adjusted total load (in MJ/m <sup>2</sup> /yr)
710	12.40	9.3	21.700
711	18.70	12.1	30.800
712	21.70	10.3	32.000
801	25.40	12	37.400
802	11.70	16.1	27.800
803	5.60	8	13.600
804	20.80	5.3	26.100
805	19.30	6.2	25.500
806	12.80	10	22.800
807	20.60	15.1	35.700
808	12.90	7.5	20.400
809	11.70	10	21.700
810	17.70	12	29.700
811	21.10	9.1	30.200
901	12.20	18.2	30.400
902	11.60	14.7	26.300
903	11.80	11.3	23.100
904	14.30	9.6	23.900
905	13.00	10.8	23.800
906	26.10	11.8	37.900
907	23.40	11.8	35.200
All other dwellings	2.10	19.40	21.500

**(c) 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	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	1000	To collect run-off from at least: - 450 square metres of roof area of buildings in the development - 0 square metres of impervious area in the development - 0 square metres of garden/lawn area in the development - 0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 1160 square metres of common landscaped area on the site - car washing in 1 car washing bays on the site
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	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
Lift bank (No. 1)	-	-	light-emitting diode	connected to lift call button	no
Lift bank (No. 2)	-	-	light-emitting diode	connected to lift call button	no
Gym area	air conditioning system	time clock or BMS controlled	light-emitting diode	time clocks	no
Basement	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	no
Plant/Service Room	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	no
Garbage room	ventilation exhaust only	-	light-emitting diode	motion sensors	no
Sauna	ventilation supply only	time clock or BMS controlled	light-emitting diode	time clocks	no
Communal Bathroom/ Change room	ventilation (supply + exhaust)	time clock or BMS controlled	light-emitting diode	manual on / manual off	no
Indoor Bicycle Parking	ventilation supply only	time clock or BMS controlled	light-emitting diode	motion sensors	no
Outdoor Bicycle Parking	no mechanical ventilation	-	light-emitting diode	motion sensors	no
Building Management	ventilation supply only	time clock or BMS controlled	light-emitting diode	manual on / timer off	no
Lobbies and hallways	ventilation supply only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	no

Central energy systems	Type	Specification
Sauna (No. 1)	Heating source: electric resistance	Efficiency measure: manual on / timer off
Sauna (No. 2)	Heating source: electric resistance	Efficiency measure: manual on / timer off

Central energy systems	Type	Specification
Lift bank (No. 1)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 10 number of levels from the bottom of the lift shaft to the top of the lift shaft: 14 number of lifts: 2 lift load capacity: $\geq 1001$ kg but $\leq 1500$ kg
Lift bank (No. 2)	gearless traction with V V V F motor	Number of levels with apartments served by a lift: 10 number of levels from the bottom of the lift shaft to the top of the lift shaft: 14 number of lifts: 2 lift load capacity: $\geq 1001$ kg but $\leq 1500$ kg
Central hot water system (No. 1)	electric heat pump – air sourced	Piping insulation (ringmain & supply risers): (a) Piping external to building: R1.0 (~38 mm); (b) Piping internal to building: R1.0 (~38 mm) (c) Unit Efficiency: $2.5 < COP \leq 3.0$

## 2. Commitments for multi-dwelling housing

### (a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: <ul style="list-style-type: none"> <li>(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</li> <li>(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.</li> </ul>		✓ ✓	✓ ✓
(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.	✓	✓	✓
(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.		✓	✓

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

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

### 3. Commitments for single dwelling houses

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

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

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

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

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

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

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	no common laundry facility

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

Central energy systems	Type	Specification
Other	-	-

## 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).