



Urban Property Group Proposed Residential Development

To be built at 10 Dangar Street, Wickham NSW 2293

Issue	File Ref	Description	Author	Reviewer	Date
A	2502210	NatHERS and BASIX Assessment - Draft	MF/LP		24/03/2026
B	2502210	NatHERS and BASIX Assessment	MF/LP/SC	LP	28/04/2026



Report Contact: Mariana Foganhole
Email: mariana@efficientliving.com.au

Licence Holder: Tracey Cools
Accreditation Number: HERA10033

Prepared For:

Urban Property Group
George Massoud
g.massoud@urbanpropertygroup.com.au

Suite 110, Level 1 180-186 Burwood Road
Burwood NSW 2134
0403 482 929

Introduction

This NatHERS and BASIX certificate report has been prepared by Efficient Living Pty Ltd to accompany a State Significant Development Application (SSDA) for a proposed mixed-use development located at 10 Dangar Street, Wickham NSW 2293.

Efficient Living has investigated the estimated thermal comfort, water and energy usage of the proposed development.

This report is based on the architectural drawings prepared by SJB Architects received on 25/04/2026.

For further details refer to the individual NatHERS and BASIX Certificates and Efficient Living's inclusions summary respectively.

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.

Analysis

The project has NatHERS thermal ratings to meet NCC2022 requirements. Each unit has individual heating, cooling and total loads applied resulting in a minimum rating of 6.0 stars NatHERS. In addition, the building has average heating, cooling and total loads which results in the minimum compliance measure of 7.0 stars NatHERS.

Heating and cooling loads for the development have been determined using Hero v4.1 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/m²/year).

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

BASIX requires a minimum target of 40% for the Water section, a minimum 7-star NatHERS building average for Thermal Comfort and a minimum required target of 60% for the Energy section. Materials data is required to be collected for embodied emissions calculations for the Department of Planning. No embodied emissions compliance measures are currently in place.

Inclusions summary

The inclusions as outlined in this report have been incorporated in each dwelling to allow them to reach their environmental sustainability targets.

As this development proposal is in the early stages, default modelling assumptions have been included where information and inclusions have not yet been determined. A NatHERS update will be required during the Construction Certificate phase to implement the final design and selected building inclusions.

NatHERS thermal inclusions

External Walls

External wall – Lightweight cladding on metal framed walls with R2.5 insulation (insulation only value)

Any concrete columns within the external wall envelope are assumed to have the same R2.5 insulation

Thermal break applied as per NCC 2022 requirements.

Upgrades applied as per Thermal Comfort Upgrades table

External Colour

Medium ($0.475 < SA < 0.7$)

Inter-tenancy walls

Walls adjacent to neighbours – 75mm AAC panel, with a minimum R1.0 insulation (insulation only value)

Walls adjacent to hallways – 75mm AAC panel, with a minimum R1.0 insulation (insulation only value)

Walls adjacent to lift shafts and fire stairs – Minimum 150mm concrete with furring channel and plasterboard lining, with a minimum R1.0 insulation (insulation only value)

Walls within dwellings

Plasterboard on metal studs – no insulation

Floors

Floors with part open subfloor is below – 200mm Concrete with a minimum R1.0 subfloor insulation (insulation only value)

Floors between residential levels – 200mm Concrete between levels, no insulation required

Thermal break applied as per NCC 2022 requirements.

Floor coverings

Carpet to bedrooms, tiles to bathrooms and laundry, timber elsewhere

Roof and ceilings

Roof – 200mm Concrete roof, no insulation above

Ceiling where roof or is over – Plasterboard ceiling with R4.0 insulation (insulation only value)

Ceiling where balconies are over – Plasterboard ceiling, no insulation

Ceiling where neighbouring units are above – Plasterboard ceiling, no insulation

Thermal break applied as per NCC 2022 requirements.

Upgrade applied as per thermal comfort table:

Ceiling where balconies are over – Plasterboard ceiling with R1.5 insulation (insulation only value)

External Colour

Medium ($0.475 < SA < 0.7$)

Glazing – doors and windows

Glazed windows and doors:

Base inclusion	Group A – awning U-value: 4.10 (equal to or lower than) SHGC: 0.47 (±5%) Group B – sliding doors/windows + fixed glazing U-value: 4.10 (equal to or lower than) SHGC: 0.52 (±5%)
Upgrade 1 Upgrade applied as per Thermal Comfort Upgrades table:	Upgrade will be required for penthouse units Group B – sliding doors U-value: 2.81 (equal to or lower than) SHGC: 0.40 (±5%) Group B – fixed glazing U-value: 2.39 (equal to or lower than) SHGC: 0.42 (±5%)

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

Default colour modelled

Window restrictors

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

External Shading

Shading as per stamped documentation

Ceiling Penetrations

Sealed LED downlights at a maximum of one every 5.0m². Once lighting plan has been developed NatHERS certificate can be updated to improve specification.

BASIX Water inclusions

Score 40/40

Landscape - indigenous and low water use species

No BASIX requirement

Central rainwater storage

Tank size: 5,000L

Collecting from 600m² roof area

Connected to outdoor tap for irrigation of 285m² common area landscaping

Fire sprinkler test water

Two sprinkler systems nominated in BASIX: one for parking areas, one for residential building

Parking area sprinkler system: No BASIX restriction

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

Fixtures within common areas

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

Toilets: 4 star

Taps: 5 star

Fixtures and appliances within units (*note: all fixtures and appliances noted are to be installed for OC, not tenant provided*)

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

Toilets: 4 star

Kitchen taps: 5 star

Bathroom vanity taps: 5 star

Clothes washers: not specified

Dishwashers: 5.0 star

BASIX Energy inclusions

Score 65/62

Hot water system

Central electric heat pump – air sourced with unit efficiency of $3.0 < \text{COP} \leq 3.5$ and R1.0 (~38mm) insulation to ring main and supply risers

Alternative energy

Photovoltaic system: rated electrical output (min.) 30 peak kW

Lift motors

All lifts to have gearless traction with VVVF motor and regenerative drive with lift load capacity of $\geq 1,000$ kg to $\leq 1,500$ kg

Other central systems

Lighting control system / Building Management System will be installed: no

Active Power Factor Correction will be installed: no

Common areas – ventilation and lighting

Lighting control system / BMS: no

Common Area	Ventilation	Lighting
Car park area	Supply and exhaust air with a carbon monoxide monitor & VSD fan	LEDs with time clock and motion sensors
Garbage rooms	Exhaust air only, running continuously	LEDs with motion sensors
Communal space (indoor)	AC, time clock or BMS controlled	LEDs with motion sensors
Communal space (outdoor undercover)	No mechanical ventilation	LEDs with motion sensors
Plant / service rooms	Supply and exhaust air, thermostatically controlled	LEDs with manual on / off switch
Communal bathrooms	Supply and exhaust air, time clock or BMS controlled	LEDs with motion sensors
Storage	Supply air only, time clock or BMS controlled	LEDs with motion sensors
Ground floor entry lobby	AC, time clock or BMS controlled	LEDs with time clock and motion sensors
Hallways	Supply air only, time clock or BMS controlled	LEDs with time clock and motion sensors
Hallways (shared / BOH)	Supply air only, time clock or BMS controlled	LEDs with time clock and motion sensors
Lifts		LEDs connected to lift call button

Dwelling ventilation

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

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

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



Dwelling cooling and heating

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

A minimum efficiency of EER 3.5 – 4.0 is required for cooling; and

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

Dwelling artificial lighting

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

Dwelling appliances and other efficiency measures *(note: appliances noted are to be installed for OC, not tenant provided)*

Induction cooktop & electric oven

Dishwashers: 3.0 star

Clothes dryers: 8.0 star (heat pump)

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m²)		Predicted loads (MJ/m²/y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
1201	1	62.3	0.0	20.2	24.7	7.4	
1202	1	62.6	0.0	23.8	23.0	7.3	
1203	1	60.7	0.0	11.0	17.7	8.6	
1204	4	83.2	0.0	20.4	12.9	8.3	
1205	1	80.8	0.0	26.4	14.2	7.7	
1206	2	79.1	0.0	34.0	15.0	7.1	
1207	2	84.6	0.0	40.5	16.0	6.6	
1208	2	82.4	0.0	44.8	12.4	6.6	
1209	2	84.1	0.0	24.0	23.9	7.2	
1301	1	62.3	0.0	19.4	24.6	7.4	
1302	1	62.5	0.0	22.2	22.9	7.4	
1303	1	60.7	0.0	8.4	17.9	8.8	
1304	2	83.2	0.0	14.8	13.1	8.7	
1305	2	80.8	0.0	27.0	14.6	7.7	
1306	2	79.1	0.0	33.2	15.1	7.2	
1307	2	84.6	0.0	39.5	19.3	6.4	
1308	2	82.4	0.0	43.8	18.0	6.3	
1309	2	84.2	0.0	23.1	23.1	7.3	
1401	1	62.3	0.0	19.6	24.6	7.4	
1402	1	62.5	0.0	22.1	22.8	7.4	
1403	1	60.7	0.0	7.9	18.0	8.8	
1404	2	83.2	0.0	14.7	13.2	8.7	
1405	2	80.8	0.0	27.1	14.6	7.7	
1406	2	79.1	0.0	33.4	15.2	7.2	
1407	2	84.6	0.0	39.7	19.1	6.4	
1408	2	82.4	0.0	44.0	18.3	6.2	
1409	2	84.2	0.0	22.9	23.4	7.3	
1501	1	62.3	0.0	20.0	24.7	7.4	
1502	1	62.5	0.0	22.4	22.9	7.4	
1503	1	60.7	0.0	8.0	18.0	8.8	
1504	2	83.2	0.0	14.8	15.2	8.4	
1505	2	80.8	0.0	27.4	14.6	7.6	
1506	2	79.1	0.0	33.8	15.2	7.1	
1507	2	84.6	0.0	40.1	19.3	6.4	
1508	2	82.4	0.0	44.4	18.2	6.2	
1509	2	84.2	0.0	23.6	23.0	7.3	
1601	1	62.3	0.0	20.1	24.2	7.4	
1602	1	62.5	0.0	22.7	23.0	7.4	
1603	1	60.7	0.0	8.1	18.0	8.8	

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
1604	2	83.2	0.0	15.0	15.2	8.4	
1605	2	80.8	0.0	27.6	14.8	7.6	
1606	2	79.1	0.0	34.1	15.2	7.1	
1607	2	84.6	0.0	40.2	19.2	6.4	
1608	2	82.4	0.0	47.0	18.9	6.0	R1.5 ceiling insulation balcony over
1609	2	84.2	0.0	28.0	25.3	6.8	R1.5 ceiling insulation balcony over
1701	1	62.3	0.0	20.3	24.0	7.4	
1702	1	62.5	0.0	22.8	22.9	7.4	
1703	1	60.7	0.0	8.2	18.0	8.8	
1704	2	83.2	0.0	11.2	14.4	8.9	
1705	2	80.8	0.0	26.4	14.7	7.7	
1706	2	79.1	0.0	34.4	15.3	7.1	
1707	2	84.6	0.0	40.9	19.1	6.4	
1801	1	62.3	0.0	20.3	24.1	7.4	
1802	1	62.5	0.0	23.0	23.0	7.4	
1803	1	60.7	0.0	8.4	17.9	8.8	
1804	2	83.2	0.0	15.2	15.3	8.4	
1805	2	80.8	0.0	27.9	14.8	7.6	
1806	2	79.1	0.0	34.6	15.2	7.1	
1807	2	84.6	0.0	40.6	19.0	6.4	
1808	2	82.5	0.0	48.2	17.7	6.0	
1809	2	84.2	0.0	28.9	22.0	7.0	
1901	1	62.3	0.0	20.6	24.0	7.4	
1902	1	62.5	0.0	23.2	23.1	7.3	
1903	1	60.7	0.0	8.5	17.8	8.8	
1904	2	83.2	0.0	15.3	15.1	8.4	
1905	2	80.8	0.0	28.1	14.7	7.6	
1906	2	79.1	0.0	34.7	15.2	7.1	
1907	2	84.6	0.0	40.8	19.0	6.4	
1908	2	82.5	0.0	45.2	17.9	6.2	
1909	2	84.2	0.0	24.2	22.3	7.3	
2001	1	62.3	0.0	20.8	23.9	7.4	
2002	1	62.5	0.0	23.4	22.9	7.3	
2003	1	60.7	0.0	9.1	18.7	8.7	No ceiling insulation balcony above
2004	2	83.2	0.0	15.8	15.4	8.4	No ceiling insulation balcony above
2005	2	80.8	0.0	28.6	15.7	7.4	
2006	2	79.1	0.0	34.9	16.1	6.9	
2007	2	84.6	0.0	41.1	19.0	6.4	
2008	2	82.5	0.0	45.5	18.2	6.1	

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
2009	2	84.2	0.0	27.7	24.7	6.9	
2101	1	62.2	0.0	20.8	23.5	7.4	
2102	3	106.7	0.0	16.7	16.6	8.3	
2103	3	108.5	0.0	15.1	20.1	8.1	
2104	2	80.7	0.0	21.7	15.2	8.0	
2105	2	79.1	0.0	35.0	15.2	7.1	
2106	2	84.6	0.0	41.2	18.7	6.4	
2107	2	82.5	0.0	45.9	18.6	6.1	
2108	2	84.1	0.0	24.7	22.2	7.3	
2201	1	62.2	0.0	20.9	23.2	7.4	
2202	3	106.7	0.0	15.6	16.7	8.3	
2203	3	108.5	0.0	14.2	17.8	8.4	
2204	2	80.7	0.0	23.0	15.3	7.9	
2205	2	79.1	0.0	35.2	15.1	7.0	
2206	2	84.6	0.0	41.4	18.8	6.4	
2207	2	82.5	0.0	45.8	17.8	6.2	
2208	2	84.1	0.0	24.7	22.3	7.3	
2301	1	62.2	0.0	20.9	23.4	7.4	
2302	3	106.7	0.0	15.6	16.6	8.3	
2303	3	108.5	0.0	14.3	17.7	8.4	
2304	2	80.7	0.0	22.9	15.4	7.9	
2305	2	79.1	0.0	35.1	15.5	7.0	
2306	2	84.6	0.0	41.4	18.5	6.4	
2307	2	82.5	0.0	45.8	17.7	6.2	
2308	2	84.1	0.0	24.7	22.1	7.3	
2401	1	62.2	0.0	21.1	24.0	7.4	
2402	3	106.7	0.0	15.7	16.7	8.3	
2403	3	108.5	0.0	14.3	17.6	8.4	
2404	2	80.7	0.0	23.2	15.3	7.9	
2405	2	79.1	0.0	35.4	15.1	7.0	
2406	2	84.6	0.0	41.5	18.7	6.4	
2407	2	82.5	0.0	46.0	18.0	6.1	
2408	2	84.1	0.0	24.9	21.8	7.3	
2501	1	62.2	0.0	21.3	23.6	7.4	
2502	3	106.7	0.0	15.8	16.8	8.3	
2503	3	108.5	0.0	14.6	17.5	8.3	
2504	2	80.7	0.0	23.3	15.2	7.9	
2505	2	79.1	0.0	35.6	15.2	7.0	
2506	2	84.6	0.0	41.7	18.7	6.4	

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
2507	2	82.5	0.0	46.2	17.8	6.1	
2508	2	84.1	0.0	25.1	21.7	7.3	
2601	1	62.2	0.0	21.5	23.9	7.4	
2602	3	106.7	0.0	16.0	16.8	8.3	
2603	3	108.5	0.0	14.6	17.4	8.4	
2604	2	80.7	0.0	23.5	15.3	7.9	
2605	2	79.1	0.0	35.7	15.2	7.0	
2606	2	84.6	0.0	41.9	18.7	6.3	
2607	2	82.5	0.0	46.4	17.6	6.1	
2608	2	84.1	0.0	25.2	21.7	7.3	
2701	1	62.2	0.0	21.7	23.9	7.4	
2702	3	106.7	0.0	16.1	16.7	8.3	
2703	3	108.5	0.0	14.7	17.3	8.4	
2704	2	80.7	0.0	23.6	15.2	7.9	
2705	2	79.1	0.0	35.9	15.3	6.9	
2706	2	84.6	0.0	42.1	18.8	6.3	
2707	2	82.5	0.0	46.6	17.7	6.1	
2708	2	84.1	0.0	25.4	21.4	7.3	
2801	1	62.2	0.0	21.7	23.8	7.4	
2802	3	106.7	0.0	16.1	16.6	8.3	
2803	3	108.5	0.0	14.7	17.5	8.3	
2804	2	80.7	0.0	23.6	15.3	7.9	
2805	2	79.1	0.0	35.9	15.3	6.9	
2806	2	84.6	0.0	42.1	18.8	6.3	
2807	2	82.5	0.0	46.6	17.7	6.1	
2808	2	84.1	0.0	25.4	21.4	7.3	
2901	1	62.2	0.0	21.8	23.7	7.4	
2902	3	106.7	0.0	16.2	16.7	8.3	
2903	3	108.5	0.0	14.9	17.4	8.3	
2904	2	80.7	0.0	23.8	15.3	7.8	
2905	2	79.1	0.0	36.2	15.4	6.9	
2906	2	84.6	0.0	42.3	18.4	6.3	
2907	2	82.5	0.0	46.8	17.7	6.1	
2908	2	84.1	0.0	25.5	21.5	7.3	
3001	1	62.2	0.0	24.4	24.4	7.2	
3002	3	106.7	0.0	16.4	16.7	8.3	
3003	3	108.5	0.0	15.0	17.3	8.3	
3004	2	80.7	0.0	23.1	15.2	7.9	
3005	2	79.1	0.0	36.4	15.4	6.9	

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
3006	2	84.6	0.0	42.5	18.3	6.3	
3007	2	82.5	0.0	47.1	17.6	6.1	
3008	2	84.1	0.0	25.7	21.6	7.3	
3101	1	62.2	0.0	22.0	23.4	7.4	
3102	3	106.7	0.0	16.4	16.5	8.3	
3103	3	108.5	0.0	15.2	19.7	8.2	
3104	2	80.7	0.0	22.8	15.2	7.9	
3105	2	79.1	0.0	36.4	15.3	6.9	
3106	2	85.0	0.0	42.5	18.3	6.3	
3107	2	82.5	0.0	47.2	18.2	6.0	
3108	2	84.1	0.0	25.7	21.2	7.3	
3201	1	62.2	0.0	22.2	22.8	7.4	
3202	3	106.7	0.0	14.8	16.5	8.4	
3203	3	108.5	0.0	14.8	17.3	8.4	
3204	2	80.7	0.0	24.1	15.1	7.8	
3205	2	79.1	0.0	36.6	15.6	6.9	
3206	2	85.0	0.0	42.7	18.3	6.3	
3207	2	82.5	0.0	46.7	17.7	6.1	
3208	2	84.1	0.0	25.9	21.2	7.3	
3301	1	62.2	0.0	22.3	22.9	7.4	
3302	3	106.7	0.0	17.0	16.5	8.2	
3303	3	108.5	0.0	14.9	17.4	8.3	
3304	2	80.7	0.0	24.2	15.0	7.8	
3305	2	79.1	0.0	36.7	15.6	6.9	
3306	2	85.0	0.0	42.9	18.3	6.3	
3307	2	82.5	0.0	46.9	17.6	6.1	
3308	2	84.1	0.0	26.0	21.1	7.3	
3401	1	62.2	0.0	22.3	22.8	7.4	
3402	3	106.7	0.0	16.9	16.7	8.2	
3403	3	108.5	0.0	14.9	17.2	8.3	
3404	2	80.7	0.0	24.2	15.0	7.8	
3405	2	79.1	0.0	36.7	15.6	6.9	
3406	2	85.0	0.0	42.9	18.1	6.3	
3407	2	82.5	0.0	46.9	17.4	6.1	
3408	2	84.1	0.0	26.0	21.1	7.3	
3501	1	62.2	0.0	22.4	22.3	7.4	
3502	3	106.7	0.0	17.1	16.7	8.2	
3503	3	108.5	0.0	15.0	17.3	8.3	
3504	2	80.7	0.0	24.4	15.1	7.8	

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
3505	2	79.1	0.0	36.9	15.7	6.9	
3506	2	85.0	0.0	43.1	18.1	6.3	
3507	2	82.5	0.0	47.1	17.5	6.1	
3508	2	84.1	0.0	26.2	21.2	7.3	
3601	1	62.2	0.0	22.4	22.1	7.4	
3602	3	106.7	0.0	17.1	16.7	8.2	
3603	3	108.5	0.0	15.0	17.2	8.3	
3604	2	80.7	0.0	24.4	14.7	7.8	
3605	2	79.1	0.0	36.9	15.7	6.9	
3606	2	85.0	0.0	43.1	18.0	6.3	
3607	2	82.5	0.0	47.1	17.3	6.1	
3608	2	84.1	0.0	26.2	21.1	7.3	
3701	1	62.2	0.0	22.5	22.2	7.4	
3702	3	106.7	0.0	17.3	16.7	8.2	
3703	3	108.5	0.0	15.1	17.1	8.3	
3704	2	80.7	0.0	24.6	14.7	7.8	
3705	2	79.1	0.0	37.1	15.7	6.9	
3706	2	85.0	0.0	43.3	18.1	6.3	
3707	2	82.5	0.0	47.3	17.3	6.1	
3708	2	84.1	0.0	26.3	20.8	7.3	
3801	1	62.2	0.0	22.5	22.1	7.4	
3802	3	106.7	0.0	17.3	16.6	8.2	
3803	3	108.5	0.0	15.1	17.1	8.3	
3804	2	80.7	0.0	24.6	15.0	7.8	
3805	2	79.1	0.0	37.1	15.6	6.9	
3806	2	85.0	0.0	43.3	18.1	6.3	
3807	2	82.5	0.0	47.3	17.2	6.1	
3808	2	84.1	0.0	26.3	20.8	7.3	
3901	1	62.2	0.0	22.7	22.0	7.4	
3902	3	106.7	0.0	17.4	16.6	8.2	
3903	3	108.5	0.0	15.3	17.1	8.3	
3904	2	80.7	0.0	24.7	14.9	7.8	
3905	2	79.1	0.0	37.3	15.5	6.9	
3906	2	85.0	0.0	43.5	18.1	6.3	
3907	2	82.5	0.0	47.5	17.0	6.1	
3908	2	84.1	0.0	26.5	20.8	7.3	
4001	1	62.2	0.0	23.0	23.1	7.4	
4002	3	106.7	0.0	21.0	16.5	7.9	No ceiling insulation balcony above
4003	3	108.5	0.0	19.2	17.5	8.0	No ceiling insulation balcony above

NatHERS Certificate # HR-2SGKJF-01						Accreditation #HERA10033	
Thermal Comfort Results							
Unit Number	Number of Bedrooms	Floor area (m ²)		Predicted loads (MJ/m ² /y)		Star Rating	Thermal Comfort Upgrades
		Con.	Uncon.	Heating	Cooling (Sens. & Lat.)		
4004	2	80.7	0.0	24.9	15.4	7.8	
4005	2	79.1	0.0	37.6	15.6	6.8	
4006	2	85.0	0.0	43.6	20.0	6.1	
4007	2	82.5	0.0	48.3	17.7	6.0	R1.5 ceiling insulation balcony over
4008	2	84.1	0.0	26.7	21.5	7.2	
4101	3	168.2	0.0	25.7	19.7	7.4	R1.5 ceiling insulation balcony over
4102	3	188.1	0.0	16.3	20.9	7.9	R1.5 ceiling insulation balcony over
4103	3	166.3	0.0	44.9	15.9	6.3	R1.5 ceiling insulation balcony over
4104	3	166.3	0.0	39.8	20.5	6.4	R1.5 ceiling insulation balcony over
4201	4	320.5	0.0	26.4	26.8	6.8	Glazing upgrade 1
4202	4	280.4	0.0	42.3	22.3	6.1	Glazing upgrade 1

Nationwide House Energy Rating Scheme® Class 2 Summary

NatHERS® Certificate No. #HR-2SGKJF-01

Generated on 28 Apr 2026 using Hero 4.1

Property

Address 10 DangarStreet, Wickham , NSW, 2293
Lot/DP 1/-/DP1197377
NatHERS climate zone 15 - Williamtown AMO



Accredited assessor

Name Tracey Cools
Business name Efficient Living
Email tracey@efficientliving.com.au
Phone +61 400083525
Accreditation No. 10033
Assessor Accrediting Organisation HERA

Verification

To verify this certificate,
scan the QR code or visit
<http://www.hero-software.com.au/pdf/HR-2SGKJF-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.

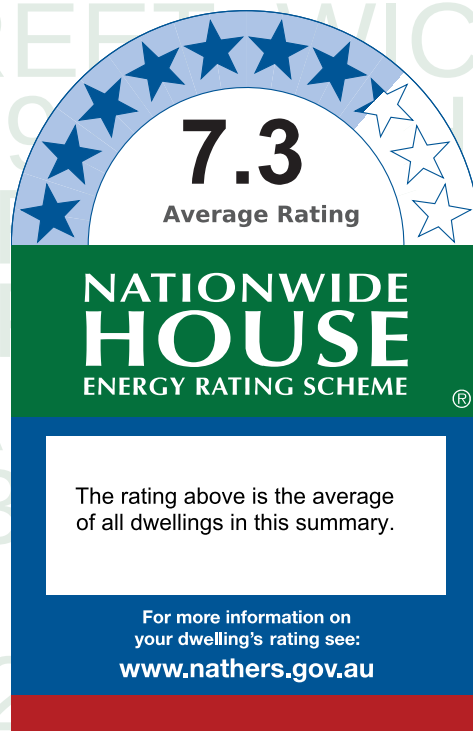
The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.

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/m².yr)	Cooling load (load limit) (MJ/m².yr)	Total load (MJ/m².yr)	Star Rating	Whole of Home Rating
HR-7GRMI2-01	1201	20.2 (53)	24.7 (35)	44.9	7.4	n/a
HR-125YNW-01	1202	23.8 (53)	23.0 (35)	46.8	7.3	n/a
HR-DHMYB-01	1203	11.0 (53)	17.7 (35)	28.7	8.6	n/a

Thermal performance Star rating



NCC heating and cooling maximum loads MJ/m².yr

Limits taken from ABCB Standard 2022

	Heating	Cooling
Average load	28.0	18.5
Maximum load	48.3	26.8
Average limit	45.4	33.0
Maximum limit	53.0	35.0

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 ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-VYYOIH-01	1204	20.4 (53)	12.9 (35)	33.3	8.3	n/a
HR-1M7M06-01	1205	26.4 (53)	14.2 (35)	40.7	7.7	n/a
HR-BPAQ3O-01	1206	34.0 (53)	15.0 (35)	49.0	7.1	n/a
HR-NV0JTJ-01	1207	40.5 (53)	16.0 (35)	56.5	6.6	n/a
HR-GO1MFA-01	1208	44.8 (53)	12.4 (35)	57.3	6.6	n/a
HR-PJKCFM-01	1209	24.0 (53)	23.9 (35)	47.9	7.2	n/a
HR-7Z4OQF-01	1301	19.4 (53)	24.6 (35)	44.0	7.4	n/a
HR-8FW2BF-01	1302	22.2 (53)	22.9 (35)	45.1	7.4	n/a
HR-0JKZOI-01	1303	8.4 (53)	17.9 (35)	26.2	8.8	n/a
HR-U47BHA-01	1304	14.8 (53)	13.1 (35)	27.9	8.7	n/a
HR-WTDGSA-01	1305	27.0 (53)	14.6 (35)	41.5	7.7	n/a
HR-OBKFP5-01	1306	33.2 (53)	15.1 (35)	48.3	7.2	n/a
HR-779JYI-01	1307	39.5 (53)	19.3 (35)	58.8	6.4	n/a
HR-GMWDSL-01	1308	43.8 (53)	18.0 (35)	61.8	6.3	n/a
HR-SQ934D-01	1309	23.1 (53)	23.1 (35)	46.2	7.3	n/a
HR-0PXIOT-01	1401	19.6 (53)	24.6 (35)	44.2	7.4	n/a
HR-MLSPQ3-01	1402	22.1 (53)	22.8 (35)	44.9	7.4	n/a
HR-BGZLBA-01	1403	7.9 (53)	18.0 (35)	25.9	8.8	n/a
HR-E7T5TC-01	1404	14.7 (53)	13.2 (35)	27.8	8.7	n/a
HR-7PNJF7-01	1405	27.1 (53)	14.6 (35)	41.6	7.7	n/a
HR-50VF0E-01	1406	33.4 (53)	15.2 (35)	48.6	7.2	n/a
HR-R6HGE2-01	1407	39.7 (53)	19.1 (35)	58.8	6.4	n/a
HR-D3QINF-01	1408	44.0 (53)	18.3 (35)	62.3	6.2	n/a
HR-R0PLR6-01	1409	22.9 (53)	23.4 (35)	46.3	7.3	n/a
HR-9MOZMH-01	1501	20.0 (53)	24.7 (35)	44.7	7.4	n/a
HR-LOFLYR-01	1502	22.4 (53)	22.9 (35)	45.3	7.4	n/a
HR-GNS888-01	1503	8.0 (53)	18.0 (35)	26.0	8.8	n/a
HR-BCUJYL-01	1504	14.8 (53)	15.2 (35)	30.0	8.4	n/a
HR-VUISML-01	1505	27.4 (53)	14.6 (35)	42.0	7.6	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-WYZ7IX-01	1506	33.8 (53)	15.2 (35)	49.0	7.1	n/a
HR-VM3CQ5-01	1507	40.1 (53)	19.3 (35)	59.4	6.4	n/a
HR-CJXYF7-01	1508	44.4 (53)	18.2 (35)	62.5	6.2	n/a
HR-T3ZW1X-01	1509	23.6 (53)	23.0 (35)	46.6	7.3	n/a
HR-8EDMMO-01	1601	20.1 (53)	24.2 (35)	44.4	7.4	n/a
HR-JBPL9R-01	1602	22.7 (53)	23.0 (35)	45.7	7.4	n/a
HR-ZCYFNY-01	1603	8.1 (53)	18.0 (35)	26.1	8.8	n/a
HR-KEXIIX-01	1604	15.0 (53)	15.2 (35)	30.2	8.4	n/a
HR-2GVG73-01	1605	27.6 (53)	14.8 (35)	42.4	7.6	n/a
HR-46WFLK-01	1606	34.1 (53)	15.2 (35)	49.3	7.1	n/a
HR-WVWLVN-01	1607	40.2 (53)	19.2 (35)	59.5	6.4	n/a
HR-YAGACX-01	1608	47.0 (53)	18.9 (35)	65.9	6.0	n/a
HR-YN7V6J-01	1609	28.0 (53)	25.3 (35)	53.3	6.8	n/a
HR-NX7NVG-01	1701	20.3 (53)	24.0 (35)	44.3	7.4	n/a
HR-TPQA9A-01	1702	22.8 (53)	22.9 (35)	45.7	7.4	n/a
HR-JTBX3Q-01	1703	8.2 (53)	18.0 (35)	26.2	8.8	n/a
HR-BX5I5F-01	1704	11.2 (53)	14.4 (35)	25.6	8.9	n/a
HR-BSZCLI-01	1705	26.4 (53)	14.7 (35)	41.1	7.7	n/a
HR-P9AE0Y-01	1706	34.4 (53)	15.3 (35)	49.7	7.1	n/a
HR-A4HHMB-01	1707	40.9 (53)	19.1 (35)	60.0	6.4	n/a
HR-FNMWO7-01	1801	20.3 (53)	24.1 (35)	44.5	7.4	n/a
HR-H6GBSA-01	1802	23.0 (53)	23.0 (35)	46.0	7.4	n/a
HR-30OZQX-01	1803	8.4 (53)	17.9 (35)	26.3	8.8	n/a
HR-U2CZO6-01	1804	15.2 (53)	15.3 (35)	30.5	8.4	n/a
HR-7JURLO-01	1805	27.9 (53)	14.8 (35)	42.7	7.6	n/a
HR-L3UOFG-01	1806	34.6 (53)	15.2 (35)	49.8	7.1	n/a
HR-8TQA3J-01	1807	40.6 (53)	19.0 (35)	59.6	6.4	n/a
HR-UKXHN7-01	1808	48.2 (53)	17.7 (35)	65.9	6.0	n/a
HR-ZFAIL3-01	1809	28.9 (53)	22.0 (35)	51.0	7.0	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-ZFHL2Z-01	1901	20.6 (53)	24.0 (35)	44.6	7.4	n/a
HR-O03KK3-01	1902	23.2 (53)	23.1 (35)	46.4	7.3	n/a
HR-P4LK7U-01	1903	8.5 (53)	17.8 (35)	26.3	8.8	n/a
HR-5TVK4Q-01	1904	15.3 (53)	15.1 (35)	30.4	8.4	n/a
HR-YNDPK9-01	1905	28.1 (53)	14.7 (35)	42.8	7.6	n/a
HR-2EVELV-01	1906	34.7 (53)	15.2 (35)	49.9	7.1	n/a
HR-JZ3KZS-01	1907	40.8 (53)	19.0 (35)	59.8	6.4	n/a
HR-LFIRFE-01	1908	45.2 (53)	17.9 (35)	63.1	6.2	n/a
HR-ALV5UM-01	1909	24.2 (53)	22.3 (35)	46.5	7.3	n/a
HR-B193J5-01	2001	20.8 (53)	23.9 (35)	44.7	7.4	n/a
HR-5SHMWO-01	2002	23.4 (53)	22.9 (35)	46.4	7.3	n/a
HR-SITN4Z-01	2003	9.1 (53)	18.7 (35)	27.8	8.7	n/a
HR-3938SF-01	2004	15.8 (53)	15.4 (35)	31.2	8.4	n/a
HR-4W6L1V-01	2005	28.6 (53)	15.7 (35)	44.4	7.4	n/a
HR-LXYGQ9-01	2006	34.9 (53)	16.1 (35)	51.1	6.9	n/a
HR-ON5VZV-01	2007	41.1 (53)	19.0 (35)	60.0	6.4	n/a
HR-L8SP1M-01	2008	45.5 (53)	18.2 (35)	63.7	6.1	n/a
HR-U3SL6L-01	2009	27.7 (53)	24.7 (35)	52.5	6.9	n/a
HR-G8NAO7-01	2101	20.8 (53)	23.5 (35)	44.3	7.4	n/a
HR-K38RRJ-01	2102	16.7 (53)	16.6 (35)	33.2	8.3	n/a
HR-UVPW4D-01	2103	15.1 (53)	20.1 (35)	35.2	8.1	n/a
HR-SB10XG-01	2104	21.7 (53)	15.2 (35)	36.9	8.0	n/a
HR-W4FHZ4-01	2105	35.0 (53)	15.2 (35)	50.2	7.1	n/a
HR-35OL0J-01	2106	41.2 (53)	18.7 (35)	59.9	6.4	n/a
HR-R19T3S-01	2107	45.9 (53)	18.6 (35)	64.5	6.1	n/a
HR-10FYI5-01	2108	24.7 (53)	22.2 (35)	46.9	7.3	n/a
HR-J485ZM-01	2201	20.9 (53)	23.2 (35)	44.1	7.4	n/a
HR-ICT7IZ-01	2202	15.6 (53)	16.7 (35)	32.2	8.3	n/a
HR-AP7WOX-01	2203	14.2 (53)	17.8 (35)	32.0	8.4	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-TWMSMO-01	2204	23.0 (53)	15.3 (35)	38.2	7.9	n/a
HR-1SMT1-01	2205	35.2 (53)	15.1 (35)	50.3	7.0	n/a
HR-UT2RER-01	2206	41.4 (53)	18.8 (35)	60.1	6.4	n/a
HR-MBCAHO-01	2207	45.8 (53)	17.8 (35)	63.6	6.2	n/a
HR-9R492C-01	2208	24.7 (53)	22.3 (35)	47.0	7.3	n/a
HR-FAULXE-01	2301	20.9 (53)	23.4 (35)	44.3	7.4	n/a
HR-35KYMR-01	2302	15.6 (53)	16.6 (35)	32.2	8.3	n/a
HR-YKEDM6-01	2303	14.3 (53)	17.7 (35)	32.1	8.4	n/a
HR-0UOTCZ-01	2304	22.9 (53)	15.4 (35)	38.3	7.9	n/a
HR-0GAYY6-01	2305	35.1 (53)	15.5 (35)	50.6	7.0	n/a
HR-8MNELR-01	2306	41.4 (53)	18.5 (35)	59.9	6.4	n/a
HR-4EOTIU-01	2307	45.8 (53)	17.7 (35)	63.5	6.2	n/a
HR-COWITK-01	2308	24.7 (53)	22.1 (35)	46.8	7.3	n/a
HR-IFTVTH-01	2401	21.1 (53)	24.0 (35)	45.1	7.4	n/a
HR-V6H12T-01	2402	15.7 (53)	16.7 (35)	32.4	8.3	n/a
HR-CKZB8H-01	2403	14.3 (53)	17.6 (35)	31.9	8.4	n/a
HR-MOCUP6-01	2404	23.2 (53)	15.3 (35)	38.5	7.9	n/a
HR-OZS030-01	2405	35.4 (53)	15.1 (35)	50.5	7.0	n/a
HR-E2PE91-01	2406	41.5 (53)	18.7 (35)	60.2	6.4	n/a
HR-ZMFPR6-01	2407	46.0 (53)	18.0 (35)	63.9	6.1	n/a
HR-Y5E8VQ-01	2408	24.9 (53)	21.8 (35)	46.7	7.3	n/a
HR-DMBPCK-01	2501	21.3 (53)	23.6 (35)	44.9	7.4	n/a
HR-0492CK-01	2502	15.8 (53)	16.8 (35)	32.6	8.3	n/a
HR-MVLRDG-01	2503	14.6 (53)	17.5 (35)	32.1	8.3	n/a
HR-EZ20ZH-01	2504	23.3 (53)	15.2 (35)	38.5	7.9	n/a
HR-MYZ6C7-01	2505	35.6 (53)	15.2 (35)	50.8	7.0	n/a
HR-O4AA7E-01	2506	41.7 (53)	18.7 (35)	60.4	6.4	n/a
HR-ID7DD0-01	2507	46.2 (53)	17.8 (35)	64.0	6.1	n/a
HR-BVOBLR-01	2508	25.1 (53)	21.7 (35)	46.8	7.3	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-FIBDBS-01	2601	21.5 (53)	23.9 (35)	45.5	7.4	n/a
HR-7DCDHZ-01	2602	16.0 (53)	16.8 (35)	32.7	8.3	n/a
HR-RL5OH0-01	2603	14.6 (53)	17.4 (35)	32.0	8.4	n/a
HR-66L26D-01	2604	23.5 (53)	15.3 (35)	38.8	7.9	n/a
HR-VDDYSA-01	2605	35.7 (53)	15.2 (35)	51.0	7.0	n/a
HR-8DXCM6-01	2606	41.9 (53)	18.7 (35)	60.6	6.3	n/a
HR-YXCMTU-01	2607	46.4 (53)	17.6 (35)	63.9	6.1	n/a
HR-O5RT3X-01	2608	25.2 (53)	21.7 (35)	46.9	7.3	n/a
HR-BXW6U4-01	2701	21.7 (53)	23.9 (35)	45.6	7.4	n/a
HR-W71P0S-01	2702	16.1 (53)	16.7 (35)	32.8	8.3	n/a
HR-4SX06V-01	2703	14.7 (53)	17.3 (35)	32.1	8.4	n/a
HR-5B0VCZ-01	2704	23.6 (53)	15.2 (35)	38.9	7.9	n/a
HR-5RTFL6-01	2705	35.9 (53)	15.3 (35)	51.2	6.9	n/a
HR-WHYV0C-01	2706	42.1 (53)	18.8 (35)	60.8	6.3	n/a
HR-ODRFD-01	2707	46.6 (53)	17.7 (35)	64.3	6.1	n/a
HR-8F36IF-01	2708	25.4 (53)	21.4 (35)	46.8	7.3	n/a
HR-BDA520-01	2801	21.7 (53)	23.8 (35)	45.5	7.4	n/a
HR-R3IL5J-01	2802	16.1 (53)	16.6 (35)	32.7	8.3	n/a
HR-VS5TRN-01	2803	14.7 (53)	17.5 (35)	32.2	8.3	n/a
HR-603KIR-01	2804	23.6 (53)	15.3 (35)	39.0	7.9	n/a
HR-IGQQPB-01	2805	35.9 (53)	15.3 (35)	51.3	6.9	n/a
HR-0G7SFO-01	2806	42.1 (53)	18.8 (35)	60.9	6.3	n/a
HR-ZPORDZ-01	2807	46.6 (53)	17.7 (35)	64.3	6.1	n/a
HR-RTQOPR-01	2808	25.4 (53)	21.4 (35)	46.8	7.3	n/a
HR-7AXHPZ-01	2901	21.8 (53)	23.7 (35)	45.5	7.4	n/a
HR-GKXUAC-01	2902	16.2 (53)	16.7 (35)	32.9	8.3	n/a
HR-1MUEZV-01	2903	14.9 (53)	17.4 (35)	32.2	8.3	n/a
HR-IZSDD6-01	2904	23.8 (53)	15.3 (35)	39.2	7.8	n/a
HR-N8L583-01	2905	36.2 (53)	15.4 (35)	51.5	6.9	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-S2XX3J-01	2906	42.3 (53)	18.4 (35)	60.6	6.3	n/a
HR-J6ZGMG-01	2907	46.8 (53)	17.7 (35)	64.5	6.1	n/a
HR-I75RMB-01	2908	25.5 (53)	21.5 (35)	47.0	7.3	n/a
HR-FU57ZF-01	3001	24.4 (53)	24.4 (35)	48.7	7.2	n/a
HR-XNQLA1-01	3002	16.4 (53)	16.7 (35)	33.2	8.3	n/a
HR-AYFUSC-01	3003	15.0 (53)	17.3 (35)	32.3	8.3	n/a
HR-QGGC3S-01	3004	23.1 (53)	15.2 (35)	38.3	7.9	n/a
HR-J9IMAC-01	3005	36.4 (53)	15.4 (35)	51.8	6.9	n/a
HR-5FY8FF-01	3006	42.5 (53)	18.3 (35)	60.8	6.3	n/a
HR-1OQQR-01	3007	47.1 (53)	17.6 (35)	64.7	6.1	n/a
HR-TDH4E6-01	3008	25.7 (53)	21.6 (35)	47.3	7.3	n/a
HR-IB2VOP-01	3101	22.0 (53)	23.4 (35)	45.5	7.4	n/a
HR-F2CWEN-01	3102	16.4 (53)	16.5 (35)	32.9	8.3	n/a
HR-ZC5Q67-01	3103	15.2 (53)	19.7 (35)	34.9	8.2	n/a
HR-LZMZVL-01	3104	22.8 (53)	15.2 (35)	38.0	7.9	n/a
HR-7RIT67-01	3105	36.4 (53)	15.3 (35)	51.7	6.9	n/a
HR-FQHMUE-01	3106	42.5 (53)	18.3 (35)	60.8	6.3	n/a
HR-2N5BLI-01	3107	47.2 (53)	18.2 (35)	65.4	6.0	n/a
HR-YJHKNK-01	3108	25.7 (53)	21.2 (35)	47.0	7.3	n/a
HR-TD7UM7-01	3201	22.2 (53)	22.8 (35)	44.9	7.4	n/a
HR-82FHDB-01	3202	14.8 (53)	16.5 (35)	31.3	8.4	n/a
HR-UMNU4O-01	3203	14.8 (53)	17.3 (35)	32.1	8.4	n/a
HR-IK4NBY-01	3204	24.1 (53)	15.1 (35)	39.2	7.8	n/a
HR-RPKJEJ-01	3205	36.6 (53)	15.6 (35)	52.2	6.9	n/a
HR-V7GZDW-01	3206	42.7 (53)	18.3 (35)	61.0	6.3	n/a
HR-FAM46K-01	3207	46.7 (53)	17.7 (35)	64.4	6.1	n/a
HR-35NPTH-01	3208	25.9 (53)	21.2 (35)	47.1	7.3	n/a
HR-DUJ6FI-01	3301	22.3 (53)	22.9 (35)	45.1	7.4	n/a
HR-6AOXCB-01	3302	17.0 (53)	16.5 (35)	33.5	8.2	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-DDCTW0-01	3303	14.9 (53)	17.4 (35)	32.3	8.3	n/a
HR-RF76V9-01	3304	24.2 (53)	15.0 (35)	39.2	7.8	n/a
HR-MBP4XN-01	3305	36.7 (53)	15.6 (35)	52.3	6.9	n/a
HR-BP5PJX-01	3306	42.9 (53)	18.3 (35)	61.2	6.3	n/a
HR-3A9RUV-01	3307	46.9 (53)	17.6 (35)	64.5	6.1	n/a
HR-9KVLQA-01	3308	26.0 (53)	21.1 (35)	47.1	7.3	n/a
HR-3PJZR5-01	3401	22.3 (53)	22.8 (35)	45.1	7.4	n/a
HR-6N881C-01	3402	16.9 (53)	16.7 (35)	33.6	8.2	n/a
HR-VQIVS5-01	3403	14.9 (53)	17.2 (35)	32.1	8.3	n/a
HR-P30EAJ-01	3404	24.2 (53)	15.0 (35)	39.2	7.8	n/a
HR-CR83L4-01	3405	36.7 (53)	15.6 (35)	52.3	6.9	n/a
HR-QVNVGD-01	3406	42.9 (53)	18.1 (35)	61.0	6.3	n/a
HR-QNIK7F-01	3407	46.9 (53)	17.4 (35)	64.3	6.1	n/a
HR-8HZJOO-01	3408	26.0 (53)	21.1 (35)	47.1	7.3	n/a
HR-69RR1A-01	3501	22.4 (53)	22.3 (35)	44.6	7.4	n/a
HR-ZV1RFB-01	3502	17.1 (53)	16.7 (35)	33.8	8.2	n/a
HR-SOL2P2-01	3503	15.0 (53)	17.3 (35)	32.3	8.3	n/a
HR-TDYO7B-01	3504	24.4 (53)	15.1 (35)	39.5	7.8	n/a
HR-JM18Q3-01	3505	36.9 (53)	15.7 (35)	52.6	6.9	n/a
HR-0EVNIM-01	3506	43.1 (53)	18.1 (35)	61.2	6.3	n/a
HR-CKMH2T-01	3507	47.1 (53)	17.5 (35)	64.5	6.1	n/a
HR-A4J614-01	3508	26.2 (53)	21.2 (35)	47.3	7.3	n/a
HR-NQA1NL-01	3601	22.4 (53)	22.1 (35)	44.5	7.4	n/a
HR-C8SIP2-01	3602	17.1 (53)	16.7 (35)	33.9	8.2	n/a
HR-PC3YVO-01	3603	15.0 (53)	17.2 (35)	32.2	8.3	n/a
HR-JOV71M-01	3604	24.4 (53)	14.7 (35)	39.1	7.8	n/a
HR-8V2NM7-01	3605	36.9 (53)	15.7 (35)	52.5	6.9	n/a
HR-5XU99E-01	3606	43.1 (53)	18.0 (35)	61.1	6.3	n/a
HR-GP19NO-01	3607	47.1 (53)	17.3 (35)	64.3	6.1	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-89T2QQ-01	3608	26.2 (53)	21.1 (35)	47.3	7.3	n/a
HR-3JVVNN-01	3701	22.5 (53)	22.2 (35)	44.6	7.4	n/a
HR-NJOE02-01	3702	17.3 (53)	16.7 (35)	34.0	8.2	n/a
HR-AR6NKV-01	3703	15.1 (53)	17.1 (35)	32.2	8.3	n/a
HR-PBMTEV-01	3704	24.6 (53)	14.7 (35)	39.3	7.8	n/a
HR-13MAIZ-01	3705	37.1 (53)	15.7 (35)	52.7	6.9	n/a
HR-L8N4CY-01	3706	43.3 (53)	18.1 (35)	61.4	6.3	n/a
HR-2E4JFZ-01	3707	47.3 (53)	17.3 (35)	64.5	6.1	n/a
HR-FGL9NX-01	3708	26.3 (53)	20.8 (35)	47.1	7.3	n/a
HR-D14GUJ-01	3801	22.5 (53)	22.1 (35)	44.6	7.4	n/a
HR-5RQP2X-01	3802	17.3 (53)	16.6 (35)	33.9	8.2	n/a
HR-KBE284-01	3803	15.1 (53)	17.1 (35)	32.3	8.3	n/a
HR-P7TJZV-01	3804	24.6 (53)	15.0 (35)	39.6	7.8	n/a
HR-U0YVRN-01	3805	37.1 (53)	15.6 (35)	52.7	6.9	n/a
HR-PPNU1F-01	3806	43.3 (53)	18.1 (35)	61.4	6.3	n/a
HR-05CNC0-01	3807	47.3 (53)	17.2 (35)	64.5	6.1	n/a
HR-NMRRFH-01	3808	26.3 (53)	20.8 (35)	47.1	7.3	n/a
HR-V9R0UZ-01	3901	22.7 (53)	22.0 (35)	44.6	7.4	n/a
HR-KRLX59-01	3902	17.4 (53)	16.6 (35)	34.0	8.2	n/a
HR-6BZ4TD-01	3903	15.3 (53)	17.1 (35)	32.4	8.3	n/a
HR-93IZR7-01	3904	24.7 (53)	14.9 (35)	39.6	7.8	n/a
HR-15OAF4-01	3905	37.3 (53)	15.5 (35)	52.8	6.9	n/a
HR-2PAG3P-01	3906	43.5 (53)	18.1 (35)	61.5	6.3	n/a
HR-RVPPB7-01	3907	47.5 (53)	17.0 (35)	64.5	6.1	n/a
HR-YGVJLI-01	3908	26.5 (53)	20.8 (35)	47.3	7.3	n/a
HR-3TLB5I-01	4001	23.0 (53)	23.1 (35)	46.1	7.4	n/a
HR-ZMK1QL-01	4002	21.0 (53)	16.5 (35)	37.5	7.9	n/a
HR-D153SR-01	4003	19.2 (53)	17.5 (35)	36.7	8.0	n/a
HR-QGTHPP-01	4004	24.9 (53)	15.4 (35)	40.3	7.8	n/a

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (load limit) (MJ/m ² .yr)	Cooling load (load limit) (MJ/m ² .yr)	Total load (MJ/m ² .yr)	Star Rating	Whole of Home Rating
HR-XOUJ20-01	4005	37.6 (53)	15.6 (35)	53.2	6.8	n/a
HR-CUZO87-01	4006	43.6 (53)	20.0 (35)	63.6	6.1	n/a
HR-5766VR-01	4007	48.3 (53)	17.7 (35)	66.0	6.0	n/a
HR-ODLOE0-01	4008	26.7 (53)	21.5 (35)	48.1	7.2	n/a
HR-GQ9MTO-01	4101	25.7 (53)	19.7 (35)	45.4	7.4	n/a
HR-3IC3A5-01	4102	16.3 (53)	20.9 (35)	37.2	7.9	n/a
HR-BHUX4Q-01	4103	44.9 (53)	15.9 (35)	60.8	6.3	n/a
HR-F9ZA79-01	4104	39.8 (53)	20.5 (35)	60.2	6.4	n/a
HR-FEDJIJ-01	4201	26.4 (53)	26.8 (35)	53.2	6.8	n/a
HR-YZFMD5-01	4202	42.3 (53)	22.3 (35)	64.6	6.1	n/a
Averages	245x (Total)	28.0	18.5	46.4	7.3	n/a
Maximum Loads and Minimum Ratings		48.3	26.8	66.0	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

Multi Dwelling

Certificate number: 1843962M

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

Secretary

Date of issue: Tuesday, 28 April 2026

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-2SGKJF-01.

Project summary

Project name	10 Dangar Street, Wickham
Street address	10 DANGAR STREET WICKHAM 2293
Local Government Area	NEWCASTLE
Plan type and plan number	Deposited Plan 1197377
Lot No.	1
Section no.	-
No. of residential flat buildings	1
Residential flat buildings: no. of dwellings	245
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	✓ 64	Target 62
Materials	✓ -100	Target n/a

Certificate Prepared by

Name / Company Name: Efficient Living Pty Ltd

ABN (if applicable): 82116346082

Description of project

Project address	
Project name	10 Dangar Street, Wickham
Street address	10 DANGAR STREET WICKHAM 2293
Local Government Area	NEWCASTLE
Plan type and plan number	Deposited Plan 1197377
Lot No.	1
Section no.	-
Project type	
No. of residential flat buildings	1
Residential flat buildings: no. of dwellings	245
Multi-dwelling housing: no. of dwellings	0
No. of single dwelling houses	0
Site details	
Site area (m²)	2904
Roof area (m²)	1250
Non-residential floor area (m²)	16251
Residential car spaces	197
Non-residential car spaces	18

Common area landscape		
Common area lawn (m²)	0	
Common area garden (m²)	285	
Area of indigenous or low water use species (m²)	0	
Assessor details and thermal loads		
Assessor number	HERA10033	
Certificate number	HR-2SGKJF-01	
Climate zone	15	
Project score		
Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 64	Target 62
Materials	✓ -100	Target n/a

Description of project

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

Residential flat buildings - Building1, 245 dwellings, 44 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1201	1	62.3	0	0	0
1205	1	80.8	0	0	0
1209	2	84.1	0	0	0
1304	2	83.2	0	0	0
1308	2	82.4	0	0	0
1403	1	60.7	0	0	0
1407	2	84.6	0	0	0
1502	1	62.5	0	0	0
1506	2	79.1	0	0	0
1601	1	62.3	0	0	0
1605	2	80.8	0	0	0
1609	2	84.2	0	0	0
1704	2	83.2	0	0	0
1801	1	62.3	0	0	0
1805	2	80.8	0	0	0
1809	2	84.2	0	0	0
1904	2	83.2	0	0	0
1908	2	82.5	0	0	0
2003	1	60.7	0	0	0
2007	2	84.6	0	0	0
2102	3	106.7	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1202	1	62.6	0	0	0
1206	2	79.1	0	0	0
1301	1	62.3	0	0	0
1305	2	80.8	0	0	0
1309	2	84.2	0	0	0
1404	2	83.2	0	0	0
1408	2	82.4	0	0	0
1503	1	60.7	0	0	0
1507	2	84.6	0	0	0
1602	1	62.5	0	0	0
1606	2	79.1	0	0	0
1701	1	62.3	0	0	0
1705	2	80.8	0	0	0
1802	1	62.5	0	0	0
1806	2	79.1	0	0	0
1901	1	62.3	0	0	0
1905	2	80.8	0	0	0
1909	2	84.2	0	0	0
2004	2	83.2	0	0	0
2008	2	82.5	0	0	0
2103	3	108.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1203	1	60.7	0	0	0
1207	2	84.6	0	0	0
1302	1	62.5	0	0	0
1306	2	79.1	0	0	0
1401	1	62.3	0	0	0
1405	2	80.8	0	0	0
1409	2	84.2	0	0	0
1504	2	83.2	0	0	0
1508	2	82.4	0	0	0
1603	1	60.7	0	0	0
1607	2	84.6	0	0	0
1702	1	62.5	0	0	0
1706	2	79.1	0	0	0
1803	1	60.7	0	0	0
1807	2	84.6	0	0	0
1902	1	62.5	0	0	0
1906	2	79.1	0	0	0
2001	1	62.3	0	0	0
2005	2	80.8	0	0	0
2009	2	84.2	0	0	0
2104	2	80.7	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
1204	4+	83.2	0	0	0
1208	2	82.4	0	0	0
1303	1	60.7	0	0	0
1307	2	84.6	0	0	0
1402	1	62.5	0	0	0
1406	2	79.1	0	0	0
1501	1	62.3	0	0	0
1505	2	80.8	0	0	0
1509	2	84.2	0	0	0
1604	2	83.2	0	0	0
1608	2	82.4	0	0	0
1703	1	60.7	0	0	0
1707	2	84.6	0	0	0
1804	2	83.2	0	0	0
1808	2	82.5	0	0	0
1903	1	60.7	0	0	0
1907	2	84.6	0	0	0
2002	1	62.5	0	0	0
2006	2	79.1	0	0	0
2101	1	62.2	0	0	0
2105	2	79.1	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2106	2	84.6	0	0	0
2202	3	106.7	0	0	0
2206	2	84.6	0	0	0
2302	3	106.7	0	0	0
2306	2	84.6	0	0	0
2402	3	106.7	0	0	0
2406	2	84.6	0	0	0
2502	3	106.7	0	0	0
2506	2	84.6	0	0	0
2602	3	106.7	0	0	0
2606	2	84.6	0	0	0
2702	3	106.7	0	0	0
2706	2	84.6	0	0	0
2802	3	106.7	0	0	0
2806	2	84.6	0	0	0
2902	3	106.7	0	0	0
2906	2	84.6	0	0	0
3002	3	106.7	0	0	0
3006	2	84.6	0	0	0
3102	3	106.7	0	0	0
3106	2	85	0	0	0
3202	3	106.7	0	0	0
3206	2	85	0	0	0
3302	3	106.7	0	0	0
3306	2	85	0	0	0
3402	3	106.7	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2107	2	82.5	0	0	0
2203	3	108.5	0	0	0
2207	2	82.5	0	0	0
2303	3	108.5	0	0	0
2307	2	82.5	0	0	0
2403	3	108.5	0	0	0
2407	2	82.5	0	0	0
2503	3	108.5	0	0	0
2507	2	82.5	0	0	0
2603	3	108.5	0	0	0
2607	2	82.5	0	0	0
2703	3	108.5	0	0	0
2707	2	82.5	0	0	0
2803	3	108.5	0	0	0
2807	2	82.5	0	0	0
2903	3	108.5	0	0	0
2907	2	82.5	0	0	0
3003	3	108.5	0	0	0
3007	2	82.5	0	0	0
3103	3	108.5	0	0	0
3107	2	82.5	0	0	0
3203	3	108.5	0	0	0
3207	2	82.5	0	0	0
3303	3	108.5	0	0	0
3307	2	82.5	0	0	0
3403	3	108.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2108	2	84.1	0	0	0
2204	2	80.7	0	0	0
2208	2	84.1	0	0	0
2304	2	80.7	0	0	0
2308	2	84.1	0	0	0
2404	2	80.7	0	0	0
2408	2	84.1	0	0	0
2504	2	80.7	0	0	0
2508	2	84.1	0	0	0
2604	2	80.7	0	0	0
2608	2	84.1	0	0	0
2704	2	80.7	0	0	0
2708	2	84.1	0	0	0
2804	2	80.7	0	0	0
2808	2	84.1	0	0	0
2904	2	80.7	0	0	0
2908	2	84.1	0	0	0
3004	2	80.7	0	0	0
3008	2	84.1	0	0	0
3104	2	80.7	0	0	0
3108	2	84.1	0	0	0
3204	2	80.7	0	0	0
3208	2	84.1	0	0	0
3304	2	80.7	0	0	0
3308	2	84.1	0	0	0
3404	2	80.7	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
2201	1	62.2	0	0	0
2205	2	79.1	0	0	0
2301	1	62.2	0	0	0
2305	2	79.1	0	0	0
2401	1	62.2	0	0	0
2405	2	79.1	0	0	0
2501	1	62.2	0	0	0
2505	2	79.1	0	0	0
2601	1	62.2	0	0	0
2605	2	79.1	0	0	0
2701	1	62.2	0	0	0
2705	2	79.1	0	0	0
2801	1	62.2	0	0	0
2805	2	79.1	0	0	0
2901	1	62.2	0	0	0
2905	2	79.1	0	0	0
3001	1	62.2	0	0	0
3005	2	79.1	0	0	0
3101	1	62.2	0	0	0
3105	2	79.1	0	0	0
3201	1	62.2	0	0	0
3205	2	79.1	0	0	0
3301	1	62.2	0	0	0
3305	2	79.1	0	0	0
3401	1	62.2	0	0	0
3405	2	79.1	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3406	2	85	0	0	0
3502	3	106.7	0	0	0
3506	2	85	0	0	0
3602	3	106.7	0	0	0
3606	2	85	0	0	0
3702	3	106.7	0	0	0
3706	2	85	0	0	0
3802	3	106.7	0	0	0
3806	2	85	0	0	0
3902	3	106.7	0	0	0
3906	2	85	0	0	0
4002	3	106.7	0	0	0
4006	2	85	0	0	0
4102	3	188.1	0	0	0
4202	4+	280.4	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3407	2	82.5	0	0	0
3503	3	108.5	0	0	0
3507	2	82.5	0	0	0
3603	3	108.5	0	0	0
3607	2	82.5	0	0	0
3703	3	108.5	0	0	0
3707	2	82.5	0	0	0
3803	3	108.5	0	0	0
3807	2	82.5	0	0	0
3903	3	108.5	0	0	0
3907	2	82.5	0	0	0
4003	3	108.5	0	0	0
4007	2	82.5	0	0	0
4103	3	166.3	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3408	2	84.1	0	0	0
3504	2	80.7	0	0	0
3508	2	84.1	0	0	0
3604	2	80.7	0	0	0
3608	2	84.1	0	0	0
3704	2	80.7	0	0	0
3708	2	84.1	0	0	0
3804	2	80.7	0	0	0
3808	2	84.1	0	0	0
3904	2	80.7	0	0	0
3908	2	84.1	0	0	0
4004	2	80.7	0	0	0
4008	2	84.1	0	0	0
4104	3	166.3	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & lawn (m²)	Indigenous species (min area m²)
3501	1	62.2	0	0	0
3505	2	79.1	0	0	0
3601	1	62.2	0	0	0
3605	2	79.1	0	0	0
3701	1	62.2	0	0	0
3705	2	79.1	0	0	0
3801	1	62.2	0	0	0
3805	2	79.1	0	0	0
3901	1	62.2	0	0	0
3905	2	79.1	0	0	0
4001	1	62.2	0	0	0
4005	2	79.1	0	0	0
4101	3	168.2	0	0	0
4201	4+	320.5	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 (m²)	Common area	Floor area (m²)	Common area	Floor area (m²)
Lift bank (No. 1)	-	Undercover car park area (shared / loading)	364	Undercover car park area	6769
Garbage rooms	235	Communal space (indoor)	136	Communal space (outdoor undercover)	341
Plant or service rooms	1428	Communal bathrooms	14	Storage rooms	491
Ground floor entry lobby	102	Hallways	2770	Hallways (shared / BOH)	271

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 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
suspended floor above open subfloor, frame: suspended concrete slab	79.1	-	-
floors above habitable rooms, frame: suspended concrete slab	26434.4	-	-
garage floor, frame: concrete slab on ground	2401.96	-	none
garage floor, frame: suspended concrete slab	4497.46	-	none
suspended floor above enclosed subfloor, frame: suspended concrete slab	6022.19	-	-
suspended floor above open subfloor, frame: suspended concrete slab	7533	-	-

External wall types				
External wall type	Construction type	Area (m2)	Low emissions option	Insulation
External wall type 1	framed (fibre cement sheet or boards),frame:light steel frame	11826	-	-
External wall type 2	framed (fibre cement sheet or boards),frame:light steel frame	92	-	-
External wall type 3	off form concrete,frame:no frame	18671	none	-

Internal wall types			
Internal wall type	Construction type	Area (m2)	Insulation
Internal wall type 1	plasterboard, frame:light steel frame	14646	-
Internal wall type 2	75 mm AAC panel, frame:light steel frame	10147	-
Internal wall type 3	75 mm AAC panel, frame:light steel frame	37.6	-

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

Ceiling and roof types			
Ceiling and roof type	Area (m²)	Roof Insulation	Ceiling Insulation
concrete - plasterboard internal, frame: no frame	1250	-	-

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)
-	7827	-	7827	-	-	-	-

(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: (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	4 star (> 6 but ≤ 7.5 L/min)	4 star	5 star	5 star	-	not specified	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
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	manual switch on/off

	Cooling		Heating		Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bathrooms or toilets	Main kitchen
All dwellings	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	1-phase airconditioning - ducted / EER 3.5 - 4.0	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	-	-	-	-	-	induction cooktop & electric oven	3 star	8.0 star	no	no

(iii) Thermal Performance	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.	✓	✓	✓
(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.		✓	

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1201	20.2	24.7	44.900
1202	23.80	23	46.800
1203	11.00	17.7	28.700
1204	20.40	12.9	33.300

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1205	26.40	14.2	40.600
1206	34.00	15	49.000
1207	40.50	16	56.500
1208	44.80	12.4	57.200
1209	24.00	23.9	47.900
1301	19.40	24.6	44.000
1302	22.20	22.9	45.100
1304	14.80	13.1	27.900
1305	27.00	14.6	41.600
1306	33.20	15.1	48.300
1307	39.50	19.3	58.800
1308	43.80	18.00	61.800
1309	23.10	23.10	46.200
1401	19.60	24.6	44.200
1402	22.10	22.8	44.900
1403	7.90	18	25.900
1404	14.70	13.2	27.900
1405	27.10	14.6	41.700
1406	33.40	15.2	48.600
1407	39.70	19.1	58.800
1408	44.00	18.3	62.300
1409	22.90	23.4	46.300
1501	20.00	24.7	44.700
1502	22.40	22.90	45.300
1503	8	18	26.000
1504	14.80	15.2	30.000
1505	27.40	14.6	42.000
1506	33.80	15.20	49.000
1507	40.10	19.3	59.400
1508	44.40	18.2	62.600
1509	23.60	23	46.600

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1601	20.10	24.20	44.300
1602	22.70	23	45.700
1603	8.10	18	26.100
1604	15.00	15.2	30.200
1605	27.60	14.80	42.400
1606	34.10	15.2	49.300
1607	40.20	19.20	59.400
1608	47.00	18.9	65.900
1609	28.00	25.3	53.300
1701	20.30	24.00	44.300
1702	22.80	22.9	45.700
1703	8.20	18	26.200
1704	11.20	14.4	25.600
1705	26.40	14.7	41.100
1706	34.40	15.3	49.700
1707	40.90	19.1	60.000
1801	20.30	24.1	44.400
1802	23.00	23.00	46.000
1804	15.20	15.3	30.500
1805	27.90	14.8	42.700
1806	34.60	15.2	49.800
1807	40.60	19	59.600
1808	48.20	17.7	65.900
1809	28.90	22	50.900
1901	20.60	24	44.600
1902	23.20	23.1	46.300
1903	8.50	17.8	26.300
1904	15.30	15.1	30.400
1905	28.10	14.7	42.800
1906	34.70	15.2	49.900
1907	40.80	19	59.800

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1908	45.20	17.9	63.100
1909	24.20	22.3	46.500
2001	20.80	23.9	44.700
2002	23.40	22.9	46.300
2003	9.10	18.7	27.800
2004	15.80	15.40	31.200
2005	28.60	15.7	44.300
2006	34.90	16.1	51.000
2007	41.10	19	60.100
2008	45.50	18.2	63.700
2009	27.70	24.7	52.400
2101	20.80	23.5	44.300
2102	16.70	16.6	33.300
2103	15.10	20.1	35.200
2104	21.70	15.2	36.900
2105	35.00	15.2	50.200
2106	41.20	18.7	59.900
2107	45.90	18.60	64.500
2108	24.70	22.2	46.900
2201	20.90	23.2	44.100
2202	15.60	16.7	32.300
2203	14.20	17.8	32.000
2204	23.00	15.3	38.300
2205	35.20	15.1	50.300
2206	41.40	18.8	60.200
2207	45.80	17.8	63.600
2208	24.70	22.3	47.000
2301	20.90	23.4	44.300
2302	15.60	16.6	32.200
2303	14.30	17.7	32.000
2304	22.90	15.4	38.300

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
2305	35.10	15.5	50.600
2306	41.40	18.5	59.900
2307	45.80	17.7	63.500
2308	24.70	22.1	46.800
2401	21.10	24	45.100
2402	15.70	16.7	32.400
2403	14.30	17.6	31.900
2404	23.20	15.3	38.500
2405	35.40	15.1	50.500
2406	41.50	18.7	60.200
2407	46.00	18	64.000
2408	24.90	21.8	46.700
2501	21.30	23.6	44.900
2502	15.80	16.8	32.600
2503	14.60	17.5	32.100
2504	23.30	15.2	38.500
2505	35.60	15.2	50.800
2506	41.70	18.7	60.400
2507	46.20	17.8	64.000
2508	25.10	21.7	46.800
2601	21.50	23.9	45.400
2602	16.00	16.8	32.800
2603	14.60	17.4	32.000
2604	23.50	15.3	38.800
2605	35.70	15.2	50.900
2606	41.90	18.7	60.600
2607	46.40	17.6	64.000
2608	25.20	21.7	46.900
2701	21.70	23.9	45.600
2702	16.10	16.7	32.800
2703	14.70	17.3	32.000

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
2704	23.60	15.2	38.800
2705	35.90	15.30	51.200
2708	25.40	21.4	46.800
2801	21.70	23.8	45.500
2802	16.10	16.60	32.700
2803	14.70	17.5	32.200
2804	23.60	15.30	38.900
2805	35.90	15.3	51.200
2808	25.40	21.40	46.800
2901	21.80	23.7	45.500
2902	16.20	16.7	32.900
2904	23.80	15.3	39.100
2905	36.20	15.4	51.600
2906	42.30	18.4	60.700
2907	46.80	17.7	64.500
2908	25.50	21.5	47.000
3001	24.40	24.4	48.800
3002	16.40	16.7	33.100
3003	15.00	17.3	32.300
3004	23.10	15.20	38.300
3005	36.40	15.4	51.800
3007	47.10	17.6	64.700
3008	25.70	21.6	47.300
3101	22.00	23.4	45.400
3102	16.40	16.5	32.900
3103	15.20	19.7	34.900
3104	22.80	15.2	38.000
3105	36.40	15.30	51.700
3107	47.20	18.20	65.400
3108	25.70	21.2	46.900
3201	22.20	22.8	45.000

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
3202	14.80	16.50	31.300
3203	14.80	17.3	32.100
3204	24.10	15.1	39.200
3205	36.60	15.6	52.200
3206	42.70	18.3	61.000
3207	46.70	17.70	64.400
3208	25.90	21.2	47.100
3301	22.30	22.9	45.200
3302	17.00	16.5	33.500
3306	42.90	18.3	61.200
3307	46.90	17.60	64.500
3308	26.00	21.10	47.100
3401	22.30	22.8	45.100
3402	16.90	16.7	33.600
3403	14.90	17.20	32.100
3406	42.90	18.1	61.000
3407	46.90	17.4	64.300
3408	26.00	21.1	47.100
3501	22.40	22.3	44.700
3503	15.00	17.30	32.300
3504	24.40	15.1	39.500
3506	43.10	18.1	61.200
3507	47.10	17.5	64.600
3508	26.20	21.2	47.400
3601	22.40	22.10	44.500
3603	15.00	17.2	32.200
3604	24.40	14.7	39.100
3606	43.10	18	61.100
3607	47.10	17.3	64.400
3608	26.20	21.1	47.300
3701	22.50	22.2	44.700

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
3702	17.30	16.7	34.000
3704	24.60	14.7	39.300
3705	37.10	15.7	52.800
3707	47.30	17.3	64.600
3801	22.50	22.1	44.600
3802	17.30	16.6	33.900
3804	24.60	15	39.600
3805	37.10	15.6	52.700
3807	47.30	17.2	64.500
3901	22.70	22	44.700
3902	17.40	16.6	34.000
3903	15.30	17.1	32.400
3904	24.70	14.9	39.600
3905	37.30	15.50	52.800
3906	43.50	18.10	61.600
3907	47.50	17	64.500
3908	26.50	20.8	47.300
4001	23.00	23.1	46.100
4002	21.00	16.50	37.500
4003	19.20	17.5	36.700
4004	24.90	15.40	40.300
4005	37.60	15.6	53.200
4006	43.60	20	63.600
4007	48.30	17.7	66.000
4008	26.70	21.5	48.200
4101	25.70	19.7	45.400
4102	16.30	20.9	37.200
4103	44.90	15.9	60.800
4104	39.80	20.5	60.300
4201	26.40	26.80	53.200
4202	42.30	22.3	64.600

	Thermal loads		
Dwelling no.	Area adjusted heating load (in MJ/m ² /yr)	Area adjusted cooling load (in MJ/m ² /yr)	Area adjusted total load (in MJ/m ² /yr)
1303, 1803	8.40	17.9	26.300
2706, 2806	42.10	18.8	60.900
2707, 2807	46.60	17.7	64.300
2903, 3303	14.90	17.4	32.300
3006, 3106	42.50	18.3	60.800
3304, 3404	24.20	15	39.200
3305, 3405	36.70	15.6	52.300
3502, 3602	17.10	16.7	33.800
3505, 3605	36.90	15.7	52.600
3703, 3803	15.10	17.1	32.200
3706, 3806	43.30	18.1	61.400
All other dwellings	26.30	20.8	47.100

(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)	5000	To collect run-off from at least: - 600 square metres of roof area of buildings in the development	- irrigation of 285 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site
Fire sprinkler system (No. 1)	-	-	-
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.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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
Undercover car park area (shared / loading)	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	no
Undercover car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	time clock and motion sensors	no
Garbage rooms	ventilation exhaust only	-	light-emitting diode	motion sensors	no
Communal space (indoor)	air conditioning system	time clock or BMS controlled	light-emitting diode	motion sensors	no
Communal space (outdoor undercover)	no mechanical ventilation	-	light-emitting diode	motion sensors	no
Plant or service rooms	ventilation (supply + exhaust)	thermostatically controlled	light-emitting diode	manual on / manual off	no
Communal bathrooms	ventilation exhaust only	time clock or BMS controlled	light-emitting diode	motion sensors	no
Storage rooms	ventilation supply only	time clock or BMS controlled	light-emitting diode	motion sensors	no
Ground floor entry lobby	air conditioning system	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	no
Hallways	ventilation supply only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	no
Hallways (shared / BOH)	ventilation supply only	time clock or BMS controlled	light-emitting diode	time clock and motion sensors	no

Central energy systems	Type	Specification
Lift bank (No. 1)	gearless traction with V V V F motor and regenerative drive	Number of levels with apartments served by a lift: 31 number of levels from the bottom of the lift shaft to the top of the lift shaft: 48 number of lifts: 3 lift load capacity: >= 1001 kg but <= 1500kg

Central energy systems	Type	Specification
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: $3.0 < \text{COP} \leq 3.5$

2. 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
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 30 peak kW
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).