# 77-103 Anzac Parade & 59A-71 Boronia Street, Kensington

# **BASIX** Report

DA Review

Prepared for: ANSON GROUP

Att: Andreas Pelosi

Date: 05/12/2023

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Ref: 301350899

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# Revision

Revision	Date	Comment	Prepared By	Approved
1	26/07/2022	DA Issue	НА	RD
2	05/12/2023	DA Issue – Revision 2	НА	RD

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#### **Qualifications to this Report**

The following qualifications apply to this report:

- Information has been based on our understanding of the proposed building and documentation provided, as
- This report outlines the scope of works required for BASIX compliance only. Additional requirements such as civil/stormwater, façade design and/or acoustic requirements should be coordinated with the relevant design consultants.
- As this project involves no detailed design or site supervision by Stantec, we advise that we will not prepare a
  Safety in Design report for this project. As detailed in our scope of work we will review the Safety in Design report
  prepared by the project designer and make comment as appropriate. We confirm that the responsibility for
  complying with the requirements of the state OS&H legislation remains with the project designer in conjunction
  with the project team and the client.

#### **Disclaimer**

The energy models prepared for BASIX thermal comfort compliance provides an estimate of the base building's energy performance. This estimate is based on a necessarily simplified and idealised version of the building that does not and cannot fully represent all of the intricacies of the building and its operation. As a result, the energy model results only represent an interpretation of the potential performance of the building. No guarantee or warrantee of building performance in practice can be based on energy modelling results alone.

# Executive Summary

We can confirm the following outcome of the BASIX analysis for 77-103 Anzac Parade & 59A-71 Boronia Street, Kensington development project.

	Energy Score	Water Score	Thermal Comfort
Target	35%	40%	Pass
77-103 Anzac Parade & 59A-71 Boronia Street - Kensington	36%	40%	Pass

#### **Table 1: BASIX Scores**

- BASIX Certificates have been included in Appendix A.
- Further information regarding the thermal comfort and building fabric specification has been outlined within Section 4 of this report. Note this specification detail forms the basis of BASIX compliance and therefore must be documented within the project design/specification in order to achieve CC approval.
- Our assessment works have been conducted based on the Architectural Plans (21/07/2022) as part of the BASIX drawing sets provided by the BVN Architect team.

# 2. Design Documentation

The following BASIX assessment is based on all architectural drawings received on 21/11/2023 and associated design notes, including:

Drawing #	Drawing Name	Revision
AR-C10-AA-01	Street Elevations – West & East	P13
AR-C10-AA-02	Street Elevations – North & South	P12
AR-C10-AA-04	Courtyard elevations – East & West	P6
AR-B10-AA-B2	GA Plan – Basement 02	P18
AR-B10-AB-B1	GA Plan – Basement 01	P19
AR-B10-XX-00	GA Plan – Ground Level	P21
AR-B10-XX-01	GA Plan – Level 01	P18
AR-B10-XX-02	GA Plan – Level 02	P16
AR-B10-XX-03	GA Plan – Level 03	P15
AR-B10-XX-04	GA Plan – Level 04	P15
AR-B10-XX-05	GA Plan – Level 05	P15
AR-B10-XX-06	GA Plan – Level 06	P15
AR-B10-XX-07	GA Plan – Level 07	P15
AR-B10-XX-08	GA Plan – Level 08	P15
AR-B10-XX-RF	GA Plan – Roof Level	P15

# 3. Thermal Comfort Design Assessment

The thermal comfort aspect of this assessment was conducted using the FirstRate5 Thermal Performance Assessment Software, which assesses the thermal performance of a Class 1 or Class 2 dwelling in accordance with the requirements of National House Energy Rating Scheme (NatHERS) scheme as stated in the BASIX Thermal Comfort Protocol.

Compliance requires that the average area adjusted heating and cooling loads are below or equal to the average area adjusted heating and cooling loads calculated by BASIX. In addition, individual dwellings must also meet descriptive targets as defined by BASIX.

Based on the information received to date, the development average area adjusted heating and cooling loads were found to be as noted in the table below.

#### **Development Average NatHERS Star Ratings:**

Building	Achieved Average NatHERS Star Rating
Building A	
Building B	6.014
Building C	0.014
Building D	

#### **Development Average Heating and Cooling Loads:**

	Heating Load (MJ/m²/year)	Cooling Load (MJ/m²/year)
BASIX Maximum Average	45.4	29.5
77-103 Anzac Parade & 59A-71 Boronia Street – Kensington	26	26

Note: Full summary of NatHERS Thermal Performance Results is attached within Appendix A

# 3.1 Energy Modelling Software

Thermal comfort compliance has been demonstrated via the simulation method within BASIX. Stantec have conducted energy simulations utilizing FirstRate5 software (Version 5.3.2a) which is approved under the BASIX Thermal Comfort Protocol (November 2020).

# 3.2 Energy Modelling Limitations

The energy modelling results obtained from the FirstRate5 software provides an estimate of the base building energy performance only. This estimate is based upon a simplified and idealised version of the building that does not fully comply with the intricacies of a building and its operation. As a result, the energy mode represents an interpretation of the potential building performance only. Several dependent factors will affect the actual operational performance of the building, including local climate variation, building occupant behaviour, construction technique and building services commissioning. No guarantee or warrantee of building performance in practice can be based on energy modelling results alone.

# 4. Design Specification

# 4.1 BASIX Compliant Design Specification

### 4.1.1 Design Specification – FABRIC

### Design Specification – FABRIC

**External Walls:** 

Total wall: R2.8 - (R2.5 added insulation)

**Internal Walls to Adjoining Apartment:** 

As the adjoining apartment is considered a conditioned space there is no thermal insulation requirement for this wall.

Therefore, the insulation to this wall shall be as per acoustic requirements.

**Internal Walls to Corridors:** 

Total wall: R1.8 - (R1.5 added insulation)

**Exposed Ceilings and Roof:** 

Total system: R3.0

**Exposed Soffit (Floor):** 

Total system: R2.0 required as shown in the insulation markup (Appendix B)

#### Windows and Glazed Doors:

Window Specification	Required to
Double Glazed (Clear) Air Filled.	A.105, A.203, A.205, A.206, A.303, A.306, A.502, A.503,
(U-value: 4.8, SHGC: 0.51)	A.505, A.506, A.507, B.106, B.203, B.303, B.503, C.101, C.102, C.103, C.105, C.108, C.109, C.110, C.111, C.112, C.113, C.201, C.202, C.203, C.206, C.208, C.209, C.210, C.211, C.212, C.213, C.301, C.303, C.305, C.306, C.307, C.308, C.309, C.310, C.312, C.313, C.503, C.505, C.506, C.507, C.508, C.509, C.510, C.601, C.603, C.605, C.606, C.607, C.608, C.609, C.611, C.612, C.613, C.701, C.702, C.703, C.705, C.706, C.707, C.708, C.709, C.711, C.712, C.713, C.801, C.802, C.803, C.805, C.806, C.807, C.808, C.809, C.810, C.812, C.907, C.913, D.105, D.107, D.207, D.303, D.502, D.601, D.602, D.603,
Double Glazed Air fill High Solar Gain low-E - Clear.  (U-value: 4.3, SHGC:0.47)	D.701, D.702, D.703, D.801, D.802, D.803, D.901  A.101, A.103, C.811, C.906, C.911, D.608, D.708, D.808, D.902, D.908
Double Glazed Air fill Low Solar Gain low-E - Clear.  (U-value: 4.9, SHGC:0.33)	A1.06, A.207, B1.01, B1.02, B.103, B.105, B.205, B.206, B.305, B.306, B.505, B.506, C.106, C.107, C.205, C.207, C.901, C.902, C.903, C.905, C.906, C.908, C.909,

	C.911, C.912, D.205, D.305, D.503, D.506, D.606, D.706, D.806, D.906.
Single Glazed High Solar Gain, low-e.	All other apartments and corridors.
(U-value: 5.4, SHGC: 0.58)	
Skylights: Double Glazed (U-value 4.22, SHGC: 0.72)	All skylights.

All windows have been specified with weather-strips to prevent air infiltration when closed. This is standard compliance with AS2047.

**Note**: The thermal performance values for all windows detailed above are for glass and framing system combined. Variation from the outlined window performance specifications will impact thermal comfort and NatHERS compliance/results.

#### 4.1.2 Design Specification - WATER

#### **Design Specification – WATER**

#### **Alternative Water Supply**

15kL Rainwater tank

#### Fixtures & Fittings:

We note that fixtures with the following WELS ratings have been included in the BASIX Assessment:

#### Common Areas (as applicable) & all dwellings:

- 4 Star WELS minimum rated Showerheads (> 6 but <= 7.5 L/min)
- 4 Star WELS minimum rated Toilets
- 5 Star WELS minimum rated Kitchen taps
- 5 Star WELS minimum rated Bathroom taps
- 3 Star WELS minimum rated dishwasher

\*Note: a reduction in the WELS rating of these fixtures or appliances will affect the water aspect of the BASIX rating.

#### **Outdoor Pool & Spa**

N/A

#### Fire System:

Fire sprinkler test water will be contained in a closed system.

#### 4.1.3 Design Specification - ENERGY

#### **Design Specification - ENERGY**

#### Alternative Energy Supply/ Solar Photovoltaic System

45kW peak output Photovoltaic system

#### Air Leakage



Kitchen, bathroom, and laundry exhaust shall be via individual fan ducted to the façade or roof.

Back-draft dampers must be installed to prevent air infiltration.

#### **Hot Water System**

One gas fired storage domestic hot water system per building (4) is to be installed to serve all dwellings.

Domestic Hot Water pipework is required to have minimum R0.6 insulation (~25mm).

It should be noted that a less efficient hot water system will affect the BASIX Energy rating.

#### **Mechanical Ventilation Systems:**

#### **Common Areas:**

Ventilation supply + exhaust with a carbon monoxide monitor and VSD fan

Car Park Basements

Ventilation exhaust only

Garbage rooms

Ventilation supply only, interlocked to light

· Site plant and service rooms

Ventilation supply only, time clock or BMS controlled

Storage spaces

No mechanical ventilation

- Fire Stairs (Stair pressurisation in emergency mode only)
- Site wide building corridors/hallway spaces
- Residential Lobby

#### **Dwellings:**

Kitchen, bathroom, and laundry exhaust will be ducted to the external façade or roof (manual on/off switch).

#### **Dwelling Cooling Systems:**

Individual VRV. 3-phase air-conditioning. EER (3.0-3.5) with day/night zoning

#### Ceiling Fan Strategy:

Ceiling Fan(s)	Required to
1 x 900mm (Dia) to Kitchen/Living	A.205, A.207, A.506, B.106, C.101, C.105, C.106, C.108, C.109, C.111, C.112, C.201, C.205, C.207, C.208, C.209, C.211, C.212, C.303, C.305, C.307, C.308, C.309, C.503, C.508, C.509, C.606, C.607, C.609, C.612, C.702, C.705, C.706, C.707, C.708, C.711, C.801, C.802, C.803, C.805, C.806, C.809, C.901, C.908, C.912, D.601, D.608, D.701, D.702, D.708, D.801, D.802, D.808, D.903, D.906, D.908

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	1 x 1200mm (Dia) to Kitchen/Living	A.307, B.105, B5.05, C.603, C.701, D.602, D.901
	1 x 1400mm (Dia) to Kitchen/Living	A.507, B.203, B.303, B3.05, B.503, C.107, C.611, C.811, C.905, C.906, C.911, D.803
	1 x 1200mm (Dia) to Kitchen/Living +	A.206, C.506
	1 x 900mm (Dia) to Bed	
	1 x 1400mm (Dia) to Kitchen/Living +	B.206, B.306, B.506, C.103, C.203, C.206,
	1 x 900mm (Dia) to Bed	
	1 x 1400mm (Dia) to Kitchen/Living +	B.205,
	1 x 1200mm (Dia) to Bed	
	1 x 1400mm (Dia) to Kitchen/Living +	C.902, C.907, D.902
	1 x 1400mm (Dia) to Bed	

Note: Variation from the outlined ceiling fan strategy will impact thermal comfort and NatHERS compliance/results.

#### **Dwelling Heating Systems:**

Individual VRV. 3-phase air-conditioning. EER (3.0-3.5) with day/night zoning

#### Lighting:

#### **Common Areas:**

Dedicated LED lamps throughout.

Zoned switching and Motion Sensor to:

- Car Park areas
- Fire stairs

#### Motion Sensors to:

- · Storage spaces
- Garbage rooms
- Plant and service rooms

All lifts: LED connected to lift call button

Time clock and motion sensors to:

- Site wide building corridors/hallway spaces
- Ground floor lobby spaces

#### Manual switches

Plant and service rooms

#### **Dwellings:**

Dedicated LED Lamps throughout.

#### **Vertical Transportation:**

Gearless traction lifts with V V V F motor and regenerative drive serving all storeys of all buildings have been specified within the BASIX certificate.

#### **Dwelling Appliance Specifications:**

The following minimum energy performance specifications have been included within the BASIX assessment:

- Gas cooktops and electric ovens to all dwellings.
- Dishwasher: 4-star energy rating

**Note:** A reduction in the quality of any of these appliances will affect the energy aspect of the BASIX rating. Client to confirm which appliances are to be included within base-building design.

#### **Common Pool and Spa**

N/A

# 5. BASIX Certification Detail

Project Summary	
Project Name	77-103 Anzac Parade & 59A-71 Boronia Street
Street Address	77-103 Anzac Parade & 59A-71 Boronia Street
Local Government Area	Randwick City Council
Plan Type / Number	DP30406
Lot No#	-
Section No#	-
No. of Residential Buildings	4
No. of units in Residential Flat Buildings	195
No. of multi-dwelling houses	0
No. of single dwelling houses	0
BASIX Certificate No#	1320141M_02
Project Score	
Water	40%
Thermal Comfort	Pass
Energy	36%

# 6. Appendix A: BASIX Certificate



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

# Multi Dwelling

Certificate number: 1320141M\_02

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.basix.nsw.gov.au

This certificate is a revision of certificate number 1320141M lodged with the consent authority or certifier on with application PAN-248810.

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, 05 December 2023

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



**BASIX** 

Project summary		
Project name	77-103 Anzac Parade, Kensington _(	02
Street address	77-103 ANZAC PARADE PARADE KENSINGTON 2033	
Local Government Area	RANDWICK	
Plan type and plan number	Deposited Plan DP30406	
Lot no.	-	
Section no.	-	
No. of residential flat buildings	4	
No. of units in residential flat buildings	195	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	<b>✓</b> 40	Target 40
Thermal Comfort	<b>✓</b> Pass	Target Pass
Energy	✓ 36	Target 35

# **Certificate Prepared by**

Name / Company Name: Stantec Australia Pty Ltd.

ABN (if applicable): 17007820322

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# **Description of project**

BASIX

Project address	
Project name	77-103 Anzac Parade, Kensington _02
Street address	77-103 ANZAC PARADE PARADE KENSINGTON 2033
Local Government Area	RANDWICK
Plan type and plan number	Deposited Plan DP30406
Lot no.	-
Section no.	-
Project type	
No. of residential flat buildings	4
No. of units in residential flat buildings	195
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	6300
Roof area (m²)	3600
Non-residential floor area (m²)	3168
Residential car spaces	157
Non-residential car spaces	86

Common area landscape		
Common area lawn (m²)	0.00	
Common area garden (m²)	1050	
Area of indigenous or low water use species (m²)	685	
Assessor details and therm	al loads	
Assessor number	DMN/21/2042	
Certificate number	QOADIZIQP3	
Climate zone	56	
Ceiling fan in at least one bedroom	Yes	
Ceiling fan in at least one living room orother conditioned area	Yes	
Project score		
Water	<b>✓</b> 40	Target 40
Thermal Comfort	✓ Pass	Target Pass
Energy	✓ 36	Target 35

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# **Description of project**

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

# Residential flat buildings - Building A, 23 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A.101	1	70.7	0	0.00	0.00
A.106	3	112.5	0	0	0.00
A.205	2	78.2	0.00	0.00	0.00
A.302	2	75	0.00	0.00	0.00
A.307	1	52.9	0.00	0.00	0.00
A.505	2	78.2	0	0	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A.102	2	75	0	0	0.00
A.201	2	76.5	0	0	0.00
A.206	2	81	0.00	0.00	0.00
A.303	2	75.2	0.00	0.00	0.00
A.501	2	76.5	0.00	0.00	0.00
A.506	2	81	0.00	0.00	0.00
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Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A.103	2	75.2	0.00	0.00	0.00
A.202	2	75	0.00	0.00	0.00
A.207	1	51.7	0.00	0.00	0.00
A.305	2	78.2	0.00	0.00	0.00
A.502	2	75	0.00	0.00	0.00
A.507	1	52.9	0.00	0.00	0.00
		_			

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
A.105	2	80.2	0.00	0.00	0.00
A.203	2	75.2	0	0.00	0.00
A.301	2	76.5	0.00	0.00	0.00
A.306	2	81	0.00	0.00	0.00
A.503	2	75.2	0.00	0.00	0.00
		<u> </u>			

# Residential flat buildings - Building B, 24 dwellings, 4 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
B.101	2	78.4	0	0	0
B.106	2	78.2	0	0	0
B.203	2	81	0	0	0
B.301	2	79.2	0	0	0
B.306	2	78.1	0	0	0
B.503	2	81	0.00	0.00	0.00

BASIX

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
B.102	2	75.5	0	0	0
B.108	2	78.2	0	0	0
B.205	2	76.5	0	0	0
B.302	2	77.5	0	0	0
B.307	2	79.3	0.00	0.00	0.00
B.505	2	76.5	0.00	0.00	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
B.103	1	53.1	0	0	0
B.201	2	79.2	0	0	0
B.206	2	80.3	0	0	0
B.303	2	81	0	0	0
B.501	2	79.2	0.00	0.00	0.00
B.506	2	78.1	0.00	0.00	0.00

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
B.105	2	76.3	0	0	0
B.202	2	77.5	0	0	0
B.207	2	79.3	0	0	0
B.305	2	76.5	0	0	0
B.502	2	77.5	0.00	0.00	0.00
B.507	2	79.3	0.00	0.00	0.00

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# Residential flat buildings - Building D, 53 dwellings, 8 storeys above ground

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Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D.101	2	86.1	0	0	0
D.106	3	102.4	0	0	0
D.203	3	106.8	0	0	0
D.301	2	86.1	0	0	0
D.306	3	106.8	0	0	0
D.503	1	55.4	0	0	0
D.508	2	75.4	0	0	0
D.605	3	107.4	0	0	0
D.701	1	51.1	0	0	0
D.706	1	56.3	0	0	0
D.802	1	51.1	0	0	0
D.807	3	106.8	0	0	0
D.903	1	55.4	0	0	0
D.908	2	67.3	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D.102	2	82.5	0	0	0
D.107	3	102.4	0	0	0
D.205	1	56.3	0	0	0
D.302	2	86.1	0	0	0
D.307	3	107.2	0	0	0
D.505	3	107.3	0	0	0
D.601	1	51.1	0	0	0
D.606	1	56.3	0	0	0
D.702	1	51.1	0	0	0
D.707	3	106.8	0	0	0
D.803	1	55.4	0	0	0
D.808	2	67.3	0	0	0
D.905	3	107.5	0	0	0
D.905	3	107.5	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	
D.103	3	106.7	0	0	0	
D.201	2	86.1	0	0	0	
D.206	3	106.8	0	0	0	
D.303	3	107.2	0	0	0	
D.501	1	61.4	0.00	0.00	0.00	
D.506	1	56.3	0	0	0	
D.602	1	51.1	0	0	0	
D.607	3	106.8	0	0	0	
D.703	1	55.4	0	0	0	
D.708	2	67.3	0.00	0.00	0.00	
D.805	3	107.7	0	0	0	
D.901	1	51.1	0	0	0	
D.906	1	56.3	0	0	0	

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
D.105	1	56.3	0	0	0
D.202	2	86.1	0	0	0
D.207	3	107.2	0	0	0
D.305	1	56.3	0	0	0
D.502	1	61.40	0.00	0.00	0.00
D.507	3	106.8	0	0	0
D.603	1	55.4	0	0	0
D.608	2	67.3	0	0	0
D.705	3	106.3	0	0	0
D.801	1	51.10	0.00	0.00	0.00
D.806	1	56.3	0	0	0
D.902	1	53	0	0	0
D.907	3	106.8	0	0	0

# Residential flat buildings - Building C, 95 dwellings, 8 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
C.101	2	81.3	0	0	0
C.106	2	76.9	0	0	0

•			•	-	
Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
C.102	2	78.5	0	0	0
C.107	2	77	0	0	0

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Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
C.103	2	86.3	0	0	0
C.108	2	85.8	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
C.105	2	84	0	0	0
C.109	2	86.3	0	0	0

Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)	Dwelling no.	No. of bedrooms	Conditioned floor area (m²)	Unconditioned floor area (m²)	Area of garden & Iawn (m²)	Indigenous species (min area m²)
C.110	3	104.2	0	0	0	C.111	3	101.9	0	0	0	C.112	2	81.6	0	0	0	C.113	2	78.1	0	0	0
C.201	2	81.3	0	0	0	C.202	2	78.6	0	0	0	C.203	2	86.3	0	0	0	C.205	2	84	0	0	0
C.206	2	76.9	0	0	0	C.207	2	77	0	0	0	C.208	2	85.8	0	0.00	0.00	C.209	2	86.30	0.00	0.00	0.00
C.210	3	104.20	0.00	0.00	0.00	C.211	3	101.9	0	0	0	C.212	2	81.6	0	0	0	C.213	2	78.2	0	0	0
C.301	2	81.3	0	0	0	C.302	2	78.6	0	0	0	C.303	2	86.3	0	0	0	C.305	2	84	0	0	0
C.306	2	76.9	0	0	0	C.307	2	77	0	0	0	C.308	2	85.8	0	0	0	C.309	2	86.3	0	0	0
C.310	3	104.2	0	0	0	C.311	3	101.9	0	0	0	C.312	2	81.6	0	0	0	C.313	2	78.2	0	0	0
C.501	2	93.9	0	0	0	C.502	2	93	0	0	0	C.503	2	84	0	0	0	C.505	2	76.90	0.00	0.00	0.00
C.506	2	77.00	0.00	0.00	0.00	C.507	2	85.8	0	0	0	C.508	2	86.3	0	0	0	C.509	3	104.2	0	0	0
C.510	1	55.4	0	0	0	C.511	3	107	0	0	0	C.512	2	94.1	0	0	0	C.601	2	82.4	0	0	0
C.602	2	84.4	0	0	0	C.603	2	84	0	0	0	C.605	2	76.9	0	0	0	C.606	2	77	0	0	0
C.607	2	85.9	0	0	0	C.608	2	86.3	0	0	0	C.609	3	104.2	0	0	0	C.610	1	55.4	0	0	0
C.611	2	68.1	0	0	0	C.612	1	51.2	0	0	0	C.613	1	51.9	0	0	0	C.701	1	82.40	0.00	0.00	0.00
C.702	2	84.40	0.00	0.00	0.00	C.703	2	84	0	0	0	C.705	2	76.9	0	0	0	C.706	2	77	0	0	0
C.707	2	85.9	0	0	0	C.708	2	86.3	0	0	0	C.709	3	104.2	0	0	0	C.710	1	55.4	0	0	0
C.711	2	68.1	0	0	0	C.712	1	51.2	0	0	0	C.713	1	51.9	0	0	0	C.801	2	82.1	0	0	0
C.802	2	84.4	0	0	0	C.803	2	84	0	0	0	C.805	2	76.9	0	0	0	C.806	2	77	0	0	0
C.807	2	85.8	0	0	0	C.808	2	86.3	0	0	0	C.809	3	104.2	0	0	0	C.810	1	55.40	0.00	0.00	0.00
C.811	2	68.1	0	0	0	C.812	1	51.2	0	0	0	C.813	1	51.9	0	0	0	C.901	2	82.1	0	0	0
C.902	2	84.8	0	0	0	C.903	2	84	0	0	0	C.905	2	76.9	0	0	0	C.906	2	77	0	0	0
C.907	2	85.9	0	0	0	C.908	2	86.3	0	0	0	C.909	3	104.2	0	0	0	C.910	1	55.4	0	0	0
C.911	2	68.1	0	0	0	C.912	1	51.2	0	0	0	C.913	1	51.9	0	0	0						

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# **Description of project**

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

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

Common area	Floor area (m²)
Car park area	7188
Garbage room (No. 1)	645
Residential lobby	154

Common area	Floor area (m²)
Lift car (No. 7)	0.00
Plant or service room (No. 1)	570
Hallway	1669

Common area	Floor area (m²)
Lift car (No. 8)	0.00
Fire stairs	682

### Common areas of unit building - Building A

Common area	Floor area (m²)
Lift car (No. 1)	0.00

## Common areas of unit building - Building B

Common area	Floor area (m²)
Lift car (No. 2)	0.00

### Common areas of unit building - Building D

Common area	Floor area (m²)
Lift car (No. 5)	0.00

Common area	Floor area (m²)
Lift car (No. 6)	0.00

### Common areas of unit building - Building C

Common area	Floor area (m²)
Lift car (No. 3)	0.00

Common area	Floor area (m²)
Lift car (No. 4)	0.00

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# **Schedule of BASIX commitments**

- 1. Commitments for Residential flat buildings Building A
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 2. Commitments for Residential flat buildings Building B
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy
- 3. Commitments for Residential flat buildings Building D
  - (a) Dwellings
    - (i) Water
    - (ii) Energy
    - (iii) Thermal Comfort
  - (b) Common areas and central systems/facilities
    - (i) Water
    - (ii) Energy

4. Commitments for Residential flat buildings - Building C (a) Dwellings (i) Water (ii) Energy (iii) Thermal Comfort (b) Common areas and central systems/facilities (i) Water (ii) Energy 5. Commitments for single dwelling houses 6. Commitments for multi-dwelling houses 7. Commitments for common areas and central systems/facilities for the development (non-building specific) (a) Common areas and central systems/facilities (i) Water (ii) Energy

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### **Schedule of BASIX commitments**

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

# 1. Commitments for Residential flat buildings - Building A

### (a) Dwellings

BASIX

(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.		~	V
(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.	V	~	
(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.	V	~	
(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.	~	~	~

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	Fixtures				Appliances		Individual pool				Individual spa			
Dwelling no.	All shower- heads	All toilet flushing systems	_	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	3 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	-	-	-	-	-	-	-			
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.		<b>&gt;</b>	V
(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.		~	~

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	~	~	~
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must:			
(aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and			
(bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		<b>✓</b>	
(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;		<b>~</b>	
(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		<b>-</b>	-
(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".		V	

	Hot water	Bathroom ven	tilation system	Kitchen venti	lation 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		individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

	Cooling		Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitcher
All dwellings	3-phase airconditioning / EER 3.0 - 3.5(zoned)	3-phase airconditioning / EER 3.0 - 3.5(zoned)	EER 3.0 -	3-phase airconditioning / EER 3.0 - 3.5(zoned)	` '	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	yes

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	Individual po	ool	Individual s	ра		Appliances & other efficiency measures						
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		gas cooktop & electric oven	not specified	yes	4 star	not specified	not specified	no	no

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.			
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.			
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.	>		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.		<b>\</b>	
(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.		<b>\</b>	~
(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.	~	V	~
(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.	7		

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)					
A.101	43.00	20.80					
A.102	45.30	16.00					
A.103	42.40	20.40					
A.105	24.20	22.70					
A.106	36.30	27.20					
A.201	21.40	22.10					
A.202	31.00	19.20					
A.203	29.60	28.60					
A.205	23.70	25.30					
A.206	13.20	29.10					
A.207	13.90	28.40					
A.301	21.20	21.30					
A.302	31.30	20.10					
A.303	31.00	28.40					
A.305	30.70	24.10					
A.306	13.90	27.90					
A.307	15.60	29.40					
A.501	34.30	27.80					
A.502	43.20	22.50					
A.503	43.90	28.60					
A.505	43.40	25.30					
A.506	34.80	24.60					
All other dwellings	31.20	28.40					

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

BASIX

(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.		~	V
(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.	V	~	
(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.		<b>~</b>	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		~	V
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		<b>~</b>	V

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
	no common facility	no common facility	no common facility	no common laundry facility
areas				

(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>~</b>	>
(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.	~	<b>~</b>	V

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	Common area ve	entilation system	Common area lighting			
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS	
Lift car (No. 1)	-	-	light-emitting diode	connected to lift call button	no	

Central energy systems	Туре	Specification
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 7
Central hot water system (No. 1)		Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.6 (~25 mm); (b) Piping internal to building: R0.6 (~25 mm)

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# 2. Commitments for Residential flat buildings - Building B

### (a) Dwellings

BASIX

(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		<b>~</b>	•
(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.		<b>~</b>	•
(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.	~	<b>~</b>	
(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 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	3 star	-	-	-	-	-	-	-

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	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	-	-	-	-	-	-	-	
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:			

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		<b>~</b>	•
(cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		<b>~</b>	
(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. 2)	individual fan, ducted to façade or roof		individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cod	ling	ng Heating			Artificial lighting					Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each Iaundry	All hallways	No. of bathrooms &/or toilets	Main kitche
	3-phase airconditioning / EER 3.0 - 3.5(zoned)	,	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	yes			

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	Individual po	ool	Individual s	ра			Appliances	& other efficien	cy measur	es		
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		gas cooktop & electric oven	not specified	yes	4 star	not specified	not specified	no	no

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

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)					
B.101	15.90	27.72					
B.102	21.90	28.30					
B.103	16.10	29.40					
B.105	26.70	29.40					
B.106	23.1	26.00					
B.108	22.90	21.70					
B.201	27.20	23.00					
B.202	29.90	22.70					
B.203	19.60	29.20					
B.205	19.30	29.40					
B.206	18.80	29.20					
B.207	19.30	23.10					
B.301	28.20	24.70					
B.302	30.80	21.80					
B.303	20.50	27.10					
B.305	19.60	29.40					
B.306	20.00	27.40					
B.307	20.70	23.10					
B.501	41.30	29.10					
B.502	45.00	25.70					
B.503	37.00	25.40					
B.505	26.30	28.60					
B.506	34.10	27.90					
All other dwellings	30.80	26.10					

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

BASIX

(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.		<b>&gt;</b>	~
(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	no common facility	no common facility	no common facility	no common laundry facility
areas				

(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>&gt;</b>	>
(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.		<b>&gt;</b>	~
(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.	~	<b>V</b>	V

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	Common area ve	entilation system	Common area lighting				
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS		
Lift car (No. 2)	-	-	light-emitting diode	connected to lift call button	no		

Central energy systems	Туре	Specification
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 7
Central hot water system (No. 2)		Piping insulation (ringmain & supply risers):  (a) Piping external to building: R0.6 (~25 mm);  (b) Piping internal to building: R0.6 (~25 mm)

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# 3. Commitments for Residential flat buildings - Building D

### (a) Dwellings

BASIX

(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		<b>~</b>	~
(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.	V	~	
(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	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	3 star	-	-	-	-	-	-	-

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	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	-	-	-	-	-	-	-		
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.			

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		<b>~</b>	<b>~</b>
(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. 4)	individual fan, ducted to façade or roof		individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling Heating		Artificial lighting						Natural lighting			
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each Iaundry	All hallways	No. of bathrooms &/or toilets	Main kitche
	3-phase airconditioning / EER 3.0 - 3.5(zoned)	,	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	yes			

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	Individual po	ool	Individual s	ра	Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		gas cooktop & electric oven	not specified	yes	4 star	not specified	not specified	no	no

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

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
D.101	19.40	22.60
D.102	29.30	22.90
D.103	28.90	20.00
D.105	27.50	29.40
D.106	10.40	26.40
D.107	17.80	27.10
D.201	13.30	23.50
D.202	25.90	21.70
D.203	24.10	25.00
D.205	23.60	27.60
D.206	10.00	28.10
D.207	13.70	23.40
D.301	19.40	20.60
D.302	32.60	17.00
D.303	22.00	26.30
D.305	28.60	27.20
D.306	11.70	23.20
D.307	18.60	26.20
D.501	28.10	22.60
D.502	40.90	12.80
D.503	32.3	25.5
D.505	21.9	22.7
D.506	23.6	27
D.507	10.7	26.4
D.508	18.2	29.1
D.601	25.4	27.6

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		Thermal loads						
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)						
D.602	42.6	29.3						
D.603	38.1	20.10						
D.605	21.2	23						
D.606	24.6	27.6						
D.607	11.1	25.8						
D.608	13.2	29.1						
D.701	25.8	27.3						
D.702	43.1	29.2						
D.703	38.1	20.1						
D.705	20.80	23.7						
D.706	24.8	25.2						
D.707	11.4	25						
D.708	13.5	28.9						
D.801	26.10	26.90						
D.802	36.80	24.20						
D.803	33.70	28.90						
D.805	19.70	23.70						
D.806	25.10	25.30						
D.807	11.60	24.30						
D.808	13.50	28.90						
D.901	29.10	28.70						
D.902	41.60	29.20						
D.903	39.40	21.70						
D.905	43.50	27.90						
D.906	41.10	24.90						
D.907	24.30	29.10						
All other dwellings	35.40	28.40						

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

BASIX

(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.		~	V
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		~	V

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating	
	no common facility	no common facility	no common facility	no common laundry facility	
areas					

(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.	>	V	~

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	Common area ve	entilation system	Common area lighting				
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS		
Lift car (No. 5)	-	-	light-emitting diode	connected to lift call button	no		
Lift car (No. 6)	-	-	light-emitting diode	connected to lift call button	no		

Central energy systems	Туре	Specification
Lift (No. 5)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 6)	gearless traction with V V V F motor	Number of levels (including basement): 11
Central hot water system (No. 4)	gas-fired storage (manifolded)	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.6 (~25 mm); (b) Piping internal to building: R0.6 (~25 mm)

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

#### (a) Dwellings

BASIX

(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		<b>~</b>	•
(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.		<b>~</b>	•
(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.	V	V	
(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.	>	<b>&gt;</b>	
(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	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
	4 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	-	not specified	3 star	-	-	-	-	-	-	-

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	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	-	-	-	-	-	-	-		
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:			

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(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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		<b>~</b>	<b>~</b>
(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 ven	tilation system	Kitchen venti	lation 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. 3)	individual fan, ducted to façade or roof		individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	

	Cooling		Heating			Artificial lighting						
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or diningroon	Each kitchen	All bathrooms/ toilets	Each Iaundry	All hallways	No. of bathrooms &/or toilets	Main kitche
	3-phase airconditioning / EER 3.0 - 3.5(zoned)	,	1(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	yes(dedicated)	1	yes			

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	Individual po	ool	Individual s	ра	Appliances & other efficiency measures							
Dwelling no.	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/ oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-		gas cooktop & electric oven	not specified	yes	4 star	not specified	not specified	no	no

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

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(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)				
C.101	22.00	26.10				
C.102	9.30	27.10				
C.103	12.50	29.20				
C.105	18.30	28.00				
C.106	15.80	27.30				
C.107	26.80	26.50				
C.108	24.10	28.40				
C.109	14.80	21.50				
C.110	9.20	27.80				
C.111	16.60	26.40				
C.112	15.40	24.20				
C.113	15.60	26.00				
C.201	21.90	25.90				
C.202	9.40	26.10				
C.203	14.40	28.70				
C.205	23.90	25.20				
C.206	16.30	28.90				
C.207	29.00	28.10				
C.208	28.00	28.20				
C.209	15.00	25.40				
C.210	12.00	26.70				
C.211	16.30	24.70				
C.212	14.60	26.80				
C.213	27.90	28.60				
C.301	14.90	25.20				
C.302	19.60	28.10				

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	Thermal loads					
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)				
C.303	22.60	26.60				
C.305	22.10	24.70				
C.306	29.10	27.50				
C.307	31.10	22.40				
C.308	18.80	29.20				
C.309	15.50	26.40				
C.310	27.00	28.10				
C.311	21.70	28.60				
C.312	16.60	28.00				
C.313	30.80	21.00				
C.501	28.10	21.80				
C.502	18.10	24.90				
C.503	24.40	25.00				
C.505	21.80	26.50				
C.506	28.40	28.60				
C.507	15.80	25.50				
C.508	14.30	23.10				
C.509	28.70	24.40				
C.510	34.50	22.00				
C.511	33.00	23.90				
C.512	27.10	29.50				
C.601	35.80	29.00				
C.602	22.70	29.10				
C.603	21.50	28.30				
C.605	28.90	27.70				
C.606	29.50	23.90				
C.607	17.60	22.30				
C.608	13.60	26.30				
C.609	34.20	22.30				
C.610	30.00	29.10				
C.611	21.90	22.90				

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		Thermal loads					
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)					
C.612	28.90	25.60					
C.613	25.90	28.80					
C.701	20.30	29.50					
C.702	27.60	24.50					
C.703	21.50	27.20					
C.705	30.50	27.10					
C.706	29.60	24.40					
C.707	17.50	23.50					
C.708	14.90	28.80					
C.709	29.00	27.90					
C.710	31.50	28.70					
C.711	24.00	25.70					
C.712	28.10	26.40					
C.713	24.20	25.50					
C.801	26.80	28.50					
C.802	27.70	21.90					
C.803	21.80	25.60					
C.805	26.80	28.60					
C.806	30.20	27.20					
C.807	20.50	28.10					
C.808	14.90	24.90					
C.809	28.10	28.80					
C.810	29.60	26.20					
C.811	22.40	27.00					
C.812	24.90	26.40					
C.813	32.80	29.30					
C.901	29.80	28.40					
C.902	43.30	29.10					
C.903	39.20	26.30					
C.905	35.10	28.20					
C.906	39.30	29.50					

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		Thermal loads
Dwelling no.	Area adjusted heating load (in MJ/m²/yr)	Area adjusted cooling load (in MJ/m²/yr)
C.907	42.40	28.60
C.908	36.10	24.00
C.909	27.60	28.80
C.910	45.00	22.40
C.911	44.10	25.00
C.912	30.40	26.50
All other dwellings	33.10	26.60

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

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(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>&gt;</b>	>
(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.	V	~	
(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.		<b>&gt;</b>	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		~	>
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		~	¥

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

(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>&gt;</b>	>
(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.		<b>&gt;</b>	~
(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.	~	<b>V</b>	V

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	Common area ventilation system				
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS
Lift car (No. 3)	-	-	light-emitting diode	connected to lift call button	no
Lift car (No. 4)	-	-	light-emitting diode	connected to lift call button	no

Central energy systems	Туре	Specification
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 11
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 11
Central hot water system (No. 3)	(manifolded)	Piping insulation (ringmain & supply risers): (a) Piping external to building: R0.6 (~25 mm); (b) Piping internal to building: R0.6 (~25 mm)

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

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

BASIX

(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.		•	V
(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.	>	~	<b>\</b>
(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.	<	<b>&gt;</b>	
(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.		~	V
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		~	V

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	no common facility	no common facility	no common facility	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for)
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Central water tank - rainwater or stormwater (No. 1)	15000.00	To collect run-off from at least: - 3600 square metres of roof area of buildings in the development - 0.00 square metres of impervious area in the development - 0.00 square metres of garden/lawn area in the development - 0.00 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 1050 square metres of common landscaped area on the site - car washing in 0 car washing bays on the site

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(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.		>	<b>\</b>
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	>	>	<

	Common area ventilation system		Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/ BMS
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	light-emitting diode	zoned switching with motion sensor	no
Lift car (No. 7)	-	-	light-emitting diode	connected to lift call button	no
Lift car (No. 8)	-	-	light-emitting diode	connected to lift call button	no
Garbage room (No. 1)	ventilation exhaust only	-	light-emitting diode	motion sensors	no
Plant or service room (No. 1)	ventilation supply only	interlocked to light	light-emitting diode	manual on / manual off	no
Fire stairs	no mechanical ventilation	-	light-emitting diode	zoned switching with motion sensor	no
Residential lobby	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	no
Hallway	no mechanical ventilation	-	light-emitting diode	time clock and motion sensors	no

Central energy systems	Туре	Specification
Lift (No. 7)	gearless traction with V V V F motor	Number of levels (including basement): 3
Lift (No. 8)	gearless traction with V V V F motor	Number of levels (including basement): 4
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 45.00 peak kW
Other	-	-

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#### **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

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- 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 fulfillment it is required to monitor in relation to the building or part, has been fulfilled).

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# 7. Appendix B: Insulation Markup



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CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF SHOP DRAWINGS. DO NOT SCALE THIS DRAWING

ISSUE	DATE	FOR	CHKD
P1	15.03.2022	For Coordination	
P2	22.03.2022	For Coordination	
P3	06.04.2022	For Coordination	
P4	14.04.2022	For Coordination	
P5	10.05.2022	For Coordination	
P6	18.05.2022	For Coordination	
P7	20.05.2022	For Coordination	
P8	15.06.2022	For Coordination	
P9	17.06.2022	For Coordination	
P10	01.07.22	For Coordination	
P11	04.07.22	For Coordination	
P12	06.07.22	For Coordination	
P13	15.07.22	For Coordination	
P14	17.07.22	For Coordination	
P15	21.07.22	For DA Issue	
P16	27.07.22	For DA Issue	
P17	16.12.22	For DA RFI	
P18	13.02.23	For DA RFI	
P19	28.07.23	For Coordination	
P20	01.08.23	For DA RFI	
P21	04.08.23	For DA RFI	
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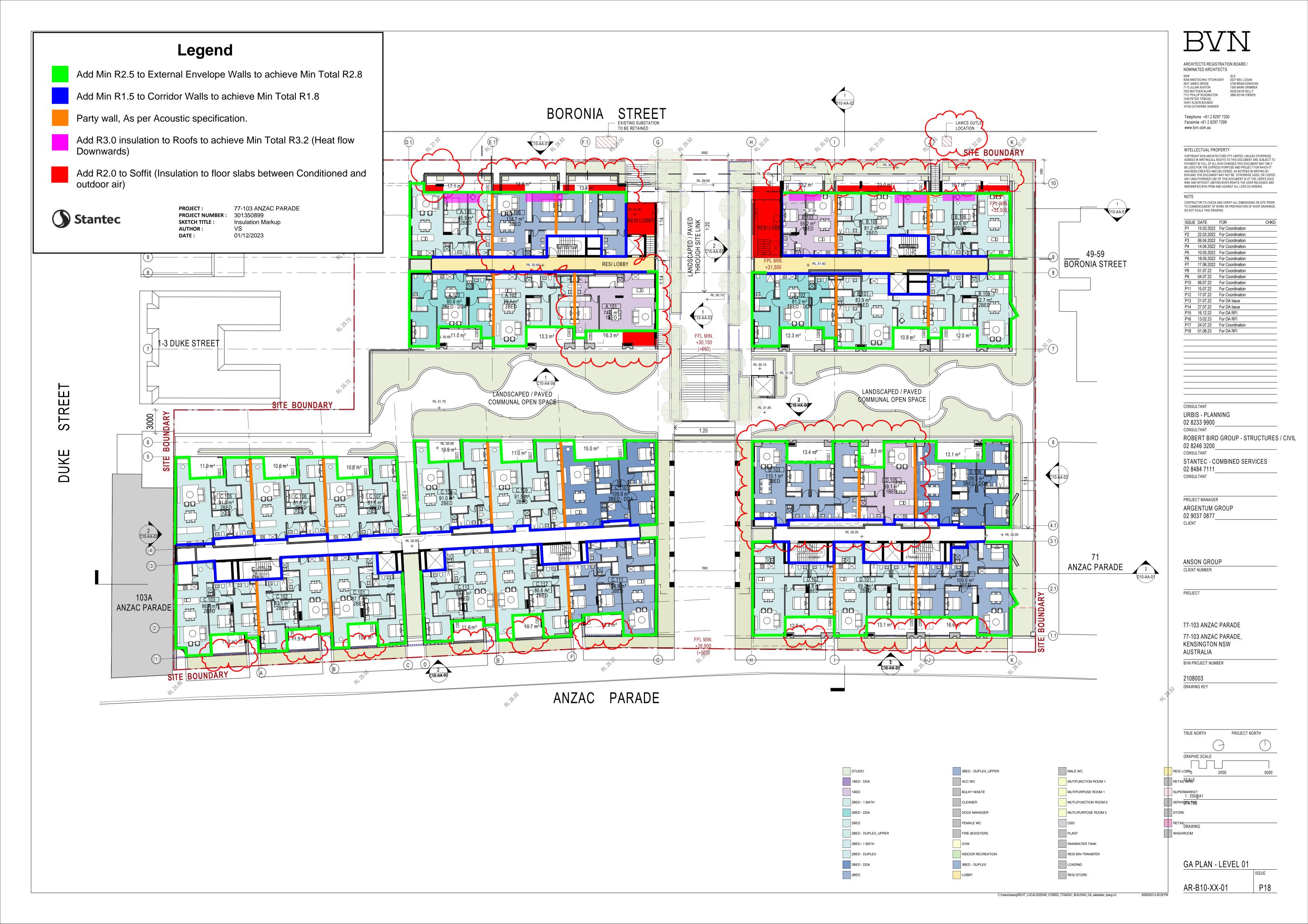
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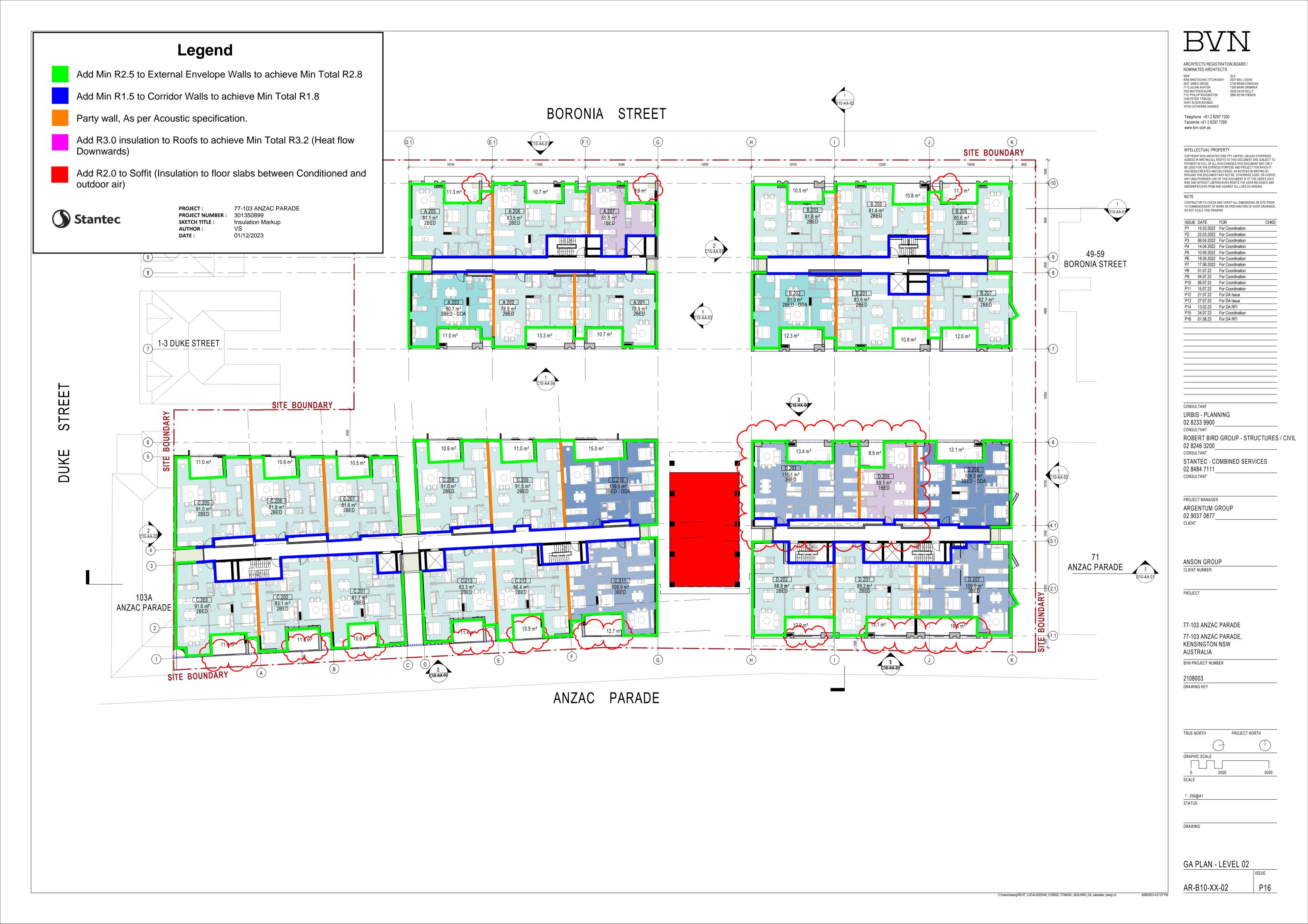
STANTEC - COMBINED SERVICES

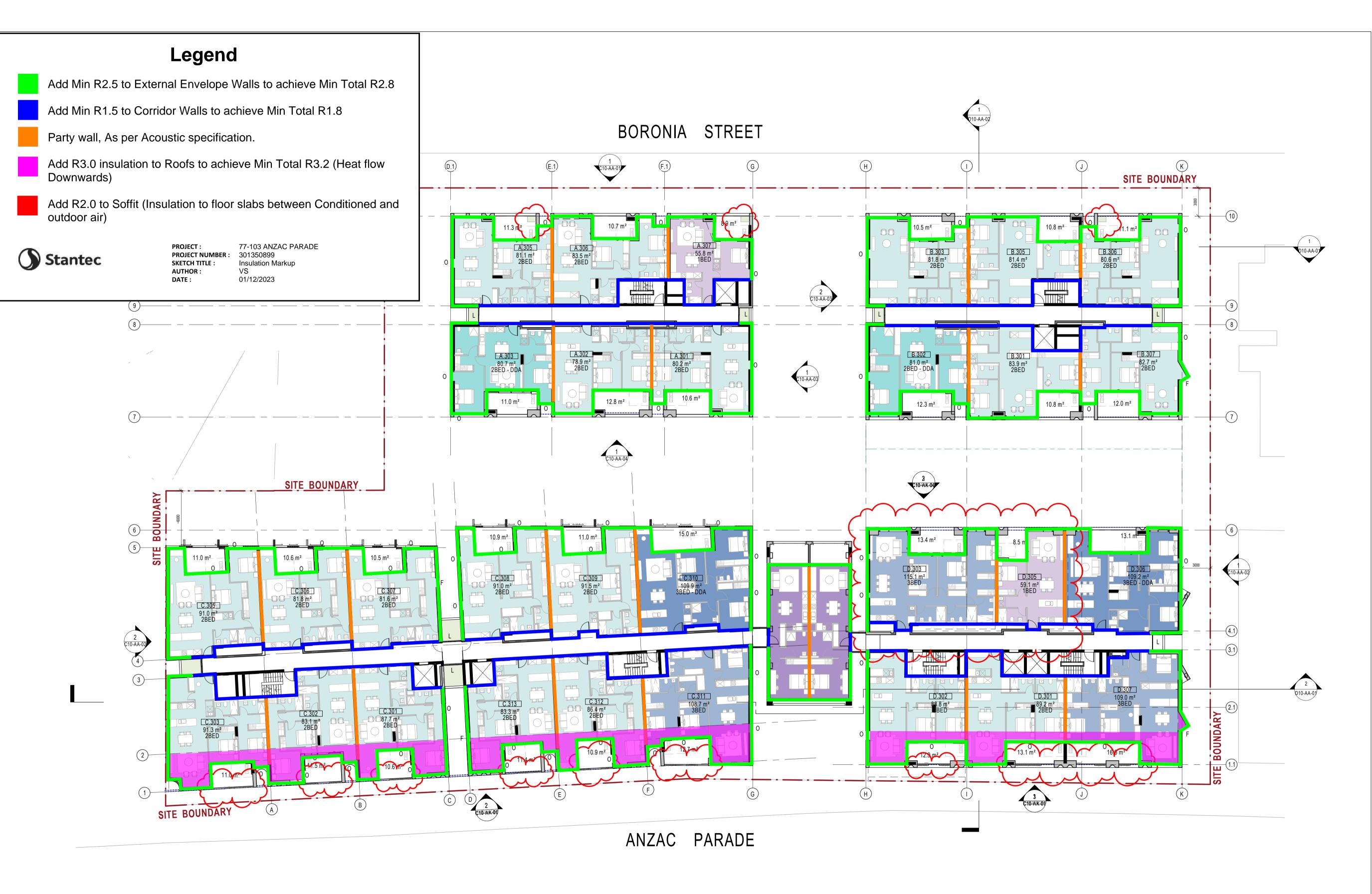
PROJECT NORTH

GA PLAN - GROUND LEVEL

P21







BVN

ARCHITECTS REGISTRATION NOMINATED ARCHITECTS

NSW
9356 NINOTSCHKA TITCHKOSKY
4937 JAMES GROSE
7115 JULIAN ASHTON
7053 MATTHEW BLAIR
7151 PHILLIP ROSSINGTON
7439 PETER TITMUSS
10447 ALISON BOUNDS
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ISSUE	DATE	FOR	(
P1	15.03.2022	For Coordination	
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P9	04.07.22	For Coordination	
P10	06.07.22	For Coordination	
P11	15.07.22	For Coordination	
P12	21.07.22	For DA Issue	
P13	27.07.22	For DA Issue	
P14	16.12.22	For DA RFI	
P15	01.08.23	For DA RFI	

CONSULTANT
URBIS - PLANNING
02 8233 9900
CONSULTANT
ROBERT BIRD GROUP - STRUCTURES / CIVIL
02 8246 3200

CONSULTANT
STANTEC - COMBINED SERVICES
02 8484 7111
CONSULTANT

PROJECT MANAGER

ARGENTUM GROUP
02 9037 0877

CLIENT

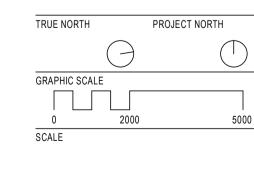
ANSON GROUP CLIENT NUMBER

PROJECT

77-103 ANZAC PARADE 77-103 ANZAC PARADE, KENSINGTON NSW AUSTRALIA

BVN PROJECT NUMBER

2108003 DRAWING KEY



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GA PLAN - LEVEL 03

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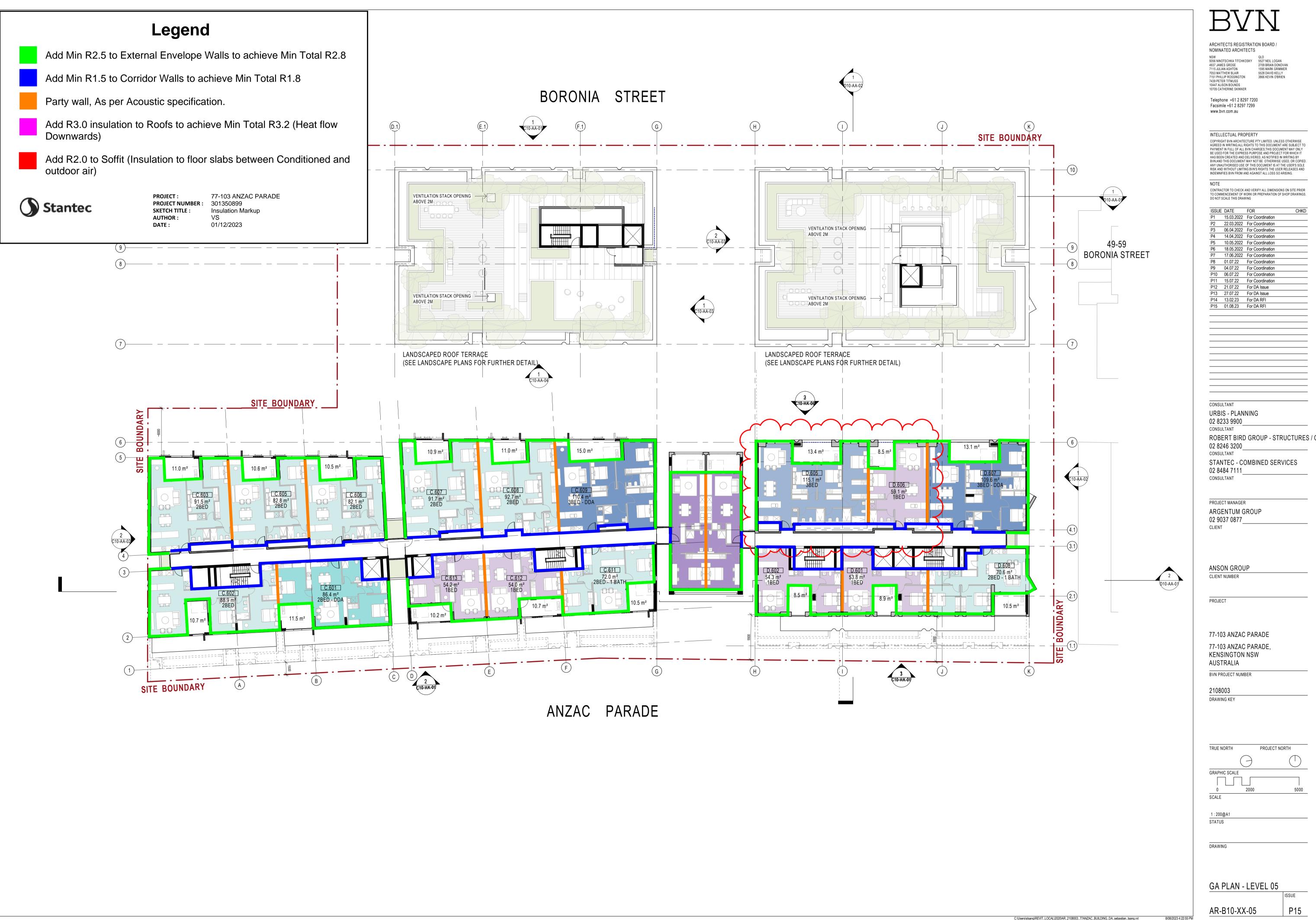
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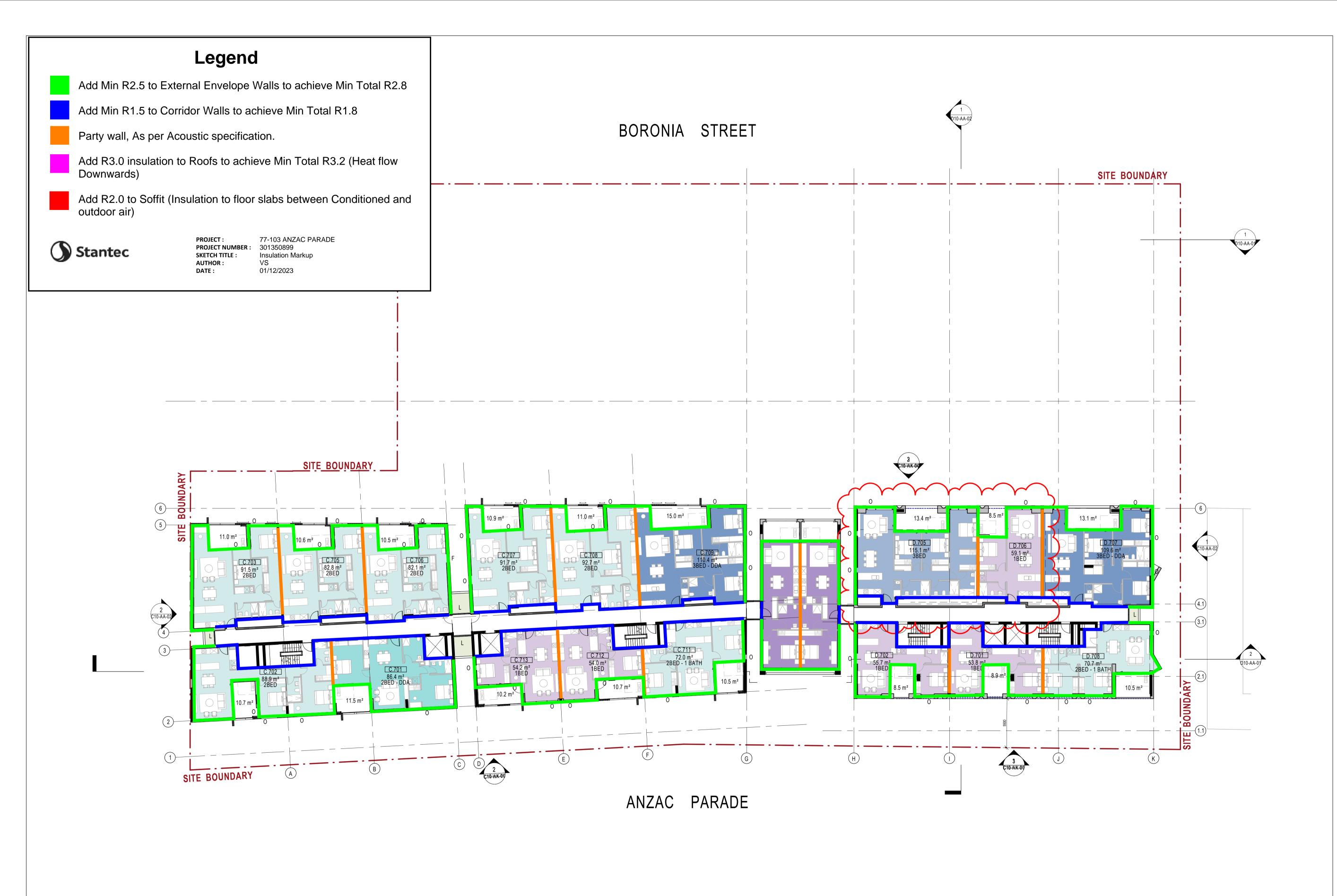
ROBERT BIRD GROUP - STRUCTURES / CIVIL

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P12	21.07.22	For DA Issue	
P13	27.07.22	For DA Issue	
P14	13.02.23	For DA RFI	
P15	01.08.23	For DA RFI	

CONSULTANT URBIS - PLANNING 02 8233 9900

ROBERT BIRD GROUP - STRUCTURES / CIVIL 02 8246 3200 CONSULTANT

STANTEC - COMBINED SERVICES 02 8484 7111 CONSULTANT

PROJECT MANAGER ARGENTUM GROUP 02 9037 0877\_ CLIENT

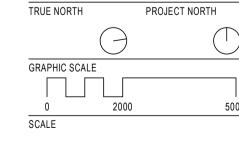
ANSON GROUP CLIENT NUMBER

PROJECT

77-103 ANZAC PARADE 77-103 ANZAC PARADE, KENSINGTON NSW AUSTRALIA

BVN PROJECT NUMBER

2108003 DRAWING KEY

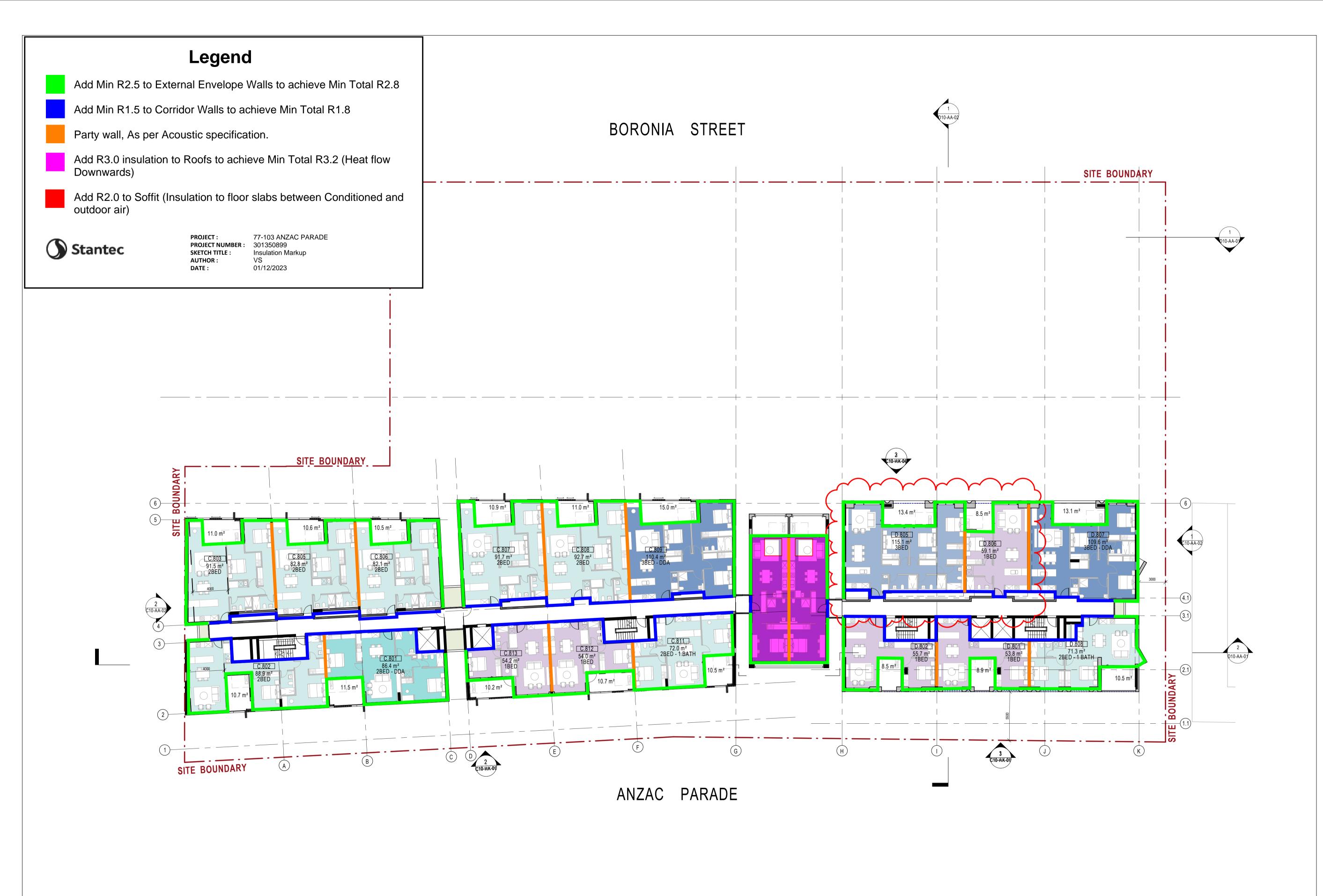


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GA PLAN - LEVEL 06

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4937 JAMES GROSE
7115 JULIAN ASHTON
7053 MATTHEW BLAIR
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P12	21.07.22	For DA Issue	
P13	27.07.22	For DA Issue	
P14	13.02.23	For DA RFI	
P15	01.08.23	For DA RFI	

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CONSULTANT STANTEC - COMBINED SERVICES 02 8484 7111 CONSULTANT

PROJECT MANAGER ARGENTUM GROUP 02 9037 0877\_ CLIENT

02 8246 3200

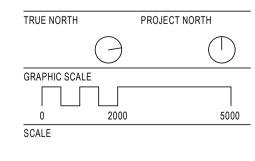
ANSON GROUP CLIENT NUMBER

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BVN PROJECT NUMBER

2108003 DRAWING KEY

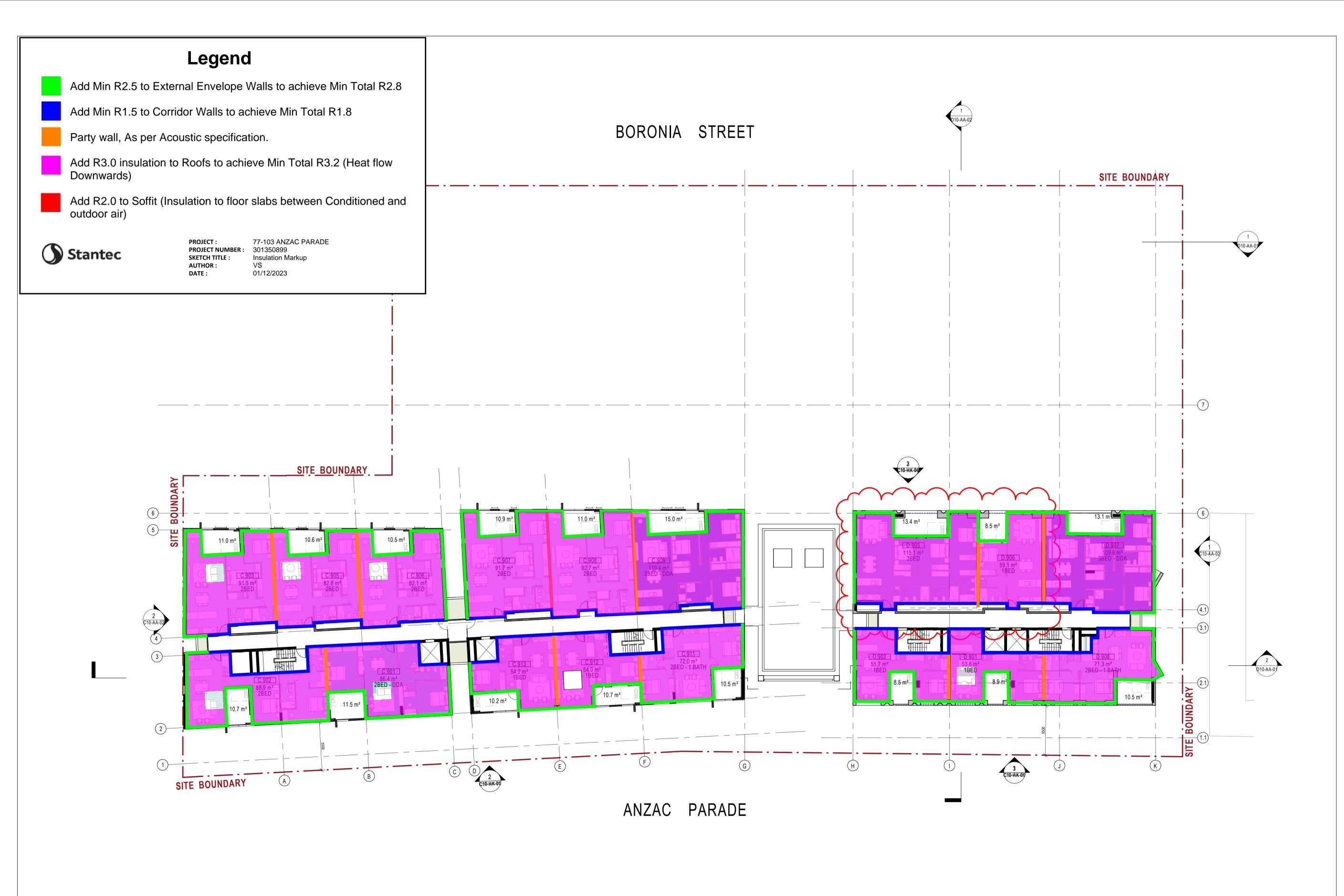


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GA PLAN - LEVEL 07

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4937 JAMES GROSE
7115 JULIAN ASHTON
7053 MATTHEW BLAIR
7151 PHILLIP ROSSINGTON
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10447 ALISON BOUNDS
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P13	27.07.22	For DA Issue
P14	13.02.23	For DA RFI
P15	01.08.23	For DA RFI

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STANTEC - COMBINED SERVICES 02 8484 7111 CONSULTANT

PROJECT MANAGER ARGENTUM GROUP 02 9037 0877\_ CLIENT

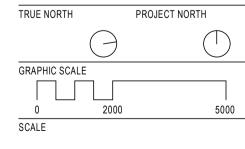
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BVN PROJECT NUMBER

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GA PLAN - LEVEL 08

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NSW QLD
9356 NINOTSCHKA TITCHKOSKY 5527 NEIL LOGAN
4937 JAMES GROSE 2709 BRIAN DONOVAN
7115 JULIAN ASHTON 1595 MARK GRIMMER
7053 MATTHEW BLAIR 5528 DAVID KELLY
7151 PHILLIP ROSSINGTON 3866 KEVIN O'BRIEN
7439 DETER TITMISS 7053 MAT HEW BLAIR 7151 PHILLIP ROSSINGTON 7439 PETER TITMUSS 10447 ALISON BOUNDS 10705 CATHERINE SKINNER

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P12	27.07.22	For DA Issue
P13	13.02.23	For DA RFI
P14	19.04.23	For DA RFI
P15	01.08.23	For DA RFI

CONSULTANT URBIS - PLANNING 02 8233 9900 ROBERT BIRD GROUP - STRUCTURES / CIVIL 02 8246 3200

CONSULTANT STANTEC - COMBINED SERVICES 02 8484 7111 CONSULTANT

PROJECT MANAGER ARGENTUM GROUP 02 9037 0877\_ CLIENT

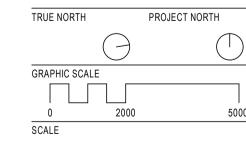
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GA PLAN - ROOF LEVEL

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# 8. Appendix C: NatHERS Certificate

# Nationwide House Energy Rating Scheme — Class 2 summary NatHERS Certificate No. QOADIZIQP3

Generated on 5 Dec 2023 using FirstRate5 v5.3.2b

**Property** 

77-103 Anzac Parade, Kensington, NSW, Address

Lot/DP

NatHERS climate zone

#### Accredited assessor

Rebecca Dracup

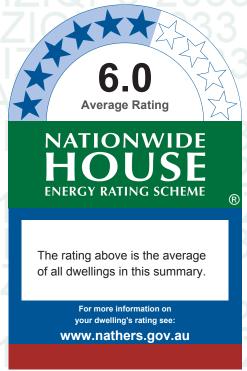
Stantec

NatHERS@stantec.com

+61 2 8484 7182

Accreditation No. DMN/21/2042

**Assessor Accrediting Organisation** 





To verify this certificate, scan the QR code or visit

https://www.fr5.com.au/QRCodeLanding?PublicId=QOADIZIQP3&GrpCert=1 When using either link, ensure you are visiting www.fr5.com.au.

### Summary of all dwellings

Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
3HPX1ZJMMU	A.101	43.00	20.80	63.80	5.1
TKN7979WE0	A.102	45.30	16.00	61.30	5.3
CFD0P6NDL1	A.103	42.40	20.40	62.80	5.2
SAFL6MIXID	A.105	24.20	22.70	46.90	6.3
FX5Z5D51PL	A.106	36.30	27.20	63.50	5.2
Z8S0X4WOXO	A.201	21.40	22.10	43.50	6.6
JJXJ83AG9F	A.202	31.00	19.20	50.20	6.1

Continued over

#### **National Construction Code (NCC) requirements**

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

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

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



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
IC0GH1CKGZ	A.203	29.60	28.60	58.20	5.4
G9QNQUBOLT	A.205	23.70	25.30	49.00	6.2
YVZMZB5RI8	A.206	13.20	29.10	42.30	6.7
6Q597XHLS5	A.207	13.90	28.40	42.30	6.7
1MH7HK3K3O	A.301	21.20	21.30	42.50	6.7
2W4QRXMORF	A.302	31.30	20.10	51.40	5.9
5VBH30ERP3	A.303	31.00	28.40	59.40	5.4
NZ5Q1LN2EO	A.305	30.70	24.10	54.80	5.7
IVX4GKVOSK	A.306	13.90	27.90	41.80	6.8
L23MAFLADQ	A.307	15.60	29.40	45.00	6.5
GM49BC0OYF	A.501	34.30	27.80	62.10	5.2
JTKC7K8GBT	A.502	43.20	22.50	65.70	5
FZ9FSU6SQW	A.503	43.90	28.60	72.50	4.6
AMYXI50X2D	A.505	43.40	25.30	68.70	4.9
THZMA1S1PZ	A.506	31.20	28.40	59.60	5.4
HE9ULQNZRQ	A.507	28.30	28.50	56.80	5.6
M7GVZME16F	B.101	15.90	27.70	43.60	6.6
MCZ2CJ3BGZ	B.102	21.90	28.30	50.20	6.1
ZLSBCAB0X0	B.103	16.10	29.40	45.50	6.4
DCZ3Y26BBI	B.105	26.70	29.40	56.10	5.6
3AVTCUSGB2	B.106	23.10	26.00	49.10	6.2
4WLUFPS3QC	B.108	22.90	21.70	44.60	6.5
LR7JDAN60O	B.201	27.20	23.00	50.20	6.1
IMSLQ0UE7N	B.202	29.90	22.70	52.60	5.9
PHB7BWCGMR	B.203	19.60	29.20	48.80	6.2
2SVE3IST4R	B.205	19.30	29.40	48.70	6.2
XYNNH2REIH	B.206	18.80	29.20	48.00	6.2
069DVO0ER3	B.207	19.30	23.10	42.40	6.7
854M62E7M0	B.301	28.20	24.70	52.90	5.9
1FM6004XZI	B.302	30.80	21.80	52.60	5.9
E87F0X4VO9	B.303	20.50	27.10	47.60	6.3
AUGF5W6F5R	B.305	19.60	29.40	49.00	6.2
F8G0PUUCN4	B.306	20.00	27.40	47.40	6.3
UCOJYCAHEZ	B.307	20.70	23.10	43.80	6.6
7XU76SDBBH	B.501	41.30	29.10	70.40	4.8
OMX7DF1GZF	B.502	45.00	25.70	70.70	4.7
C1HUOEPYJ7	B.503	37.00	25.40	62.40	5.2



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
MTCMGJLA9B	B.505	26.30	29.30	55.60	5.7
NFFMPIPRGT	B.506	34.10	27.90	62.00	5.3
K3S8X34UUG	B.507	30.80	26.10	56.90	5.6
OA2MKMDQGJ	C.101	22.00	26.10	48.10	6.2
R1W2TRH7BG	C.102	9.30	27.10	36.40	7.2
5SA6OW3QBB	C.103	12.50	29.20	41.70	6.8
RQZ9XX0ZOZ	C.105	18.30	28.00	46.30	6.4
X4U3ZHS54O	C.106	15.80	27.30	43.10	6.7
OO8ZQ40L8D	C.107	26.80	26.50	53.30	5.8
622Y4ABWF5	C.108	26.40	27.60	54.00	5.8
1RSLTB8HHH	C.109	14.80	21.50	36.30	7.2
D8VWWDS9S3	C.110	9.20	27.80	37.00	7.1
7P1L25C68Y	C.111	16.60	26.40	43.00	6.7
F508X75WGP	C.112	15.40	24.20	39.60	6.9
6TE1A7GFB1	C.113	15.60	26.00	41.60	6.8
RBDL8MZHSX	C.201	21.90	25.90	47.80	6.3
8CISBHIW9Z	C.202	9.40	26.10	35.50	7.2
I52D7NLAL5	C.203	14.40	28.70	43.10	6.7
Y64HGE2OAL	C.205	23.90	25.20	49.10	6.2
HXDTQ3KVZ2	C.206	16.30	28.90	45.20	6.4
ZTGMSWIAOU	C.207	29.00	28.10	57.10	5.6
BZ6X8BHAL7	C.208	28.00	28.20	56.20	5.6
P4WXRU2JWD	C.209	15.00	25.40	40.40	6.9
CZKSFF0SYU	C.210	12.00	26.70	38.70	7
519PKS1QUP	C.211	18.10	24.90	43.00	6.7
VKJ2N56S48	C.212	16.30	24.70	41.00	6.8
490LRLONS3	C.213	14.60	26.80	41.40	6.8
LZL0BY5HN8	C.301	27.90	28.60	56.50	5.6
2LZHS2PSFK	C.302	14.90	25.20	40.10	6.9
IHX005NX78	C.303	19.60	28.10	47.70	6.3
DN80D69S0Y	C.305	22.60	26.60	49.20	6.1
9ZF6FSKG3Z	C.306	22.10	24.70	46.80	6.3
56IHVEBV9G	C.307	29.10	27.50	56.60	5.6
KHJO5PN8DW	C.308	31.10	22.40	53.50	5.8
361QKSB1UI	C.309	18.80	29.20	48.00	6.2
VG4ICGF0E9	C.310	15.50	26.40	41.90	6.8



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
4NSUO2Q1A0	C.311	27.00	28.10	55.10	5.7
ELDG59F16D	C.312	21.70	28.60	50.30	6.1
YAUKO07B3E	C.313	16.60	28.00	44.60	6.5
JX3E1PNHCR	C.501	30.80	21.00	51.80	5.9
BK03EJDXMD	C.502	28.10	21.80	49.90	6.1
BN4B6UM19J	C.503	24.40	25.00	49.40	6.1
QPPMQQS8PQ	C.505	21.80	26.50	48.30	6.2
V8ZOB2THWL	C.506	28.40	28.60	57.00	5.6
BYXHW632HG	C.507	25.90	28.80	54.70	5.7
DWH2BV4NMX	C.508	15.80	25.50	41.30	6.8
1EI6SDYP9E	C.509	14.30	23.10	37.40	7.1
U6SQMR2UUD	C.510	28.70	24.40	53.10	5.8
XZ1IM916NQ	C.511	34.50	22.00	56.50	5.6
7F48T7Q0YT	C.512	33.00	23.90	56.90	5.6
HN3DF8QSUJ	C.601	27.10	29.50	56.60	5.6
3WX19BN9TT	C.602	35.80	29.00	64.80	5.1
GAHA7YDLX0	C.603	22.70	29.10	51.80	5.9
ZH7E7JXU9V	C.605	21.50	28.30	49.80	6.1
775ITZVA69	C.606	28.90	27.70	56.60	5.6
W6D80MPMDR	C.607	29.50	23.90	53.40	5.8
N649KC0B8I	C.608	17.60	22.30	39.90	6.9
YMQPHJE8QH	C.609	13.60	26.30	39.90	6.9
CCOXE3E9NU	C.610	34.20	22.30	56.50	5.6
M1CTG6KGFL	C.611	30.00	29.10	59.10	5.4
LBTGMJ6XDO	C.612	21.90	22.90	44.80	6.5
SILDWKRD9S	C.613	28.90	25.60	54.50	5.8
TQGFHQLJ6J	C.701	20.30	29.50	49.80	6.1
XKNJ71DQOZ	C.702	27.60	24.50	52.10	5.9
EZ6EBDQ865	C.703	28.10	28.80	56.90	5.6
OGHW154N96	C.705	21.50	27.20	48.70	6.2
7J22ZMBF5H	C.706	30.50	27.10	57.60	5.5
HBYJN4TBED	C.707	29.60	24.40	54.00	5.8
9NMA4QC0SC	C.708	17.50	23.50	41.00	6.8
7ZQS1R7CN2	C.709	14.90	28.80	43.70	6.6
HO3CYNS8J6	C.710	29.00	27.90	56.90	5.6
M2J57VK18K	C.711	31.50	28.70	60.20	5.4



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
FFSD7RUGR5	C.712	24.00	25.70	49.70	6.1
6QYL6UTKLR	C.713	28.10	26.40	54.50	5.8
8EQV0EQVUG	C.801	24.20	25.50	49.70	6.1
HFDDXC50EG	C.802	26.80	28.50	55.30	5.7
3MQN95E79M	C.803	27.70	21.90	49.60	6.1
B9QRMAY7M3	C.805	21.80	25.60	47.40	6.3
A8VLY1MUX4	C.806	26.80	28.60	55.40	5.7
Z3GEYVXDV4	C.807	30.20	27.20	57.40	5.5
9TVIFIZW1X	C.808	20.50	28.10	48.60	6.2
N8NLG41FZI	C.809	14.90	24.90	39.80	6.9
HEMH92P7WB	C.810	29.60	26.20	55.80	5.7
MVLS3RNMGQ	C.811	22.40	27.00	49.40	6.1
BZ3AQ0Q583	C.812	24.90	26.40	51.30	5.9
4SNNLQJQV7	C.813	32.80	29.30	62.10	5.2
LPTV3BCTLF	C.901	29.80	28.40	58.20	5.4
MX7JPQUM1R	C.902	43.30	29.10	72.40	4.6
WP9K3ZXKMK	C.903	39.20	26.30	65.50	5
YR1ZOORD4S	C.905	35.10	28.20	63.30	5.2
EMHPE4QJZ0	C.906	39.30	29.50	68.80	4.9
T3J0UIVTXP	C.907	42.40	28.60	71.00	4.7
3216M1ZILS	C.908	36.10	24.00	60.10	5.4
S6A6T7HVZU	C.909	27.60	28.80	56.40	5.6
I5RAOWJT70	C.910	45.00	22.40	67.40	4.9
GJAGJMXL3M	C.911	44.10	25.00	69.10	4.8
1QGIY5CQKH	C.912	30.40	26.50	56.90	5.6
RWZ712YA2X	C.913	40.60	29.00	69.60	4.8
EIVQ1FZQ43	D.101	19.40	22.60	42.00	6.8
4QK7T2CCDK	D.102	29.30	22.90	52.20	5.9
1MDA4X23RU	D.103	28.90	20.00	48.90	6.2
8S7HPMMU9B	D.105	27.50	29.40	56.90	5.6
WTZLPY83PL	D.106	10.40	26.40	36.80	7.2
K47XTAMHDD	D.107	17.80	27.10	44.90	6.5
XCOVFR2CD5	D.201	13.30	23.50	36.80	7.2
L8LBY9TQFP	D.202	25.90	21.70	47.60	6.3
ZCVL6MATDR	D.203	24.10	25.00	49.10	6.2
ZP1JSCS8DM	D.205	23.60	27.60	51.20	5.9



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
UMJDISOX2Q	D.206	9.50	27.50	37.00	7.1
74VX9QN3XJ	D.207	13.70	23.40	37.10	7.1
VOQ7H7P68I	D.301	19.40	20.60	40.00	6.9
FS0F576VMP	D.302	32.60	17.00	49.60	6.1
S0RBURQYTN	D.303	22.00	26.30	48.30	6.2
TRRMHYZXUJ	D.305	28.60	27.20	55.80	5.7
DRZTKPDQ2C	D.306	11.70	23.20	34.90	7.3
U1RI1M2KXN	D.307	18.60	26.20	44.80	6.5
ETSLFEEK0Y	D.501	28.10	22.60	50.70	6
ATZALATC43	D.502	40.90	12.80	53.70	5.8
D0SG9TE4HI	D.503	32.30	25.50	57.80	5.5
ZAAB68NXWY	D.505	21.90	22.70	44.60	6.5
HOK4H5EMH2	D.506	23.60	27.00	50.60	6
2ZP4W2PGJ4	D.507	10.70	26.40	37.10	7.1
V8VXJO5G31	D.508	18.20	29.10	47.30	6.3
AGYYS7V9JB	D.601	25.40	27.60	53.00	5.9
E3DSUMIC4X	D.602	42.60	29.30	71.90	4.7
F6WF0WA0LZ	D.603	38.10	20.10	58.20	5.4
DZS2O170HG	D.605	21.20	23.00	44.20	6.6
ZIYGULR672	D.606	24.60	27.60	52.20	5.9
ZSFW6MQCHW	D.607	11.10	25.80	36.90	7.2
YOSHIY656B	D.608	13.20	29.10	42.30	6.7
VUYJOEWHRT	D.701	25.90	27.30	53.20	5.8
T4WFAXKJKJ	D.702	43.10	29.20	72.30	4.7
CYQ154SCG9	D.703	37.50	19.40	56.90	5.6
X2IBMJQZQ2	D.705	20.80	23.70	44.50	6.5
D5I4U17U5A	D.706	24.80	25.20	50.00	6.1
AGUCTPV9M5	D.707	11.40	25.00	36.40	7.2
9NH3QL4JX0	D.708	13.50	28.90	42.40	6.7
JGMTAXCYWN	D.801	26.10	26.90	53.00	5.9
NR83YISFYB	D.802	43.40	28.60	72.00	4.7
6O3EVJQGE3	D.803	33.70	28.90	62.60	5.2
6FL5GZ7RPJ	D.805	19.70	23.70	43.40	6.6
PNZ29QCNN7	D.806	25.10	25.30	50.40	6
R8Z3B07XKV	D.807	11.60	24.30	35.90	7.2
1L9M10XJ3D	D.808	13.70	28.60	42.30	6.7



Certificate number and link	Unit number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m²/p.a.)	Total load (MJ/m²/p.a.)	Star rating
PRD1XIRIGD	D.901	29.10	28.70	57.80	5.5
PFDNC4TA84	D.902	41.60	29.20	70.80	4.7
J8Q3CT6W9C	D.903	39.40	21.70	61.10	5.3
W50F7C3KVD	D.905	43.50	27.90	71.40	4.7
YGY7IJ1X2E	D.906	41.10	24.90	66.00	4.9
UTSX8I1XWT	D.907	24.30	29.10	53.40	5.8
ZNN7UW5YI9	D.908	35.40	28.40	63.80	5.1
Average		25.6	26	51.5	6.0



### **Explanatory notes**

#### About this report

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

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

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

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Design with community in mind

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