

Burwood Place, 42-60 Railway Parade Burwood

S4.55 Acoustic Assessment

Project ID	20240041.1
Document Title	S4.55 Acoustic Assessment
Attention To	Burwood Tower Holdings Pty Ltd

Revision	Date	Document Reference	Prepared By	Checked By	Approved By
0	25/03/2024	20240041.1/2503A/R0/WY	WY		
1	23/08/2024	20240041.1/2308A/R1/WY	WY		WY

TABLE OF CONTENTS

1	INTRODUCTION	5
2	SITE DESCRIPTION	6
3	AMBIENT NOISE MONITORING.....	8
3.1	NOISE DESCRIPTORS	8
3.2	ENVIRONMENTAL NOISE SURVEY	9
3.2.1	DA Stage Noise Monitoring	9
3.2.2	Additional Noise Monitoring	10
3.2.3	Adopted Noise Levels	11
4	EXTERNAL NOISE INTRUSION ASSESSMENT	12
4.1	NOISE INTRUSION CRITERIA	12
4.1.1	Burwood Council DCP's & NSW Government Gazette CCPG 2021	12
4.1.2	AAAC Guideline for Child Care Centre Acoustic Assessment, Version 3.0, 2020	13
4.1.3	Australian and New Zealand AS/NZS 2107:2016 <i>Recommended design sound levels and reverberation times for building interiors</i>	13
4.1.4	NSW DoP <i>Development near Rail Corridors or Busy Roads – Interim Guideline</i> 2008 13	
4.1.5	Internal Noise Criteria – Airborne Noise.....	14
4.1.6	Ventilation	14
4.2	ADOPTED PROJECT SPECIFIC CRITERIA	14
4.3	SOUNDPLAN NOISE MODELLING	15
4.4	COMPLYING CONSTRUCTIONS	16
4.4.1	Glazed Façade (Windows and Doors)	16
4.4.2	External Wall Construction	18
4.4.3	Child Care Centre Outdoor Play Area Treatments	18
4.4.4	Entry Doors	18
4.4.5	External Roof/Ceiling Construction	18
4.4.6	Ventilation and Air Conditioning	19
5	NOISE EMISSION CRITERIA	20
5.1	BURWOOD COUNCIL DCP'S & NSW GOVERNMENT GAZETTE CCPG 2021.....	20
5.2	AAAC GUIDELINE FOR CHILD CARE CENTRE ACOUSTIC ASSESSMENT, VERSION 3.0, 2020	21
5.3	VIBRANCY REFORMS 2024, LIQUOR & GAMING NSW (L&GNSW).....	22
5.3.1	Application to Subject Development	23
5.4	NSW EPA NOISE POLICY FOR INDUSTRY (NPI) 2017	23
5.4.1	Intrusiveness Criterion	24
5.4.2	Project Amenity Criterion	24
5.4.3	Sleep Arousal Criteria.....	25
5.5	SUMMARISED OPERATIONAL NOISE EMISSIONS CRITERIA.....	25
5.6	SUMMARISED MECHANICAL NOISE EMISSIONS CRITERIA	26
6	NOISE EMISSIONS ASSESSMENT	27
6.1	CHILDCARE	27
6.2	COMMUNAL POOLS	27
6.3	NOISE FROM MECHANICAL PLANT WITHIN PROPOSED SITE GENERALLY	27
6.4	COMPLYING CONTROLS AND CONSTRUCTIONS.....	28
6.4.1	Child Care Centre Outdoor Play Area Treatments	28
6.4.2	Communal Pools.....	28
6.4.3	Preliminary Mechanical Advice.....	28

7 CONCLUSION.....29
APPENDIX ONE – UNATTENDED NOISE MONITORING30
APPENDIX TWO – SOUNDPLAN NOISE MODELLING RESULTS43
APPENDIX THREE – ALTERNATIVE VENTILATION MARK UP48

1 INTRODUCTION

This Acoustic Assessment report has been prepared by Acoustic Logic (AL) to accompany an S4.55 application for the proposed mixed-use development known as Burwood Place, 42-60 Railway Parade Burwood (the Site). The proposed development seeks the construction of a five towers above a three-storey podium with the development comprising of retail, commercial, child care, entertainment uses, residential accommodation and 8 levels of basement parking. It is noted the original site has been previously approved by Council under DA.2021.44.

This document addresses noise impacts associated with the following:

- Noise intrusion to the project site from adjacent roadways and rail
- Noise emissions from the newly proposed child care centre, and
- Noise emissions from mechanical plant to service the project site (in principle).

AL have utilised the following documents and regulations in the noise assessment of the development:

- *Development Application Acoustic Assessment* by RWDI (Ref: 2004544, Revision B, dated 17th June 2022).
- Burwood Council *Site Specific Development Control Plan (DCP)* 2020 and **DCP** 2013.
- NSW Government Gazette *Child Care Planning Guideline (CCPG)* 2021.
- Association of Australian Acoustical Consultants (**AAAC**) *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.
- Australian and New Zealand AS/NZS 2107:2016 *Recommended design sound levels and reverberation times for building interiors*.
- NSW Department of Planning (**DoP**) *Development near Rail Corridors or Busy Roads – Interim Guideline (DNRCBR)* 2008.
- Vibrancy Reforms 2024
- Liquor and Gaming NSW (**L&GNSW**).
- NSW Environmental Protection Authority (**EPA**) *Noise Policy for Industry (NPI)* 2017.

This assessment has been conducted using the Studio.SC architectural drawings (Project No: 20230055, dated September 2024).

2 SITE DESCRIPTION

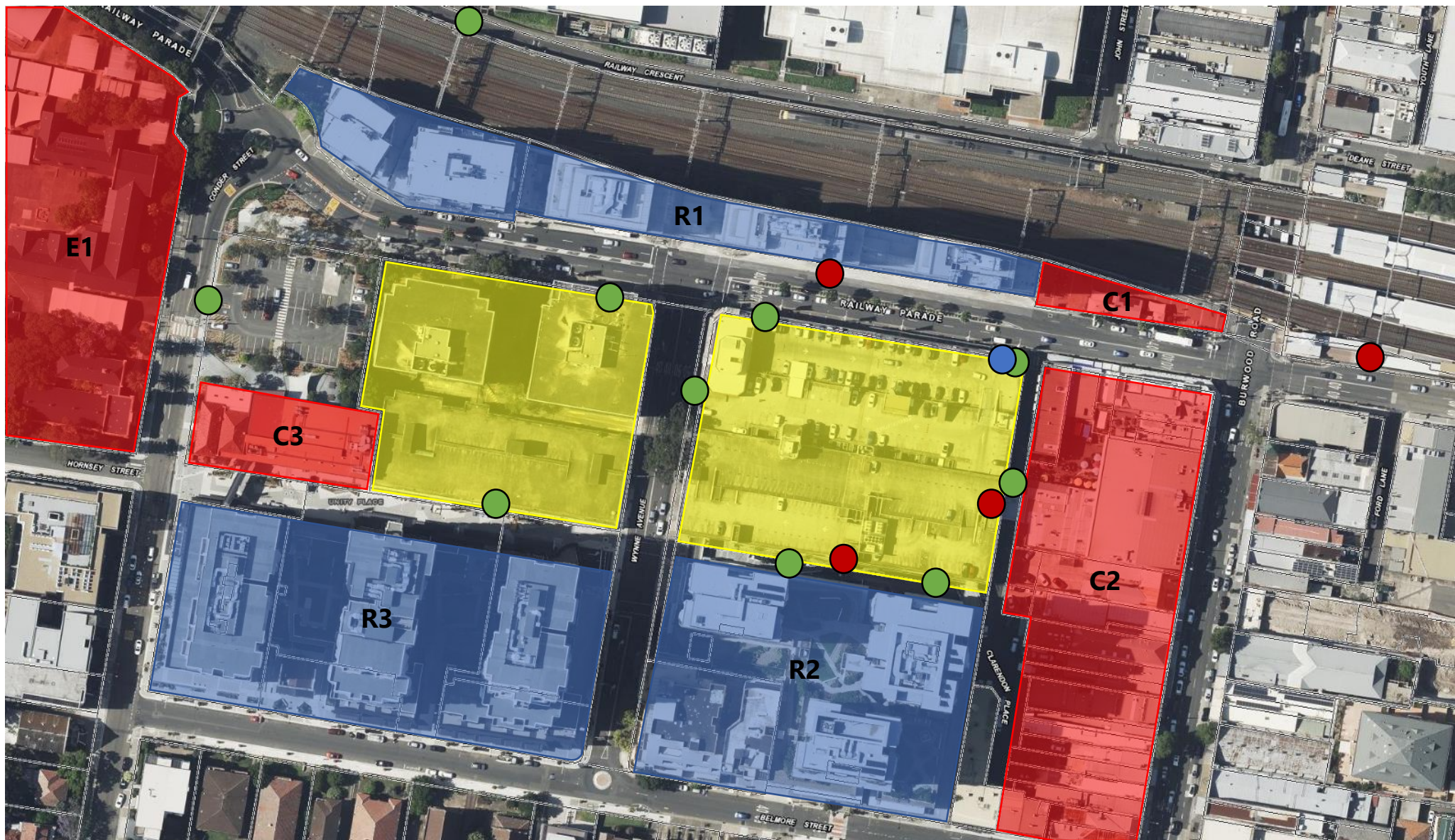
The proposed development at Burwood Place, 42-60 Railway Parade Burwood is a mixed-use development. The proposed S4.55 design includes the following changes of acoustic importance:

- Tower D:
 - Level 1 changed from commercial to child care centre.
 - Level 2 child care centre rearrangement.
 - Level 6 pool facilities moved to Level 3 and unenclosed (external).
- Tower A Level 3 pool facilities moved to Tower B and unenclosed (external).
- Plant room changes based on initial mechanical study.

The nearest noise receivers around the site include:

- **R1:** Residential Receiver 1 – Mixed-use with residential receivers to the north across Railway Parade.
- **R2:** Residential Receiver 2- Mixed-use with residential receivers to the south east across Emerald Square (Emerald Square development)
- **R3:** Residential Receiver 3- Mixed-use with residential receivers to the south west across Unity Place (Burwood Grand development)
- **C1:** Commercial Receiver 1 –Commercial receiver to the north east across Railway Parade.
- **C2:** Commercial Receiver 2 –Multi-storey commercial receivers to east Clarendon Place.
- **C3:** Commercial Receiver 3 –Multi-storey commercial receiver to the west (Burwood Library).
- **E1:** Educational Receiver 1 –Multi-storey educational receiver to the west across Conder Street (Burwood Public School).

A site map, measurement description and surrounding receivers are presented in Figure 1 below.



- Project Site
- Residential Receivers
- Commercial/ Educational Receivers

Figure 1 – Project Site
Source: NSW Six Maps

- Unattended Noise Monitoring
- Attended Noise Measurements
- Previous Attended & Unattended Noise Monitoring

3 AMBIENT NOISE MONITORING

Monitoring has been undertaken to obtain the following data:

- Background noise levels at the surrounding residential properties.
- Traffic and rail noise levels.
- Noise levels generated by adjacent land uses.

Figure 1 above shows the monitoring locations used.

3.1 NOISE DESCRIPTORS

Ambient noise constantly varies in level from moment to moment, so it is not possible to accurately determine prevailing noise conditions by measuring a single, instantaneous noise level.

To quantify ambient noise, a 15-minute measurement interval is typically utilised. Noise levels are monitored continuously during this period, and then statistical and integrating techniques are used to characterise the noise being measured.

The principal measurement parameters obtained from the data are:

L_{eq} – represents the average noise energy during a measurement period. This parameter is derived by integrating the noise levels measured over the measurement period. L_{eq} is important in the assessment of noise impact as it closely corresponds with how humans perceive the loudness of time-varying noise sources (such as traffic noise).

L_{90} – This is commonly used as a measure of the background noise level as it represents the noise level heard in the typical, quiet periods during the measurement interval. The L_{90} parameter is used to set noise emission criteria for potentially intrusive noise sources since the disturbance caused by a noise source will depend on how audible it is above the pre-existing noise environment, particularly during quiet periods, as represented by the L_{90} level.

L_{10} is used in some guidelines to measure noise produced by an intrusive noise source since it represents the average of the loudest noise levels produced at the source. Typically, this is used to assess noise from licenced venues.

L_{max} is the highest noise level produced during a noise event and is typically used to assess sleep arousal impacts from short term noise events during the night. It is also used to assess internal noise levels resulting from aircraft and railway ground vibration induced noise.

L_1 is sometimes used in place of L_{max} to represent a typical noise level from a number of high-level, short-term noise events.

3.2 ENVIRONMENTAL NOISE SURVEY

3.2.1 DA Stage Noise Monitoring

Unattended noise monitoring was conducted during DA Stage as detailed in the existing *Development Application Acoustic Assessment* by RWDI (Ref: 2004544, Revision B, dated 17th June 2022). An excerpt detailing monitoring locations is provided below.

- *Location 1: On the level 1 roof at the north-eastern corner of the site overlooking Railway Parade and Clarendon Place. The noise environment at this location was dominated by traffic noise and intermittent rail noise;*
- *Location 2: On the rooftop near the north-eastern façade of the commercial building at 52-54 Railway Parade overlooking Railway Parade and Wynne Avenue. The noise environment at this location was dominated by traffic noise, intermittent rail noise and mechanical equipment noise;*
- *Location 3: On the rooftop along the southern façade of the car park located towards the southern boundary of the site. The noise environment at this location was primarily distant traffic noise and mechanical equipment noise.*

Monitoring was conducted from between 10th September 2020 and 17th September 2020.

The following table summarises the rating background noise levels determined for the day, evening and night periods as defined in the NPI.

Table 3-1 – DA Stage NPI Rating Background Noise Levels

Monitor	Location	Rating Background Noise Level (dB(A) L ₉₀)		
		Day	Evening	Night
1	Near R1/C1 at north eastern corner (Railway Parade & Clarendon Place)	60	56	50
2	Near R1 facing Railway Parade and rail corridor	57	57	50
3	Near R3	54	52	50

The data for the day, evening and night periods have been processed using the guidelines in the NSW EPA *Road Noise Policy* 2011 to determine the ambient noise levels at the monitoring location.

Table 3-2 – DA Stage NPI Ambient Noise Levels

Monitor	Location	Traffic Noise Level (dB(A) L _{eq,period})*	
		Day (7am to 10pm)	Night (10pm to 7am)
1	Near R1/C1 at north eastern corner (Railway Parade & Clarendon Place)	67 (daytime)	64 (night time)
		67 (day, 11hr) 66 (evening, 4hr)	
		68 (1 hour)	65 (1 hour)
2	Near R1 facing Railway Parade and rail corridor	63 (daytime)	58 (night time)
		64 (1 hour)	61 (1 hour)
3	Near R3	59 (daytime)	54 (night time)
		59 (1 hour)	55 (1 hour)

3.2.2 Additional Noise Monitoring

Additional noise monitoring was conducted to verify and validate the DA stage noise monitoring.

Equipment Used

Unattended noise monitoring was conducted using a Rion NL-42 (Type 2). Attended noise monitoring was conducted using a Norsonic N-140 Type 1 sound level meter.

The unattended noise monitoring was continuous, with statistical noise levels recorded at 15-minute intervals throughout the monitoring period. Measurements were taken on "A" frequency weighting and fast time response.

All monitoring equipment used retains current calibration – either manufacturers' calibration or NATA certified calibration. The monitors were field calibrated at the beginning and the end of the measurement with no significant drift in calibration noted.

Locations Monitored

One unattended noise monitor was located at the same location as monitor 1, on the level 1 awning on the north-eastern corner of the site. The monitor was located approximately 5m from ground level, approximately 3m from the kerb of Railway Parade. Refer to Figure 1 for detailed location.

Attended noise measurements were taken around the project site. Traffic measurements had 180° view of the local road and were conducted at 1.5m above local ground level. Refer to Figure 1 for detailed locations.

Measurement Period

Unattended noise monitoring was conducted between 1st March 2024 and 12th March 2024. Attended noise measurements were conducted on 21st March between 4:00pm and 5:00pm.

3.2.2.1 Calculated Noise Levels

Ambient, assessment and rating background levels have been determined from the long term, unattended noise monitoring data based on the methodology in the NSW EPA NPI Fact Sheet B. Appendix One – Unattended Noise Monitoring contains the data collected, and the periods identified as being affected by adverse weather conditions or extraneous noise (as defined by NPI Fact Sheet B).

Weather data was obtained from records provided by the Bureau of Meteorology for the weather station located at Canterbury.

The NSW EPA NPI 2017 defines:

- Day as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.
- Evening as the period from 6pm to 10pm.
- Night as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

Representative traffic noise levels have been calculated using the guidelines in the NSW EPA *Road Noise Policy* 2011.

3.2.2.2 Background Noise Levels

The following table summarises the assessment background noise levels (ABL) for the monitoring location.

Table 3-3 – Additional NPI Assessment Background Noise Levels

Location	Date	ABL		
		Day	Evening	Night
Near R1/C1 at north eastern corner (Railway Parade & Clarendon Place)	1/03/2024	-	63	54
	2/03/2024	60	63	54
	3/03/2024	58	62	54
	4/03/2024	61	61	54
	5/03/2024	60	63	55
	6/03/2024	60	60	55
	7/03/2024	61	62	55
	8/03/2024	61	64	55
	9/03/2024	59	64	52
	10/03/2024	56	63	52
	RBL	60	63	54

*Periods affected by adverse weather or other extraneous noise and excluded from the ABL calculation.

It is noted that the wind data presented in Appendix One – Unattended Noise Monitoring has been obtained at a height of 10m as collected by the Bureau of Meteorology. Due to surface friction, there is a wind gradient between ground and a 10m height. As the logger was placed in location where in an urban area with surrounding buildings, the wind speed at 1.5m above ground level (logger microphone height) is estimated to be 1/3 of the 10m high wind speeds collected by the BOM. This correction factor has been applied before assessing the 5 m/s wind criterion for valid background data.

Table 3-4 – Additional NPI Ambient Noise Levels

Location	Traffic Noise Level (dB(A) $L_{eq,period}$)*	
	Day (7am to 10pm)	Night (10pm to 7am)
Near R1/C1 at north eastern corner (Railway Parade & Clarendon Place)	69 (daytime)	64 (night time)
	68 (day, 11hr) 69 (evening, 4hr)	
	69 (1 hour)	66 (1 hour)

3.2.3 Adopted Noise Levels

The additional background noise monitoring yielded background noise levels that were above those measured at DA stage. For conservative assessment, the original DA RBL's will be retained for this assessment.

Ambient noise levels were within 1-2 dB(A) of the DA stage noise monitoring, therefore the DA stage results are considered valid for this assessment. Details of SoundPlan 8.0 noise modelling parameters can be found in Section 4.3.

4 EXTERNAL NOISE INTRUSION ASSESSMENT

Site investigation indicates that the major external noise sources around site are from traffic movements along Railway Parade and rail movements running through the Burwood Station rail corridor north of Railway Parade.

4.1 NOISE INTRUSION CRITERIA

A noise intrusion assessment has been conducted based on the requirements of the following acoustic noise criteria and standards:

- Burwood Council *Site Specific Development Control Plan (DCP)* 2020 and **DCP** 2013.
- NSW Government Gazette *Child Care Planning Guideline (CCPG)* 2021.
- Association of Australian Acoustical Consultants (**AAAC**) *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.
- Australian and New Zealand AS/NZS 2107:2016 *Recommended design sound levels and reverberation times for building interiors*.
- NSW Department of Planning (**DoP**) *Development near Rail Corridors or Busy Roads – Interim Guideline (DNRCBR)* 2008.

4.1.1 Burwood Council DCP's & NSW Government Gazette CCPG 2021

A Site Specific Development Control Plan for 42-50 and 52-60 Railway Parade Burwood, however the SSDCP does not provide specific noise controls. The overarching DCP 2013 includes the following reference to Part 3.6 of the NSW Government Gazette *Child Care Planning Guideline* 2017, which was further superseded in 2021.

3.6 Noise and air pollution

C25 *An acoustic report should identify appropriate noise levels for sleeping areas and other non-play areas and examine impacts and noise attenuation measures where a child care facility is proposed in any of the following locations:*

- *on industrial zoned land*
- *where the ANEF contour is between 20 and 25*
- *along a railway or mass transit corridor, as defined by State Environmental Planning Policy (Infrastructure) 2007*
- *on a major or busy road*
- *other land that is impacted by substantial external noise.*

As the CCPG 2021 does not provide specific noise controls, AL have adopted the AAAC *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.

4.1.2 AAAC Guideline for Child Care Centre Acoustic Assessment, Version 3.0, 2020

5.1 Road, Rail Traffic and Industry

The predictions of noise levels from road traffic on a child care centre can be calculated using basic formula as given, for example, in the Calculation of Road Traffic Noise from the UK Department of Transport, Welsh Office (1988).

The $L_{Aeq,1hr}$ noise level from road traffic, rail or industry at any location within the outdoor play or activity area during the hours when the Centre is operating should not exceed 55 dB(A).

The $L_{Aeq,1hr}$ noise level from road traffic, rail or industry at any location within the indoor activity or sleeping areas of the Centre during the hours when the centre is operating shall be capable (i.e. with doors and / or windows closed) of achieving 40 dB(A) within indoor activity areas and 35 dB(A) in sleeping areas.

4.1.3 Australian and New Zealand AS/NZS 2107:2016 Recommended design sound levels and reverberation times for building interiors

Australian Standard AS 2107:2016: *Recommended design sound levels and reverberation times for building interiors* specifies allowable internal noise levels for internal spaces within various building types. AS 2107:2016, gives the following maximum internal noise levels for relevant areas of the proposed building.

Table 4-1 – Recommended Design Sound Level

Occupancy	Space /Activity Type	Recommended Maximum Design Sound Level dB(A) L_{eq}
Residential	Sleeping Areas (Night Time)	35-40 dB(A) $L_{eq}(10pm-7am)$
	Living Areas	35-45 dB(A) $L_{eq}(anytime)$
Commercial	Corridors and Lobbies	45-50 dB(A) $L_{eq}(anytime)$
	General Office Areas	40-45 $L_{eq}(anytime)$
Shop	Small Retail Stores (General)	< 50 dB(A) $L_{eq}(anytime)$
	Supermarket	< 55 dB(A) $L_{eq}(anytime)$

4.1.4 NSW DoP Development near Rail Corridors or Busy Roads – Interim Guideline 2008

The guideline provides guidance for the planning and assessment of noise sensitive development impacted by roads and railways, and in particular those uses required to be addressed under SEPPT&I 2021. The assessment criteria broadly mirror those in SEPPT&I 2021, as well as providing additional guidance.

4.1.5 Internal Noise Criteria – Airborne Noise

Table 3.1 of the guideline summarises the internal traffic noise levels that should be achieved in noise sensitive developments including residential buildings. The $L_{eq,9hr}$ descriptor is recommended to assess noise levels in sleeping areas (bedrooms) and the $L_{eq,15hr}$ descriptor is recommended to assess noise levels in other habitable rooms.

The relevant sections of Table 3.1 of DNRCBR are repeated below.

Table 4-2 – DNRCBR Airborne Noise Criteria

Building Use	Room	Noise Level dB(A) L_{eq}
Residential	Sleeping Area (Bedroom)	35 (10pm to 7am)
	Other habitable rooms (excl. garages, kitchens, bathrooms & hallways)	40 (7am to 10pm)

4.1.6 Ventilation

The DNRCBR recommends that when “windows open” noise levels are excessive, which is defined as when the “windows open” noise level exceeds the “windows closed” criterion by more than 10 dB(A), the occupants should be able to *“leave their windows closed, if they so desire, and also meet the ventilation requirements of the Building Code of Australia (BCA).”*

4.2 ADOPTED PROJECT SPECIFIC CRITERIA

The internal noise criteria adopted for each internal space is therefore summarised below based on the relevant State, Council and Australian Standard requirements.

Table 4-3 – Adopted Internal Noise Levels

Occupancy	Space /Activity Type	Adopted Internal Sound Level dB(A) L_{eq}
Residential	Sleeping Areas (Night Time)	35 dB(A) $L_{eq}(10pm-7am)$
	Living Areas	40 dB(A) $L_{eq}(anytime)$
Commercial	General Office Areas	45 $L_{eq}(anytime)$
	Corridors and Lobbies	45 dB(A) $L_{eq}(anytime)$
Shop	Small Retail Stores (General)	50 dB(A) $L_{eq}(anytime)$
	Supermarket	55 dB(A) $L_{eq}(anytime)$
Child Care Centre	Sleeping Areas	35 dB(A) $L_{eq}(1hr)$
	Indoor Activity Areas	40 dB(A) $L_{eq}(1hr)$
	Outdoor Play Areas	55 dB(A) $L_{eq}(1hr)$

4.3 SOUNDPLAN NOISE MODELLING

Noise levels from the road and rail corridor have also been predicted at the development using SoundPlan 8.0 modelling software. SoundPlan simulation results detailing the predicted façade noise levels as a result of the surrounding environmental noise can be found in Appendix Two – SoundPlan Noise Modelling Results. These results have been used to inform the external façade complying constructions and alternative ventilation requirements below.

The measured noise levels from DA stage and additional attended and unattended noise monitoring have been used as a basis for predicting noise levels around the development by:

- Accounting for any likely changes in traffic volumes in the long term.

For the subject roads, analysis of traffic volumes on the TfNSW website indicates there has been no significant increase in traffic volumes. Given this, and the trend to quieter electric vehicles, a zero long term increase in noise has been adopted.

- Correcting for different distances between the noise source compared to the monitoring location.
- Barrier effects, where applicable.
- Reflections off adjacent structures, where significant.
- Delineation of noise from local traffic and noise from the rail line.

Noise monitoring to the far east of the site at 20-24 Burleigh Parade between 13th March 2024 and 21st March 2024 were used to calibrate traffic and rail noise levels along with the noise monitoring conducted on and around site given the difficulty of ensuring how much noise is coming from traffic or rail. This calibration is also consistent with noise monitoring conducted in 2019 by this office for 4 Railway Parade.

Noise levels around the site have been predicted using the SoundPlan 8.0 computer model. The model is able to façade noise levels, taking into account the factors indicated above.

The model:

- Has been calibrated for each noise source using the relevant measured noise levels, with any long-term change in noise level applied.
- Includes a digitised geo-map of the proposed building and any nearby structures that may affect noise levels at the site.
- ISO 9613-2:1996 "Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation" noise propagation standard was adopted.

The modelling assumptions include:

- Noise source heights:
 - Passenger cars and light commercial vehicles at 1m above the roadway.
 - Rail noise sources at 1m above rail level.
- Data obtained from Geoscape for the surrounding land, roadways and built form.

SoundPlan modelling outputs are provided in Appendix Two – SoundPlan Noise Modelling Results. SoundPlan "façade noise maps" do not include a façade reflection allowance, and therefore do not require correction.

4.4 COMPLYING CONSTRUCTIONS

Assessment of façade requirements to achieve required indoor noise levels has been undertaken. Dimensions of spaces, setbacks from roadways, window openings and floor areas have been used.

Note: Façade constructions are to be reviewed at CC stage based on construction drawings pending final façade design. The below constructions are provided for authority approval purposes only.

4.4.1 Glazed Façade (Windows and Doors)

The following constructions will comply with the project noise objectives. Aluminium framed/sliding glass doors and windows will be satisfactory provided they meet the following criteria. All external windows and doors listed are required to be fitted with Q-Ion type acoustic seals. **(Mohair Seals are unacceptable).**

Thicker glazing may be required for structural, safety or other purposes. Where it is required to use thicker glazing than scheduled, this will also be acoustically acceptable. The recommended external glazing constructions to mitigate potential noise impacts are detailed in Table 4-4.

Table 4-4 – Complying Residential Glazing Construction

Tower	Façade	Levels	Room	Glazing Thickness	Acoustic Seals
A	North & Corner Rooms	All	Living Room & Bedroom Glazing (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
	East	1-15	Living Room & Bedroom Glazing (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
		Level 16 and above	Bedroom Glazing Only (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
	South & West	1-15	Living Room & Bedroom Glazing (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
		Level 16 and above	Bedroom Glazing Only (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
B, C	North & Corner Rooms	All	Living Room & Bedroom Glazing (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
	East, South, West	1-15	Living Room & Bedroom Glazing (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes

Tower	Façade	Levels	Room	Glazing Thickness	Acoustic Seals
B, C	East, South, West	Level 16 and above	Bedroom Glazing Only (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
D	North & Corner Rooms	All	Living Room & Bedroom Glazing (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
	West	1-15	Living Room & Bedroom Glazing (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
	South & East	Level 16 and above	Bedroom Glazing Only (Outside Wintergardens)	10.38mm Laminated or 10.38mm/12mm airgap /6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
		1-15	Living Room & Bedroom Glazing (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes
		Level 16 and above	Bedroom Glazing Only (Outside Wintergardens)	6.38mm Laminated or 6.38mm/12mm airgap/6mm IGU	Yes
			All Other Glazing	5mm Float/ Toughened or 6mm/12mm airgap/6mm IGU	Yes

Retail/ commercial glazed façades can be 5mm Float/ Toughened (Rw 28), 6.38mm laminated (Rw 31) or similar subject to project requirements to be confirmed at CC stage when proposed tenancy uses are finalised.

Minimum glazing thicknesses shall be iterated and reviewed at CC stage to achieve project noise intrusion requirements. Some glazing constructions have been upgraded based on Client expectations and therefore shall not be taken as a minimum requirement and have been presented for authority approval purposes only.

It is recommended that only window systems having test results indicating compliance with the required ratings obtained in a certified laboratory be used where windows with acoustic seals have been recommended.

In addition to complying with the minimum scheduled glazing thickness, the R_w rating of the glazing fitted into open-able frames and fixed into the building opening should not be lower than the values listed in Table 4-5 for all areas. Where nominated, this will require the use of acoustic seals around the full perimeter of open-able frames and the frame will need to be sealed into the building opening using a flexible sealant.

Table 4-5 – Minimum R_w of Glazing Assembly (with Acoustic Seals)

Glazing Assembly	Minimum R_w of Installed Window
10.38mm/ 12mm air gap/ 6mm IGU	37
10.38mm Laminated	35
6.38mm/ 12mm air gap/ 6mm IGU	34
6mm/ 12mm air gap/ 6mm IGU	33
6.38mm Laminated	31
5mm Float/ Toughened	28

Note: Façade constructions to be reviewed at CC stage based on construction drawings, pending final façade design.

4.4.2 External Wall Construction

External wall construction will be constructed from concrete and masonry elements, therefore; acoustic upgrading is not required. Any lightweight façade construction shall provide a minimum acoustic performance of R_w 50.

There should not be vents on the internal skin of external walls. In the event that any penetrations are required through the external skin, an acoustic sealant should be used to minimise all gaps.

4.4.3 Child Care Centre Outdoor Play Area Treatments

Barriers and absorptive treatments are recommended to minimise noise intrusion into the outdoor play areas. see Section 6.4 for nominated constructions.

4.4.4 Entry Doors

All external doors shall have glazing thicknesses equal to those recommended in Section 4.4.1 and are to have Raven RP10 to the top and sides and Raven RP38 to the underside of a swing door.

Note that mohair seals in windows and doors are not acceptable where acoustic seals are required.

4.4.5 External Roof/Ceiling Construction

External roof construction will be constructed from concrete elements, therefore; acoustic upgrading is not required. In the event that any penetrations are required through the external skin, an acoustic sealant should be used to minimise all gaps.

4.4.6 Ventilation and Air Conditioning

With windows open, the allowable internal noise goal is permitted to be 10dB(A) higher than when the windows are closed. The internal noise level criteria with windows open then becomes:

45dB(A) in bedrooms (35dB + 10dB), and 50dB(A) in living rooms (40dB + 10dB).

A noise reduction of 10dB is expected through a façade with open windows/doors. As such, noise levels at the façade up to 10dB higher than the allowable internal criteria will be acceptable. The maximum external traffic noise levels whereby natural ventilation is permitted then becomes:

55dB(A) L_{eq9hr} at the façade of bedrooms (55dB(A) L_{eq9hr} - 10dB = 45dB(A) internally); and

60dB(A) L_{eq15hr} at the façade of living areas (60dB(A) $L_{eq anytime}$ - 10dB = 50dB(A) internally).

Based on the predicted traffic noise levels at the development site:

- A ventilation mark up can be found in Appendix Three – Alternative Ventilation Mark Up. This mark up provides initial guidance on which rooms are predicted to be able to rely on open windows or doors for natural ventilation.
- For rooms which cannot rely on open windows or doors for natural ventilation, alternative ventilation through borrowed air (BCA compliance) or other strategies have also been noted.
- Rooms which can rely on open windows or doors for naturally ventilation through careful configuration of closed façades of wintergardens or balconies have also been clouded.
- Further iterations of the ventilation methodology shall be reviewed at CC stage.

Other methodologies of achieving ventilation requirements such as borrowed air from other rooms or mechanical ventilation are also considered acceptable. Any supplementary fresh air (ventilation system or other) required should be acoustically designed to ensure that the acoustic performance of the acoustic treatments outlined above are not reduced and does not exceed the EPA or Council criteria for noise emissions to nearby properties.

Note: Façade constructions to be reviewed at CC stage based on construction drawings, pending final façade design.

5 NOISE EMISSION CRITERIA

The noise emission from the project site shall comply with the requirements of the following documents:

- Burwood Council *Site Specific Development Control Plan (DCP)* 2020 and **DCP** 2013.
- NSW Government Gazette *Child Care Planning Guideline (CCPG)* 2021.
- Association of Australian Acoustical Consultants (**AAAC**) *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.
- Vibrancy Reforms 2024
- Liquor and Gaming NSW (**L&GNSW**).
- NSW Environmental Protection Authority (**EPA**) *Noise Policy for Industry (NPI)* 2017.

5.1 BURWOOD COUNCIL DCP'S & NSW GOVERNMENT GAZETTE CCPG 2021

A Site Specific Development Control Plan for 42-50 and 52-60 Railway Parade Burwood, however the SSDCP does not provide specific noise controls. The overarching DCP 2013 includes the following reference to Part 3.6 of the NSW Government Gazette *Child Care Planning Guideline* 2017, which was further superseded in 2021.

3.6 Noise and air pollution

C25 *An acoustic report should identify appropriate noise levels for sleeping areas and other non-play areas and examine impacts and noise attenuation measures where a child care facility is proposed in any of the following locations:*

- *on industrial zoned land*
- *where the ANEF contour is between 20 and 25*
- *along a railway or mass transit corridor, as defined by State Environmental Planning Policy (Infrastructure) 2007*
- *on a major or busy road*
- *other land that is impacted by substantial external noise.*

As the CCPG 2021 does not provide specific noise controls, AL have adopted the AAAC *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020 for child care centres, Vibrancy Reforms 2024 and L&GNSW operational noise emissions criteria for any future food and beverage venues, and the NSW EPA *Noise Policy of Industry* 2017 for mechanical noise emissions.

5.2 AAAC GUIDELINE FOR CHILD CARE CENTRE ACOUSTIC ASSESSMENT, VERSION 3.0, 2020

3.2.1 Outdoor Play Area

Base Criteria – With the development of child care centres in residential areas, the background noise level within these areas can at certain times, be low. Thus, a base criterion of a contributed $L_{eq,15min}$ 45 dB(A) for the assessment of outdoor play is recommended in locations where the background noise level is less than 40 dB(A).

Background Greater Than 40 dB(A) – The contributed $L_{eq,15min}$ noise level emitted from an outdoor play and internal activity areas shall not exceed the background noise level by more than 5 or 10 dB at the assessment location, depending on the usage of the outdoor play area. AAAC members regard that a total time limit of approximately 2 hours outdoor play per morning and afternoon period should allow an emergence above the background of 10 dB (ie background +10 dB if outdoor play is limited to 2 hours in the morning and 2 hours in the afternoon).

Up to 4 hours (total) per day – If outdoor play is limited to no more than 2 hours in the morning and 2 hours in the afternoon, the contributed $L_{eq,15\text{ minute}}$ noise level emitted from the outdoor play shall not exceed the background noise level by more than 10 dB at the assessment location.

More than 4 hours (total) per day – If outdoor play is not limited to no more than 2 hours in the morning and 2 hours in the afternoon, the contributed $L_{eq,15\text{ minute}}$ noise level emitted from the outdoor play area shall not exceed the background noise level by more than 5 dB at the assessment location.

3.2.2 Other Noise Emission

The cumulative $L_{eq,15\text{ minute}}$ noise emission level resulting from the use and operation of the child care centre, with the exception of noise emission from outdoor play discussed above, shall not exceed the background noise level by more than 5 dB at the assessment location as defined above. This includes the noise emission resulting from:

- Indoor play
- Mechanical plant
- Drop off and pick up
- Other activities/ operations (not including outdoor play).

3.2.3 Sleep Disturbance

The noise impact of staff arrivals, setup, cleaning or other on-site activities prior to 7am or during night-time hours should be assessed at nearby residential premises. The L_{Amax} noise level emitted from vehicles arriving and parking, depending on the requirements of the state or territory where the centre is located shall not exceed the background noise level by more than 15 dB outside the nearest habitable room window.

As the sleep disturbance and mechanical noise emissions guidelines are an adaptation of the NSW EPA NPI 2017, the NPI shall be adopted.

5.3 VIBRANCY REFORMS 2024, LIQUOR & GAMING NSW (L&GNSW)

From 1st July 2024, the Vibrancy Reforms legislation designates Liquor & Gaming NSW (L&GNSW) as the regulator of entertainment sound-related complaints for all licensed premises.

Amendments have been made to relevant pieces of legislation to assist L&GNSW to effectively carry out this role. These amendments require that entertainment sound emanating from licensed premises is solely managed through the *Liquor Act 2007*. This means that previously imposed noise-related conditions of development consent and 'offensive noise pollution' laws will no longer apply to items regulated by the *Liquor Act 2007*.

The Vibrancy Reforms will also increase the number of disturbance complainants needed for complaints to be formally considered. The number will increase from 3 to 5 (and the complainants must be from different households). Complainants must also attempt to resolve disputes with the licensee before lodging a complaint.

How long a complainant has been living in the household (referred to as the "order of occupancy" in the legislation) will become a central consideration in disturbance complaints. This will help to prevent when newcomers to a neighbourhood work to shut down or wind back the entertainment offerings and/or operating hours of established venues.

The Vibrancy Reforms:

- Remove restrictions on live entertainment that generally seek to restrict the type of live music, whether it is amplified or not, the location on the site, etc.
- Conditions of development consent relating to noise emitted from licenced premises or trading hours cease to have effect.
- Formalise procedures related to complaints including who is able to make a complaint and the minimum number of complainants.
- Vary how noise is assessed depending on the "order of occupancy".

When the licenced premises was operating prior to the complainant occupying their premises, a more relaxed test is applied, that is an *order of occupancy* test rather than *unduly disturbed*.

In addition, a complainant cannot be considered to be *unreasonably and seriously disturbed* if the alleged disturbance was reasonably foreseeable by the complainant, or if the complainant could take reasonable steps to mitigate the impact of the disturbance on the complainant but did not.

Notwithstanding:

- Clause 79A of the Liquor Act states Licensed premises must not disturb the quiet and good order of neighbourhood. A licence does not authorise business to be conducted on licensed premises in a way that unduly disturbs, or unreasonably and seriously disturbs, the quiet and good order of the neighbourhood in which the licensed premises are located.
- The Secretary may add noise abatement conditions on a licence when valid complaints are received in a manner permitted by the acts, or the Secretary is satisfied the quiet and good order of the neighbourhood of the licensed premises are being unduly disturbed.

Liquor and Gaming have advised us that that objective tests to determine the levels of impact corresponding to *unreasonably and seriously disturbed* and *unduly disturbed* have not been established.

Historically, Liquor and Gaming typically applied the following licenced premises noise limits at residential receivers:

The L_{A10} noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz–8kHz inclusive) by more than 5dB between 7:00 am and 12:00 midnight at the boundary of any affected residence.

The L_{A10} noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5Hz–8kHz inclusive) between 12:00 midnight and 7:00 am at the boundary of any affected residence.

Notwithstanding compliance with the above, the noise from the licensed premises shall not be audible within any habitable room in any residential premises between the hours of 12:00 midnight and 7:00 am.

Given this guideline has historically been used to assess impacts for new and existing licenced premises, until further direction is provided by Liquor and Gaming, it is assumed it can be used to determine if residential receivers are likely to be *unduly disturbed* by patron and entertainment noise emissions when a new licenced premises is proposed.

For existing licenced premises, different and, by definition, more relaxed criteria should be adopted. However, currently there are no available guidelines to assess at what level a resident would be “seriously or unreasonably disturbed.”

5.3.1 Application to Subject Development

As indicated above, development consents can no longer contain conditions that limit noise levels at source or receiver, or regulate how live music is played.

Notwithstanding, an impact review has been undertaken to assess the likelihood of the proposed use causing the neighbourhood to be *unreasonably and seriously disturbed* or *unduly disturbed* (as applicable). Where adverse impacts are likely, noise mitigation and management that could be implemented is discussed.

Though the development included retail activities prior to this application, and because the current proposal is likely to increase use of the site:

- The unduly disturbed test has been generally adopted in respect of entertainment noise emissions.
- As this test does not provide an objectively assessable criterion, the historical Liquor and Gaming guideline has been adopted to objectively assess noise impacts (as adopted in the original DA Acoustic Assessment).

5.4 NSW EPA NOISE POLICY FOR INDUSTRY (NPI) 2017

The EPA NPI has two criteria which both are required to be satisfied, namely Intrusiveness and amenity. The NPI sets out acceptable noise levels for various localities. The policy indicates four categories to assess the appropriate noise level at a site. They are rural, suburban, urban and urban/industrial interface. Under the policy the nearest residential receivers would be assessed against the suburban criteria.

Noise levels are to be assessed at the property boundary or nearby dwelling, or at the balcony or façade of an apartment.

5.4.1 Intrusiveness Criterion

The guideline is intended to limit the audibility of noise emissions at residential receivers and requires that noise emissions measured using the L_{eq} descriptor not exceed the background noise level by more than 5dB(A). Where applicable, the intrusive noise level should be penalised (increased) to account for any annoying characteristics such as tonality.

Background noise levels adopted are presented in Table 3-1. Noise emissions from the Site should comply with the noise levels presented below when measured at nearby property boundaries.

5.4.2 Project Amenity Criterion

The guideline is intended to limit the absolute noise level from all noise sources to a level that is consistent with the general environment.

The EPA's NPI sets out acceptable noise levels for various localities. The recommended noise amenity area is based upon the measured background noise levels at the sensitive receiver. Based on the measured background noise levels detailed in Table 3-1, the Noise Policy for Industry suggests the adoption of the 'urban' categorisation.

The NPI requires project amenity noise levels to be calculated in the following manner:

$$L_{Aeq,15min} = \text{Recommended Amenity Noise Level} - 5 \text{ dB(A)} + 3 \text{ dB(A)}$$

The amenity levels appropriate for the receivers surrounding the site are presented in Table 5-1.

Table 5-1 – EPA Amenity Noise Levels

Type of Receiver	Time of day	Project Amenity Noise Level dB(A) $L_{eq}(15 \text{ minute})$
Residents R1 R2 & R3	Day	58
	Evening	48
	Night	43

Table 5-2 – EPA NPI Noise Emission Criteria (Non-Residences Surrounding Project Site)

Type of Receiver	Time of day	Project Amenity Noise Level dB(A) $L_{eq}(15 \text{ minute})$
Commercial	When in Use	63
School Classroom	Noisiest 1 Hour	40 (internal)

The NSW EPA Noise Policy for Industry (2017) defines:

- Day as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays.
- Evening as the period from 6pm to 10pm.
- Night as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

5.4.3 Sleep Arousal Criteria

The Noise Policy for Industry recommends the following noise limits to mitigate sleeping disturbance:

Where the subject development / premises night -time noise levels at a residential location exceed:

- $L_{eq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{Fmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater,

a detailed maximum noise level even assessment should be undertaken.

Table 5-3 – Sleep Arousal Criteria for Residential Receivers

Receiver	Rating Background Noise Level (Night) dB(A) L_{90}	Emergence Level
Residents R1 R2 & R3	50 dB(A) L_{90}	55 dB(A) $L_{eq, 15min}$; 65 dB(A) L_{Fmax}

5.5 SUMMARISED OPERATIONAL NOISE EMISSIONS CRITERIA

Table 5-4 – Summarised AAAC Childcare Noise Emission Criteria

Source	Receiver	Criteria $L_{Aeq(15min)}$ dB(A)
Childcare Outdoor Play, Indoor Play	Residents R1	Day (7am-6pm): 62 Evening (6pm-7pm): 51
	Residents R2 & R3	Day (7am-6pm): 59 Evening (6pm-7pm): 57
All Activities	Commercial Receivers	65

Historic L&GNSW guidelines as defined in the previous DA Acoustic Assessment have been replicated below as a general guideline for future liquor licensed fit outs noting that the Vibrancy Reforms 2024 now supersede any Council imposed criteria on operational noise from liquor licensed premises.

Table 5-5 – Summarised L&GNSW Operational Noise Emission Objectives (External)

Receiver	Time of Day	Criteria	Octave Band Noise Criteria, dB L ₁₀ (Hz)									dB(A)
			31.5	63	125	250	500	1k	2k	4k	8k	
R1	7am-6pm	BG (57) +5 dB L ₁₀	61	60	64	61	58	55	54	54	52	62
	6pm-10pm	BG (56) + 5dB L ₁₀	60	59	63	60	57	54	53	53	51	61
	10pm-7am	BG (50) +0 dB L ₁₀	49	48	52	49	46	43	42	42	40	50
R2 & R3	7am-6pm	BG (54) +5 dB L ₁₀	64	60	59	57	54	53	53	50	48	59
	6pm-10pm	BG (52) + 5dB L ₁₀	62	58	57	55	52	51	51	48	46	57
	10pm-7am	BG (50) +0 dB L ₁₀	55	51	50	48	45	44	44	41	39	50

5.6 SUMMARISED MECHANICAL NOISE EMISSIONS CRITERIA

Table 5-6 – EPA NPI Noise Emission Criteria (Residents/ Hotels Surrounding Project Site)

Receiver	Time Period	Assessment Background Noise Level dB(A) L_{90}	Intrusiveness Criteria $L_{eq}(15min)$	Project Amenity Criteria dB(A) L_{eq}	NPI Criteria for Sleep Disturbance
R1	Day	57	62	58	N/A
	Evening	56	61	48	N/A
	Night	50	55	43	55 dB(A)$L_{eq, 15min}$; 65 dB(A)L_{Fmax}
R2, R3	Day	54	59	58	N/A
	Evening	52	57	48	N/A
	Night	50	55	43	55 dB(A)$L_{eq, 15min}$; 65 dB(A)L_{Fmax}

The project noise trigger levels are indicated by the bolded values in the table above.

Table 5-7 – EPA NPI Noise Emission Criteria (Non-Residences Surrounding Project Site)

Receiver	Time of day	Project Amenity Noise Level dB(A) $L_{eq}(15\text{ minute})$
Commercial	When in Use	63
School Classroom	Noisiest 1 Hour	40 (internal)

6 NOISE EMISSIONS ASSESSMENT

6.1 CHILDCARE

Child care centre spaces have been proposed for both Level 1 and Level 2 of Tower D. Though specific operational conditions cannot be reviewed until an operator has been selected, consideration of available treatment options in order to minimise noise emissions as well as noise intrusion to the outdoor play area are considered.

In order to minimise noise emissions from outdoor play areas, a barrier system and absorptive soffit/ ceiling lining is recommended (see Section 6.4). This is recommended to be implemented on both Level 1 and Level 2 for all outdoor play areas.

6.2 COMMUNAL POOLS

With the design of semi-enclosed pool areas, noise flanking from communal usage of the pools to external receivers as well as residents within the development itself have been reviewed.

Based on the layout of all pool areas, noise emissions to receivers outside of the development will be minimal and not considered an acoustic risk. Noise shall be managed within the development to not unreasonably affect residents and commercial tenants.

6.3 NOISE FROM MECHANICAL PLANT WITHIN PROPOSED SITE GENERALLY

Detailed plant selection and location has not been undertaken at this stage. Satisfactory levels will be achievable through appropriate plant selection, location and if necessary, standard acoustic treatments such as duct lining, acoustic silencers and enclosures. Noise emissions from all mechanical services to the closest residential and commercial receivers should comply with the requirements of Section 5.5.

Detailed acoustic review should be undertaken at CC stage to determine acoustic treatments to control noise emissions to satisfactory levels. Indicative treatments to be reviewed and/ or iterated at CC stage are shown below.

6.4 COMPLYING CONTROLS AND CONSTRUCTIONS

6.4.1 Child Care Centre Outdoor Play Area Treatments

- Install minimum 1.1m high localised imperforate acoustic barriers around all outdoor play areas servicing the child care centre. The barrier of height specified above, may be constructed of lapped and capped timber, plexiglass, 4mm Perspex, Colorbond, 9mm fibrous cement sheet or equivalent, installed with no gaps between the panels. This can be further reviewed at CC Stage for appropriate material selection.
- Install acoustically absorptive material to all soffits of the outdoor play area servicing the child care centre with openings to Railway Parade. Absorptive material can be through the usage of perforated ceilings with insulation in cavity or with absorptive panels such as CSR Martini MD50 with a minimum NRC of 0.7. This can be further reviewed at CC Stage for appropriate material selection.
- The canopy structure above the walkway between Tower E and Tower C/D is relied upon to minimise noise emissions to residents above.
- Staff are to be given appropriate training in relation to the acoustic impacts and requirements in terms of operation of the child care centre.
- Specific recommendations on operational capacity are subject to a separate DA when an operator has been selected.

6.4.2 Communal Pools

- Signs reminding patrons to minimise noise at all times shall be installed all communal areas.
- Management is to be given appropriate training in relation to the acoustic impacts and requirements in terms of operation of the communal facilities.
- Communal pools shall only be used in the day and evening time periods (7am-10pm). This can be reviewed in the future with detailed analysis if required.

6.4.3 Preliminary Mechanical Advice

- Residential condenser plant equipment: Night time operational speeds shall be restricted with a night mode card (Daikin RXYMQ or similar).
- Major fans (typically with a sound power over 80dB(A) such as kitchen exhaust, major toilet exhaust and major carpark exhaust/supply/ relief air fans) may require acoustic treatment if located externally near sensitive receivers. It is recommended that axial (as opposed to roof mounted fans) are to be used as this will enable acoustic treatment to be incorporated within ductwork running to atmosphere and with attenuators if necessary. Indicatively a 1d unpodded attenuator with 2m of 50mm internally lined ductwork.
- Plant rooms may require acoustic louvres and internal absorptive lining (such as with CSR Martini XHD50 or Anticon glasswool insulation) with plant specific silencers or ducting.
- It is noted that iterative mechanical advice has already been reviewed with the Client to ascertain specific requirements of plant treatments and plant room allowances.
- Cumulative assessment of both plant noise with other noise sources is recommended when conducting acoustic design of plant items.

Compliance with EPA acoustic criteria (as set out in Section 5.5) will be achievable provided that detailed acoustic review of plant items is undertaken once plant is selected, and acoustic treatments similar to those outlined above are adopted.

7 CONCLUSION

This report presents an acoustic assessment of noise impacts associated for the proposed mixed-use development located known as Burwood Place, 42-60 Railway Parade Burwood.

Provided that the complying constructions presented in Sections 4.3 and 6.4 are adopted, the development will comply with the acoustic requirements of the following documents:

- Burwood Council *Site Specific Development Control Plan (DCP)* 2020 and **DCP** 2013.
- NSW Government Gazette *Child Care Planning Guideline (CCPG)* 2021.
- Association of Australian Acoustical Consultants (**AAAC**) *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.
- Australian and New Zealand AS/NZS 2107:2016 *Recommended design sound levels and reverberation times for building interiors*.
- NSW Department of Planning (**DoP**) *Development near Rail Corridors or Busy Roads – Interim Guideline (DNRCBR)* 2008.

External noise emissions criteria have been established in this report. Provided that the complying constructions and controls presented in Sections 6.4 are adopted, the development will comply with the acoustic requirements of the following documents:

- Burwood Council *Site Specific Development Control Plan (DCP)* 2020 and **DCP** 2013.
- NSW Government Gazette *Child Care Planning Guideline (CCPG)* 2021.
- Association of Australian Acoustical Consultants (**AAAC**) *Guideline for Child Care Centre Acoustic Assessment*, Version 3.0, 2020.
- Vibrancy Reforms 2024
- Liquor and Gaming NSW (**L&GNSW**).
- NSW Environmental Protection Authority (**EPA**) *Noise Policy for Industry (NPI)* 2017.

A detailed acoustic review of mechanical plant will be undertaken during CC Stage, however preliminary calculations have been undertaken and general complying controls have been documented.

Overall, the proposal will not result in any adverse noise or vibration impacts subject to the implementation of the complying constructions and controls set out in this report.

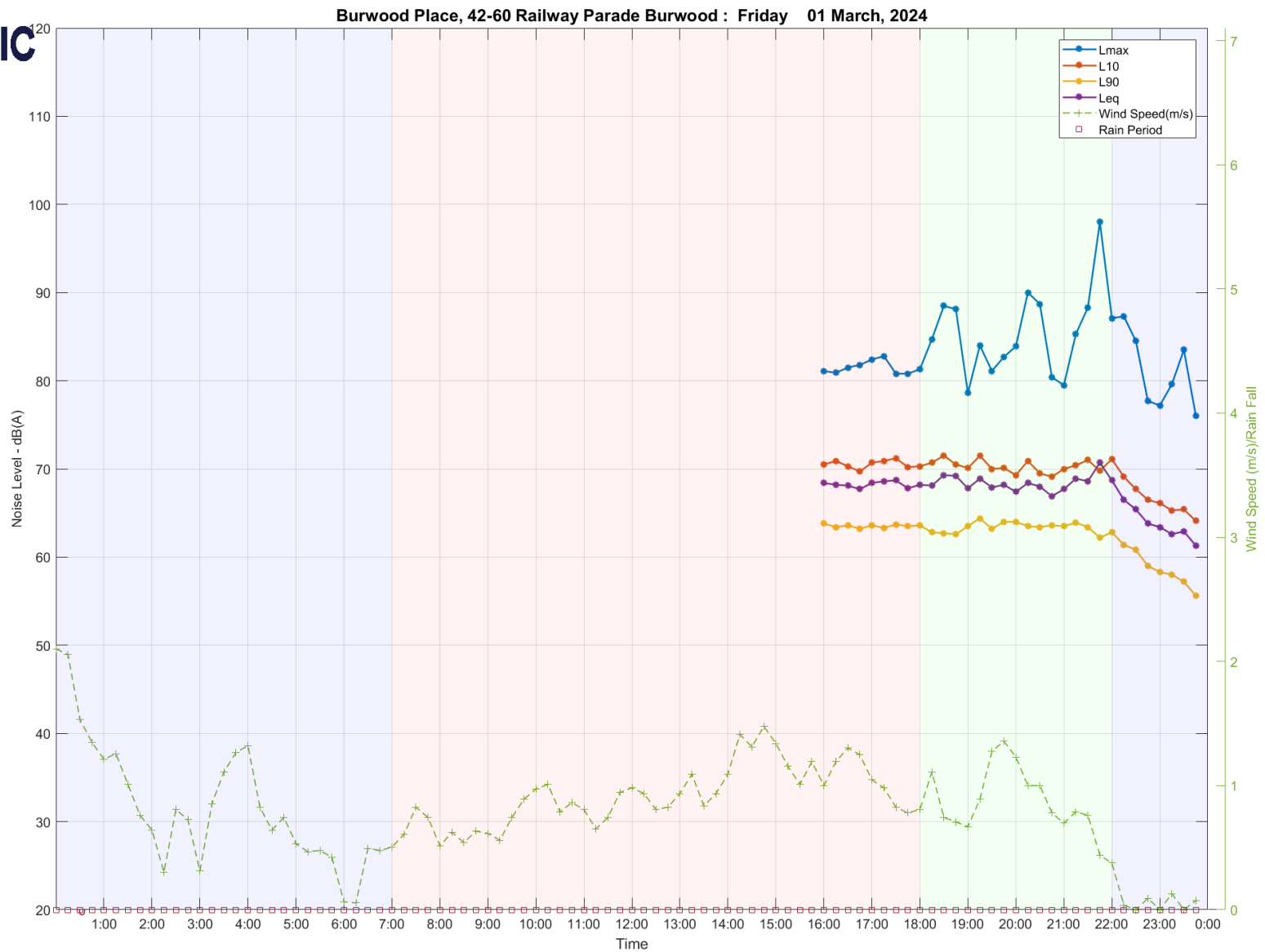
We trust this information is satisfactory. Please contact us should you have any further queries.

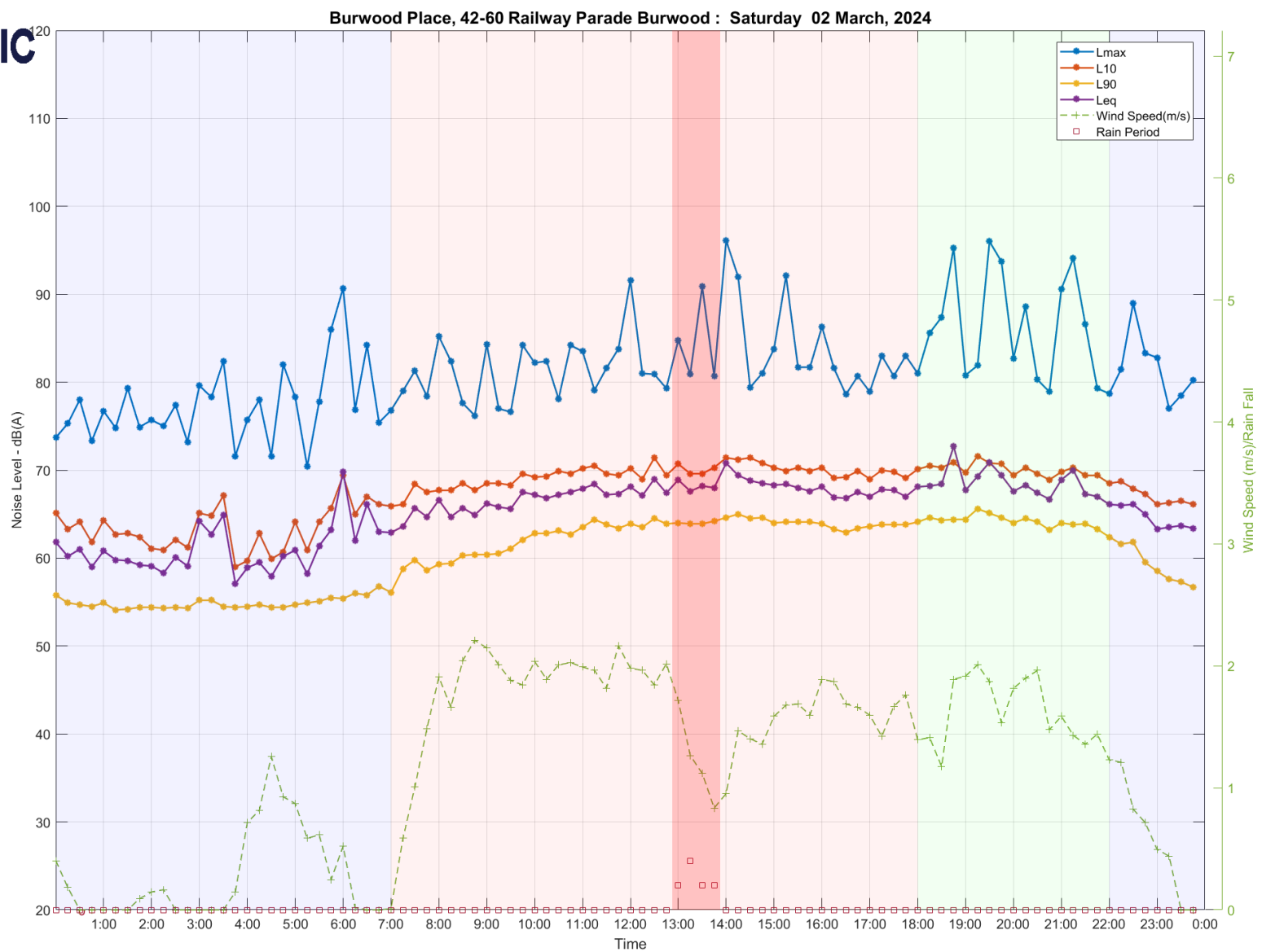
Yours faithfully,

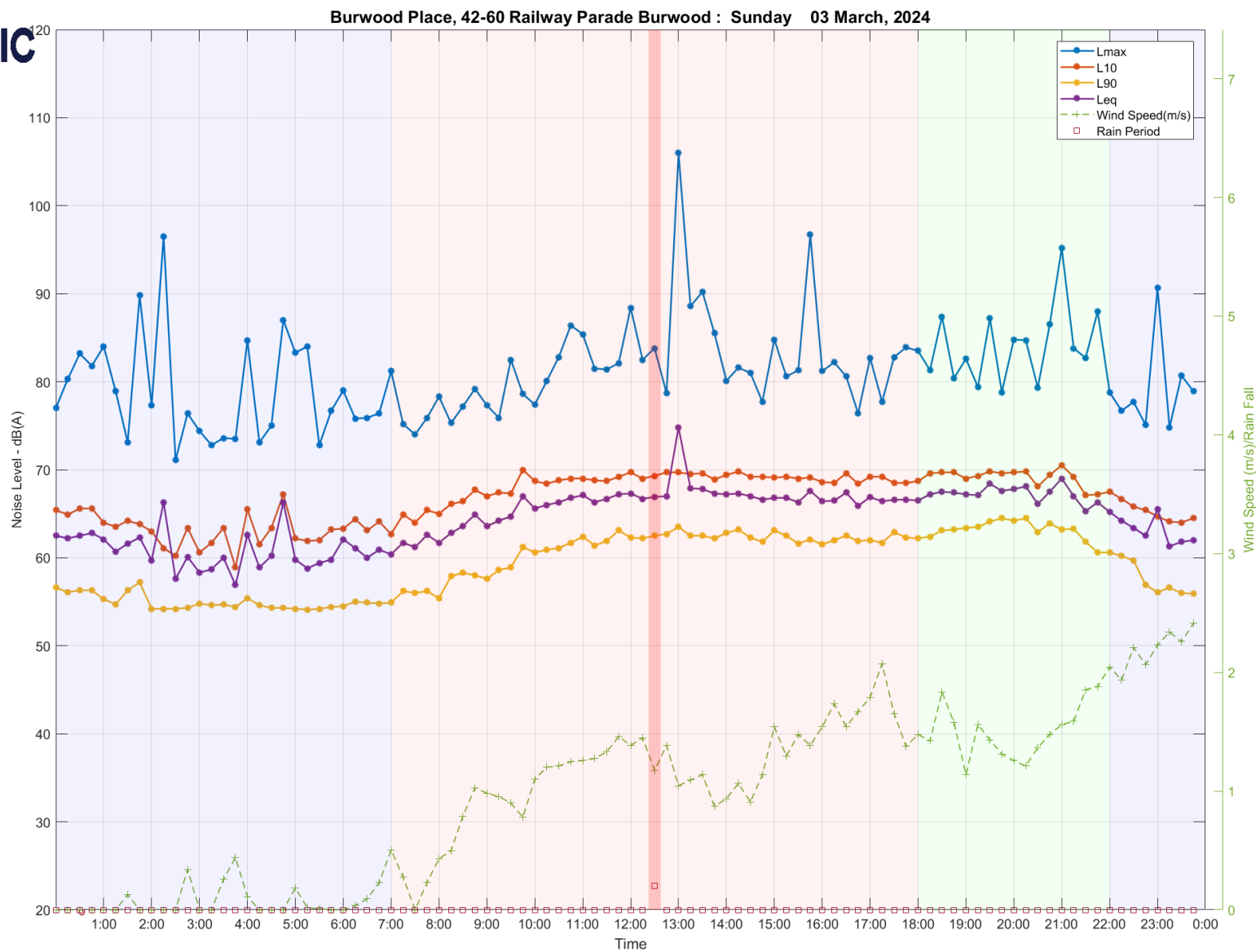


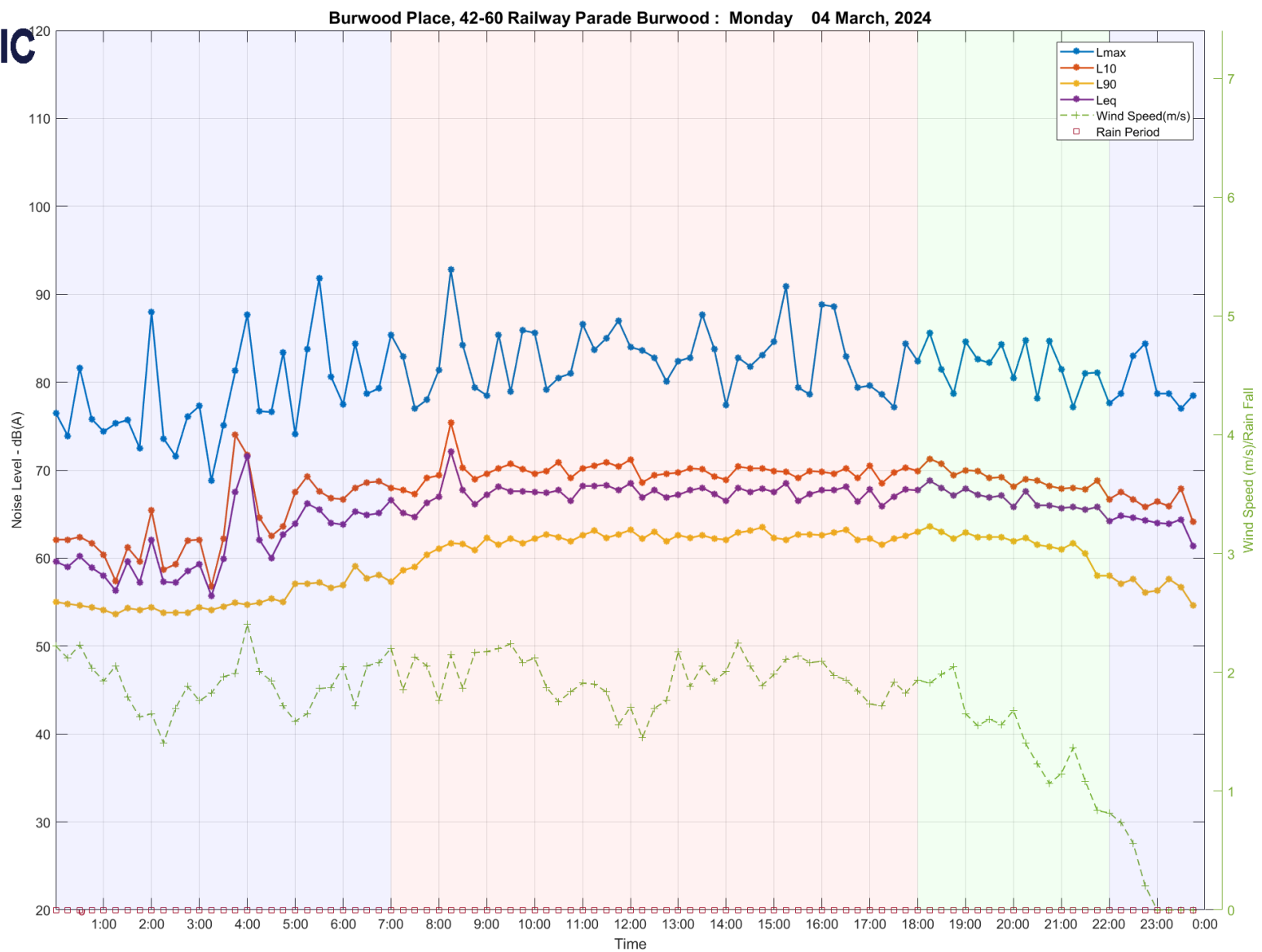
Acoustic Logic Pty Ltd
Weber Yeh
[MAAS](#), MIEAust

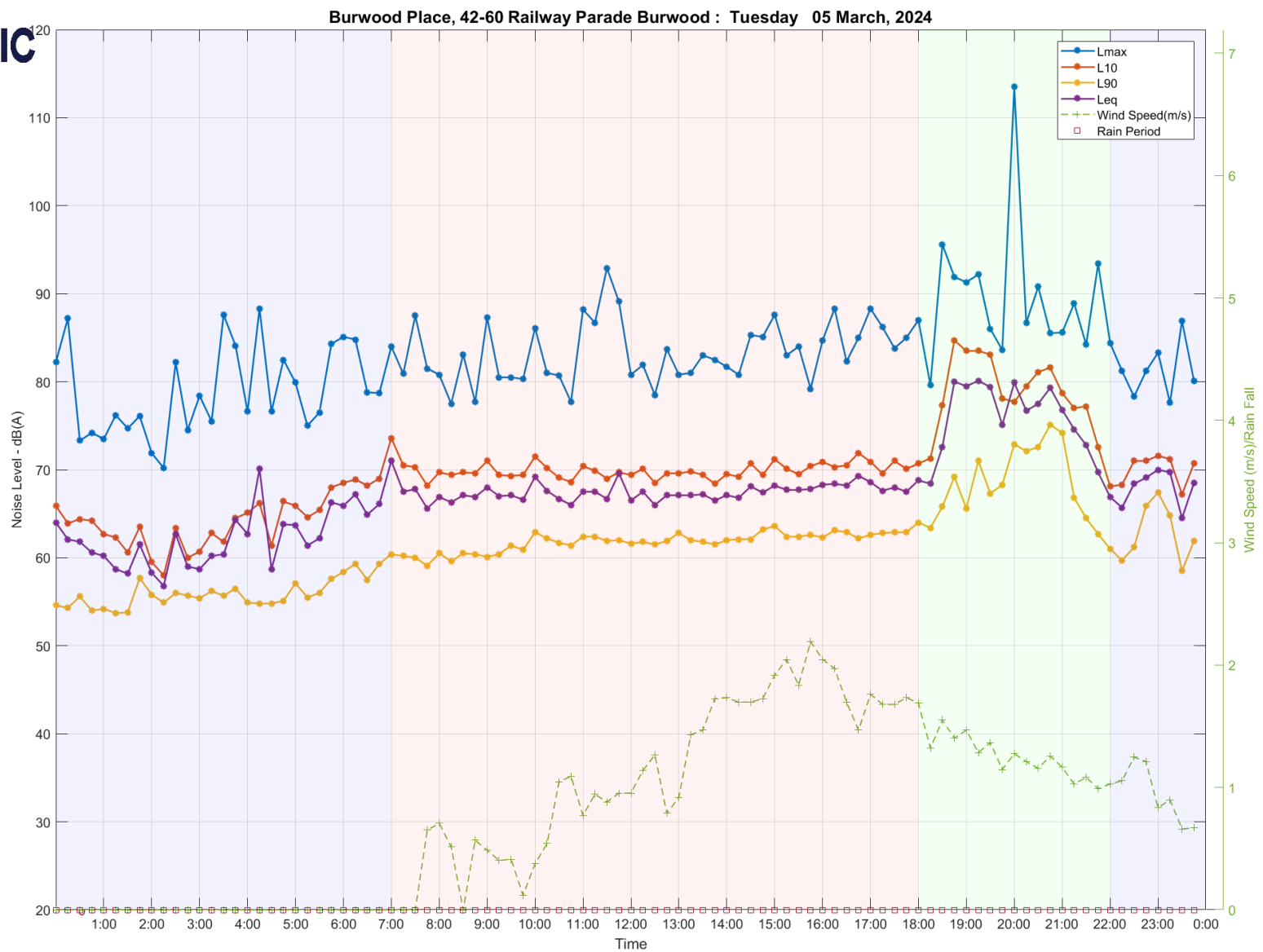
APPENDIX ONE – UNATTENDED NOISE MONITORING

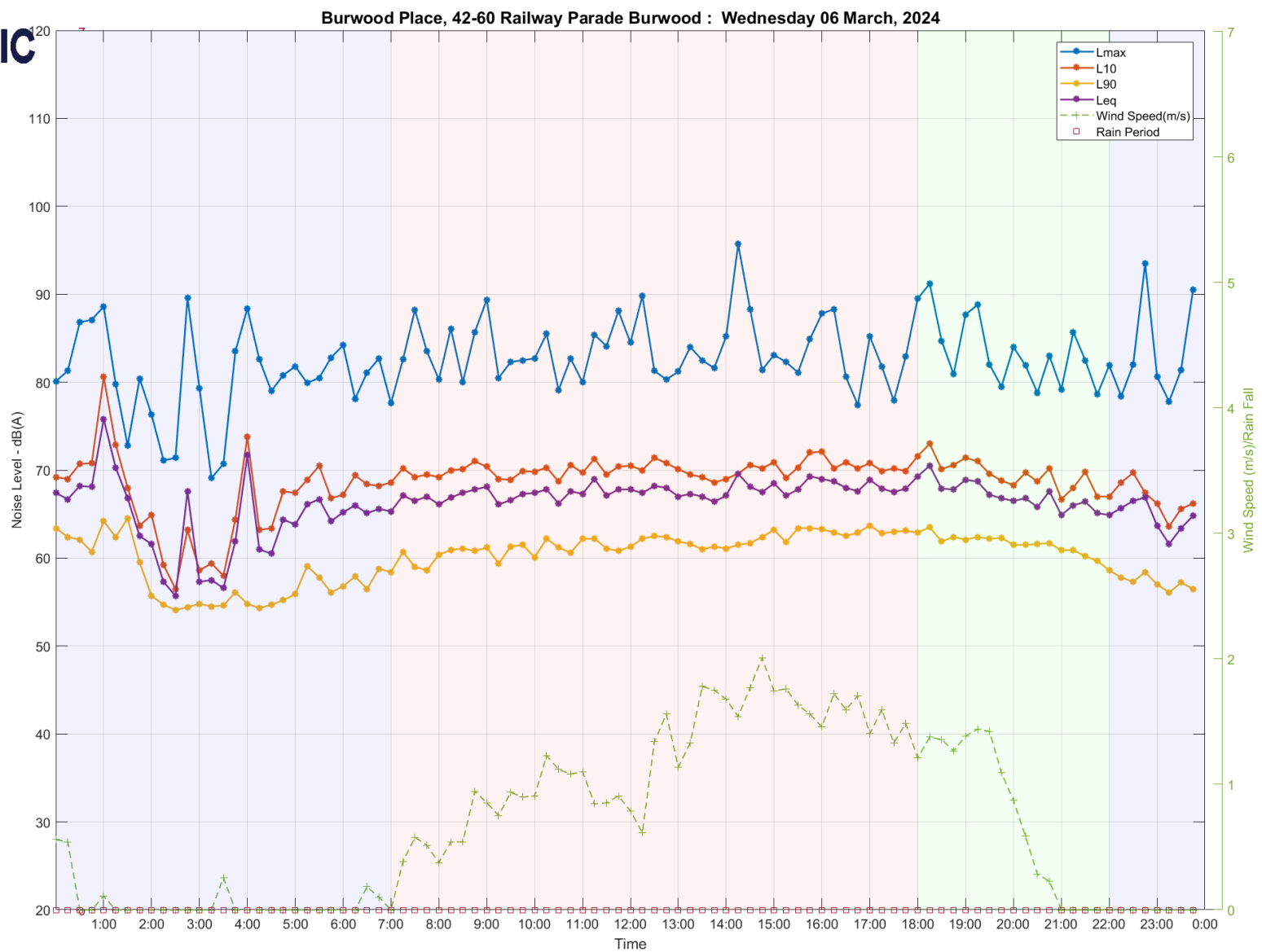


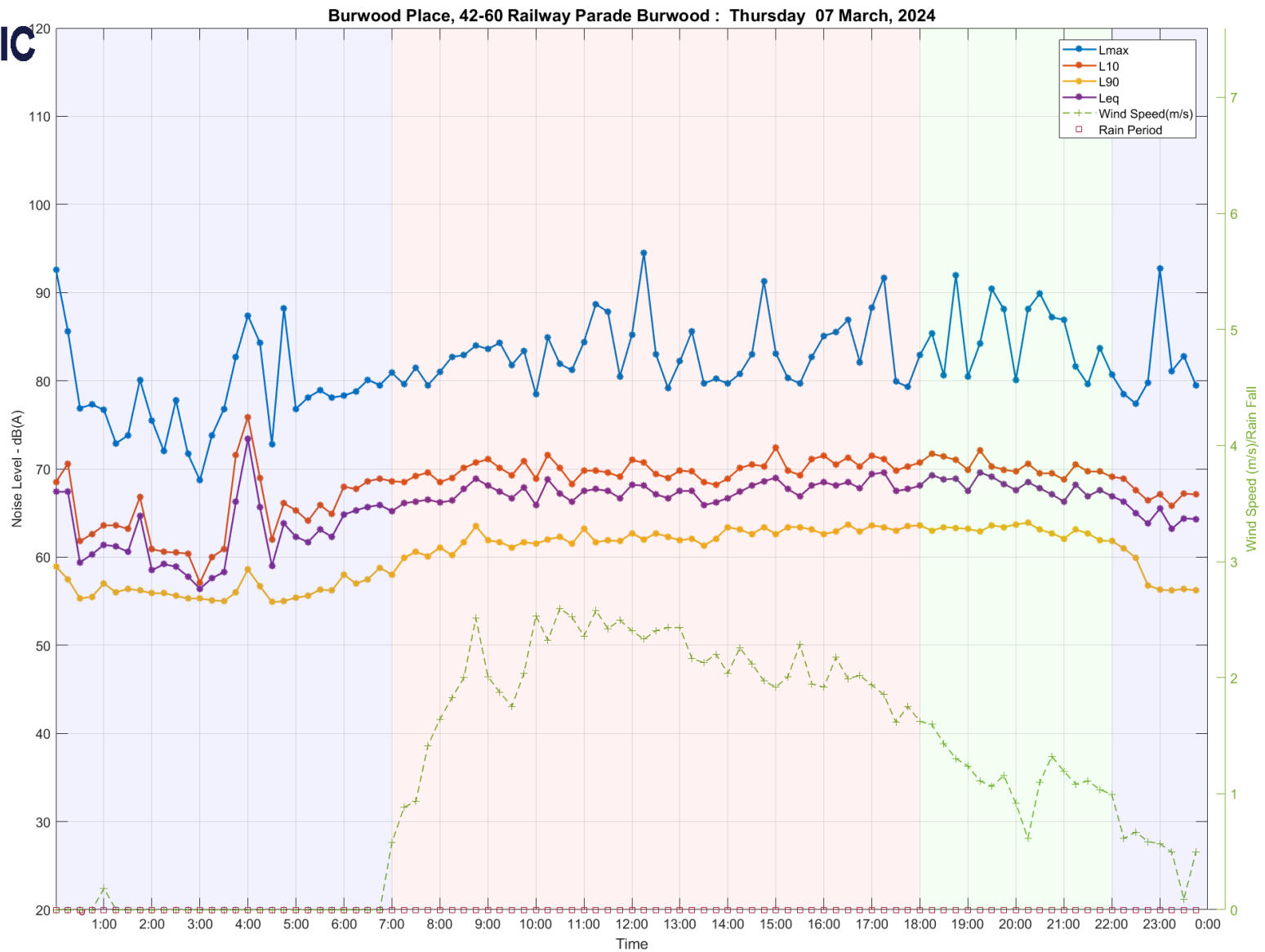


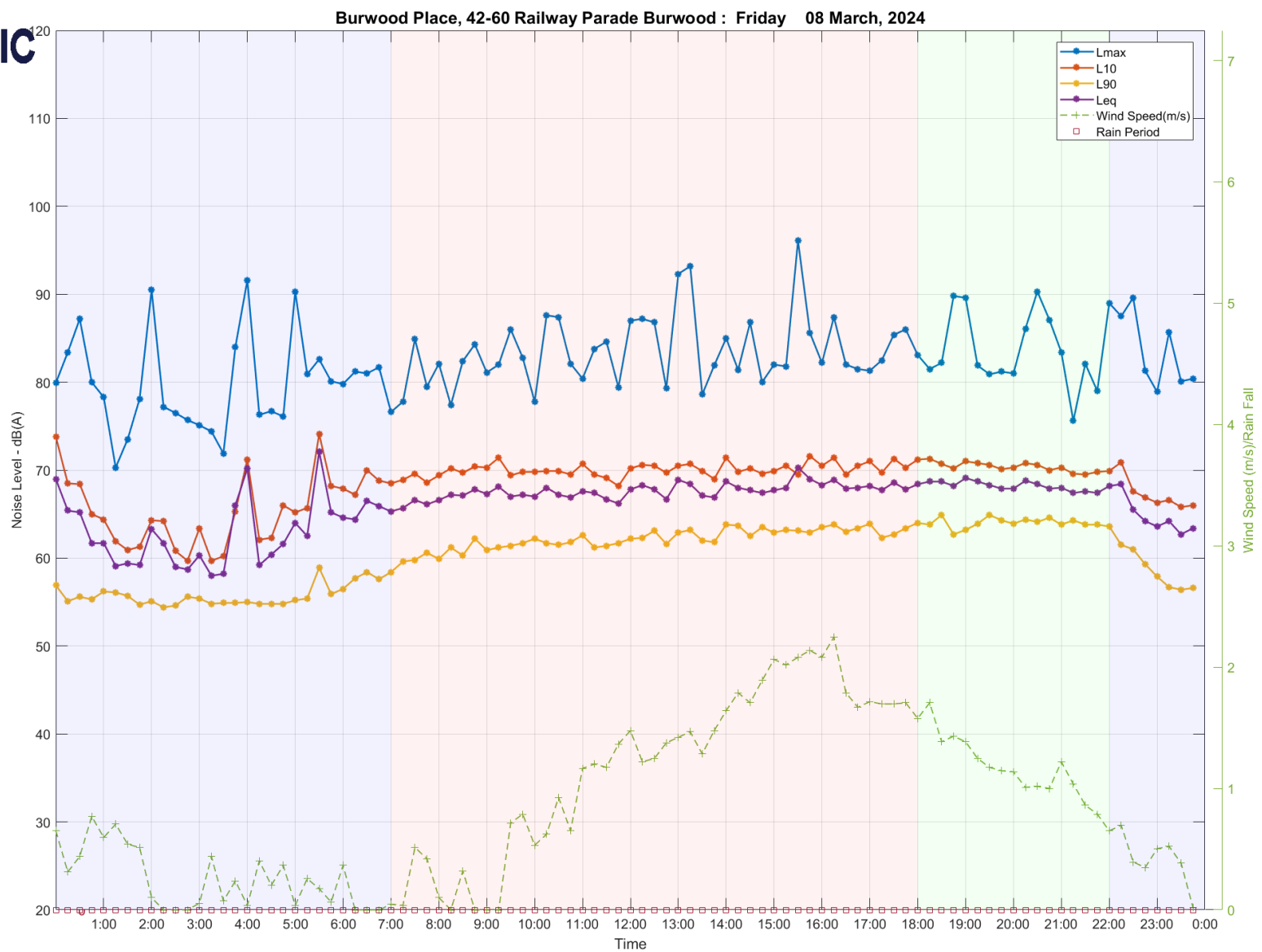


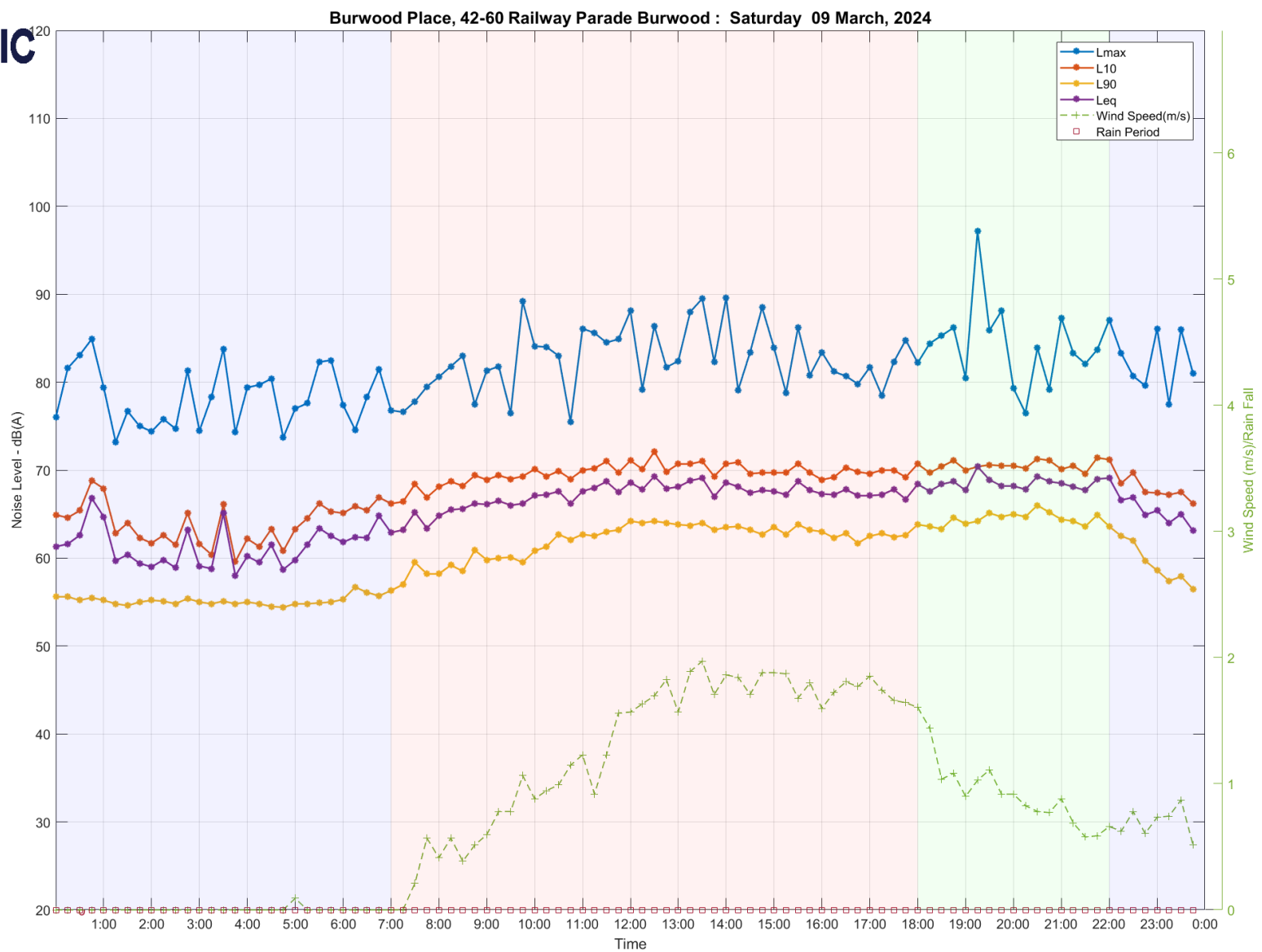


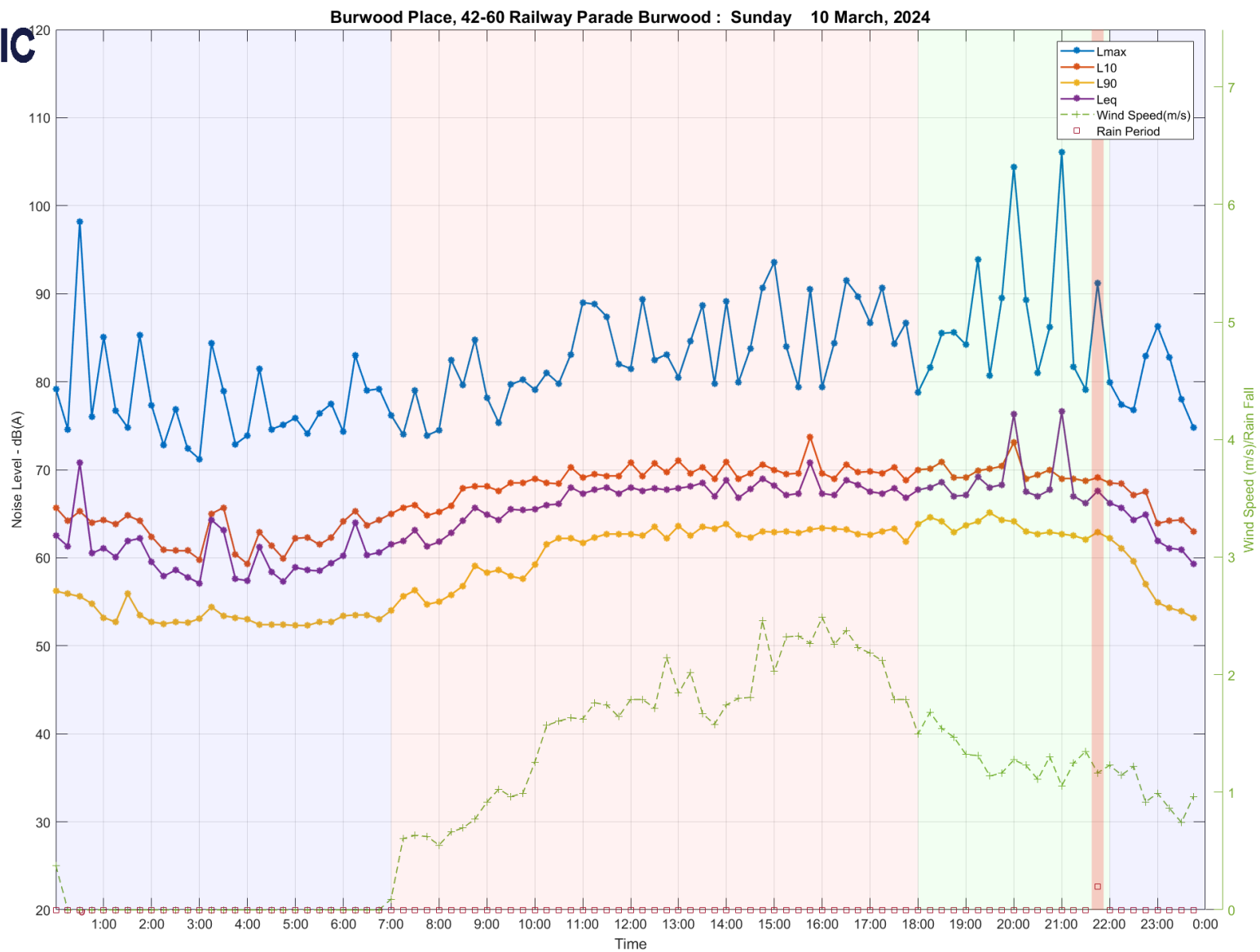


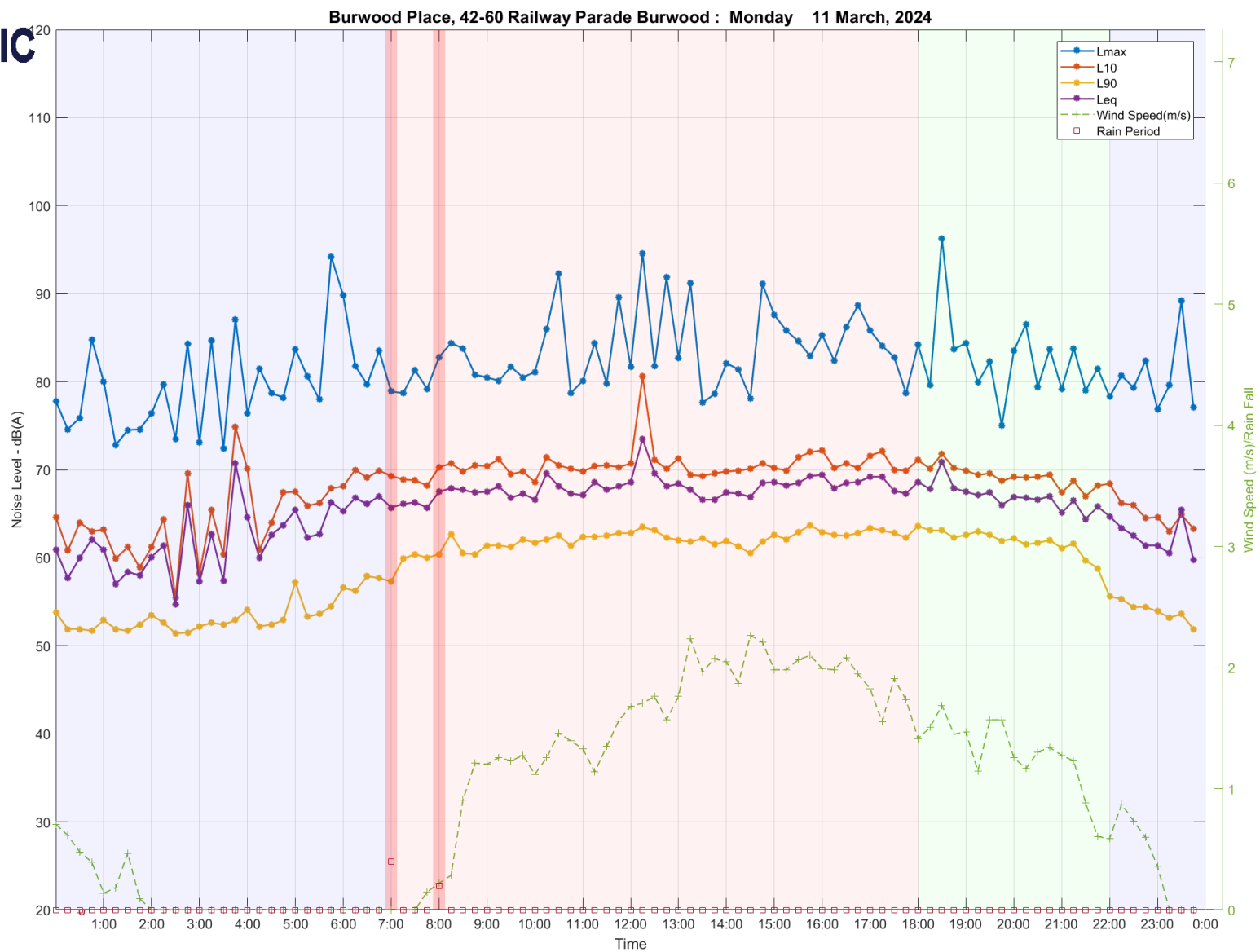


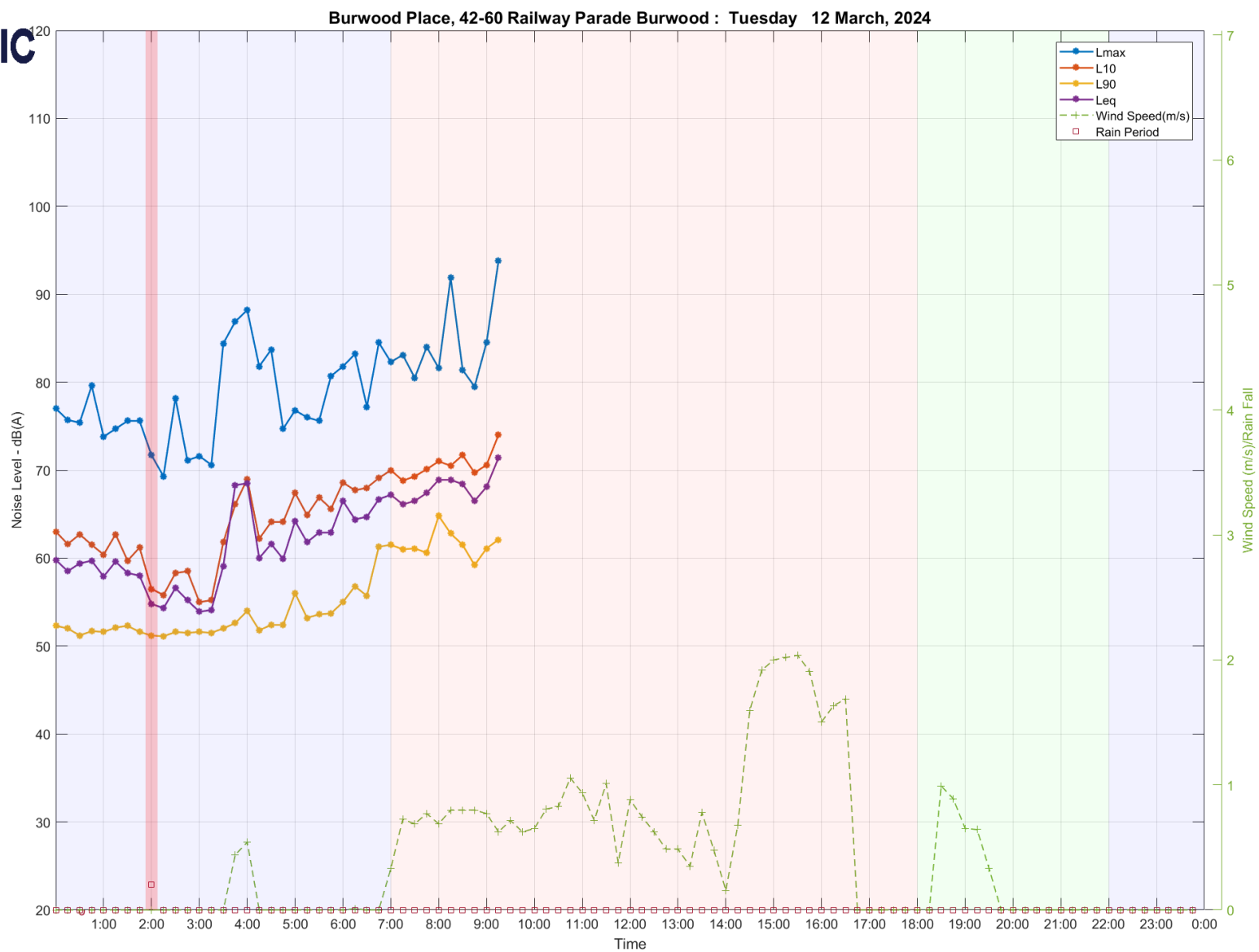






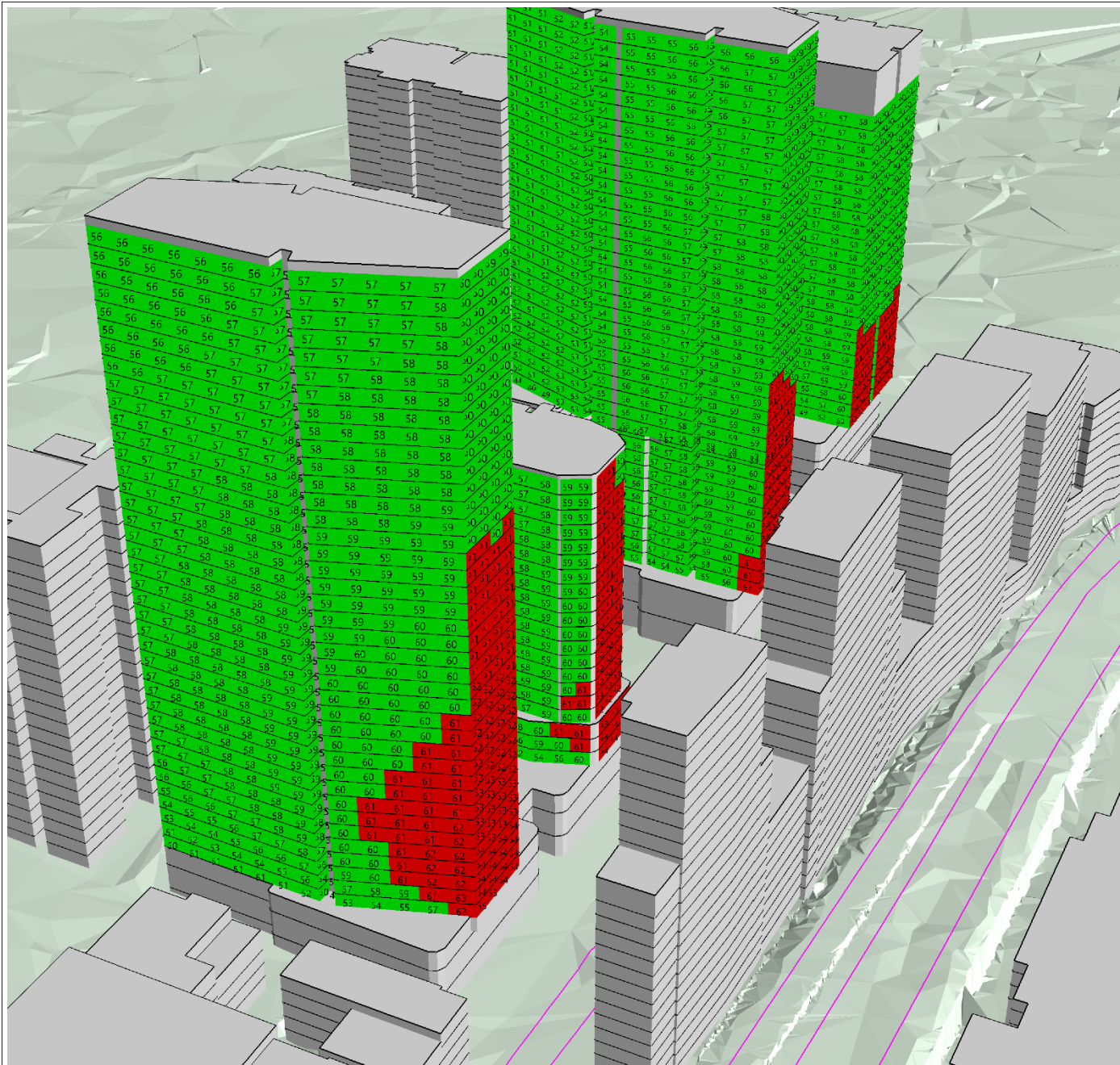






Wind Speed is corrected using factor 0.3300 based on logger location

APPENDIX TWO – SOUNDPLAN NOISE MODELLING RESULTS



Burwood Place

Facade Noise Prediction

Daytime
7am-10pm

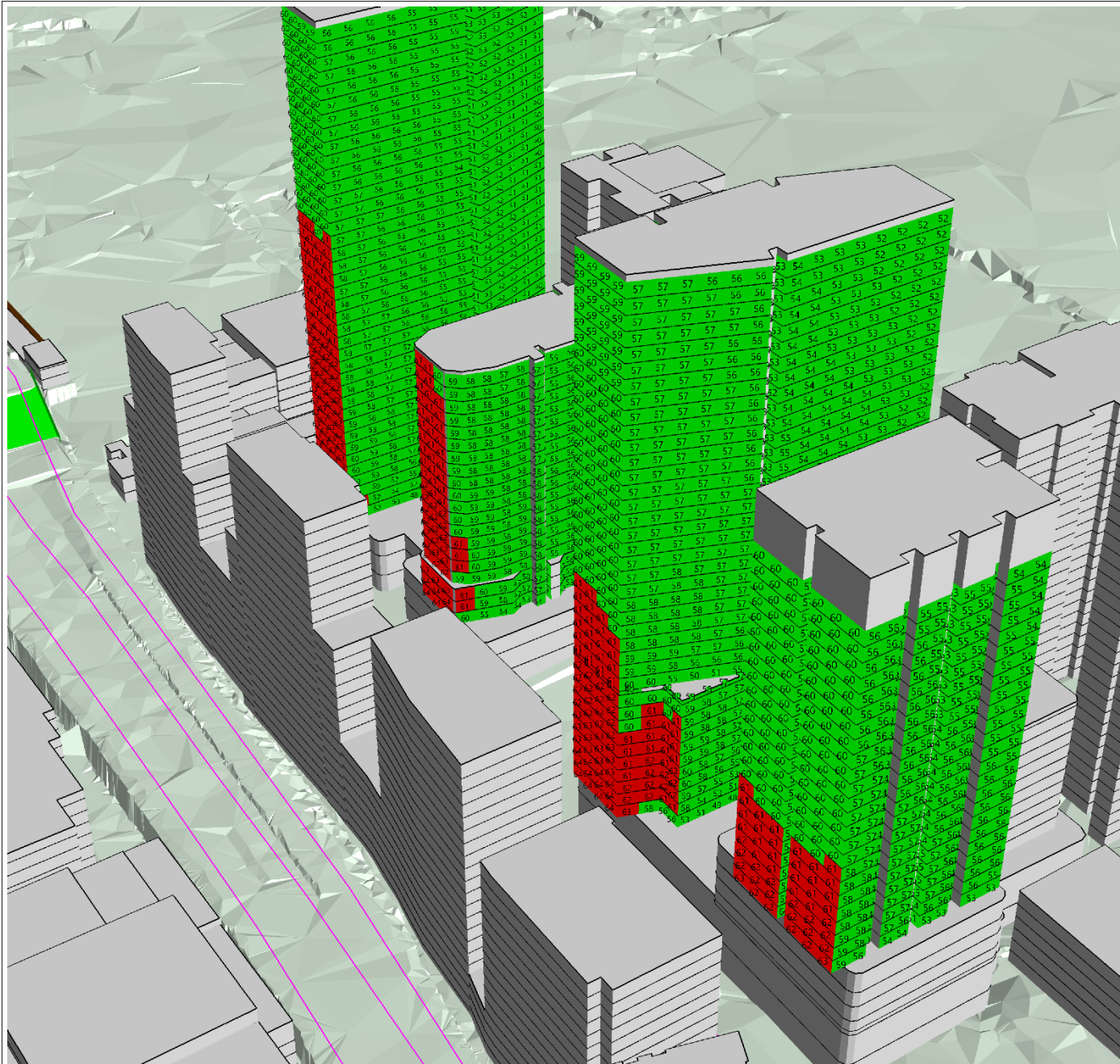
Prepared by: WY
Date: 26/03/2024

Noise Level

$L_{eq}(15hr)$
in dB(A)

≤ 60
> 60





Burwood Place

Facade Noise Prediction

Daytime
7am-10pm

Prepared by: WY
Date: 26/03/2024

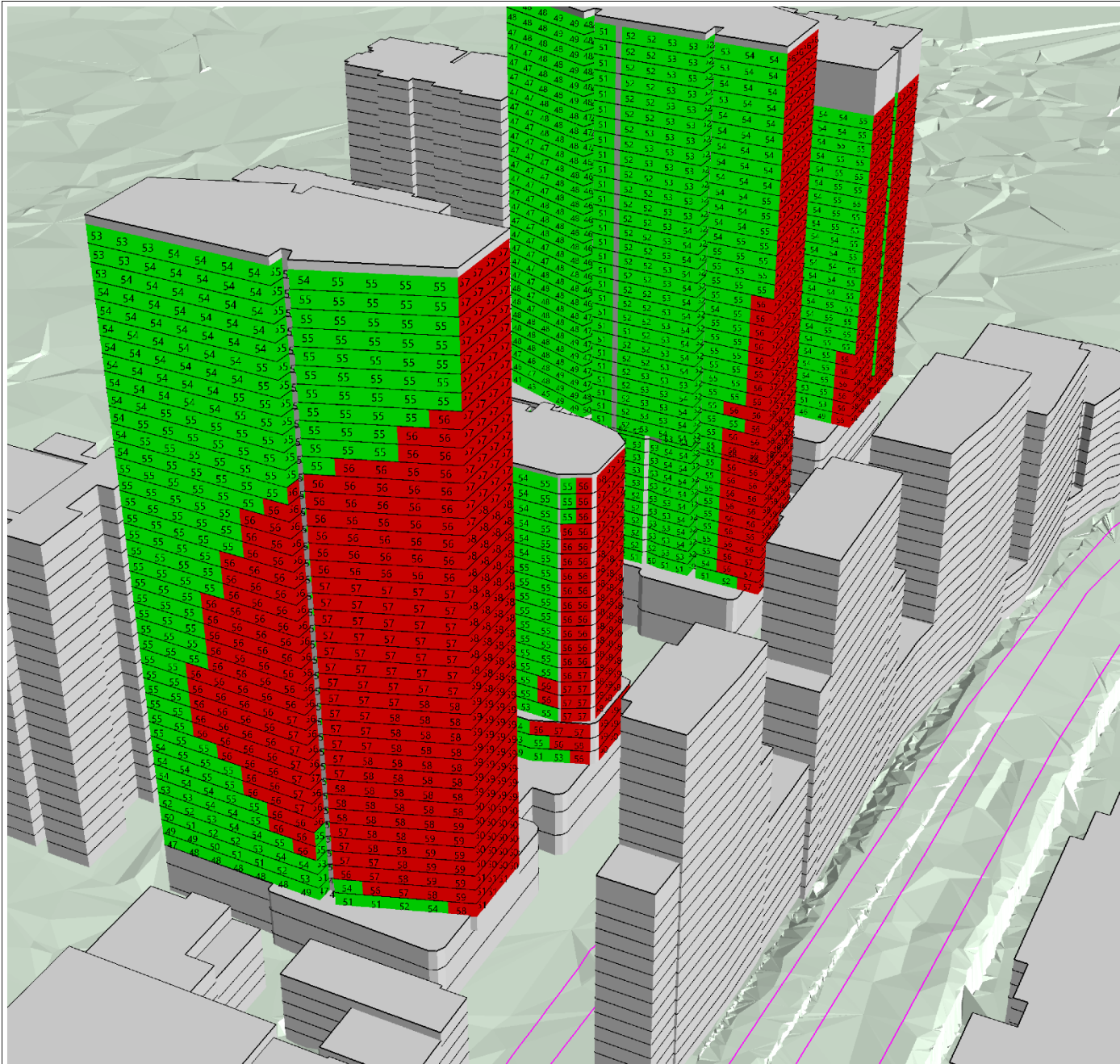
Noise Level

$L_{eq}(15hr)$
in dB(A)

≤ 60
> 60



**ACOUSTIC
LOGIC**



Burwood Place

Facade Noise Prediction

Night Time
10pm-7am

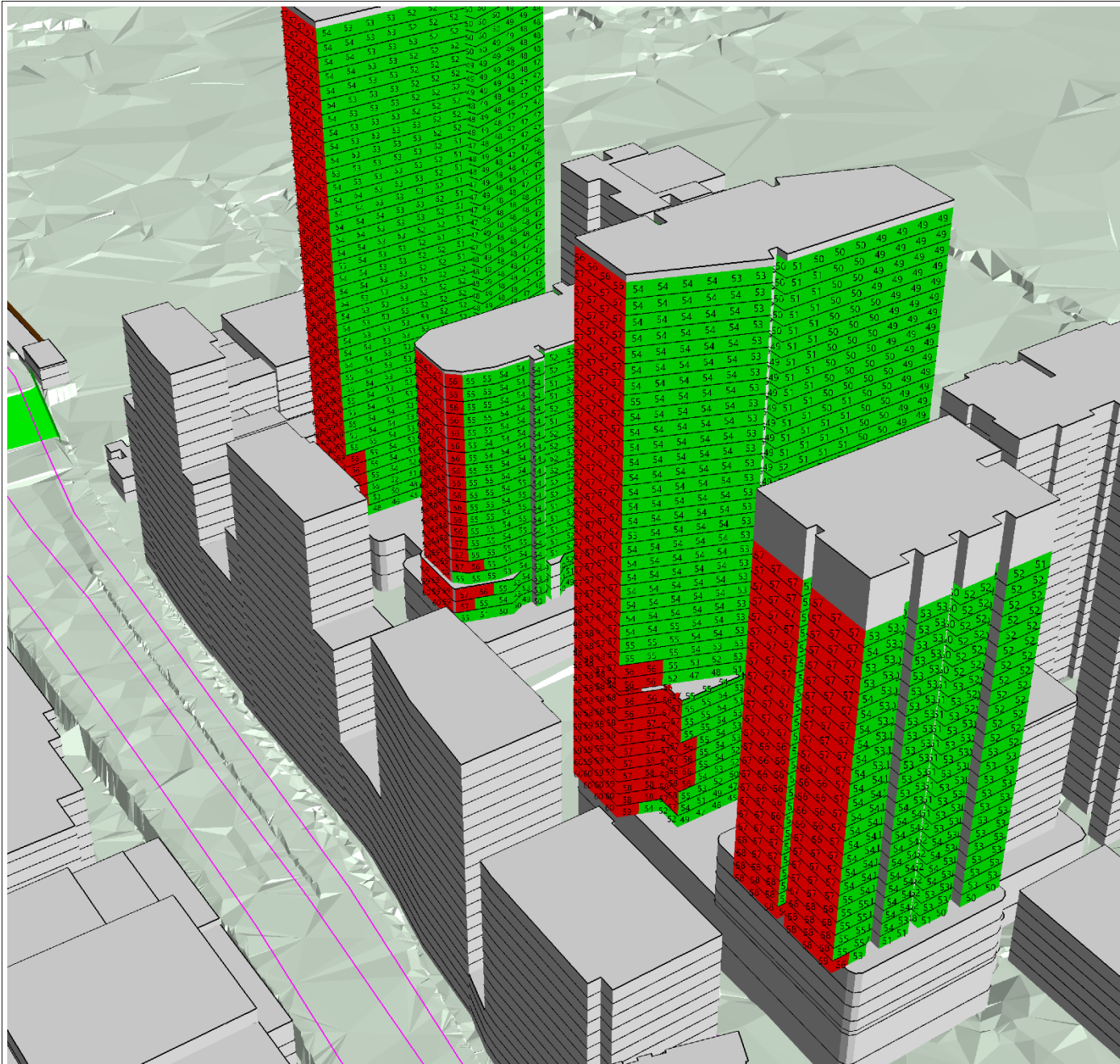
Prepared by: WY
Date: 26/03/2024

Noise Level

$L_{eq}(15hr)$
in dB(A)

≤ 55
> 55





Burwood Place

Facade Noise Prediction

Night Time
10pm-7am

Prepared by: WY
Date: 26/03/2024

Noise Level

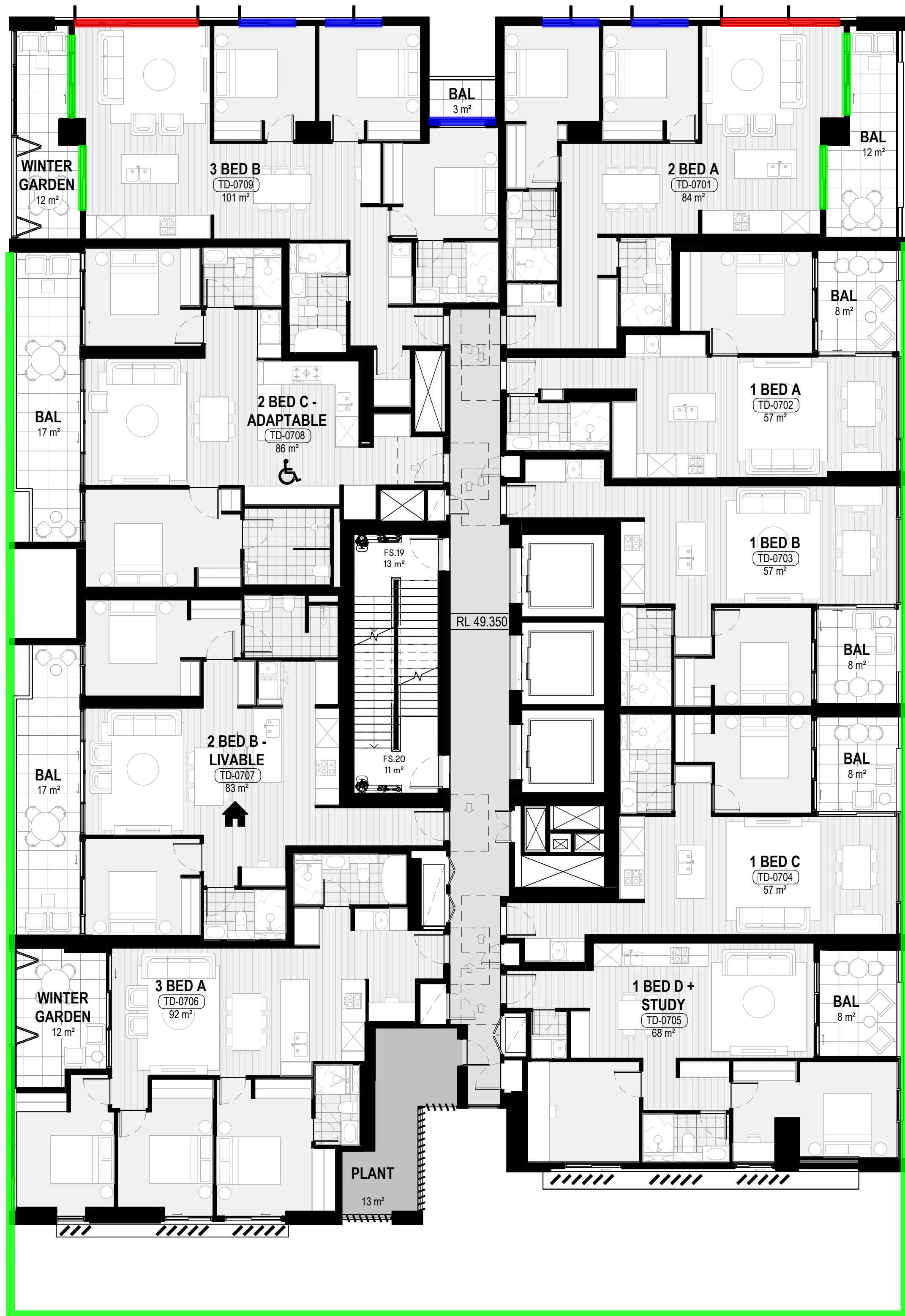
$L_{eq}(15hr)$
in dB(A)

≤ 55
> 55

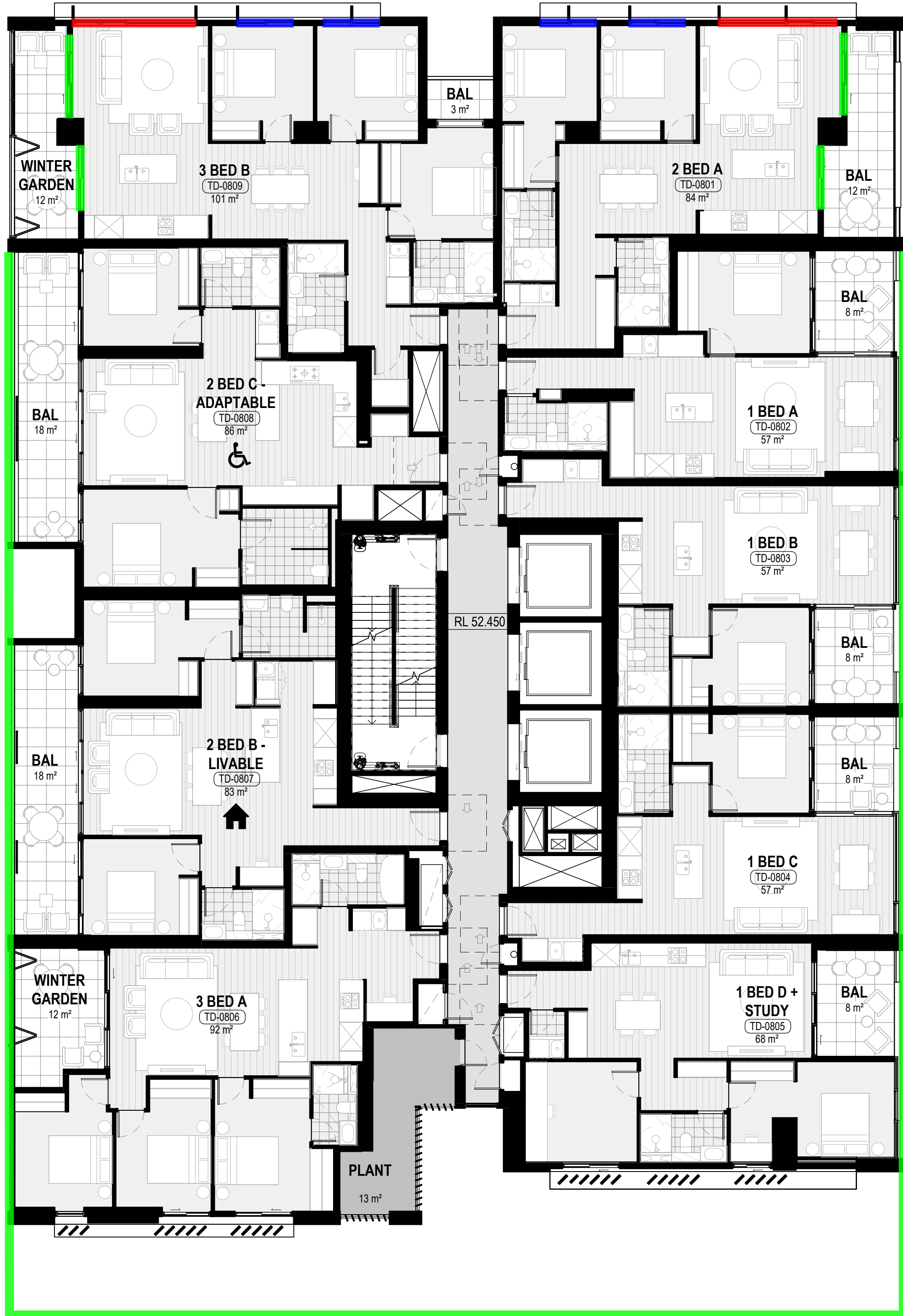


**ACOUSTIC
LOGIC**

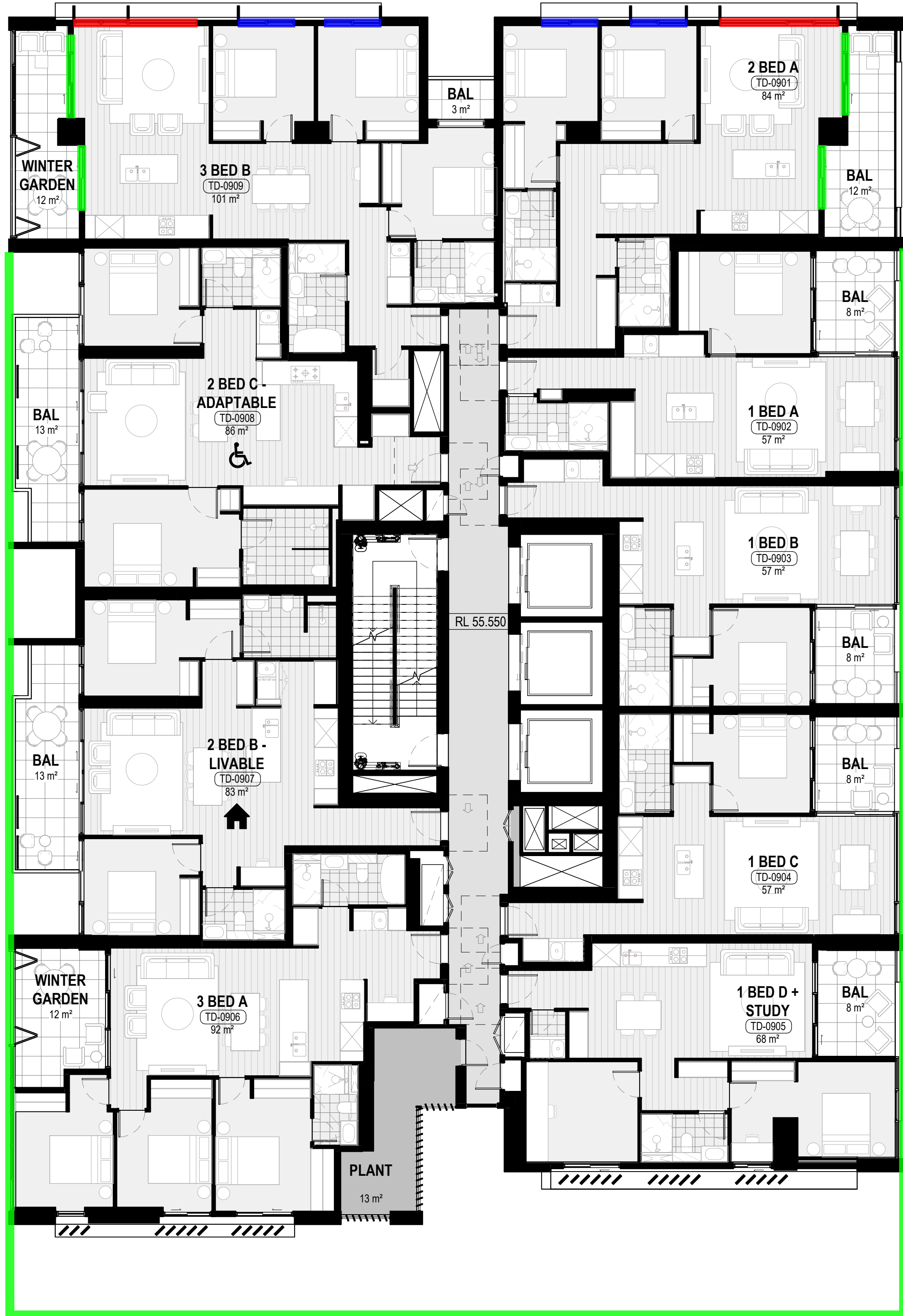
APPENDIX THREE – ALTERNATIVE VENTILATION MARK UP



1 TOWER D - RESIDENTIAL LEVEL 7, 11
1 : 100



2 TOWER D - RESIDENTIAL LEVEL 8
1 : 100

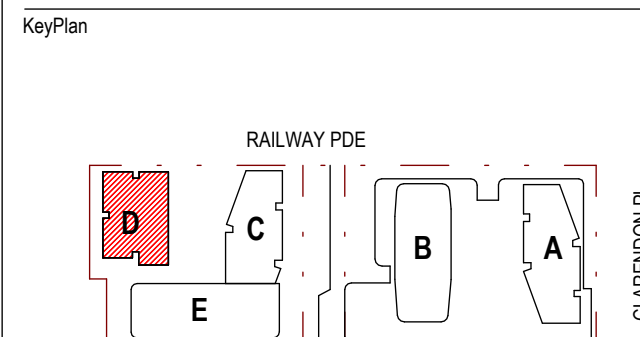


3 TOWER D - RESIDENTIAL LEVEL 9
1 : 100

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		26/06/24
J		15/07/24
K		31/07/24
L	FOR S4.55 SUBMISSION	25/08/24

- General Notes**
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DON'T SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

- LEGEND - PLANS**
- ADAPTABLE UNITS
 - LIVABLE UNITS
 - PLANT



Client
2-4 Giffrock Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect
Studio.SC
Formerly Scot Carver
Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants
Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect
Project
EDWARD SALIB
9469

BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW
Drawing Title
TOWER D - LEVELS 7-9, 11

Project Status
FOR COORDINATION

Scale
1 : 100 @ A0
North Point

Bar Scale 1:100
Project No
20230055
Drawn By
ES
Check By
SC
Rev
L

NOTE: LANDSCAPE PLAN INDICATIVE ONLY -
REFER TO LANDSCAPE ARCHITECT REPORT AND
DOCUMENTATION FOR DETAILED DESIGN.

PRINT IN COLOUR AR-DA-2208

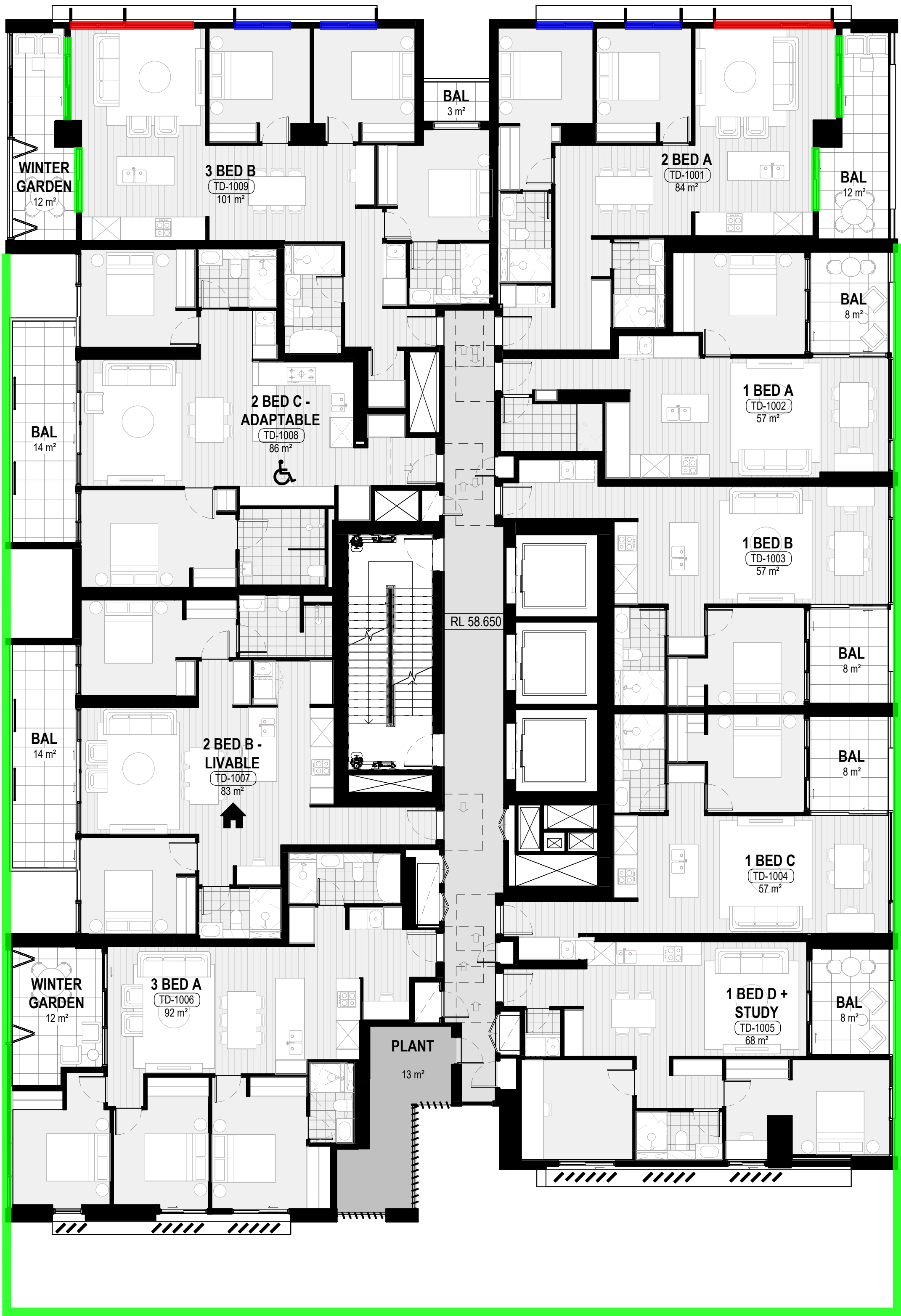
Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

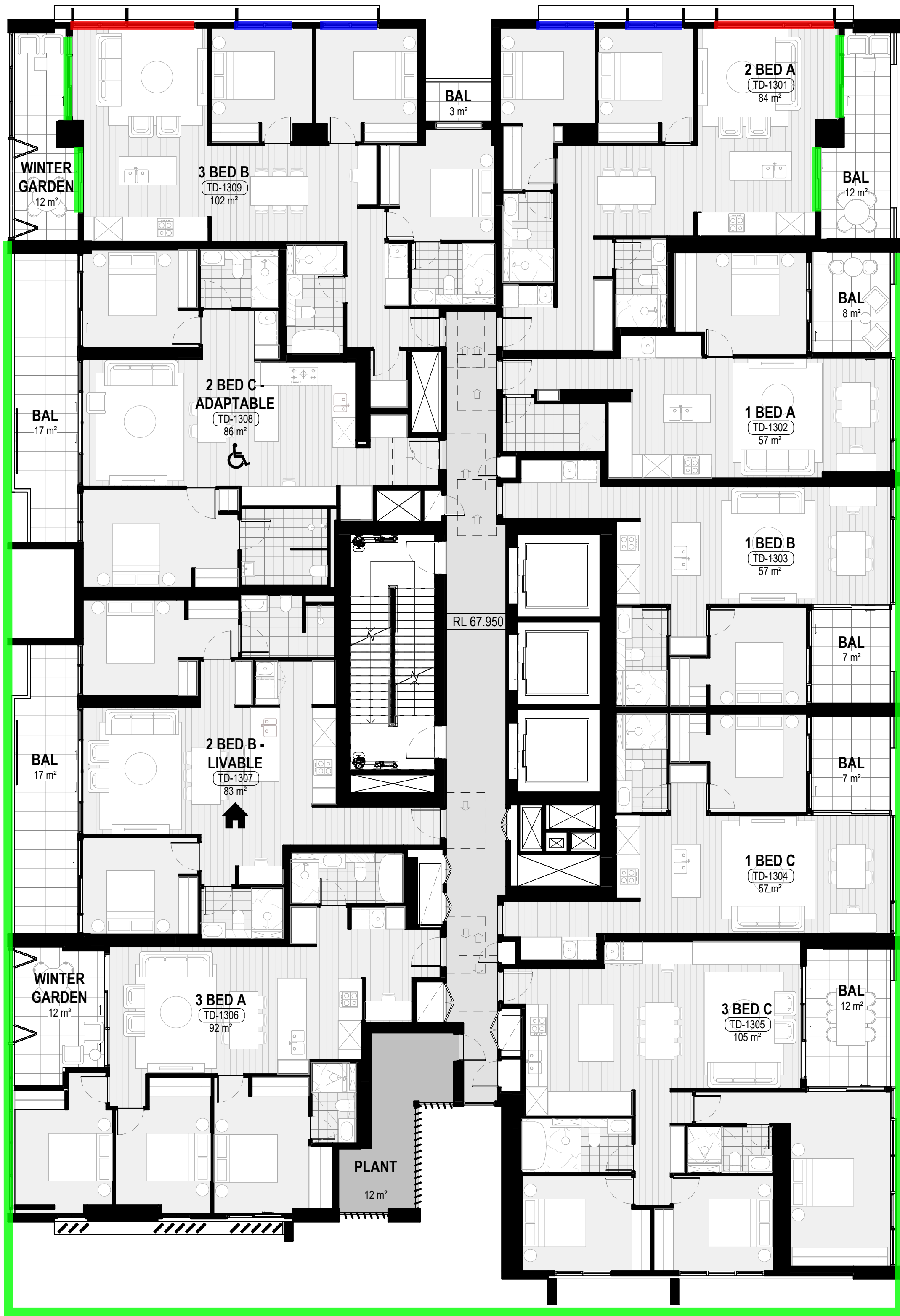
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

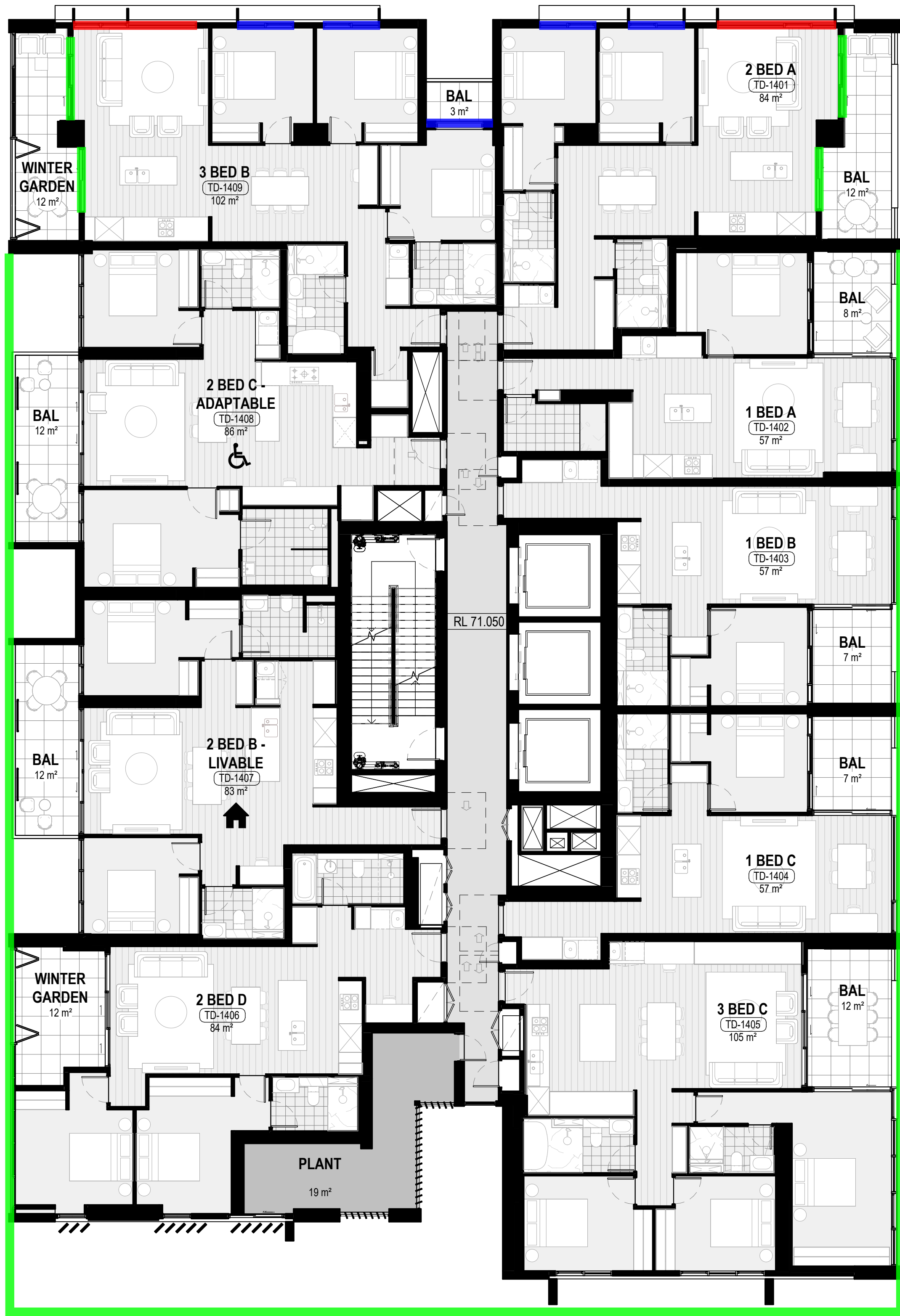
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used



1 TOWER D - RESIDENTIAL LEVEL 10, 12
1 : 100



2 TOWER D - RESIDENTIAL LEVEL 13, 16, 20, 22
1 : 100



3 TOWER D - RESIDENTIAL LEVEL 14 - INTERMEDIATE PLANT
1 : 100

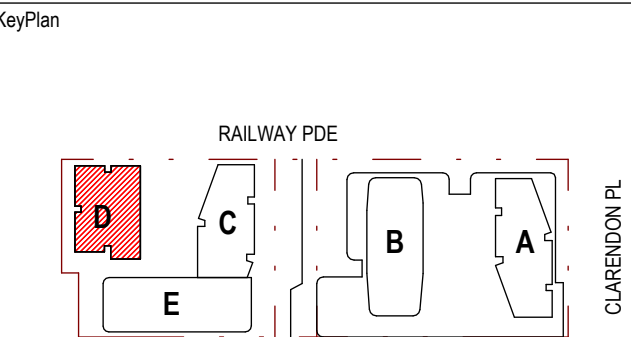
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		26/06/24
J		15/07/24
K		31/07/24
L	FOR S4.55 SUBMISSION	25/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVABLE UNITS
- PLANT



Client
HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants
Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect
EDWARD SALIB
9469

Project
BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW
Drawing Title
TOWER D - LEVELS 10, 12-14, 16, 20, 22

Project Status
FOR COORDINATION
Scale
1 : 100 @ A0
North Point
Bar Scale 1:100
Project No
20230055
Drawn By
ES
Check By
SC
Rev
L

NOTE: LANDSCAPE PLAN INDICATIVE ONLY -
REFER TO LANDSCAPE ARCHITECT REPORT AND
DOCUMENTATION FOR DETAILED DESIGN.

PRINT IN COLOUR AR-DA-2209

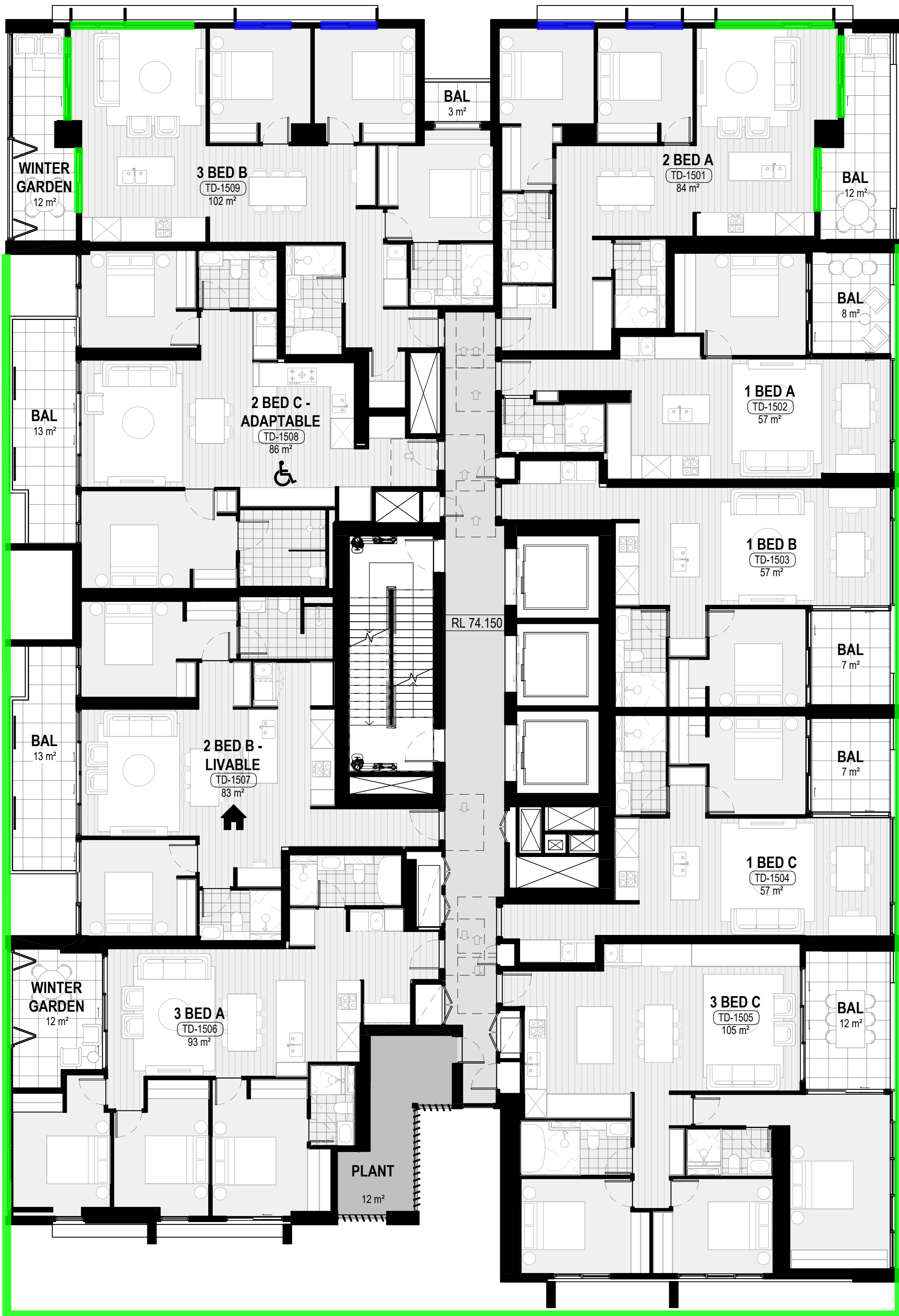
Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

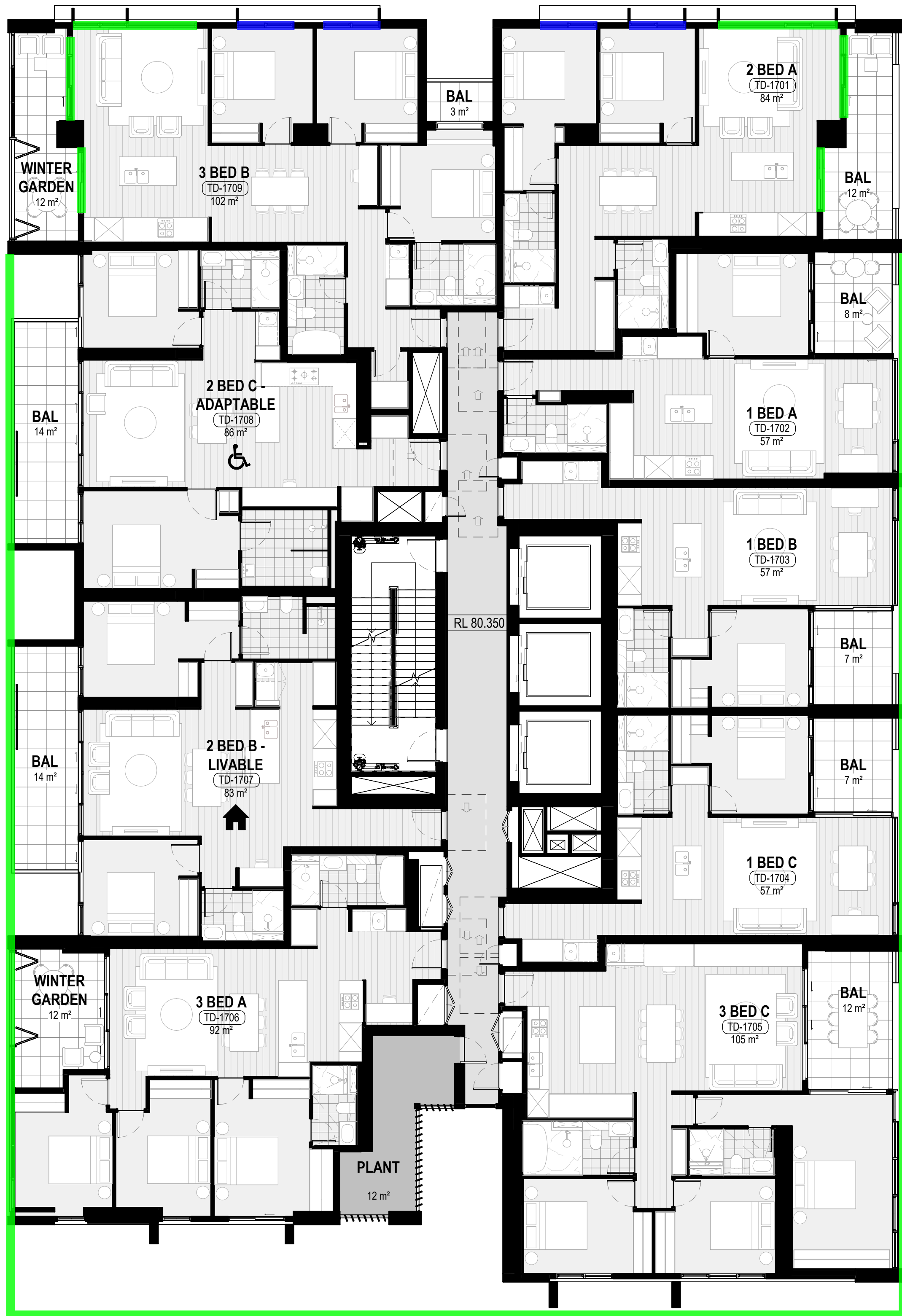
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

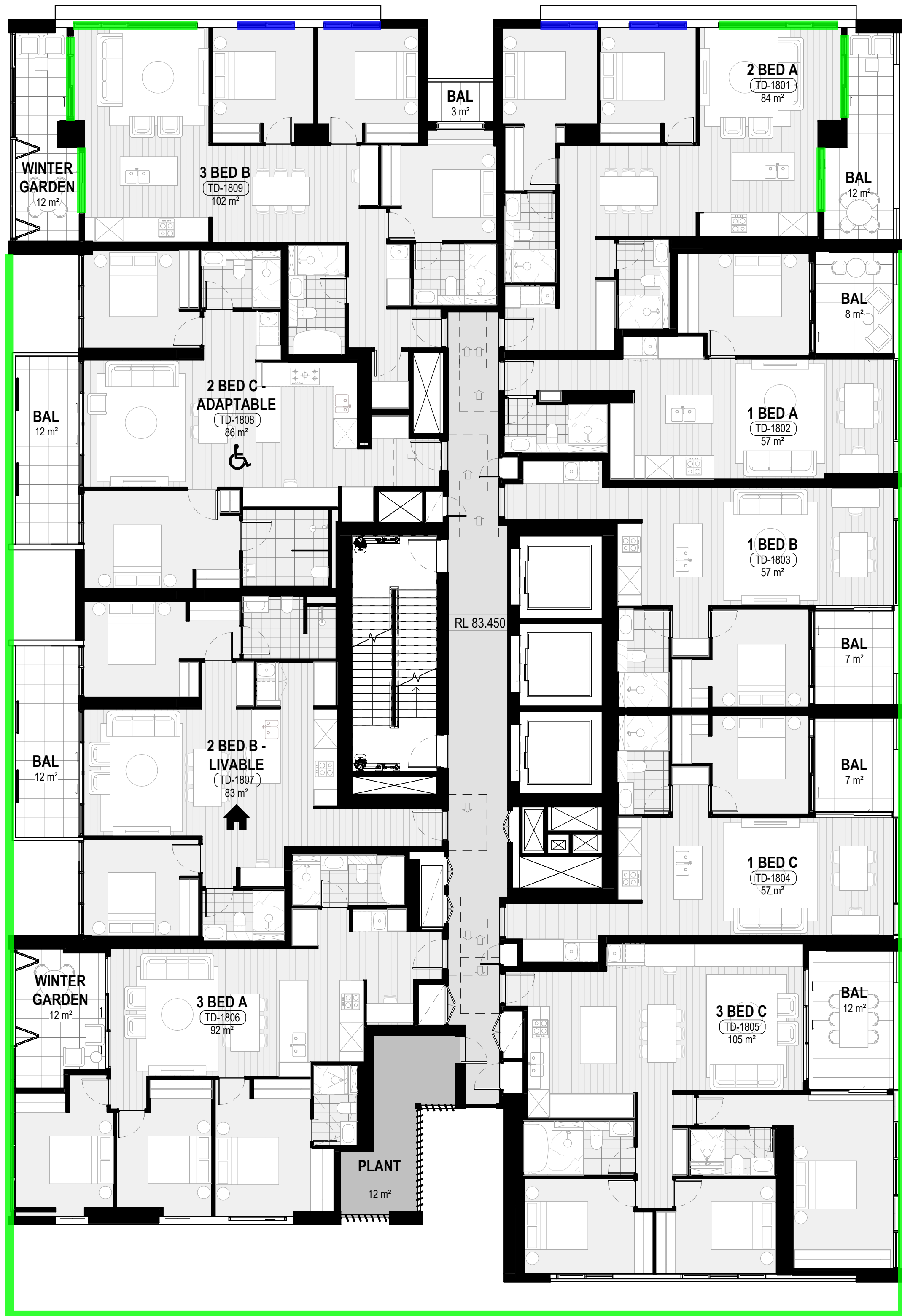
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used



1 TOWER D - RESIDENTIAL LEVEL 15, 19
1:100



2 TOWER D - RESIDENTIAL LEVEL 17, 21
1:100



3 TOWER D - RESIDENTIAL LEVEL 18
1:100

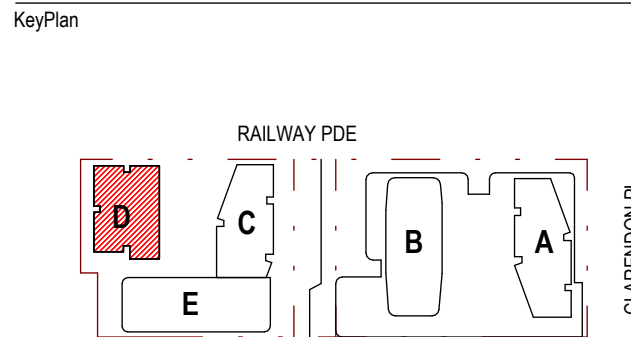
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		29/06/24
J		15/07/24
K		31/07/24
L	FOR S4.55 SUBMISSION	25/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVABLE UNITS
- PLANT



Client
HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants
Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect
Project
EDWARD SALIB

Reg. No.
9469

BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title
TOWER D - LEVELS 15, 17-19, 21

Project Status

FOR COORDINATION

Scale
1:100 @ A0

Bar Scale 1:100

Project No.
20230055

Drawn By
ES

Check By
SC

Dwg No.
AR-DA-2210

Rev
L

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

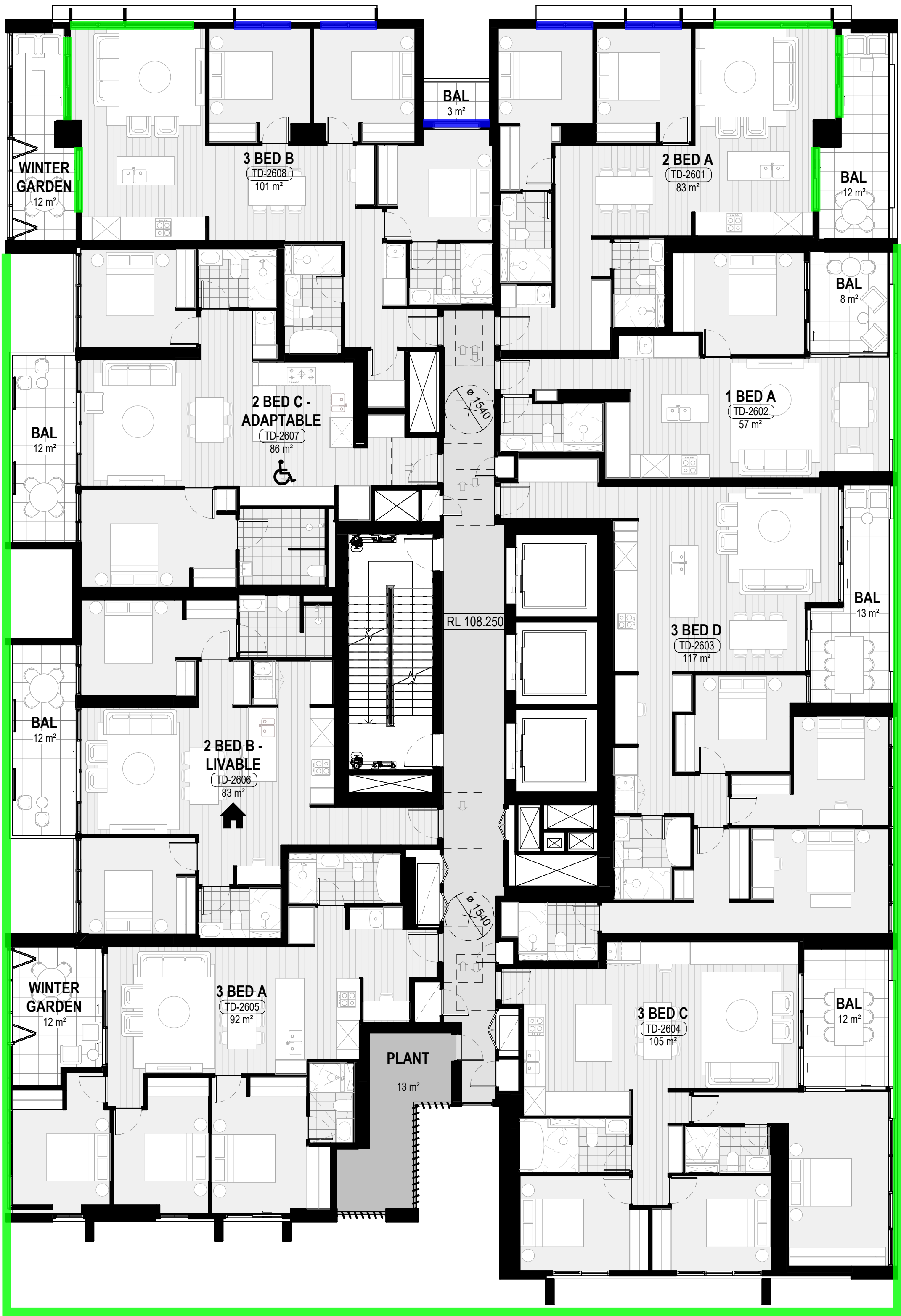
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

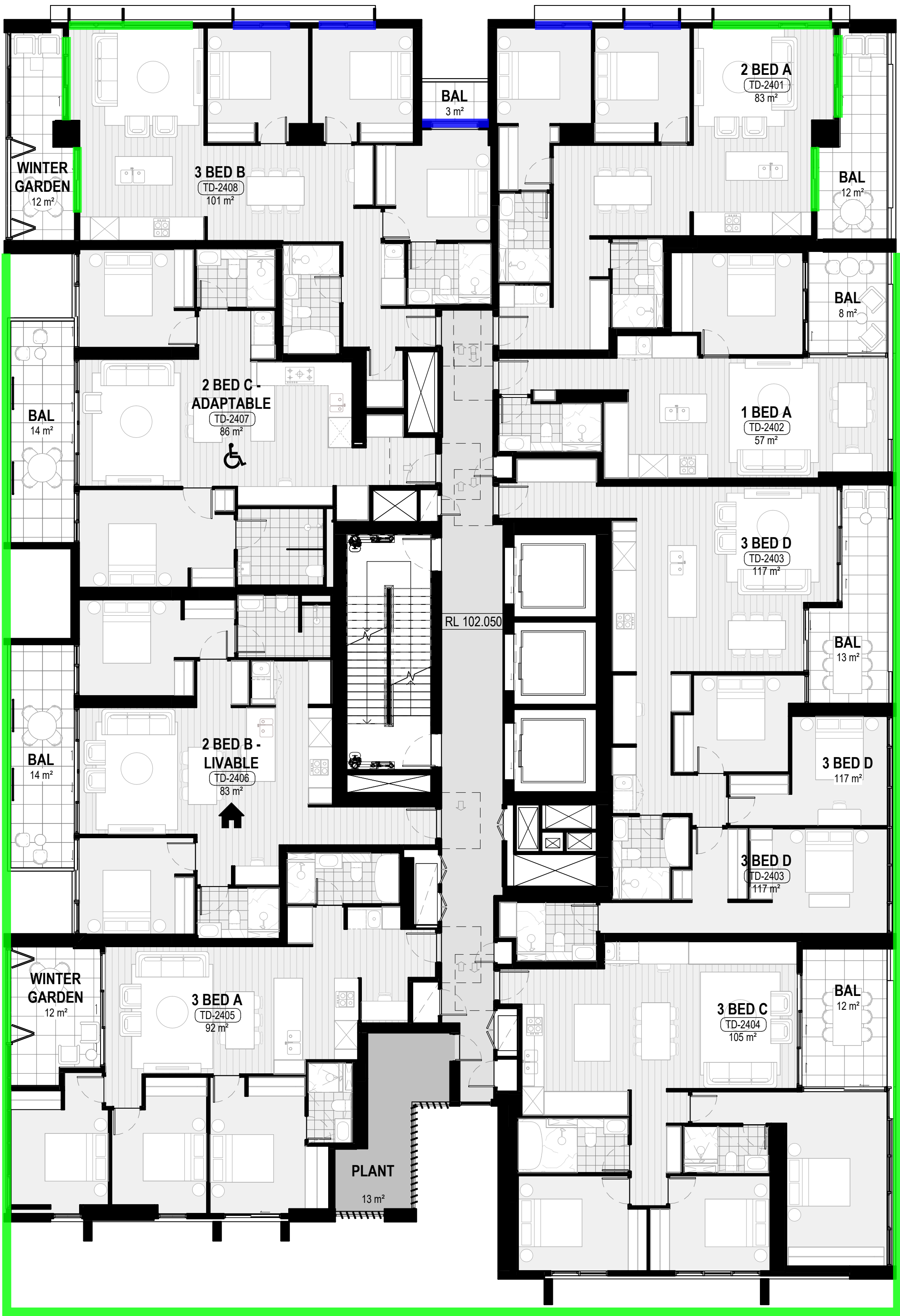
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

NOTE: LANDSCAPE PLAN INDICATIVE ONLY -
REFER TO LANDSCAPE ARCHITECT REPORT AND
DOCUMENTATION FOR DETAILED DESIGN.

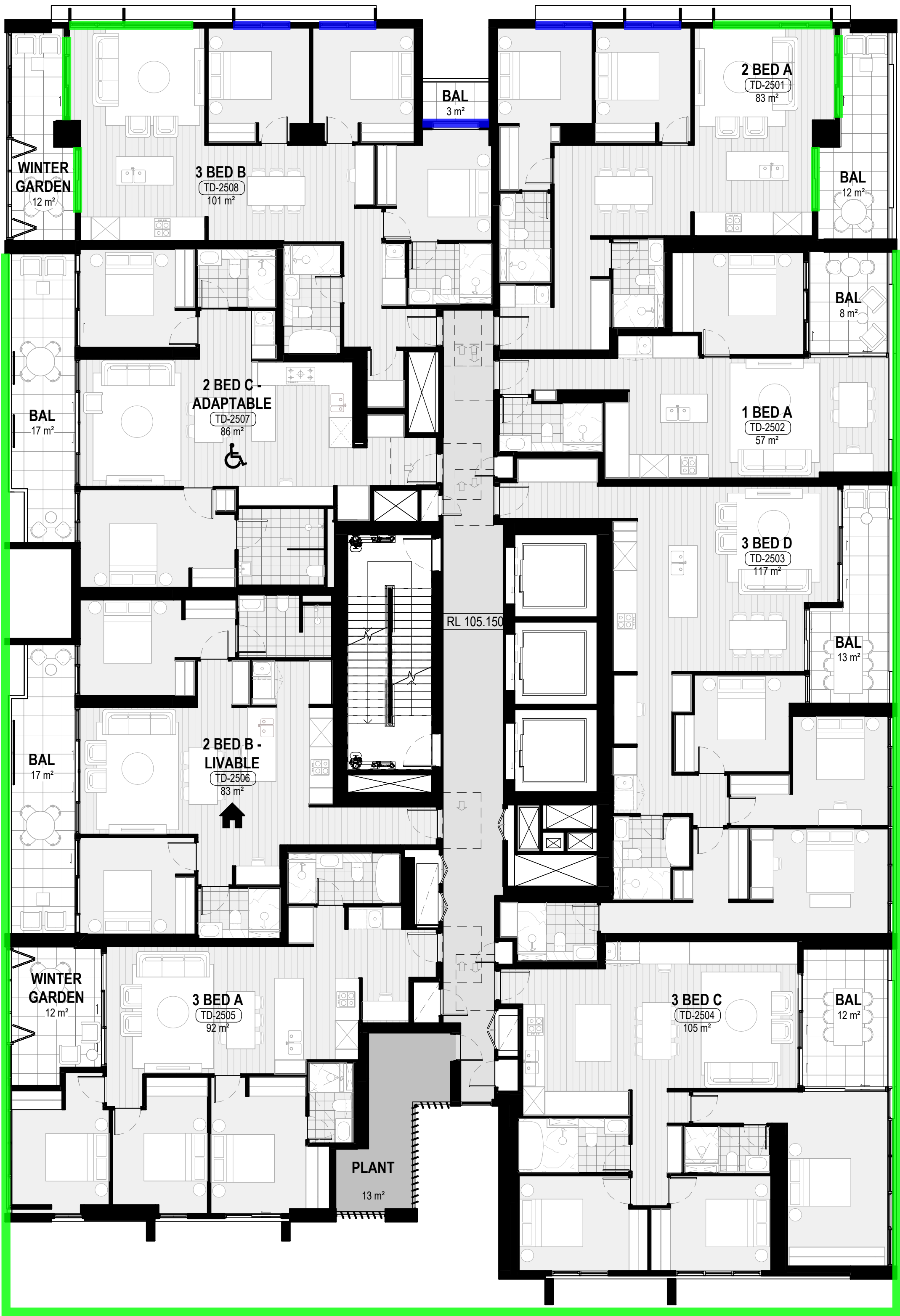
PRINT IN COLOUR



1 TOWER D - RESIDENTIAL LEVEL 23, 26
1:100



2 TOWER D - RESIDENTIAL LEVEL 24
1:100



3 TOWER D - RESIDENTIAL LEVEL 25, 27
1:100

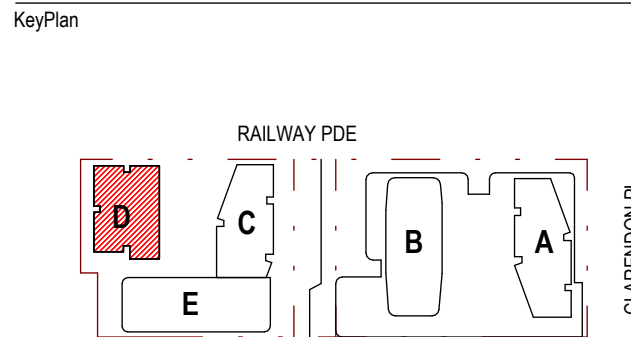
Rev#	Description	Date
A	-	28/03/24
B	-	06/04/24
C	-	30/04/24
D	-	31/05/24
E	-	28/06/24
F	-	19/07/24
G	-	31/07/24
H	FOR 5455 SUBMISSION	29/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVABLE UNITS
- PLANT



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scott Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect

EDWARD SALIB

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER D - LEVELS 23-27

Project Status

FOR COORDINATION

Scale

1:100 @ A0

Bar Scale 1:100

Project No

20230055

Dwg No

AR-DA-2210B

Rev

H

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

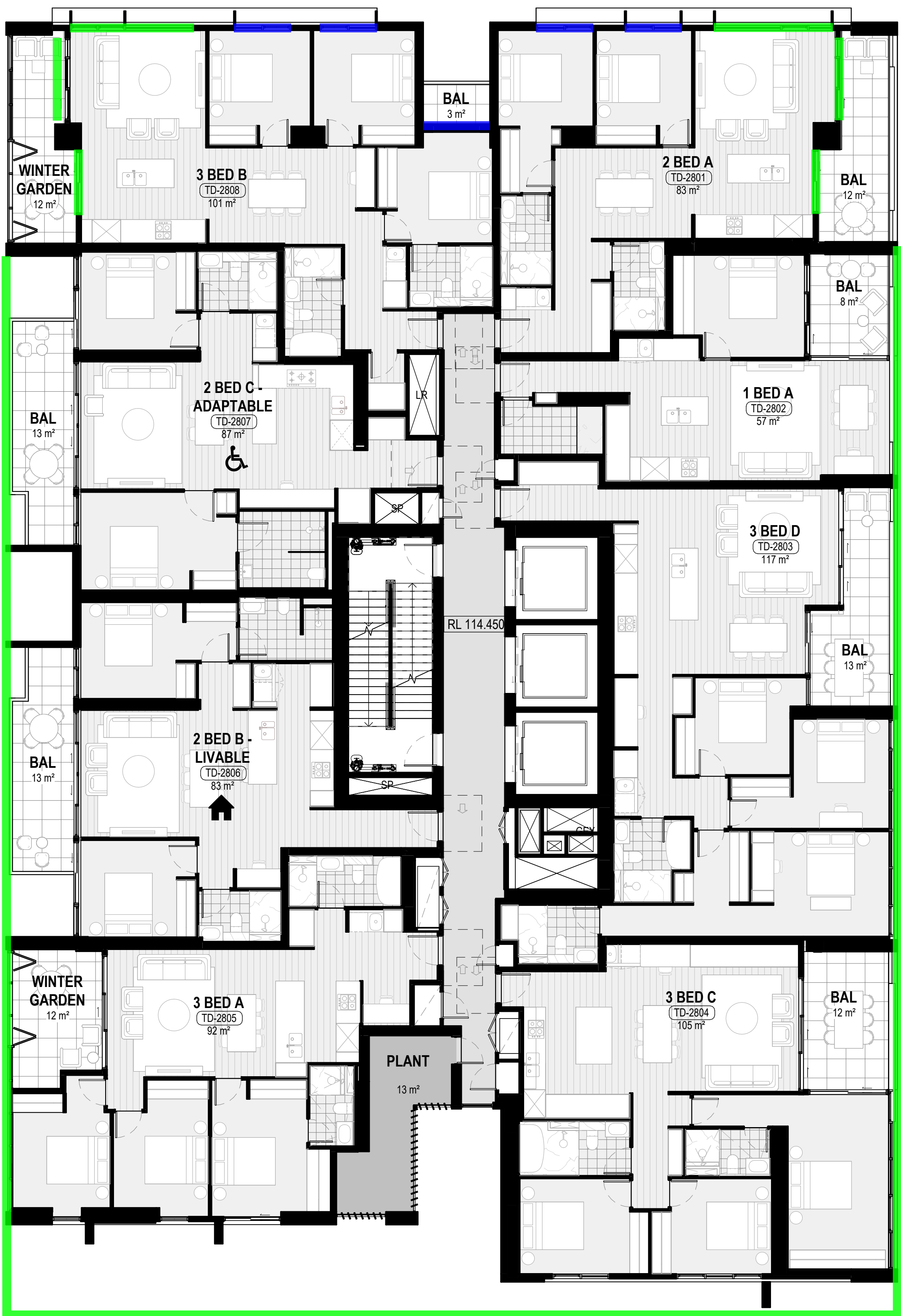
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

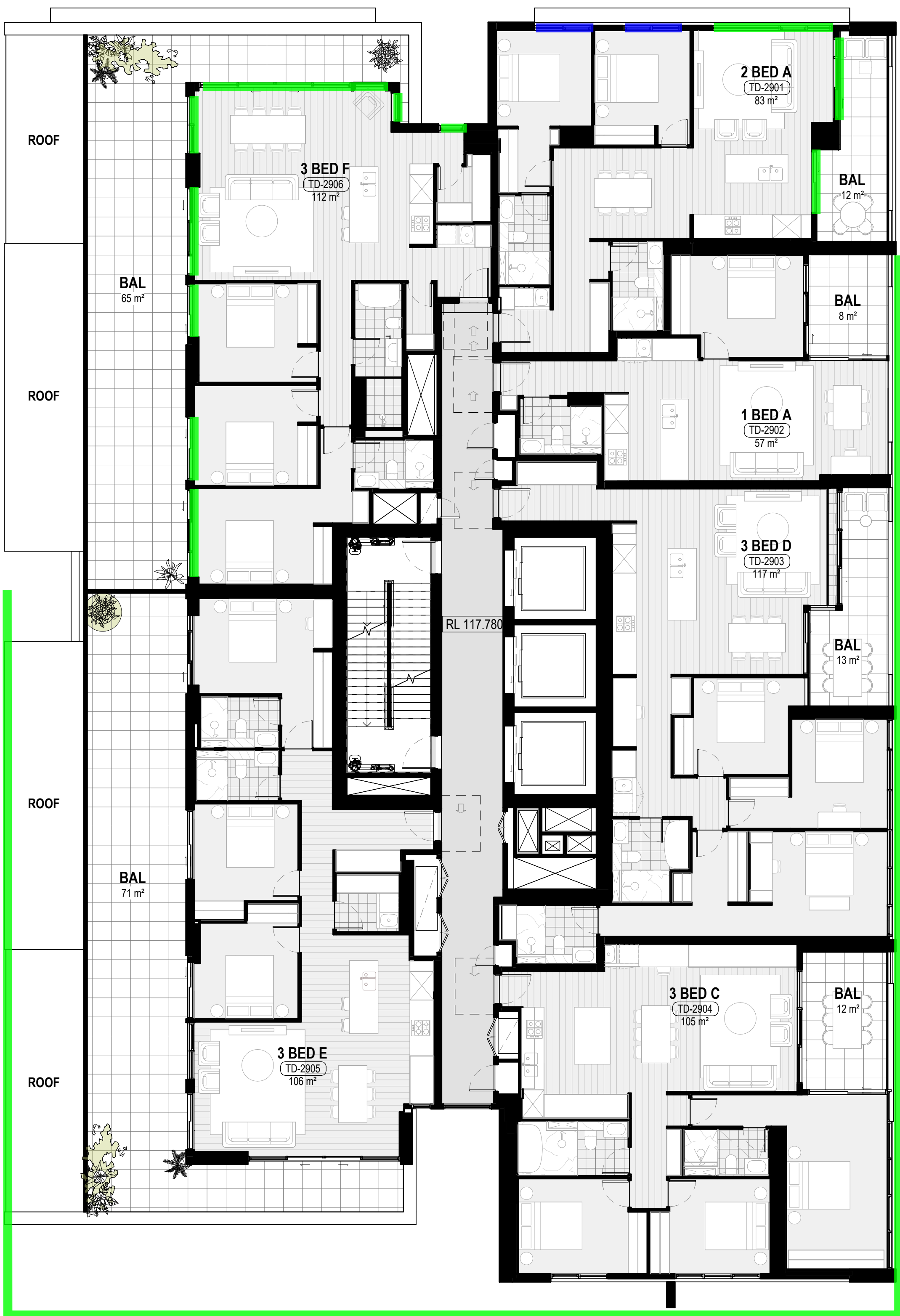
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

NOTE: LANDSCAPE PLAN INDICATIVE ONLY - REFER TO LANDSCAPE ARCHITECT REPORT AND DOCUMENTATION FOR DETAILED DESIGN.

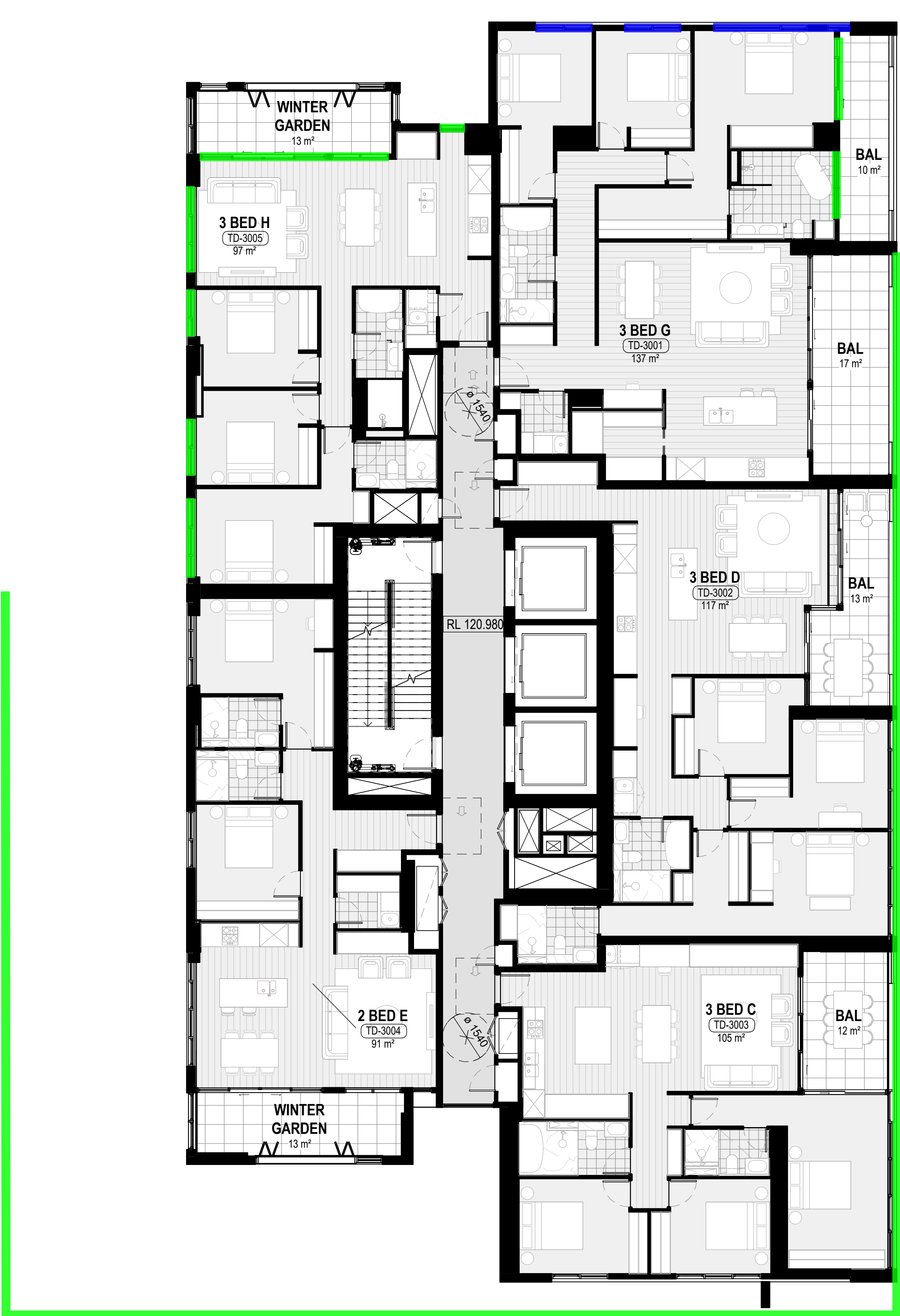
PRINT IN COLOUR



1 TOWER D - RESIDENTIAL LEVEL 28
1:100



2 TOWER D - RESIDENTIAL LEVEL 29
1:100



3 TOWER D - RESIDENTIAL LEVEL 30, 31
1:100

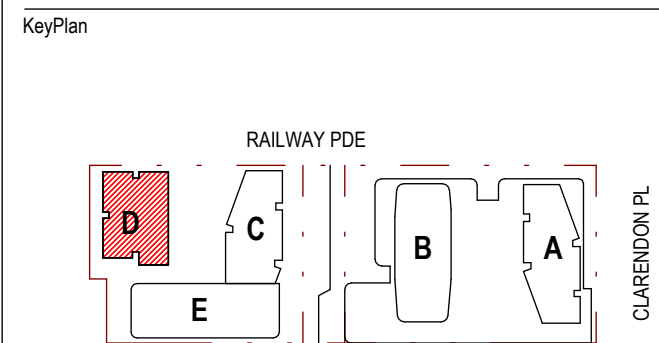
Rev	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	29/06/24
J	-	15/07/24
K	-	31/07/24
L	FOR S4.55 SUBMISSION	29/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVABLE UNITS
- PLANT



Client
HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsay Surveyors Pty Ltd
www.ramsay.com.au

Nominated Architect
Project
EDWARD SALIB

Reg. No
9469

BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title
TOWER D - LEVELS 28-31

Project Status
FOR COORDINATION

Scale
1:100 @ A0

Bar Scale 1:100
Project No
20230055

Drawn By
ES

Check By
SC

Dwg No
AR-DA-2211

Rev
L

NOTE: LANDSCAPE PLAN INDICATIVE ONLY -
REFER TO LANDSCAPE ARCHITECT REPORT AND
DOCUMENTATION FOR DETAILED DESIGN.

PRINT IN COLOUR

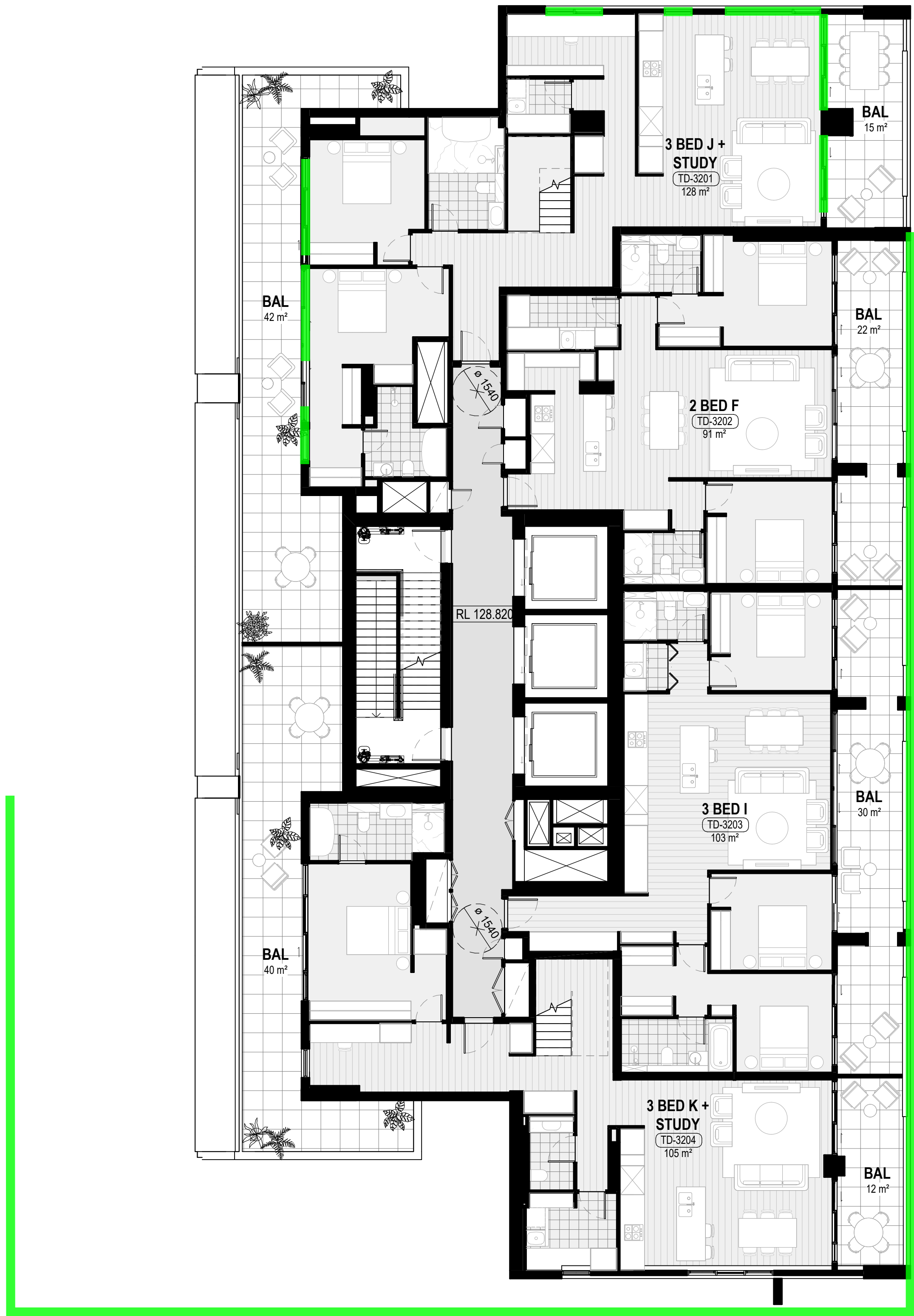
Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

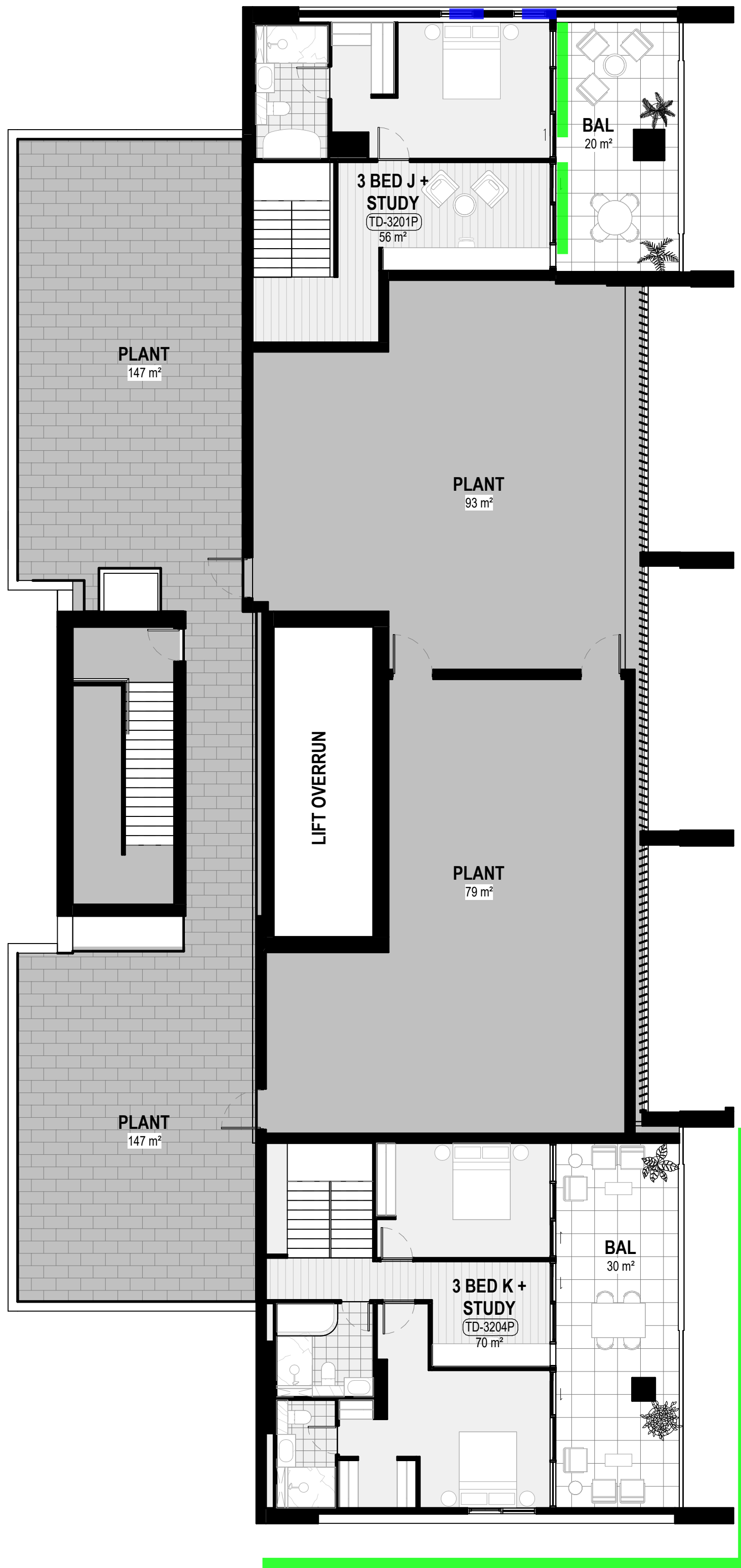
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

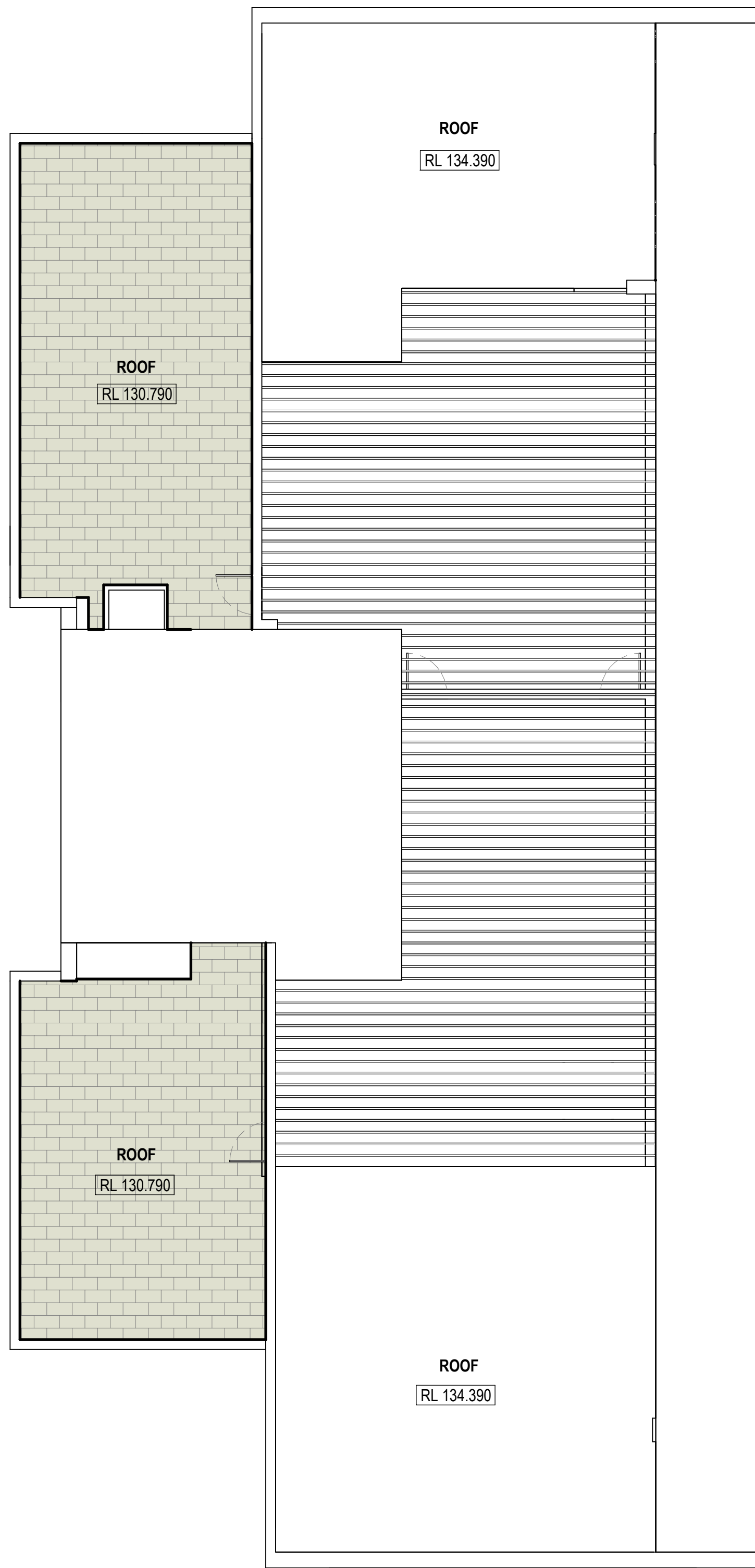
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used



1 TOWER D - RESIDENTIAL LEVEL 32
1:100



2 TOWER D - RESIDENTIAL PLANT LEVEL
1:100



3 TOWER D-LEVEL 34 ROOF
1:100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev:0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

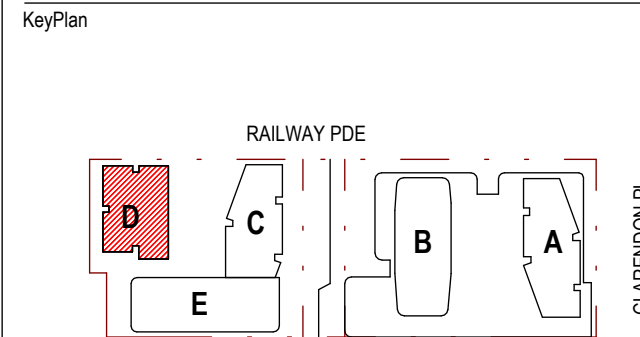
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	26/06/24
J	-	15/07/24
K	-	31/07/24
L	FOR 54.55 SUBMISSION	26/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DON'T SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVABLE UNITS
- PLANT



Client: 2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire / Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsay Surveyors Pty Ltd
www.ramsay.com.au

Nominated Architect Reg. No
EDWARD SALIB 9469

Project
BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW
Drawing Title
TOWER D - LEVEL 32-ROOF

Project Status
FOR COORDINATION

Scale
1:100 @ A0
North Point
0 1 2 3 4 5 m
Bar Scale 1:100
Project No 20230055 Drawn By ES Check By SC
Date No Rev
Rev

NOTE: LANDSCAPE PLAN INDICATIVE ONLY -
REFER TO LANDSCAPE ARCHITECT REPORT AND
DOCUMENTATION FOR DETAILED DESIGN.

PRINT IN COLOUR AR-DA-2212 L

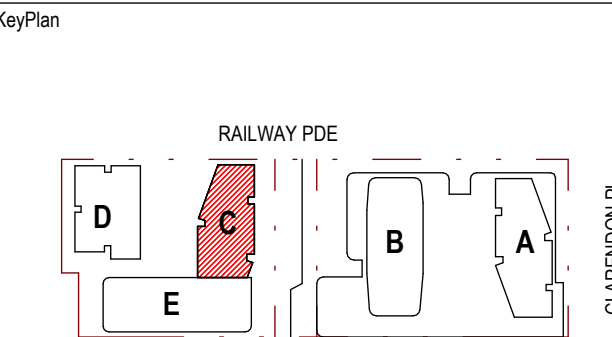
Rev#	Description	Date
A	-	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	28/06/24
J	-	15/07/24
K	FOR 54.55 SUBMISSION	29/09/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNIT
- LIVEABLE UNIT



Client: 2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.studio.sc.au +61 2 9557 3988

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.au +61 2 9557 3988

Consultants

Structural Engineer

Van Der Meer

www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer

Goldfish and Bay

www.goldfishandbay.com.au

Vertical Transportation Engineer

KONE Elevators Pty Ltd

www.kone.com.au

Civil Engineer

Van Der Meer

www.vandermeer.com.au

Landscape Architect

Place Design Group

www.placedesigngroup.com

Surveyor

Ramsay Surveyors Pty Ltd

www.ramsay.com.au

Nominated Architect: EDWARD SALIB Reg. No: 9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title
TOWER C - LEVELS 3-5

Project Status

FOR COORDINATION

Scale
1 : 100 @ A0

Bar Scale 1:100

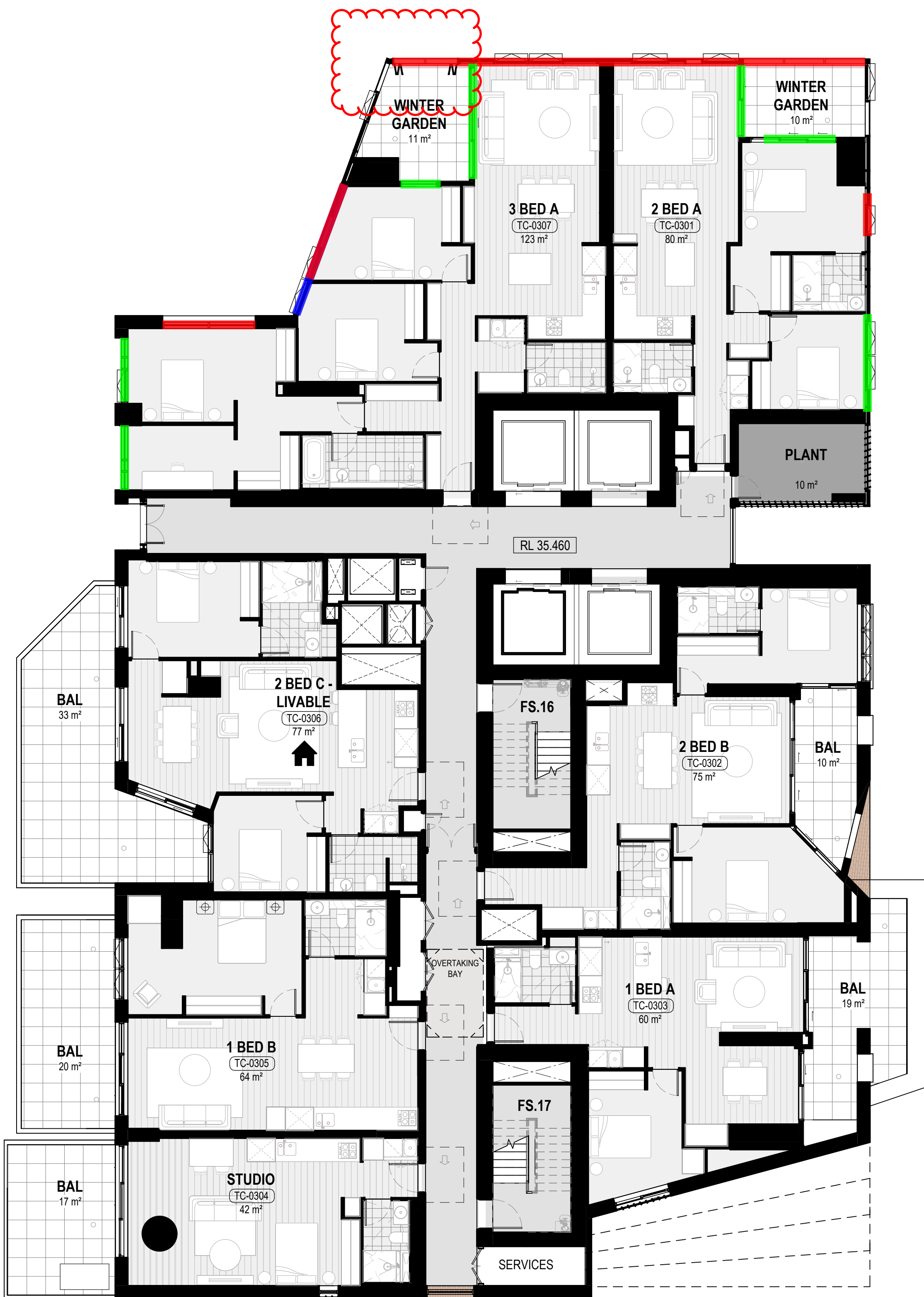
Project No: 20230055

Drawn By: Author

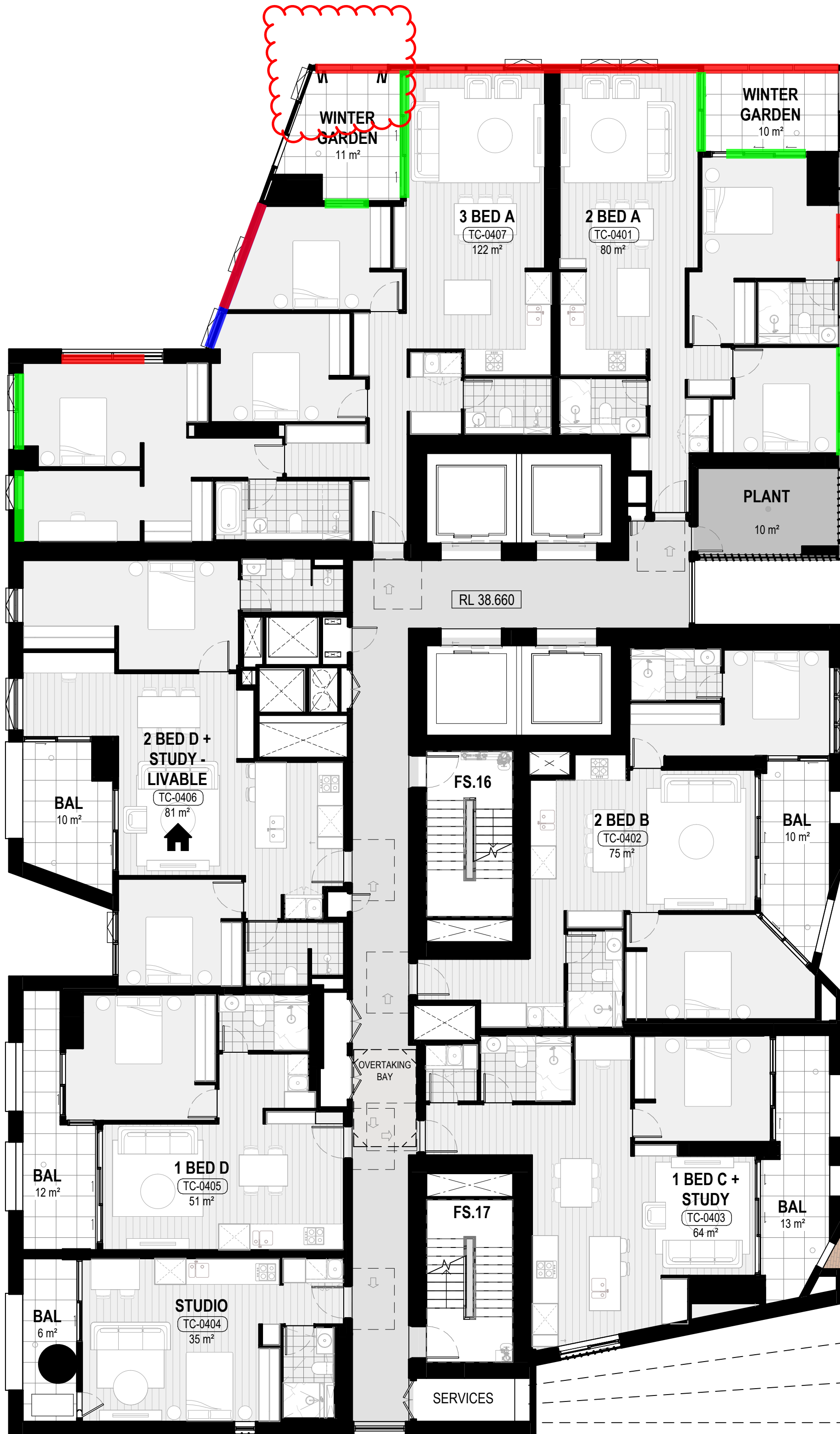
Check By: Checker

Dwg No: AR-DA-2213

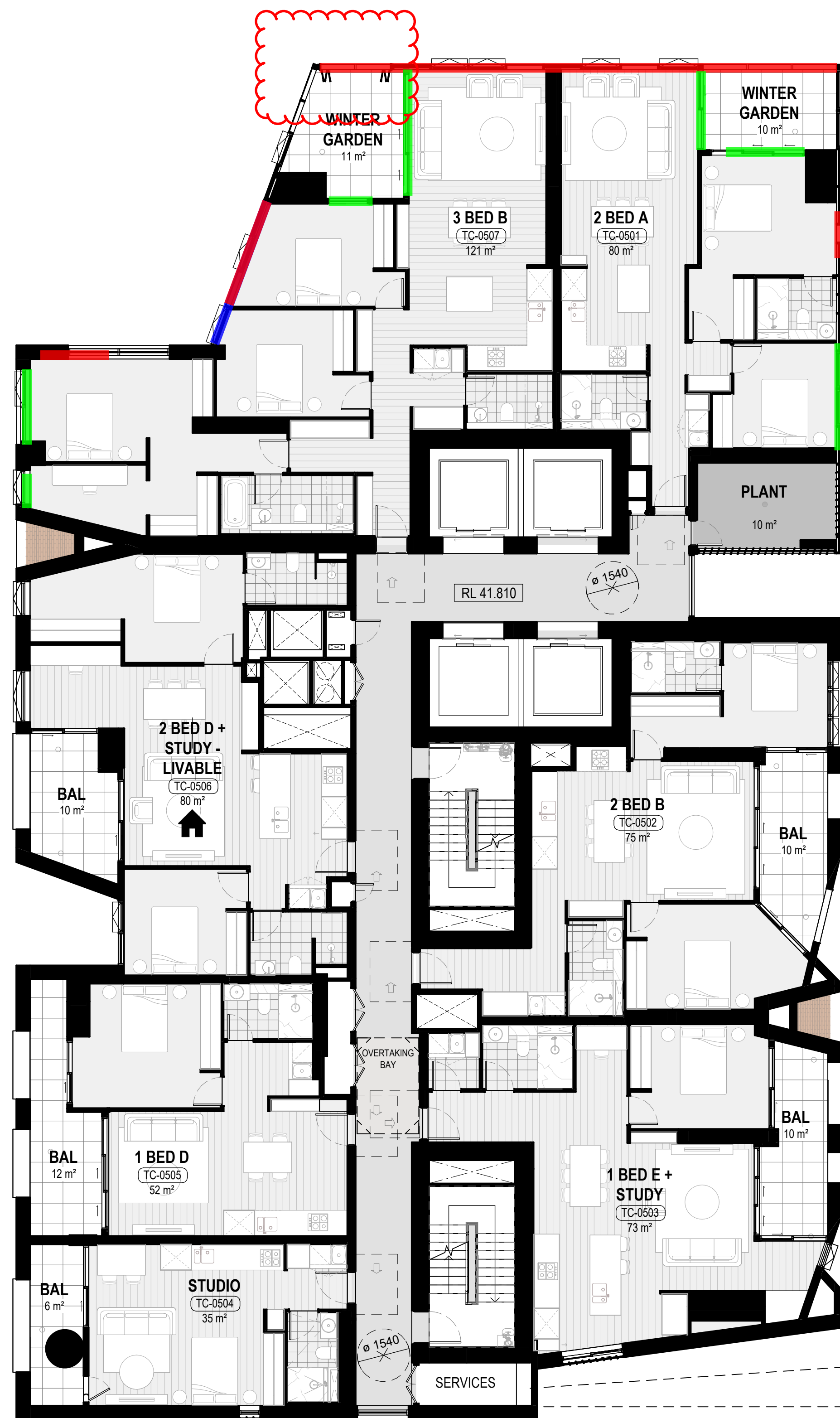
Rev: K



1 TOWER C - RESIDENTIAL LEVEL 3
1 : 100



2 TOWER C - RESIDENTIAL LEVEL 4
1 : 100



3 TOWER C - RESIDENTIAL LEVEL 5
1 : 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

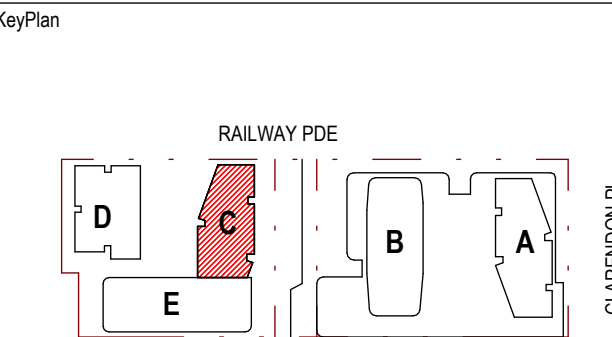
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

Rev#	Description	Date
A	-	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	28/06/24
J	-	15/07/24
K	FOR 54.55 SUBMISSION	29/09/24

- General Notes**
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNIT
- LIVEABLE UNIT



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au +61 2 9695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney NSW, 2000, Australia
www.studio.sc +61 2 9557 3988

Consultants

Structural Engineer

Van Der Meer

www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer

Goldfish and Bay

www.goldfishandbay.com.au

Vertical Transportation Engineer

KONE Elevators Pty Ltd

www.kone.com.au

Civil Engineer

Van Der Meer

www.vandermeer.com.au

Landscape Architect

Place Design Group

www.placedesigngroup.com

Surveyor

Ramsay Surveyors Pty Ltd

www.ramsay.com.au

Nominated Architect

EDWARD SALIB

Reg. No 9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER C - LEVELS 6-11

Project Status

FOR COORDINATION

Scale

1 : 100 @ A0

Bar Scale 1:100

Project No

20230055

Dwg No

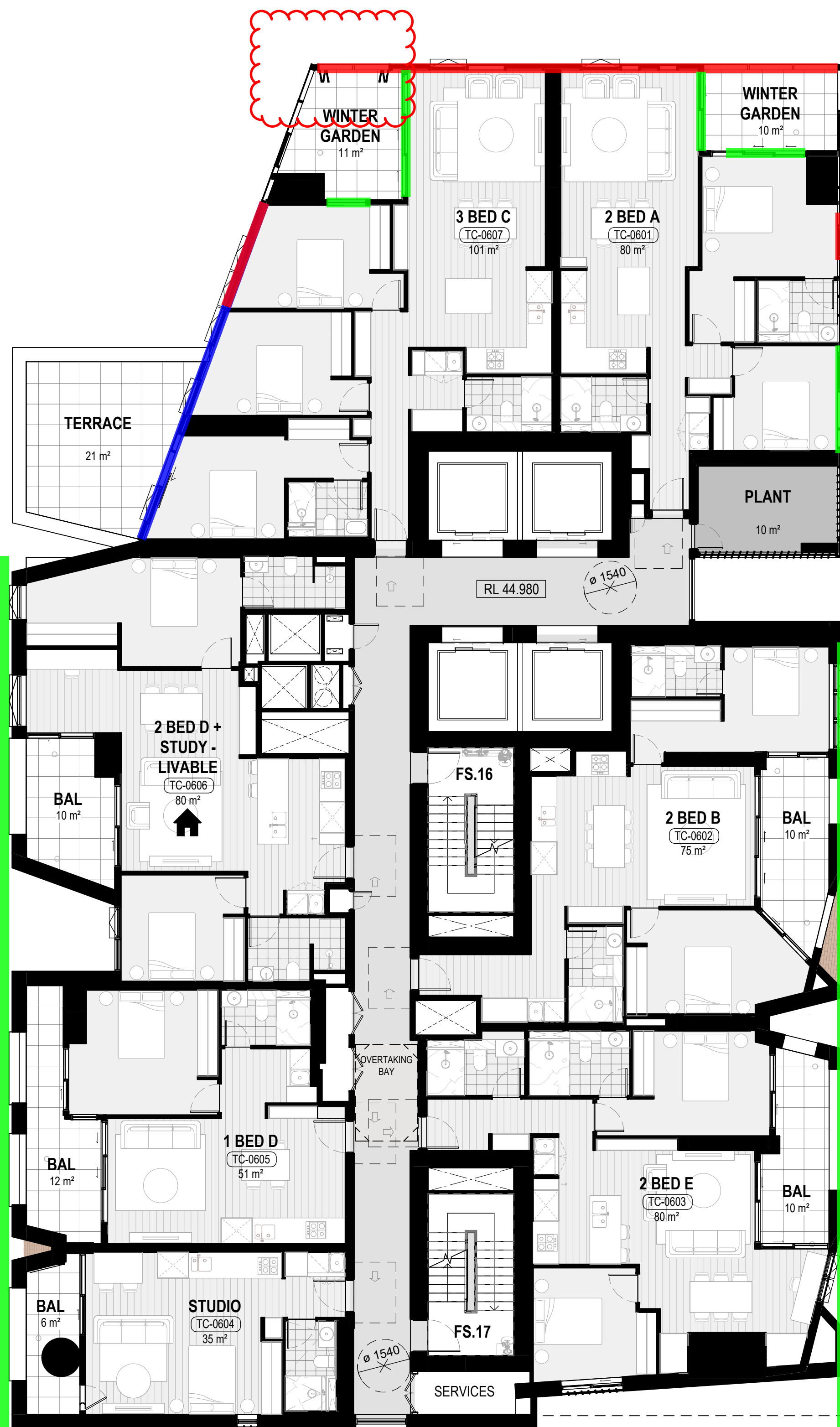
Author

Checker

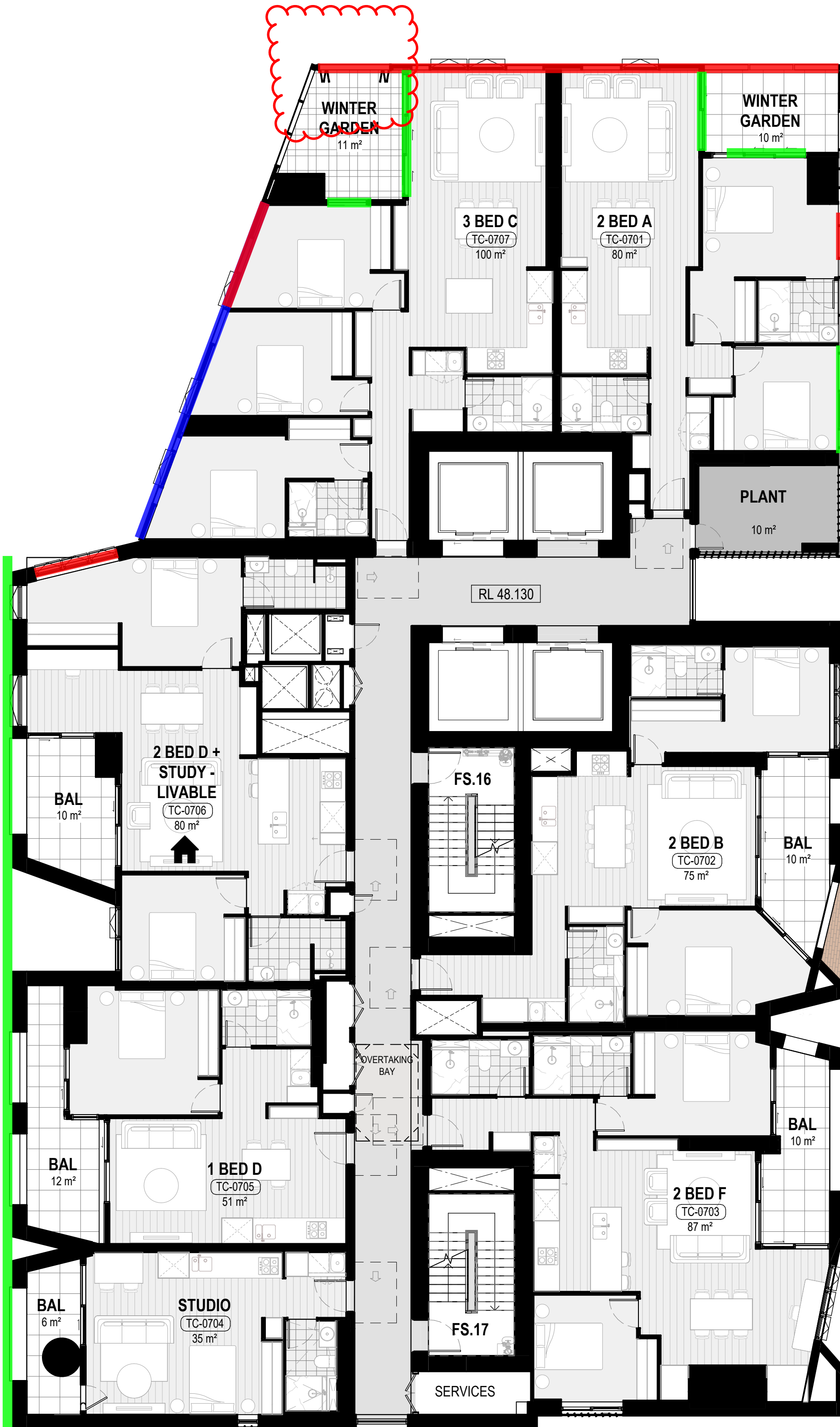
Rev

AR-DA-2214

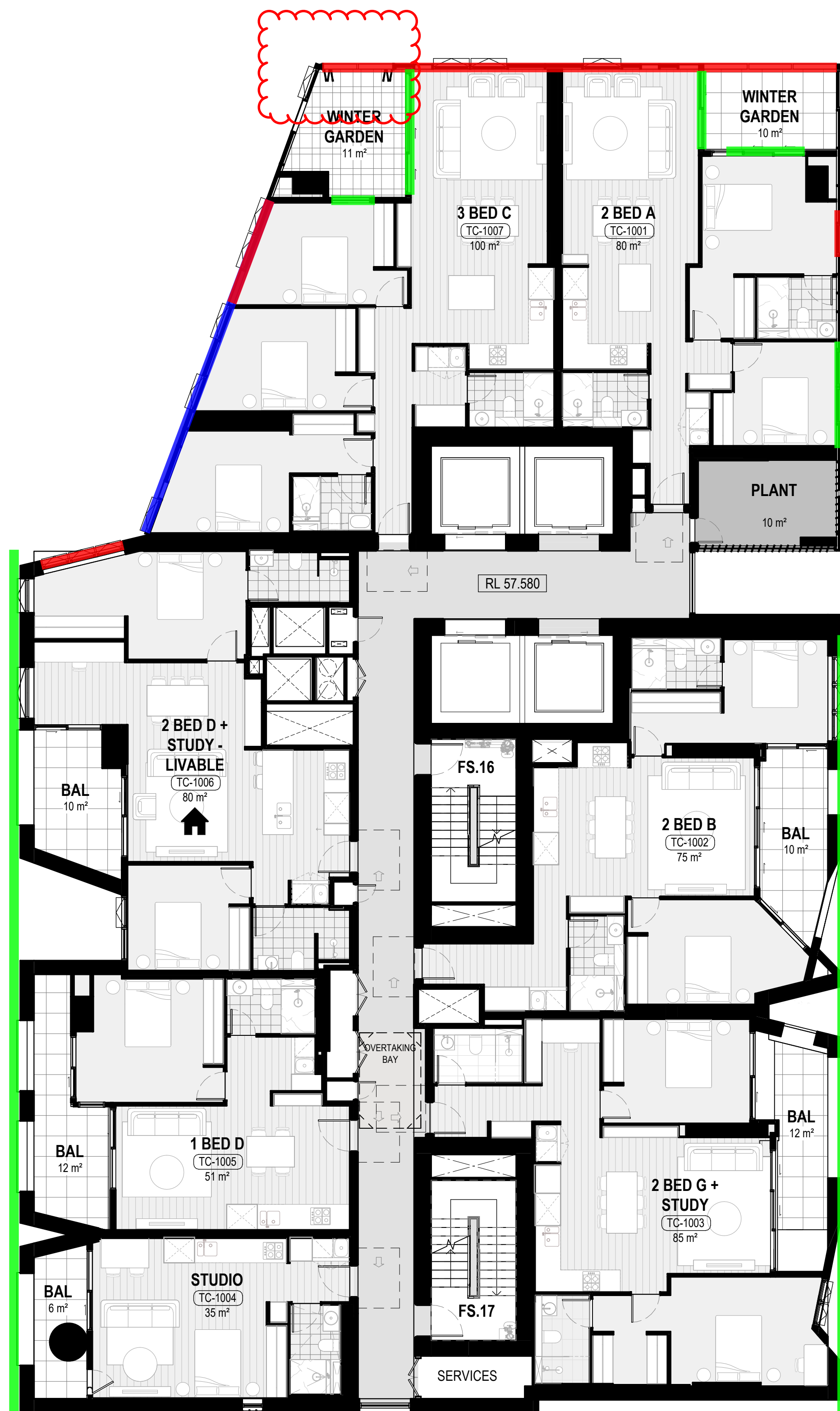
K



1 TOWER C - RESIDENTIAL LEVEL 6
1 : 100



2 TOWER C - RESIDENTIAL LEVEL 7
1 : 100



3 TOWER C - RESIDENTIAL LEVELS 8-11
1 : 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

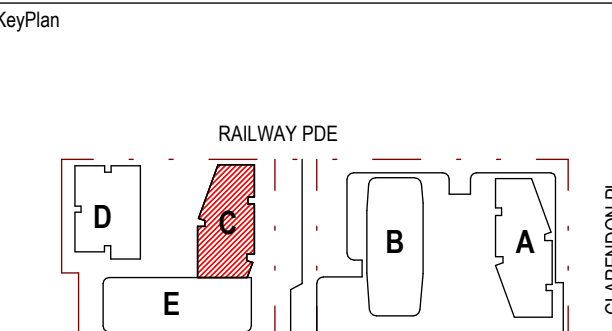
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		29/06/24
J		15/07/24
K	FOR S455 SUBMISSION	29/08/24

- General Notes
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNIT
- LIVEABLE UNIT



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.studio.sc.com.au +61 2 9557 3988

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1 - One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer

Van Der Meer

www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer

Goldfish and Bay

www.goldfishandbay.com.au

Vertical Transportation Engineer

KONE Elevators Pty Ltd

www.kone.com.au

Civil Engineer

Van Der Meer

www.vandermeer.com.au

Landscape Architect

Place Design Group

www.placeandgroup.com

Surveyor

Ramsay Surveyors Pty Ltd

www.ramsay.com.au

Nominated Architect

EDWARD SALIB

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER C - LEVELS 12-32

Project Status

FOR COORDINATION

Scale

1: 100 @ A0

Bar Scale 1:100

Project No

20230055

Dwg No

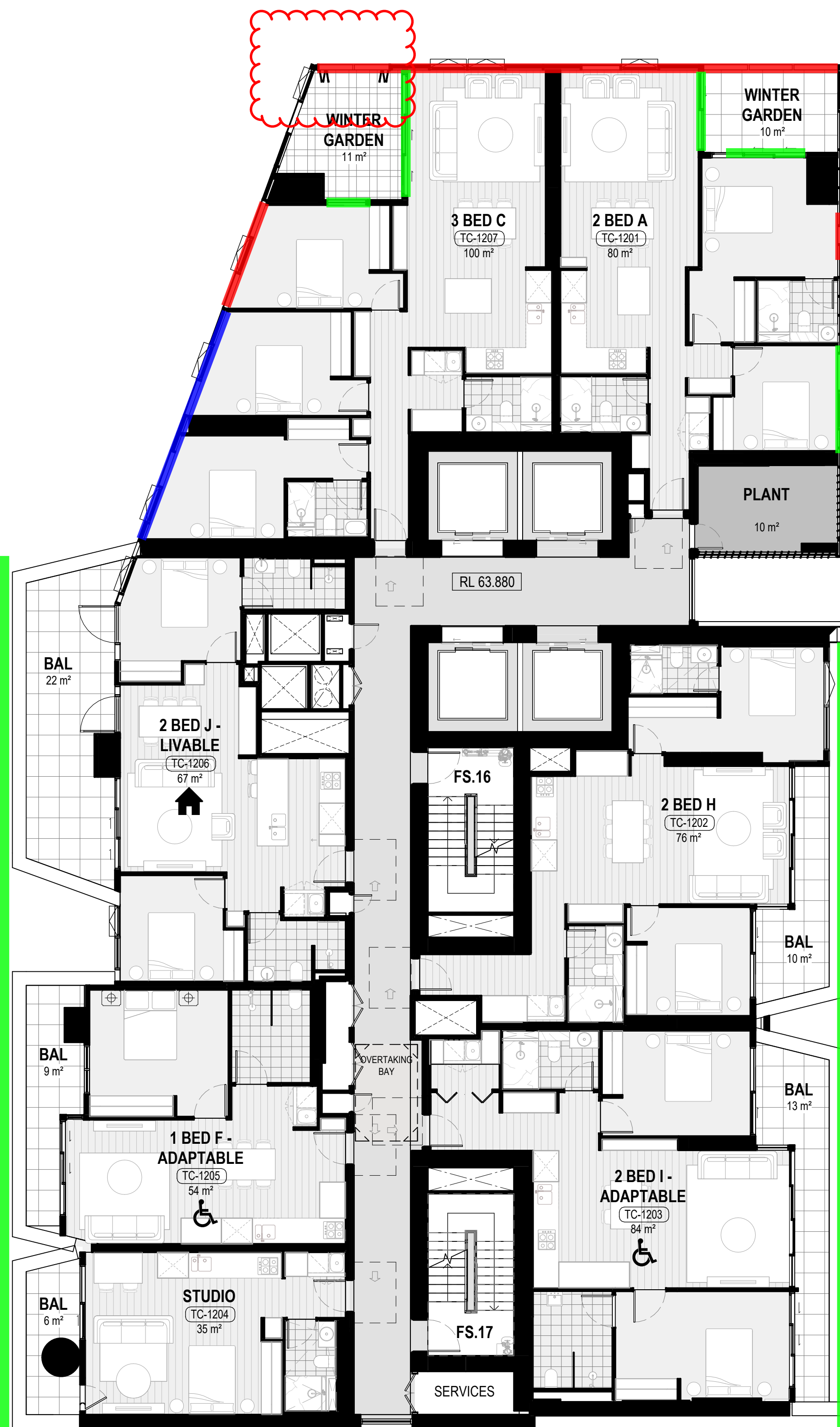
Author

Checker

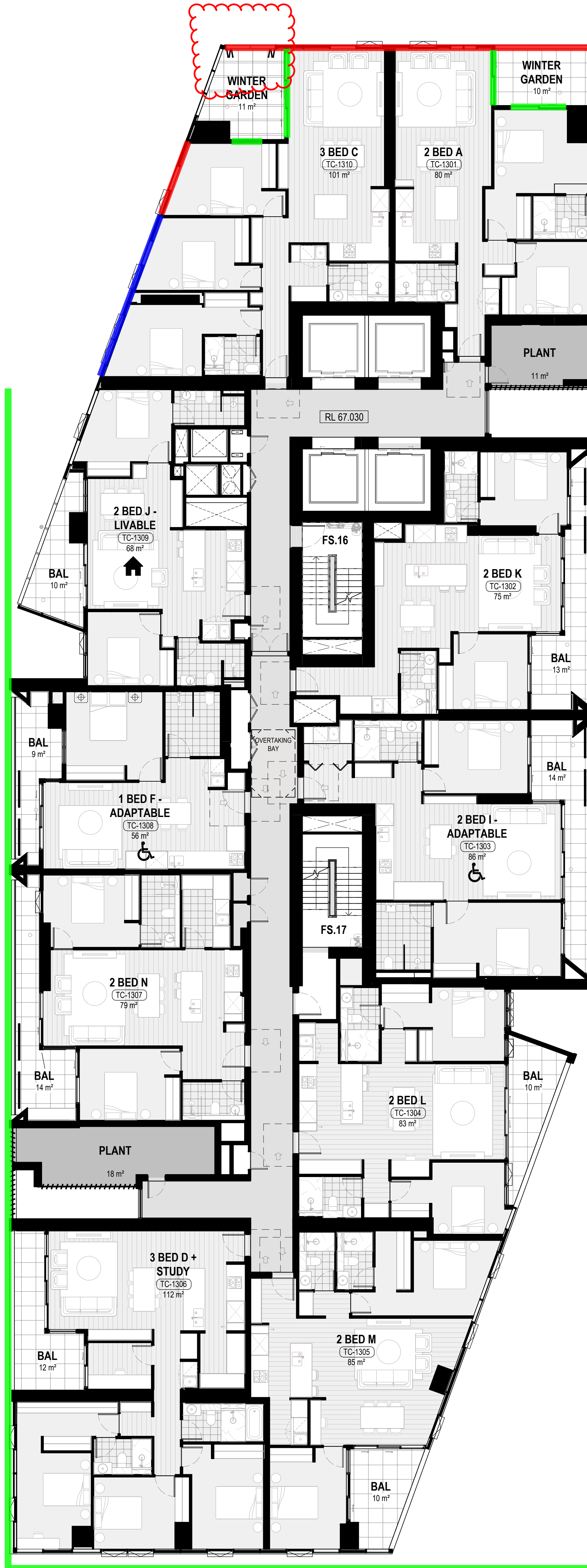
Rev

AR-DA-2215

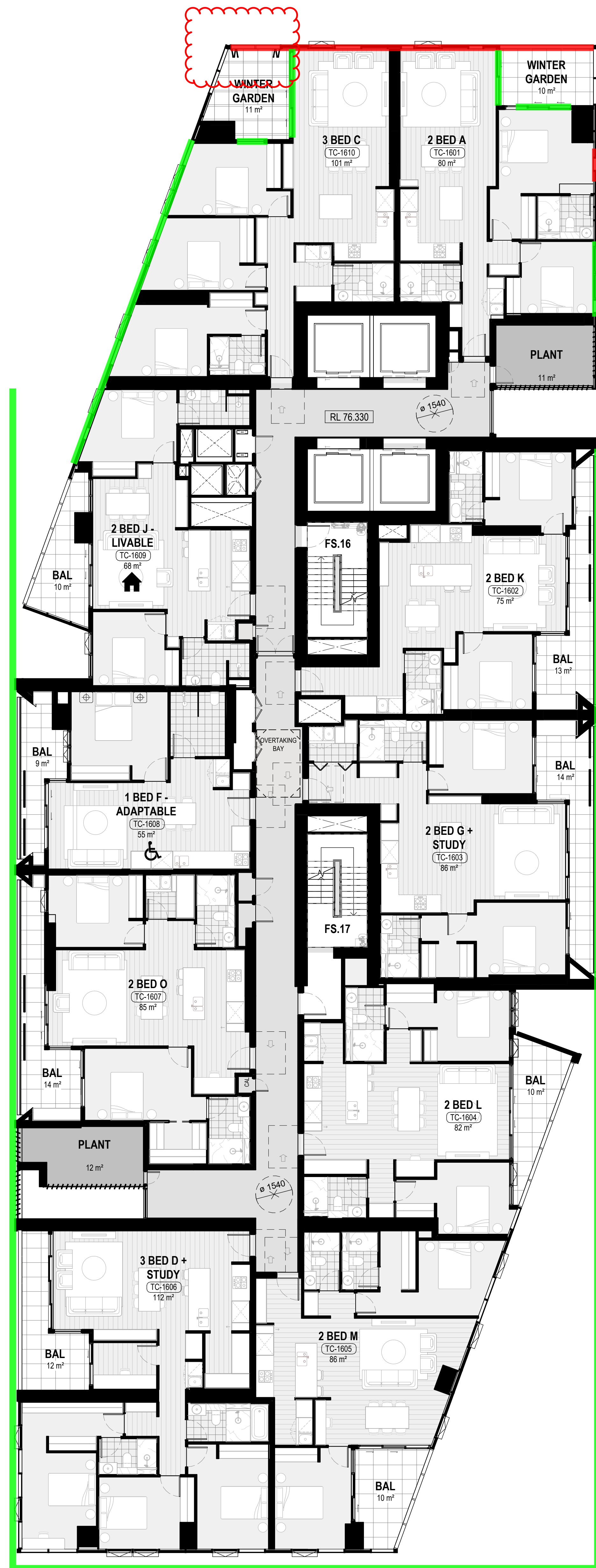
K



1 TOWER C - RESIDENTIAL LEVEL 12
1: 100



2 TOWER C - RESIDENTIAL LEVEL 13 - INTERMEDIATE PLANT
1: 100



3 TOWER C - RESIDENTIAL LEVEL 14-32
1: 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

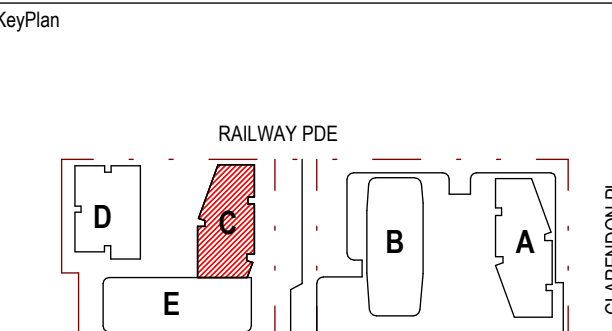
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		29/06/24
J		15/07/24
K	FOR S4.55 SUBMISSION	29/08/24
L	FOR S4.55 SUBMISSION	10/09/24

- General Notes**
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

-  ADAPTABLE UNIT
-  LIVEABLE UNIT



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au +61 2 9697 5940

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1 - One Chifley Square, Sydney NSW 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer

Van Der Meer

www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer

Goldfish and Bay

www.goldfishandbay.com.au

Vertical Transportation Engineer

KONE Elevators Pty Ltd

www.kone.com.au

Civil Engineer

Van Der Meer

www.vandermeer.com.au

Landscape Architect

Place Design Group

www.placedesigngroup.com

Surveyor

Ramsay Surveyors Pty Ltd

www.ramsay.com.au

Nominated Architect

EDWARD SALIB

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER C - LEVELS 33-36

Project Status

FOR COORDINATION

Scale

1 : 100 @ A0

Bar Scale 1:100

Project No

20230055

Dwg No

20230055

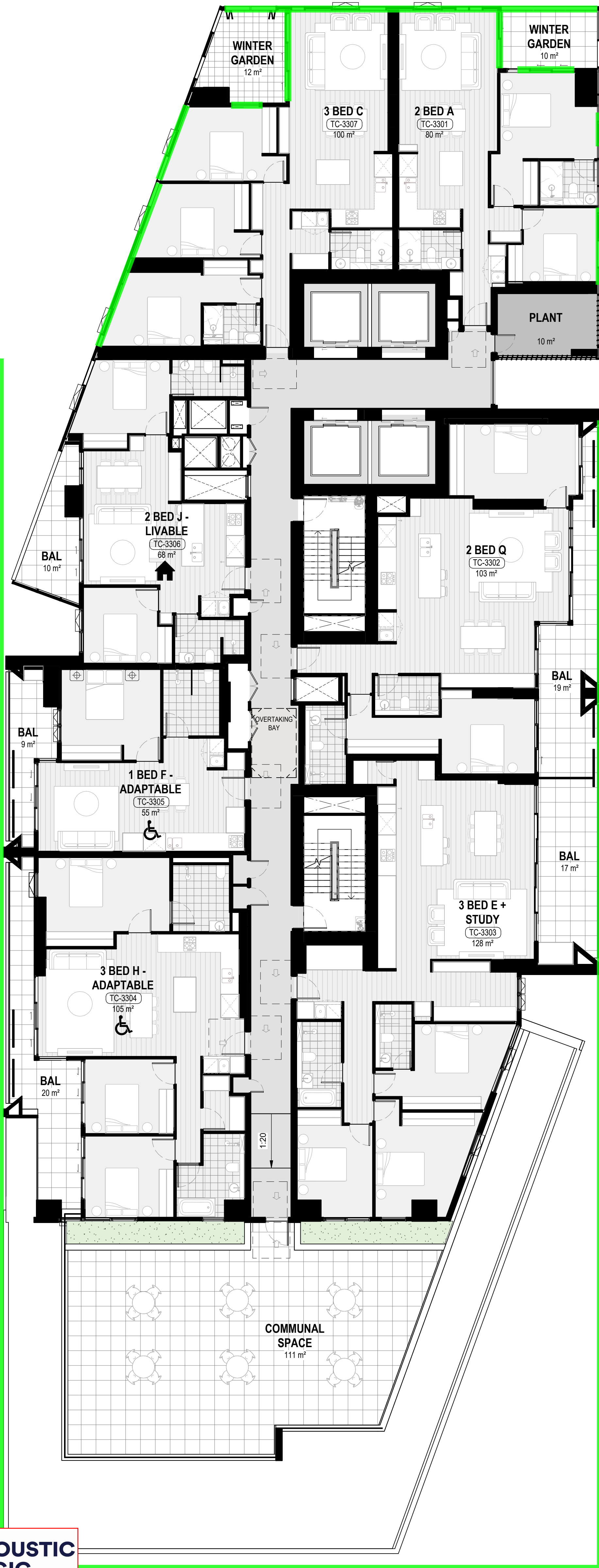
Author

Checker

Rev

AR-DA-2216

L



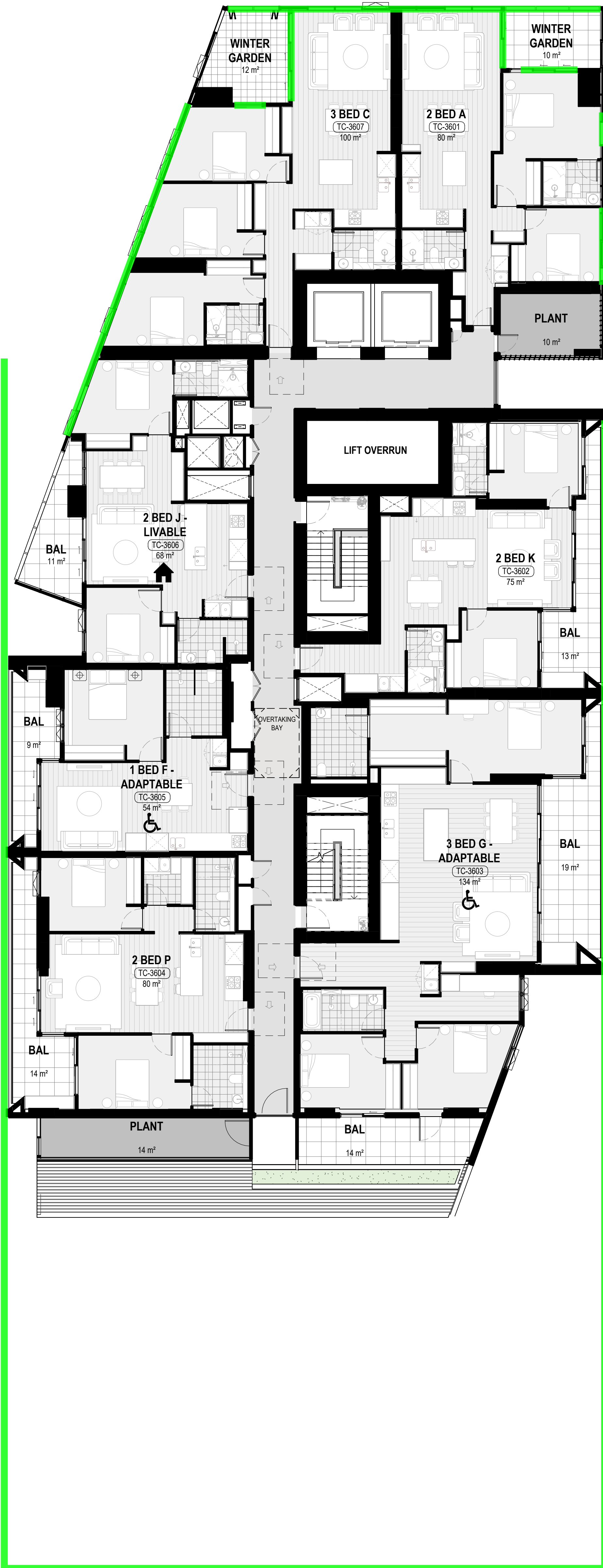
TOWER C - RESIDENTIAL LEVEL 33

1 : 100



TOWER C - RESIDENTIAL LEVEL 34-35

1 : 100



TOWER C - RESIDENTIAL LEVEL 36

1 : 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0



Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

PRINT IN COLOUR

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	29/06/24
J	-	15/07/24
K	FOR S4.55 SUBMISSION	29/08/24
L	FOR S4.55 SUBMISSION	10/09/24

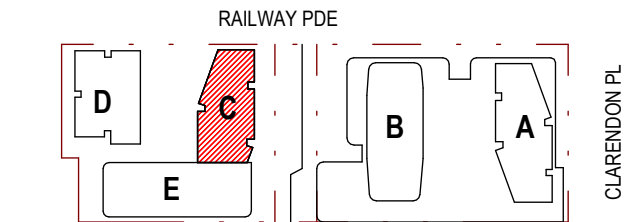
General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNIT
- LIVEABLE UNIT

KeyPlan



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect

EDWARD SALIB

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER C - LEVELS 37-39 & PLANT

Project Status

FOR COORDINATION

Scale

1 : 100 @ A0

Bar Scale 1:100

Project No

20230055

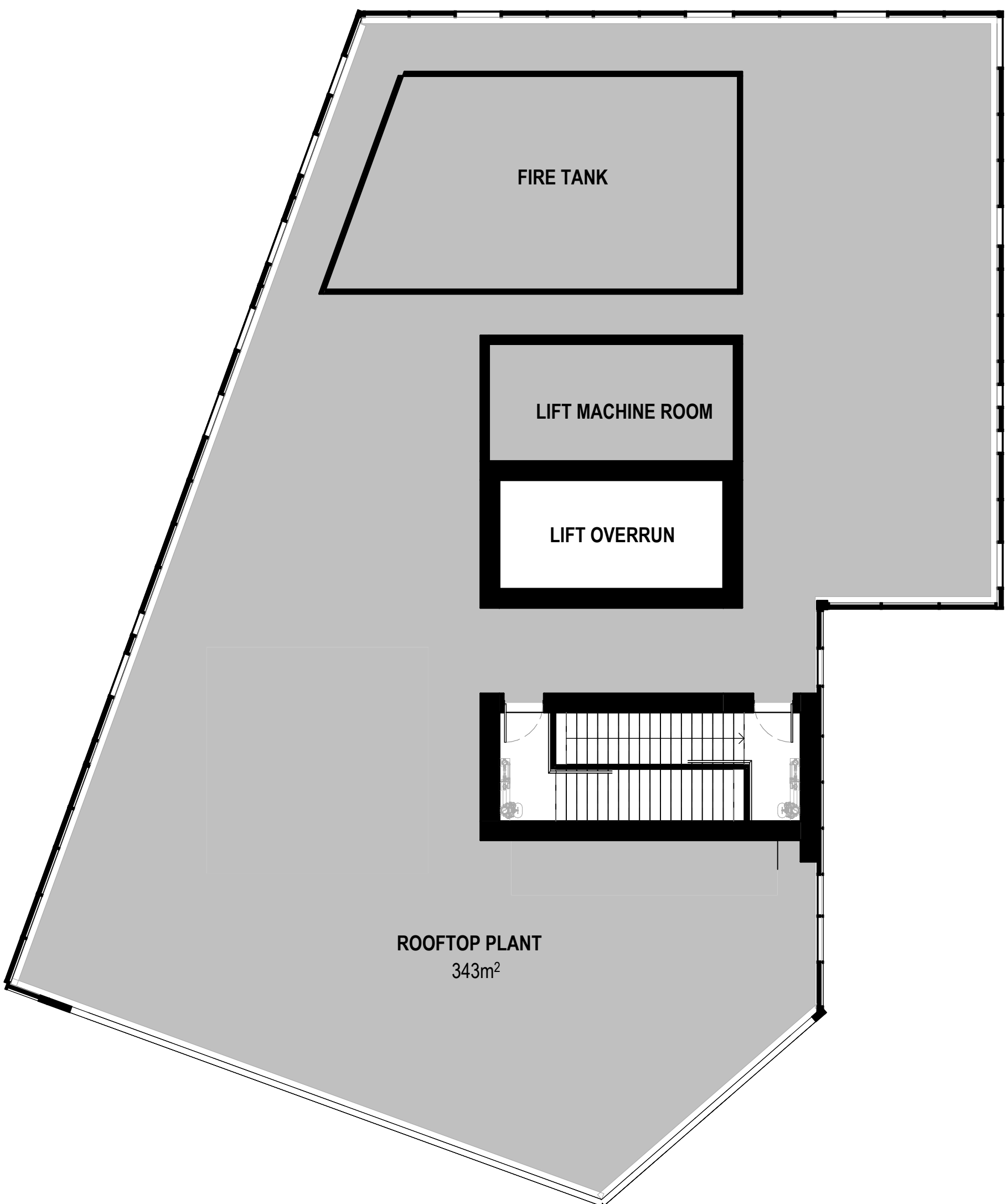
Dwg No

Author

Checker

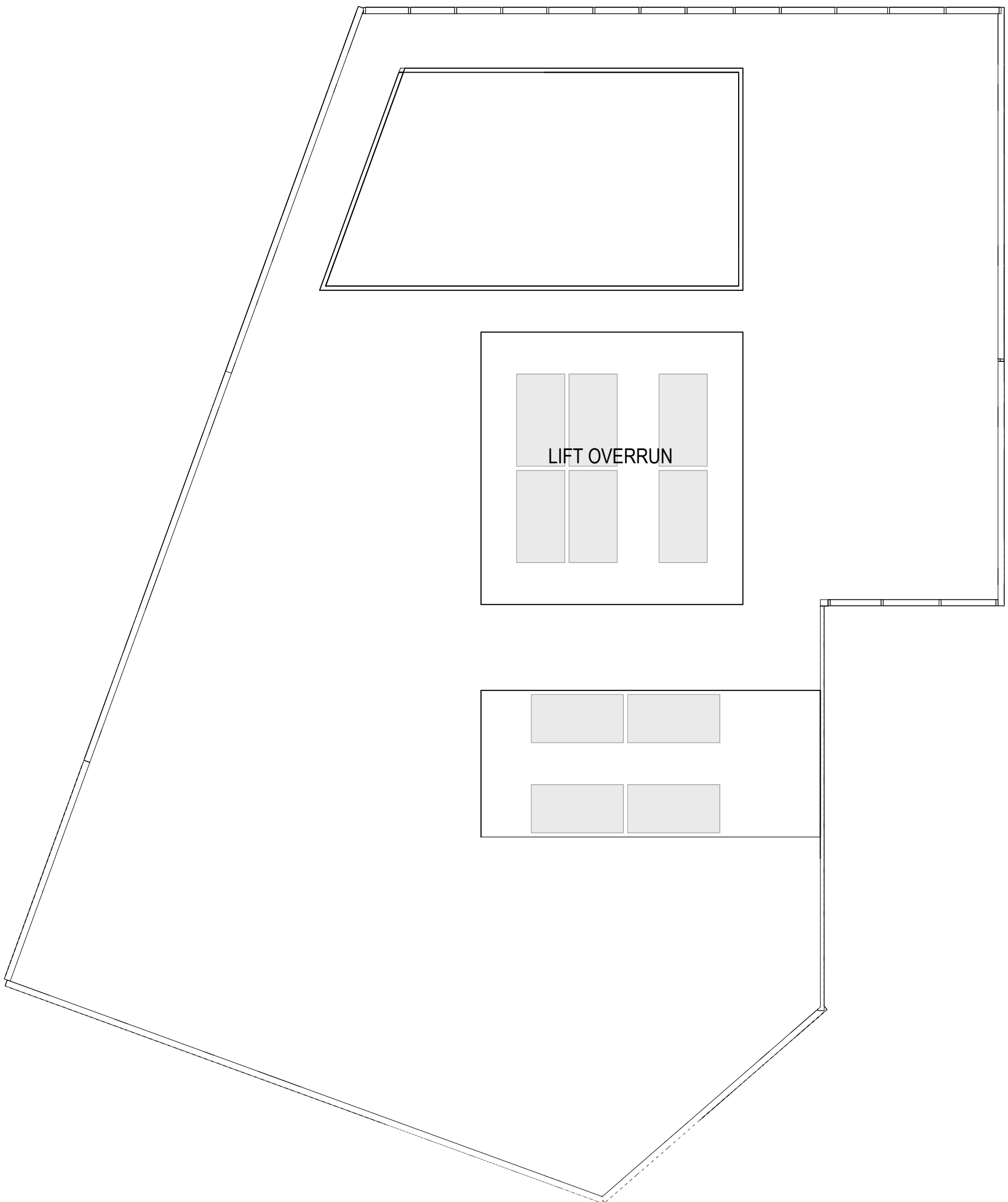
Rev

L



4 TOWER C - PLANT LEVEL

1 : 100



5 TOWER C - ROOF LEVEL

1 : 100



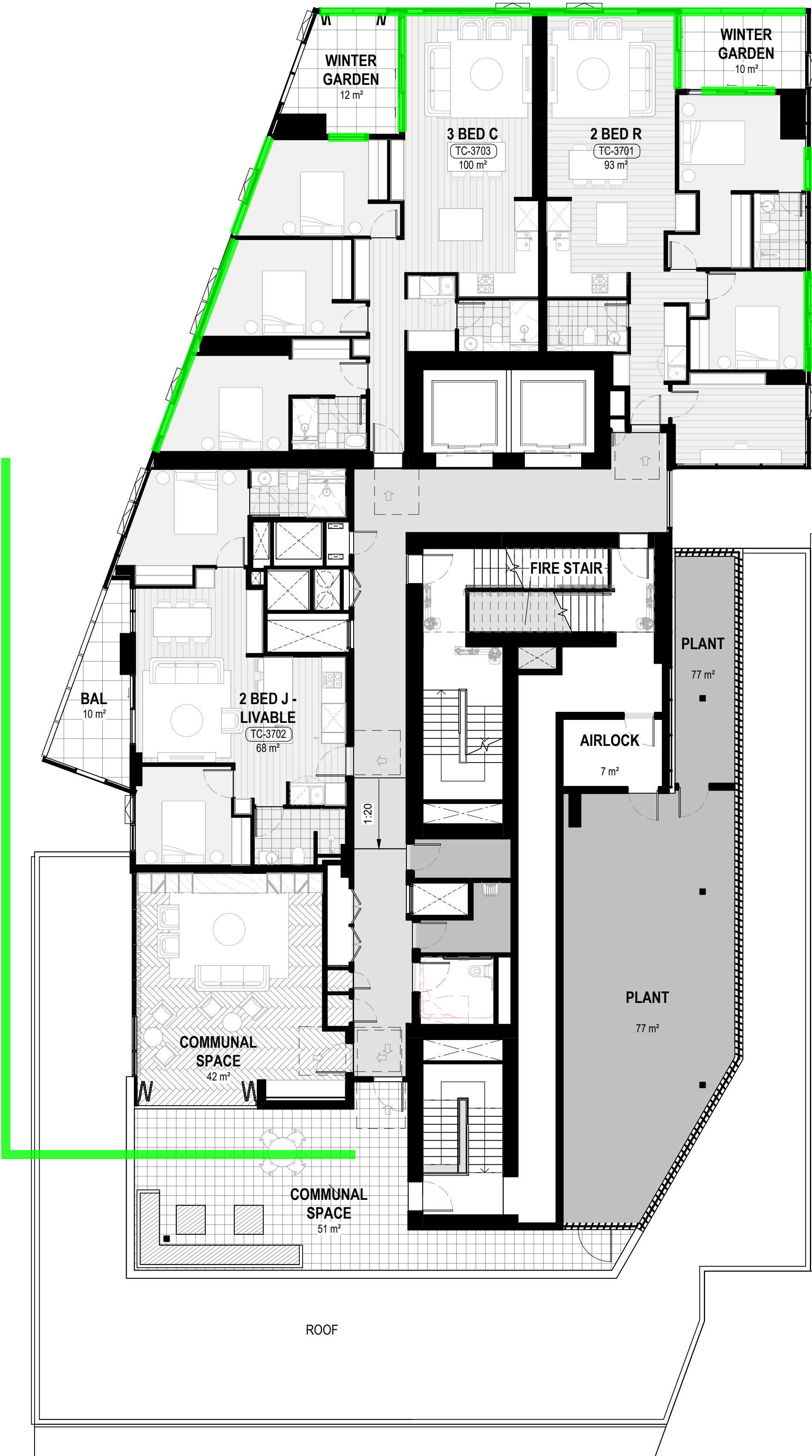
2 TOWER C - RESIDENTIAL LEVEL 38

1 : 100



3 TOWER C - RESIDENTIAL LEVEL 39

1 : 100



1 TOWER C - RESIDENTIAL LEVEL 37

1 : 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

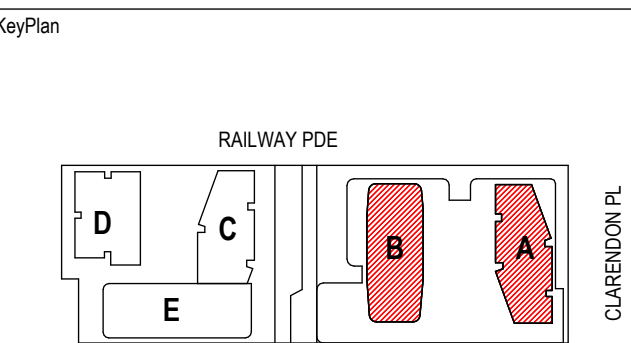
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

PRINT IN COLOUR

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	FOR DEVELOPMENT APPLICATION	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	FOR DEVELOPMENT APPLICATION	02/09/22
E	JUNE 2022 DA UPDATE	16/09/22
F	-	01/03/24
G	-	26/03/24
H	-	30/04/24
I	-	31/05/24
J	-	28/06/24
K	-	15/07/24
L	-	26/08/24
M	FOR S4.55 SUBMISSION	10/09/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 9695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1 - One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsay Surveyors Pty Ltd
www.ramsay.com.au

Nominated Architect

EDWARD SALIB

Reg. No
9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD, NSW

Drawing Title
BLOCK 1 LEVEL 03

Project Status

DEVELOPMENT APPLICATION (S4.55)

Scale

1 : 100 @ A0

Bar Scale 1:100

0 1 2 3 4 5 m

Project No

20230055

Drawn By

ES

Check By

SC

Dwg No

AR-DA-2305

Rev

M

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

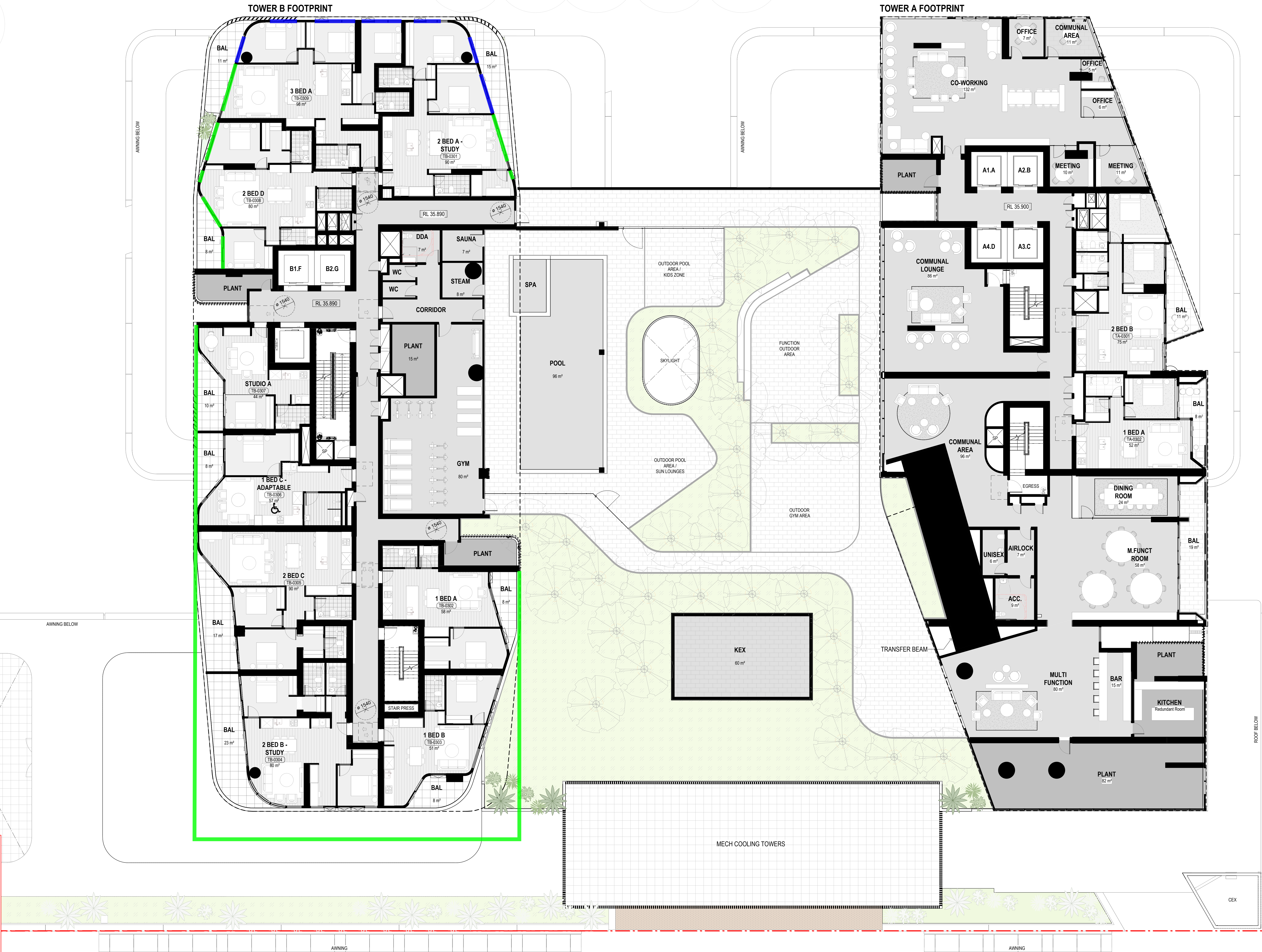
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

ACOUSTIC LOGIC



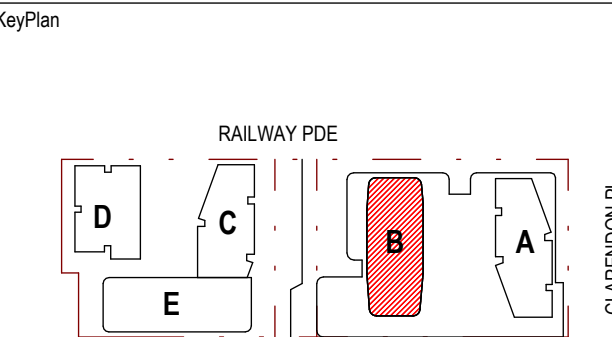
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	26/06/24
J	-	15/07/24
K	FOR S455 SUBMISSION	29/09/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVEABLE UNITS



Client: 2-4 Gifford Avenue
Marquardt Park NSW
2113 Australia
www.holdmark.com.au
+61 2 9695 5540

HOLDMARK

Architect: **Studio.SC**
Formerly Scot Carver

Level 1 - One Office Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect: **EDWARD SALIB** Reg. No: **9469**

Project: **BURWOOD PLACE**
42-60 RAILWAY PARADE, BURWOOD NSW

Project Status: **DEVELOPMENT APPLICATION (S4.55)**

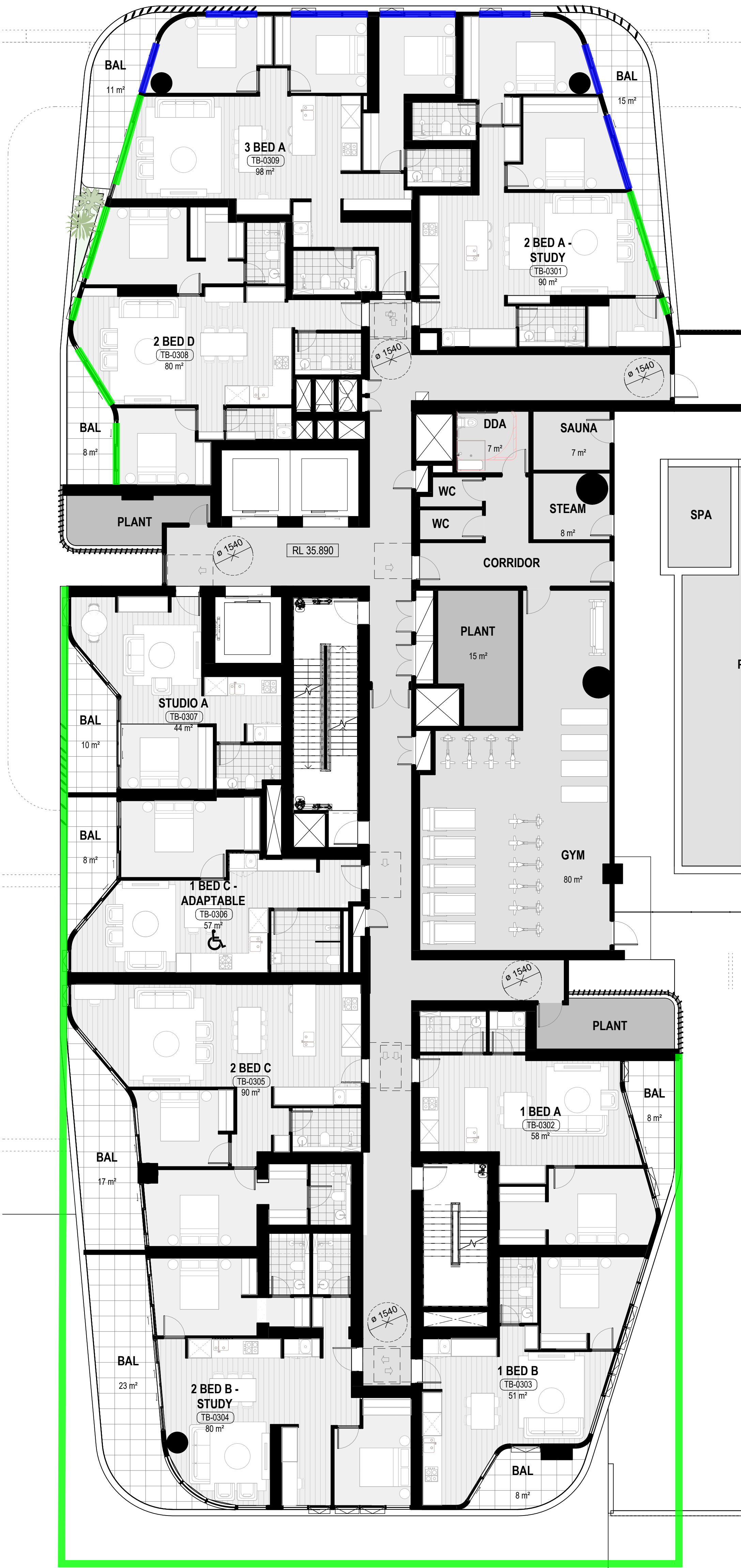
Scale: **1: 100 @ A0**

Bar Scale 1:100

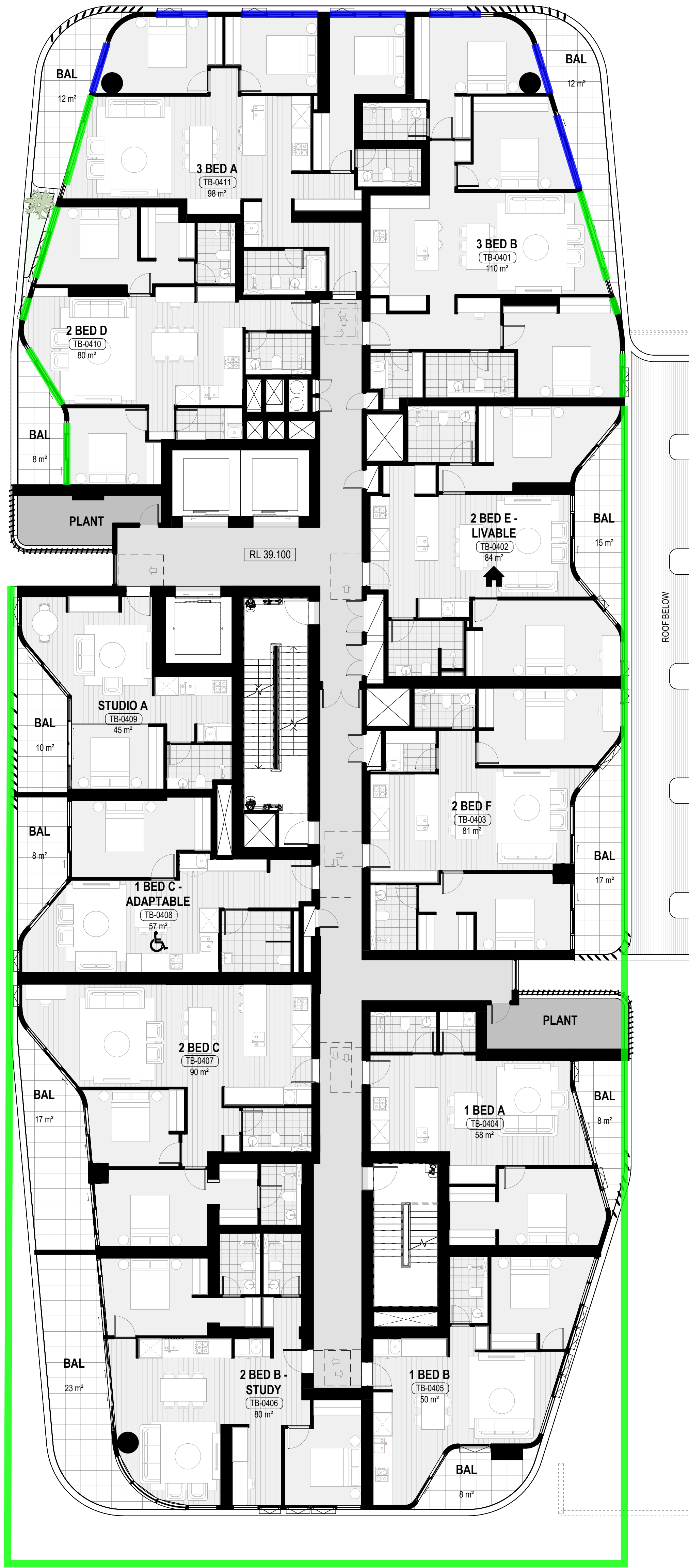
Project No: **2023055** Author: **Author** Check By: **Checker**

Dwg No: **AR-DA-2307** Rev: **K**

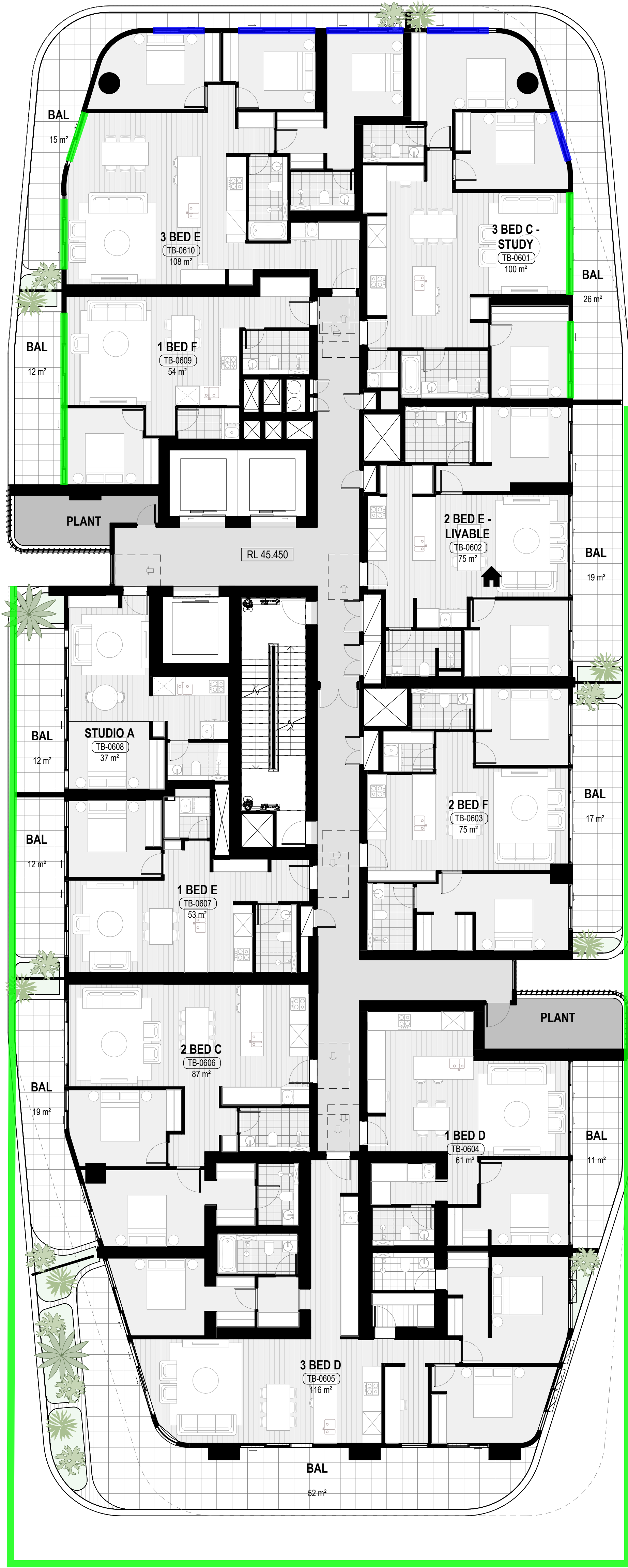
WORK IN PROGRESS (WIP). NOT FOR CONSTRUCTION



ENTIAL LEVEL 03



2 TOWER B - RESIDENTIAL LEVEL 04-05
1: 100



3 TOWER B - RESIDENTIAL LEVEL 06
1: 100

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

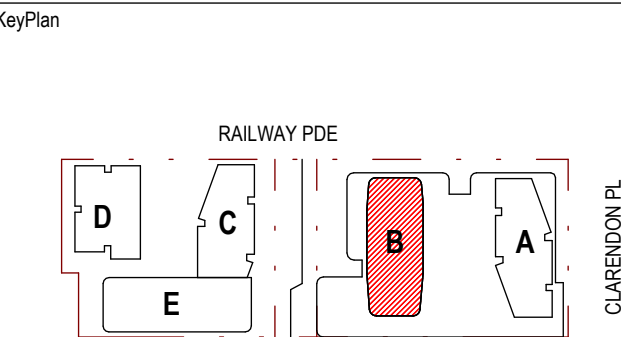
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	28/06/24
J	-	15/07/24
K	FOR S455 SUBMISSION	29/09/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVEABLE UNITS



Client

2-4 Giffnock Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scott Carver

Level 1, One Chifley Square, Sydney NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect

EDWARD SALIB

Reg. No
9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER B - LEVELS 7-13

Project Status

DEVELOPMENT APPLICATION (S4.55)

Scale

1: 100 @ A0

Bar Scale 1:100

Project No

2023055

Author

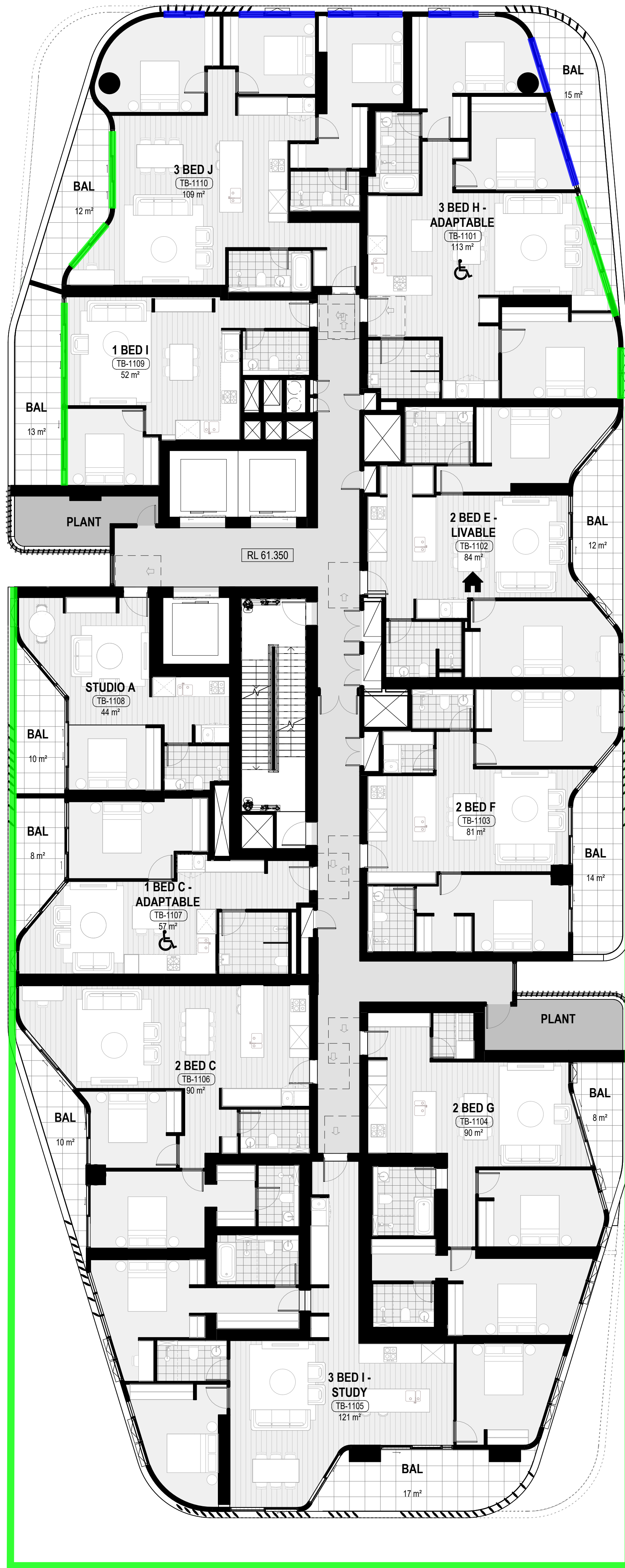
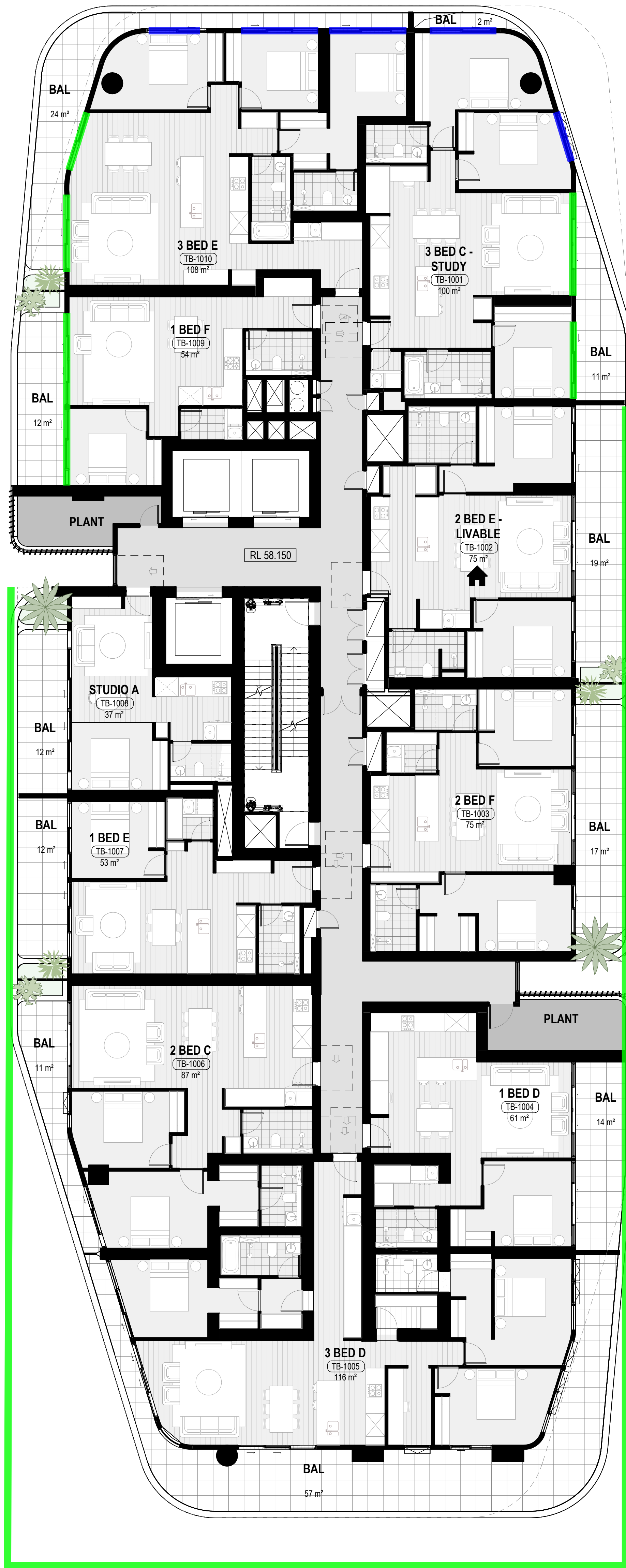
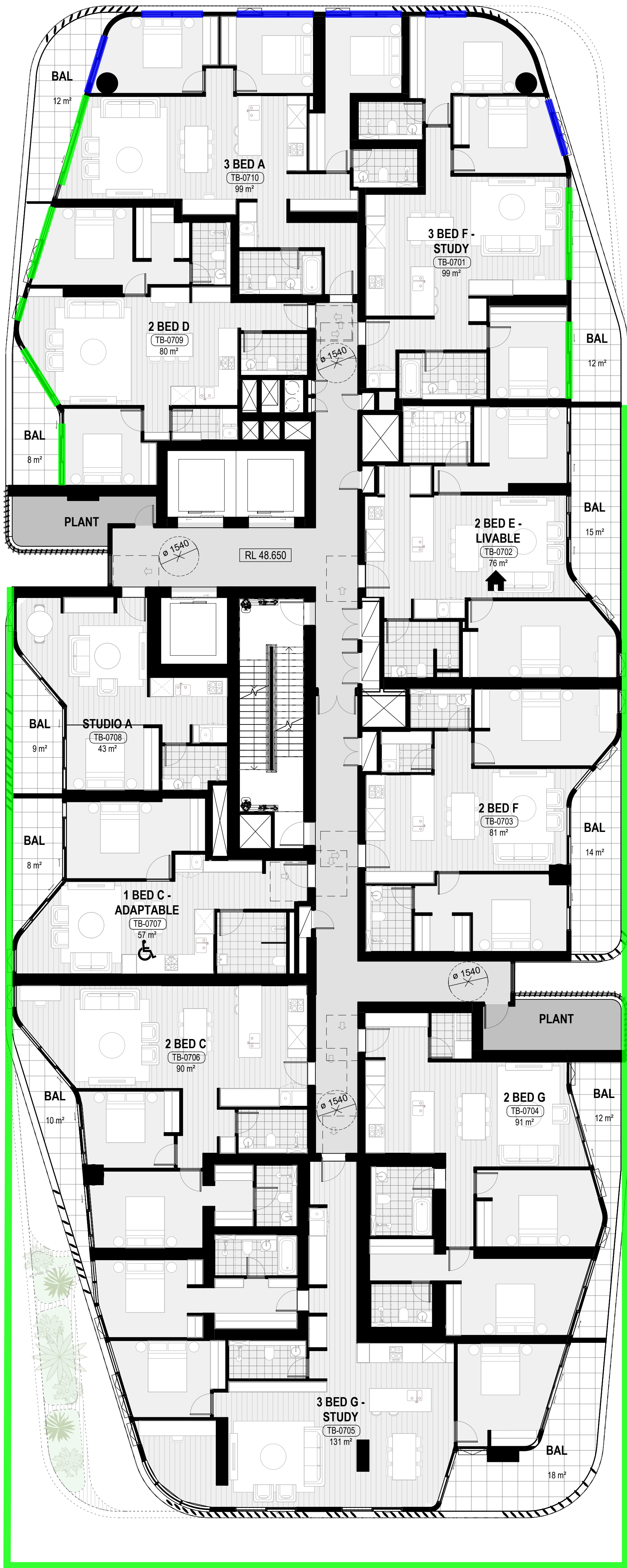
Checker

Rev

Rev

WORK IN PROGRESS (WIP), NOT FOR CONSTRUCTION

PRINT IN COLOUR AR-DA-2308 K



Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

ENTIAL LEVEL 07-09

2 TOWER B - RESIDENTIAL LEVEL 10
1: 100

3 TOWER B - RESIDENTIAL LEVEL 11-13
1: 100

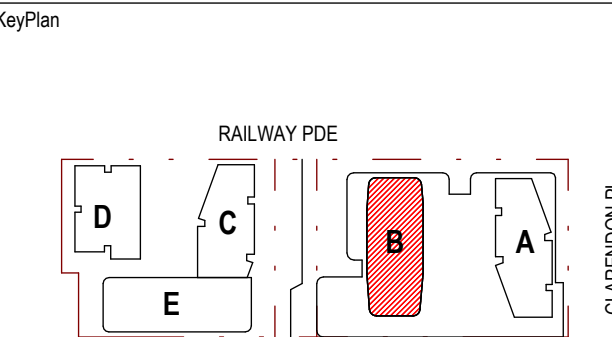
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	06/04/24
G	-	30/04/24
H	-	31/05/24
I	-	28/06/24
J	-	15/07/24
K	FOR S455 SUBMISSION	29/09/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVEABLE UNITS



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.studio.sc.com.au +61 2 9557 3988

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1: One Chifley Square, Sydney NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect

EDWARD SALIB

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER B - LEVELS 14-17

Project Status

DEVELOPMENT APPLICATION (S4.55)

Scale

1: 100 @ A0

Bar Scale 1:100

Project No

2023055

Author

2023055

Checker

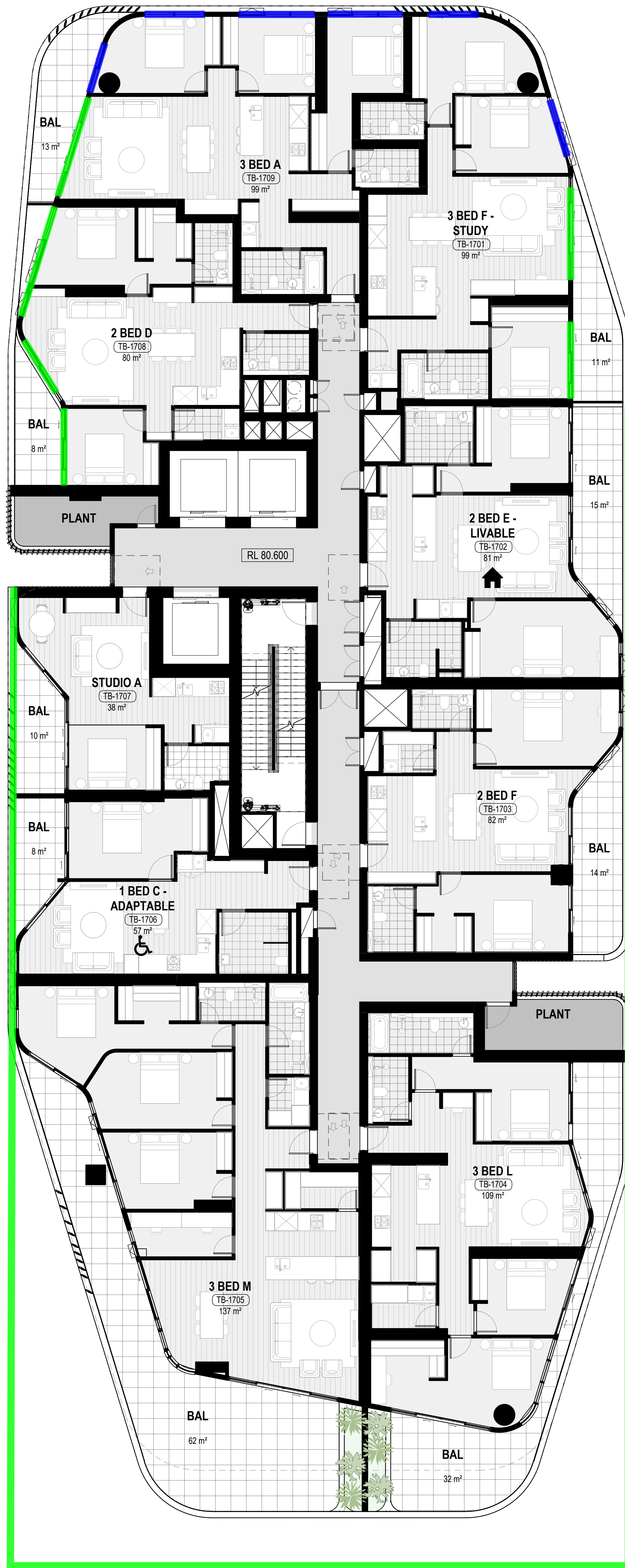
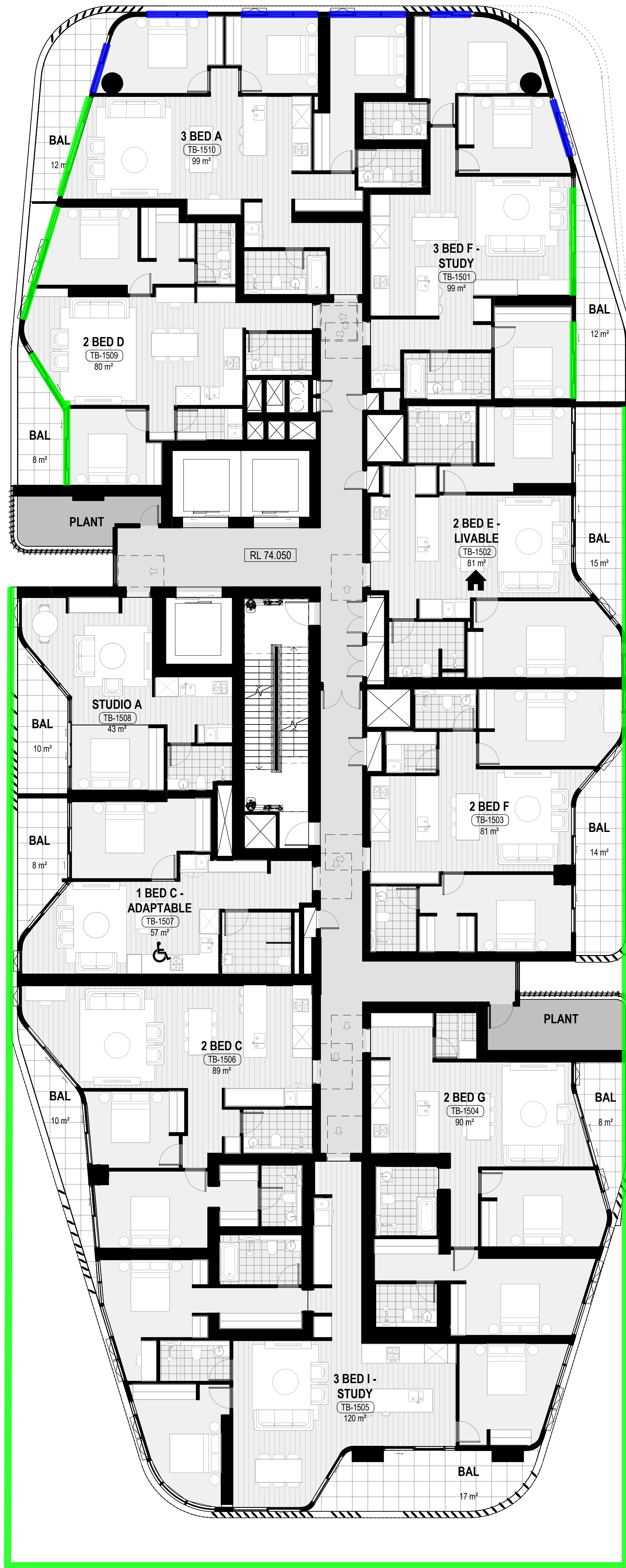
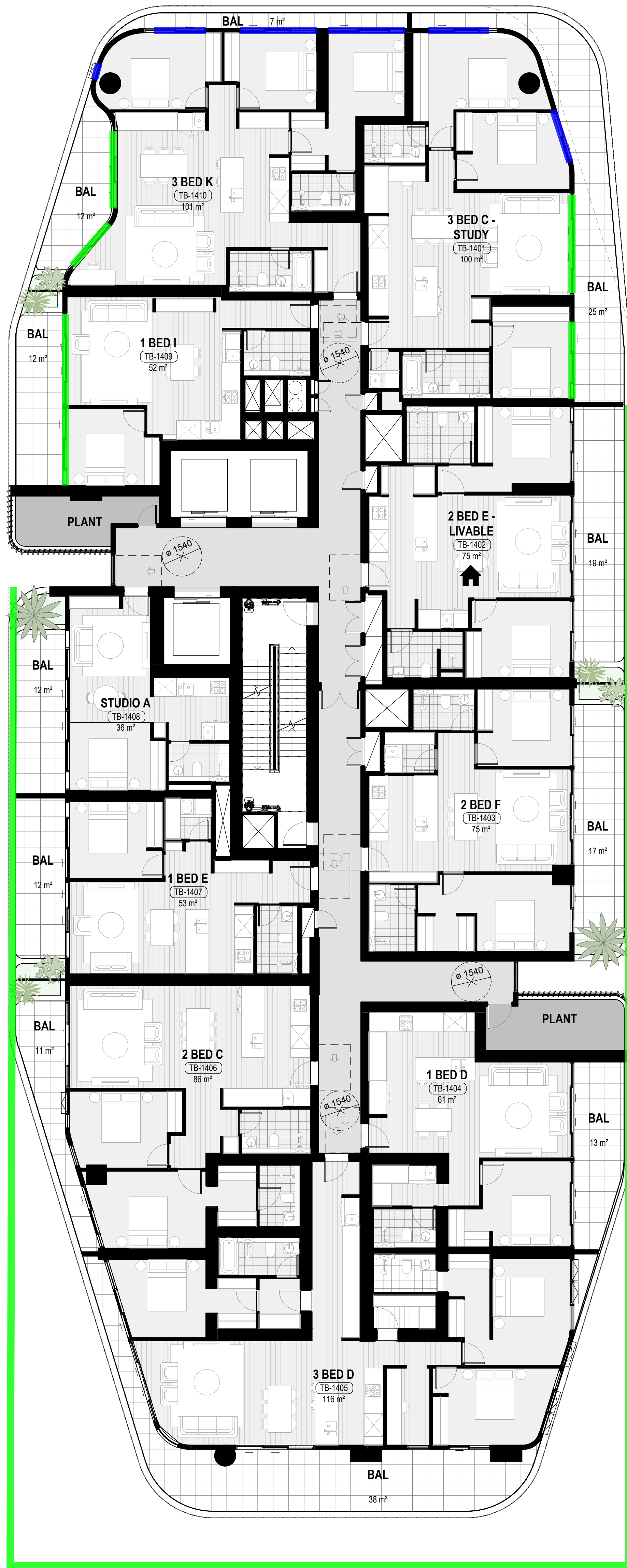
2023055

Rev

K

WORK IN PROGRESS (WIP), NOT FOR CONSTRUCTION

PRINT IN COLOUR AR-DA-2309



Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

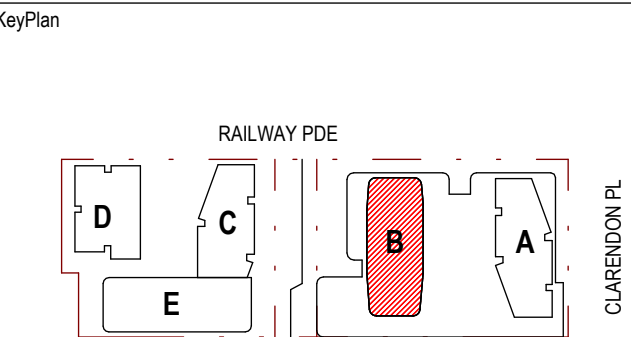
ENTIAL LEVEL 14

2 TOWER B - RESIDENTIAL LEVEL 15-16
1: 100

3 TOWER B - RESIDENTIAL LEVEL 17
1: 100

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B		13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D		01/03/24
E		28/03/24
F		06/04/24
G		30/04/24
H		31/05/24
I		28/06/24
J		15/07/24
K	FOR S4.55 SUBMISSION	29/09/24

- General Notes**
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY



Client
HOLDMARK
Architect

Studio.SC
Formerly Scot Carver

Level 1 - One Chifley Square, Sydney NSW, 2000, Australia
www.studio.sc.au +61 2 9557 3988

Consultants
Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect
Project
EDWARD SALIB
9469

BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD NSW
Drawing Title
TOWER B - LEVELS 18-20

Project Status
DEVELOPMENT APPLICATION (S4.55)

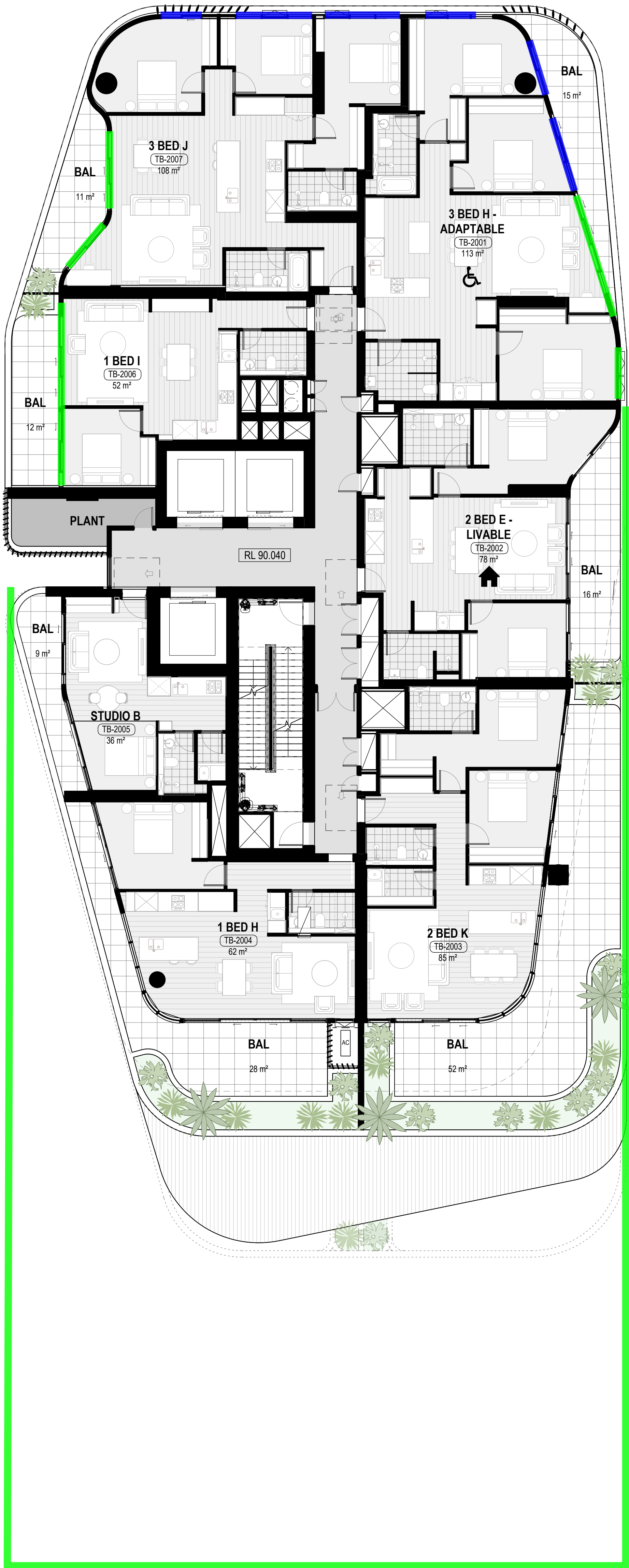
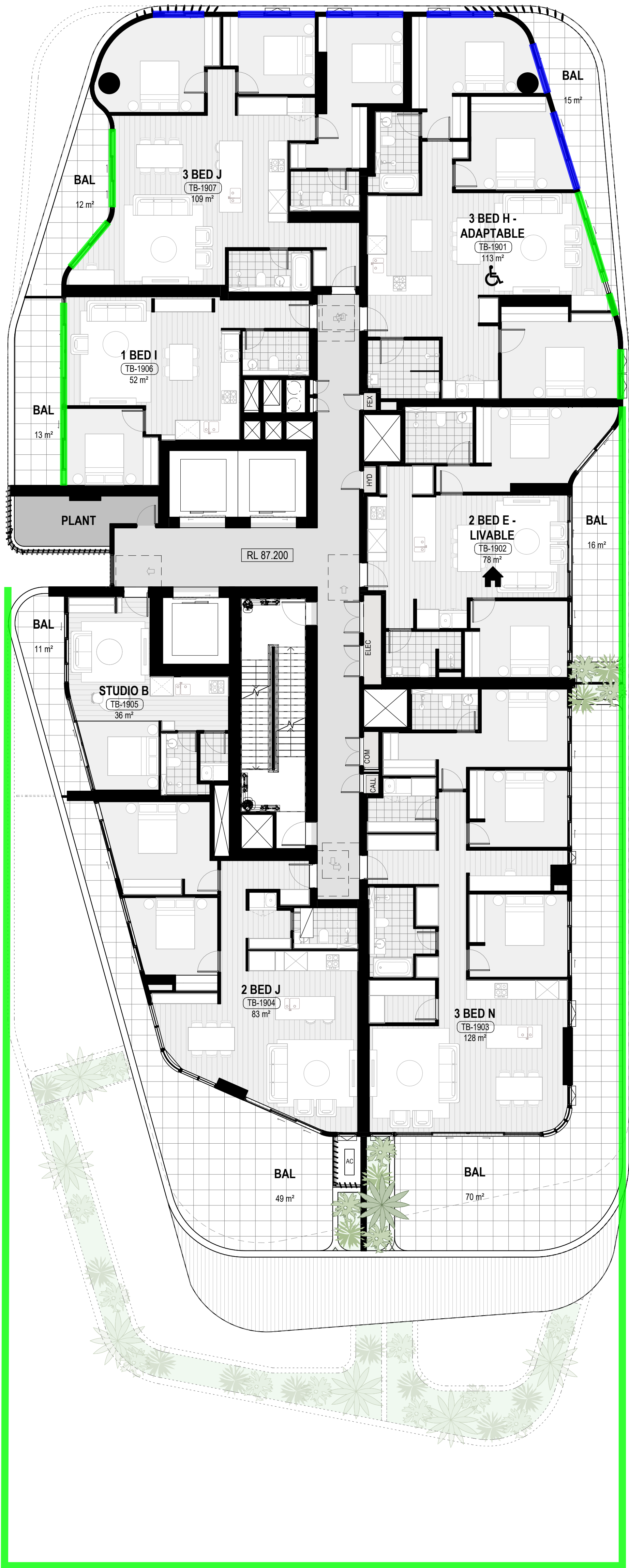
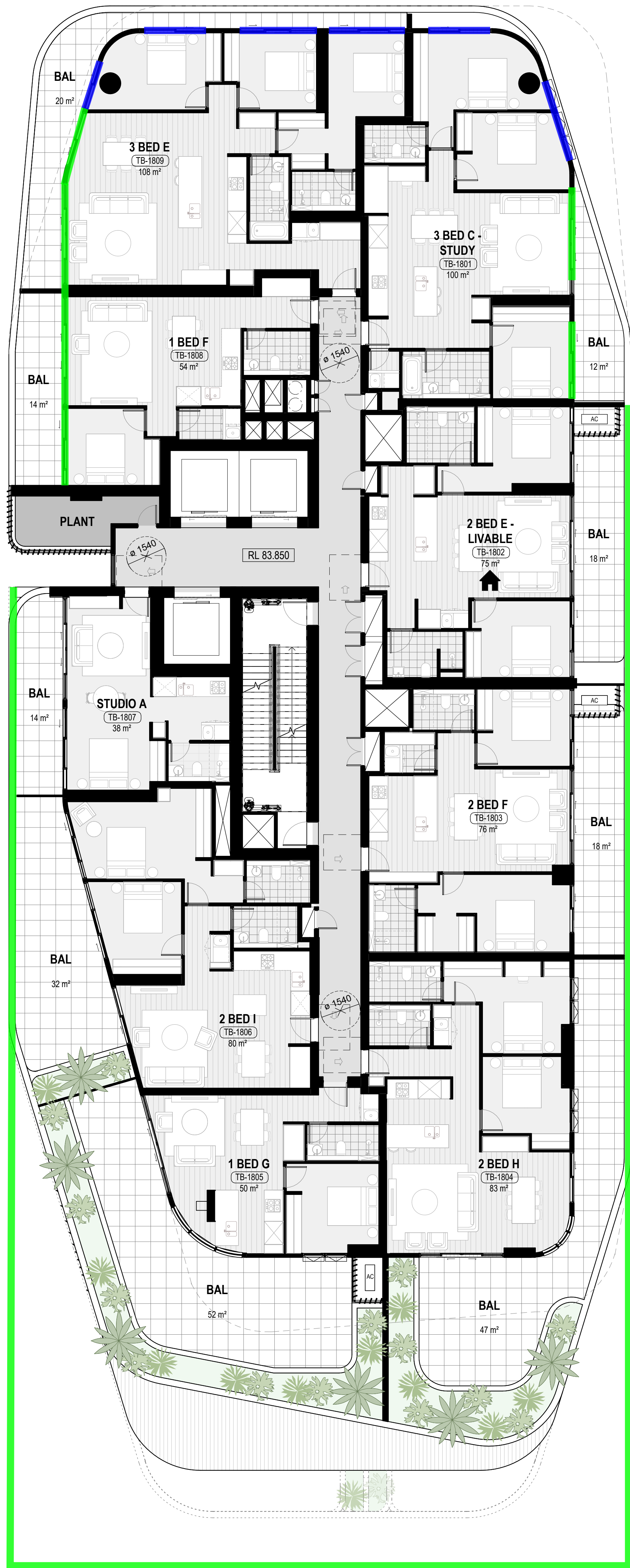
Scale
1 : 100 @ A0
North Point

Bar Scale 1:100
0 1 2 3 4 5 m

Project No
2023055
Author
Checker

Dwg No
AR-DA-2310
Rev
K

WORK IN PROGRESS (WIP). NOT FOR CONSTRUCTION



Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

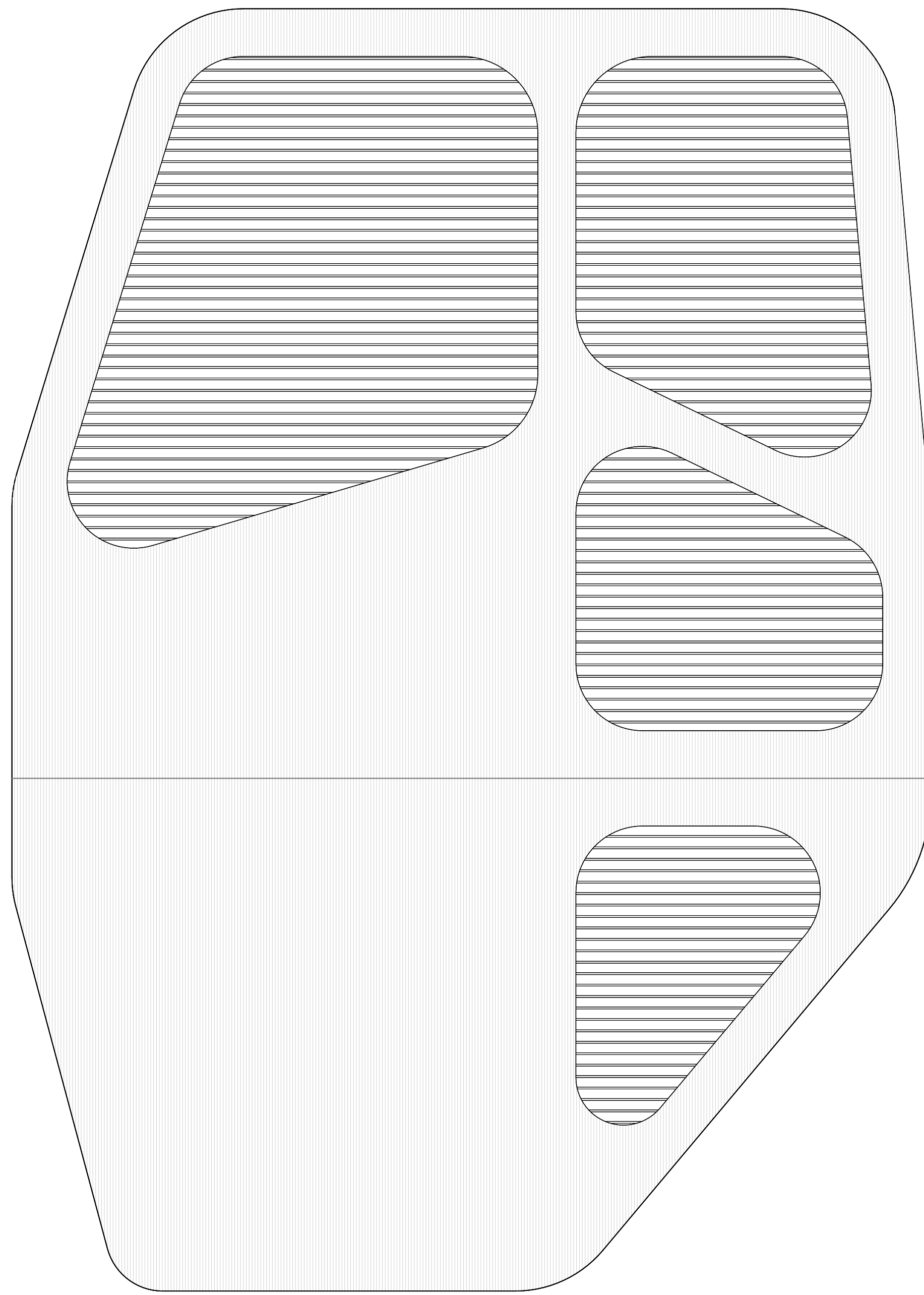
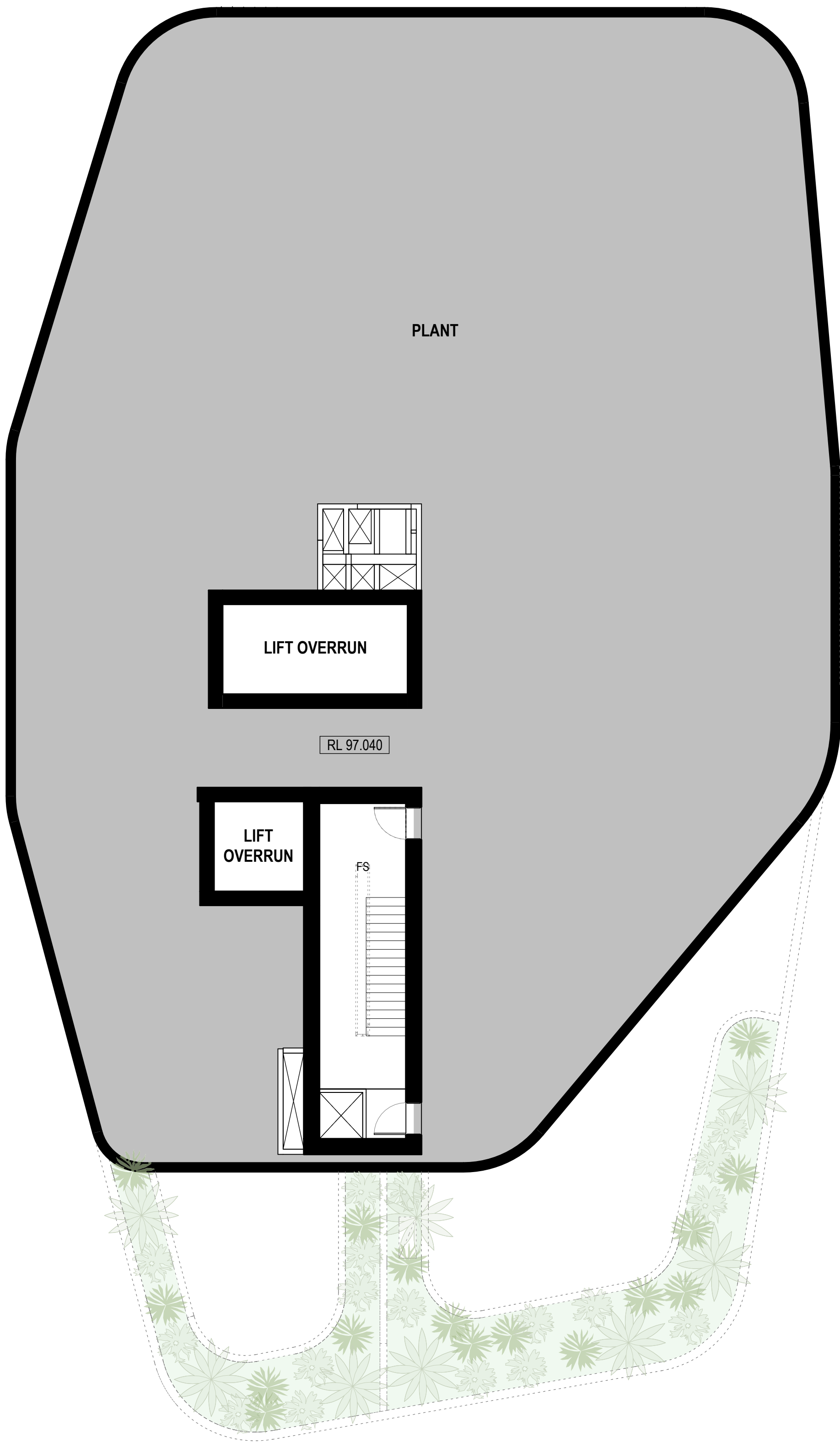
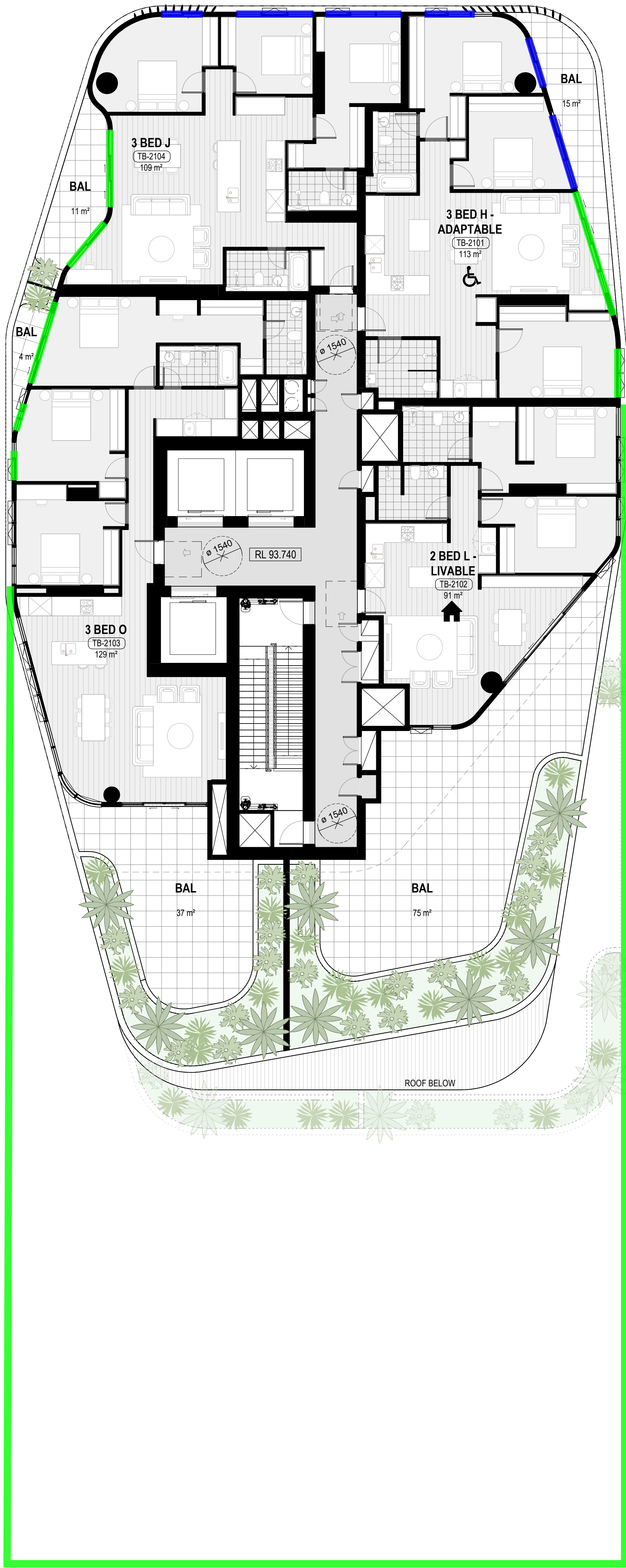
Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

ENTIAL LEVEL 18

2 TOWER B - RESIDENTIAL LEVEL 19
1 : 100

3 TOWER B - RESIDENTIAL LEVEL 20
1 : 100



Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0



ACOUSTIC
LOGIC

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

RESIDENTIAL LEVEL 21

3 TOWER B - RESIDENTIAL PLANT ROOM
1:100

2 TOWER B - ROOF LEVEL
1:100

Rev# Description Date

A FOR DEVELOPMENT APPLICATION 12/02/21

B 13/05/21

C FOR DEVELOPMENT APPLICATION 03/06/22

D 01/03/24

E - 28/03/24

F - 06/04/24

G - 30/04/24

H - 31/05/24

I - 28/06/24

J - 15/07/24

K FOR \$4.55 SUBMISSION 29/09/24

General Notes

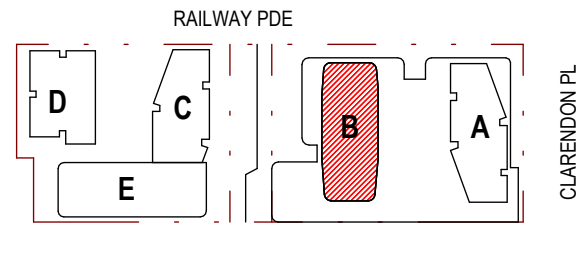
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

 ADAPTABLE UNITS

 LIVEABLE UNITS

KeyPlan



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scott Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire / Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsay Surveyors Pty Ltd
www.ramsay.com.au

Nominated Architect

Reg. No

EDWARD SALIB 9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD NSW

Drawing Title

TOWER B - LEVEL 22 & PLANT

Project Status

DEVELOPMENT APPLICATION (\$4.55)

Scale

1:100 @ A0



Bar Scale 1:100

Project No

2023055

Drawn By

Author

Check By

Checker

Drawn By

Rev

PRINT IN COLOUR

AR-DA-2311

K

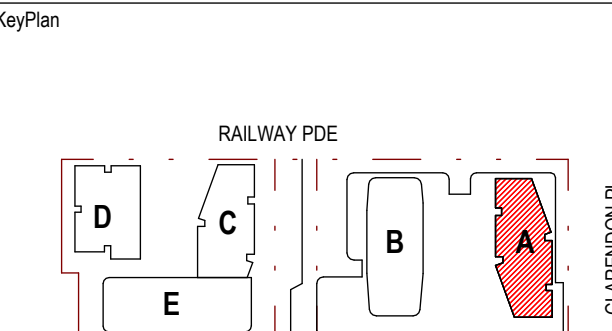
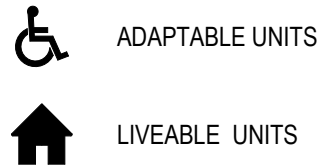
WORK IN PROGRESS (WIP), NOT FOR CONSTRUCTION

Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	30/04/24
G	-	31/05/24
H	-	28/06/24
J	-	16/07/24
K	FOR S455 SUBMISSION	26/08/24

General Notes

- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS



Client
2-4 Chifley Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK
Studio.SC
Formerly Scott Carter

Level 1 - One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.au +61 2 9557 3988

Consultants
Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsey Surveyors Pty Ltd
www.ramsey.com.au

Nominated Architect
EDWARD SALIB
9469

Project
BURWOOD PLACE
42-60 RAILWAY PARADE, BURWOOD, NSW

Drawing Title
TOWER A - LEVEL 4-34

Project Status
DEVELOPMENT APPLICATION

Scale
1: 100 @ A0

Bar Scale 1:100

Project No
20230055

Dwg No
Author
Check By
Rev

PRINT IN COLOUR
AR-DA-2313
K

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0



Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/alternative ventilation methodologies can be used

TOWER A - RESIDENTIAL LEVELS 4-16, 18-34

2 TOWER A - RESIDENTIAL LEVEL 17 - INTERMEDIATE PLANT
1: 100

1 TOWER A - LEVELS 4-16, 18-34
1: 100

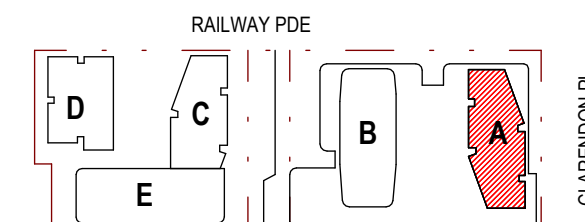
Rev#	Description	Date
A	FOR DEVELOPMENT APPLICATION	12/02/21
B	-	13/05/21
C	FOR DEVELOPMENT APPLICATION	03/06/22
D	-	01/03/24
E	-	28/03/24
F	-	30/04/24
G	-	31/05/24
H	-	28/06/24
J	-	16/07/24
K	FOR S455 SUBMISSION	29/08/24

- General Notes**
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
 - ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
 - IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
 - DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

- ADAPTABLE UNITS
- LIVEABLE UNITS

KeyPlan



Client

2-4 Gifford Avenue
Macquarie Park NSW
2113 Australia
www.studio.sc.au
+61 2 9657 5540

HOLDMARK

Architect

Studio.SC
Formerly Scott Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.au +61 2 9657 5988

Consultants

Structural Engineer

Van Der Meer

www.vandermeer.com.au

Mechanical / Electrical / Fire Hydraulic Engineer

Goldfish and Bay

www.goldfishandbay.com.au

Vertical Transportation Engineer

KONE Elevators Pty Ltd

www.kone.com.au

Civil Engineer

Van Der Meer

www.vandermeer.com.au

Landscape Architect

Place Design Group

www.placeandgroup.com

Surveyor

Ramsay Surveyors Pty Ltd

www.ramsay.com.au

Nominated Architect

EDWARD SALIB

Reg. No

9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD, NSW

Drawing Title

TOWER A - LEVELS 35-38

Project Status

DEVELOPMENT APPLICATION

Scale

1 : 100 @ A0

Bar Scale 1:100

Project No

20230055

Dwg No

AR-DA-2314

Drawn By

Author

Check By

Checker

Rev

Rev

Rev

K

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0



- Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room
- Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies
- Open window can be relied upon for natural ventilation

- If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used

TOWER A - RESIDENTIAL LEVEL 35

TOWER A - RESIDENTIAL LEVELS 36-37

TOWER A - RESIDENTIAL LEVEL 38

Acoustic Logic
Ventilation Mark Up
Date: 12/08/2024
Rev: 0



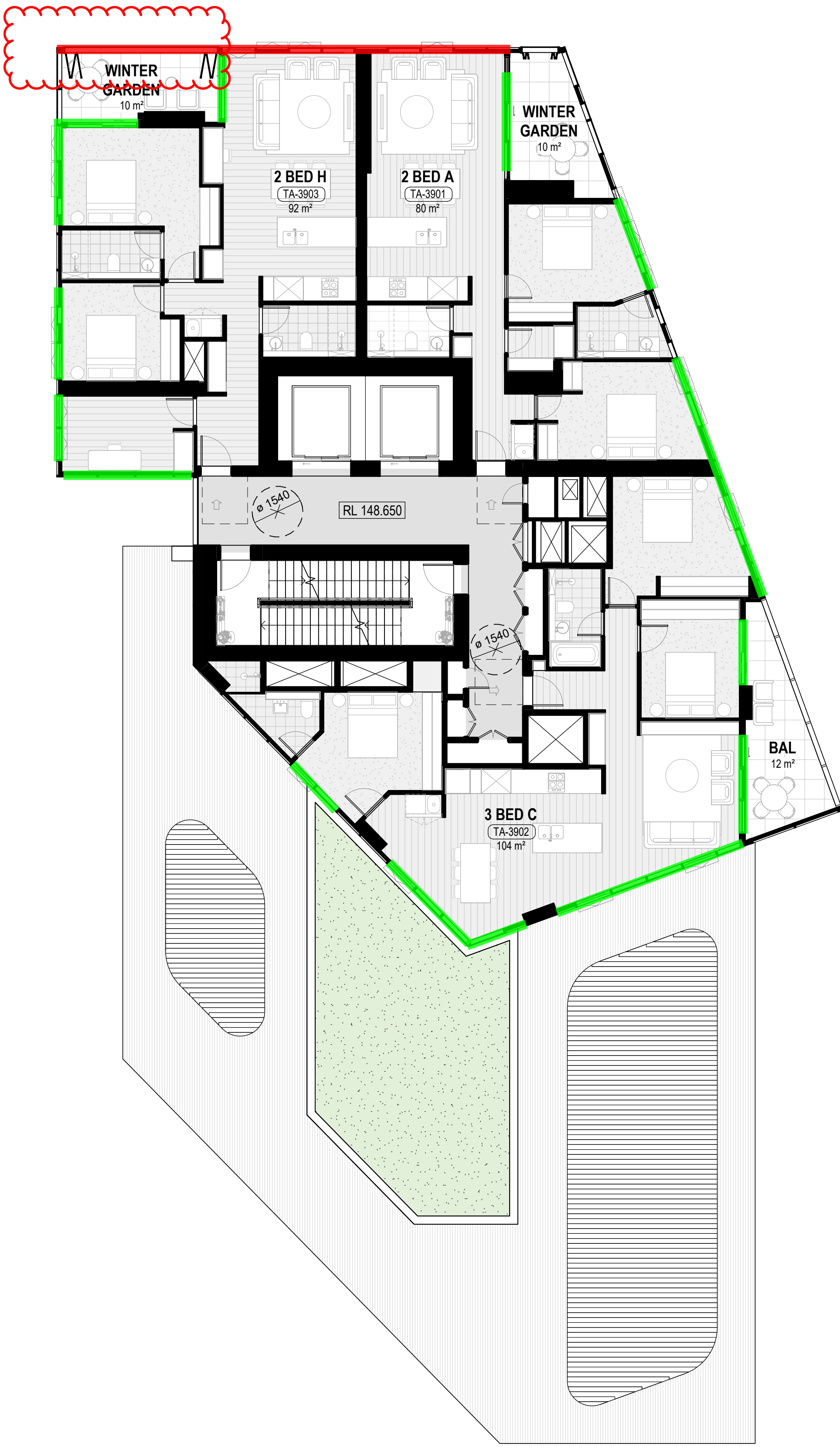
ACOUSTIC
LOGIC

Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated from other facade in the same room

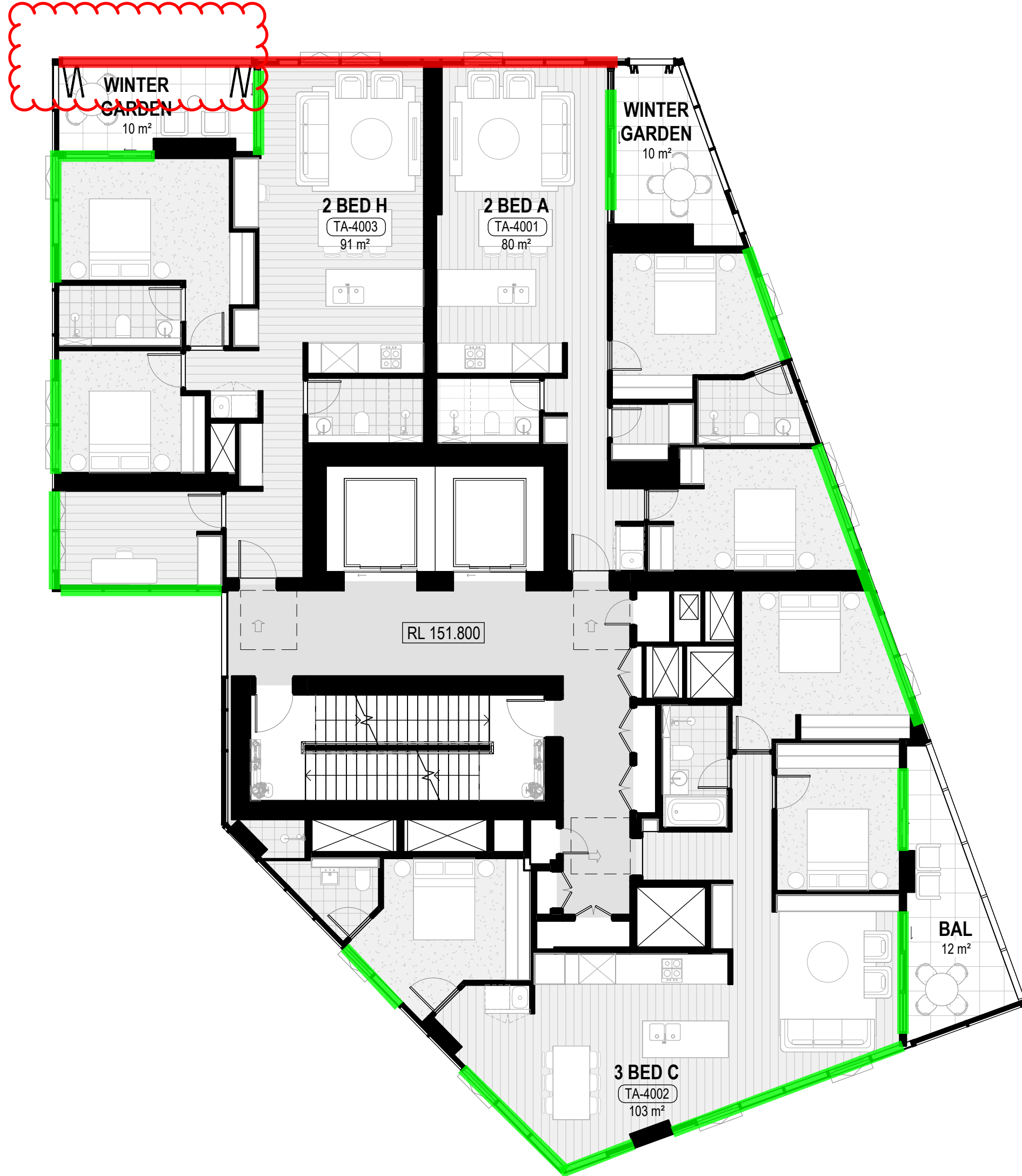
Open window/door cannot be relied upon for natural ventilation, however room can be naturally ventilated with borrowed air or use alternative ventilation methodologies

Open window can be relied upon for natural ventilation

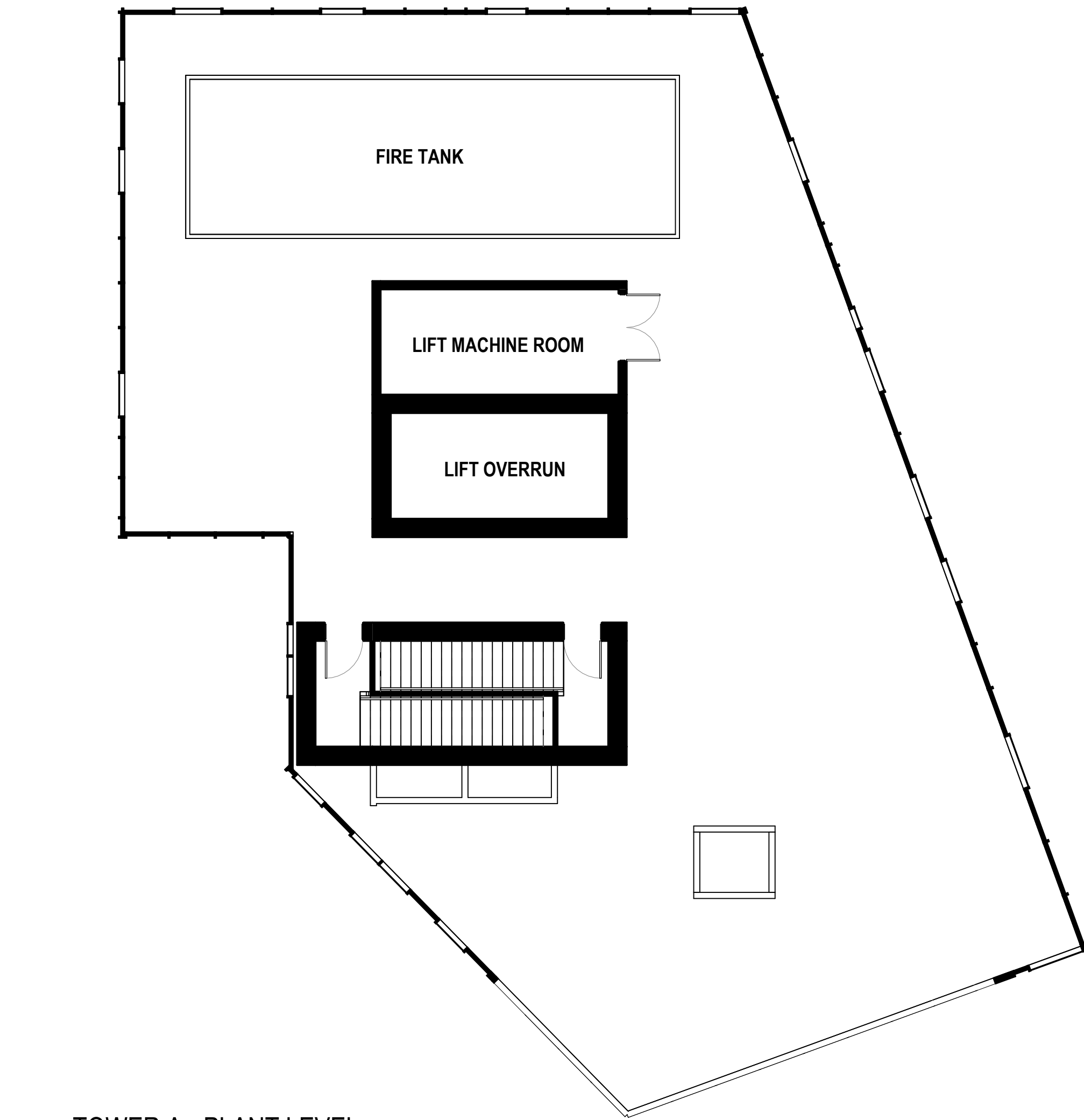
If can be enclosed or operably enclosed, bedroom can utilise open window for natural ventilation, else borrowed air/ alternative ventilation methodologies can be used



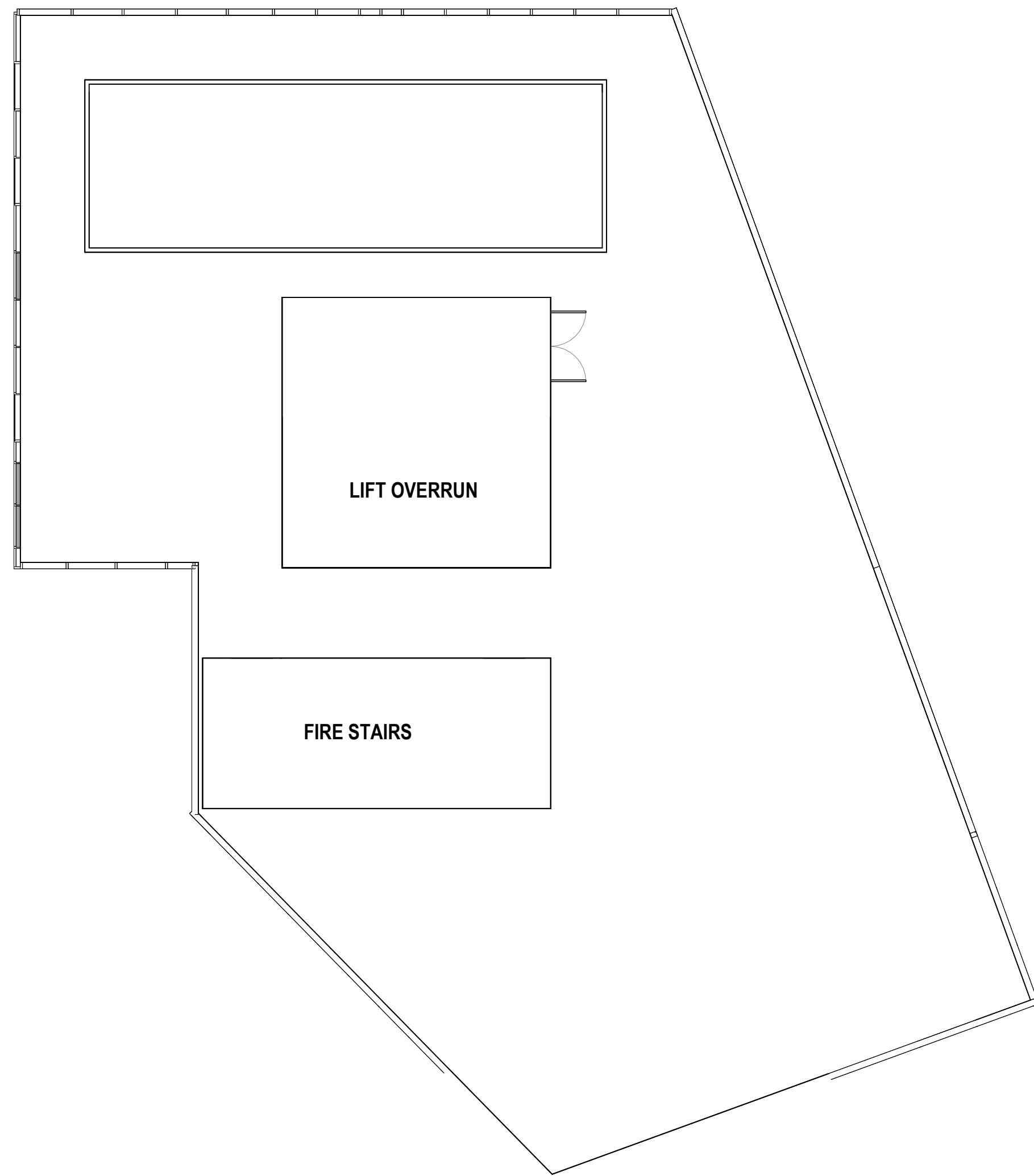
TOWER A - RESIDENTIAL LEVEL 39



TOWER A - RESIDENTIAL LEVEL 40,41



TOWER A - PLANT LEVEL



TOWER A - ROOF LEVEL

Rev# Description Date

A FOR DEVELOPMENT APPLICATION 12/02/21

B 13/05/21

C FOR DEVELOPMENT APPLICATION 03/06/22

D 01/03/24

E - 28/03/24

F - 30/04/24

G - 31/05/24

H - 28/06/24

J - 16/07/24

K FOR S455 SUBMISSION 29/08/24

General Notes

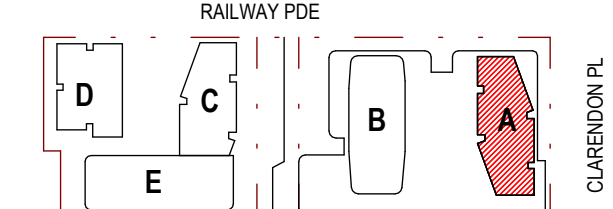
- THIS DOCUMENT IS THE COPYRIGHT OF STUDIO.SC
- ALL INFORMATION ILLUSTRATED ON THIS DOCUMENT IS TO BE CHECKED AND VERIFIED ON SITE
- IN THE EVENT OF DISCREPANCIES REFER TO ARCHITECT PRIOR TO COMMENCEMENT OF THE WORK
- DO NOT SCALE DRAWINGS MANUALLY OR ELECTRONICALLY

LEGEND - PLANS

 ADAPTABLE UNITS

 LIVEABLE UNITS

KeyPlan



Client

2-4 Giffnock Avenue
Macquarie Park NSW
2113 Australia
www.holdmark.com.au
+61 2 8695 5540

HOLDMARK

Architect

Studio.SC
Formerly Scot Carver

Level 1, One Chifley Square, Sydney, NSW, 2000, Australia
www.studio.sc.com.au +61 2 9557 3988

Consultants

Structural Engineer
Van Der Meer
www.vandermeer.com.au

Mechanical / Electrical / Fire / Hydraulic Engineer
Goldfish and Bay
www.goldfishandbay.com.au

Vertical Transportation Engineer
KONE Elevators Pty Ltd
www.kone.com.au

Civil Engineer
Van Der Meer
www.vandermeer.com.au

Landscape Architect
Place Design Group
www.placedesigngroup.com

Surveyor
Ramsay Surveyors Pty Ltd
www.ramsay.com.au

Nominated Architect

Reg. No

EDWARD SALIB 9469

Project

BURWOOD PLACE

42-60 RAILWAY PARADE, BURWOOD, NSW

Drawing Title

TOWER A - LEVELS 39-41, PLANT & ROOF

Project Status

DEVELOPMENT APPLICATION

Scale

1 : 100 @ A0

0 1 2 3 4 5 m

Bar Scale 1:100

Project No

20230055

Author

Checker

Drawn By

Rev

Project No

20230055

Author

Checker

Drawn By

Rev

PRINT IN COLOUR

AR-DA-2315

K