

24th of June 2026

Project No.: P03538

Lani Bezzina
Walker 47 First Avenue Pty Ltd



E-LAB Consulting
Level 6/200 Adelaide Street
Brisbane QLD 4000

ABN: 84 647 520 634

Dear Lani,

Noise Impact Assessment
Address: Lot 30, 51 First Avenue Maroochydore

This report presents the noise impact assessment of the proposed residential development to be located on Lot 30, First Avenue Maroochydore.



The proposed development is surrounded by the following:

1. Corso Residential (existing);
2. Surrounding road network
3. Future Metro bus connection via First Avenue.

1. SURROUNDING ENVIRONMENT

1.1. Noise Environment

The surrounding noise is influenced by low to moderate level traffic noise as well as activities within the surrounding areas. The impacts associated with The Corso residential site are addressed in Section 1.3.

Background noise levels are referenced from the locations indicated in image below. B1 was in a free-field position at 4metres from the road, and at a height of 1.5metres above ground surface level. The weather observations for the period between the 3rd of May and the 11th of May 2026 indicate suitable conditions with minimal interference from rain events.

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9 am						3 pm					
		Min	Max				Dir	Spd	Time	Temp	RH	Cld	Dir	Spd	MSLP	Temp	RH	Cld	Dir	Spd	MSLP
		°C	°C					km/h	local	°C	%	g th		km/h	hPa	°C	%	g th		km/h	hPa
3	Su	18.9	25.5	0			SE	39	01:47	22.9	72		S	17	1021.0	24.3	68	5	SE	20	1018.3
4	Mo	18.1	26.0	0.8			SE	28	14:20	21.8	87	8	SSW	11	1018.2	24.8	73		SE	20	1015.7
5	Tu	19.3	25.5	0.4			SE	26	11:16	23.5	76		S	17	1017.6	23.9	77		SE	15	1015.0
6	We	18.9	26.1	0.2			SSE	39	17:06	23.6	76		S	19	1017.6	24.7	73		SSE	20	1015.3
7	Th	18.9	26.2	0			WSW	26	22:03	23.7	76	1	SW	7	1016.7	24.2	73	8	SSE	9	1013.9
8	Fr	11.2	21.5	0			WSW	31	01:12	17.7	29		SSW	24	1020.6	20.3	37		E	13	1017.5
9	Sa	8.1	23.7	0			SE	35	13:02	19.4	55		SSW	13	1022.7	22.4	56		SSE	22	1021.3
10	Su	12.4	24.4	0			SSE	39	12:28	21.6	63		SSW	24	1025.7	19.6	85	8	SSE	20	1024.6
11	Mo	17.8	24.9	1.0			S	50	12:39	21.5	74	2	S	24	1027.0	20.5	81	8	S	26	1025.2
12	Tu	17.3	24.0	8.4			SE	50	11:11	21.6	75	8	S	20	1028.2	21.2	71	8	SSE	31	1025.1

However, given the minor rain events, the selected location was compared against the 20 December 2024 approval DEV2024/1553 which provided the same noise levels as in May 2026 and have therefore been considered as suitable. The measurements were conducted in general accordance with the Australian Standard AS1055 and the Transport Noise Management Code of Practice and Noise Measurement Manual QLD.

Day	RBL L ₉₀ dB(A)			L _{eq} dB(A)		L _{10, 18hr}
	Day	Evening	Night	Day	Night	
Thursday	-	45	42	-	53	-
Friday	51	45	41	61	53	60
Saturday	46	43	39	56	52	54
Sunday	44	45	40	52	53	52
Monday	52	-	-	61	-	-
Average	48	44	40	58	53	55

The above values have also been compared against the MCU22/0145 (approved on the 2nd of August 2023) which provided higher values for evening and night but 3dB(A) values lower during the day. On that basis, the lower values of all of these have been applied for RBL L₉₀ to be conservative.



The values at location B2 provided lower RBL for the evening period in comparison to the B1:

Day (7am – 6pm): 48dB(A) L_{90} RBL

Evening (6pm-10pm): 43dB(A) L_{90} RBL

Night (10pm-7am): 40dB(A) L_{90} RBL

Overall, the surrounding noise environment has not been noted to change and is equivalent irrespective of the location. On that basis, the background noise level used on the assessment is as follows and based on the lowest values of each period:

- Day (7am – 6pm): 45dB(A) L_{90} RBL
- Evening (6pm-10pm): 43dB(A) L_{90} RBL
- Night (10pm-7am): 40dB(A) L_{90} RBL

1.2. Road Traffic Noise

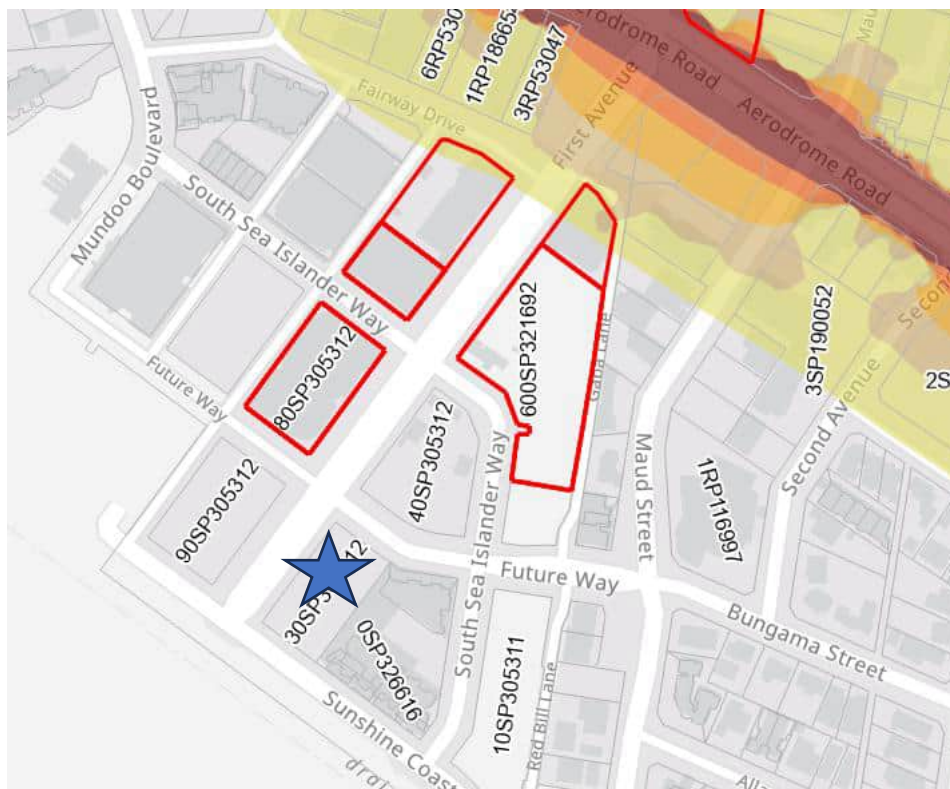
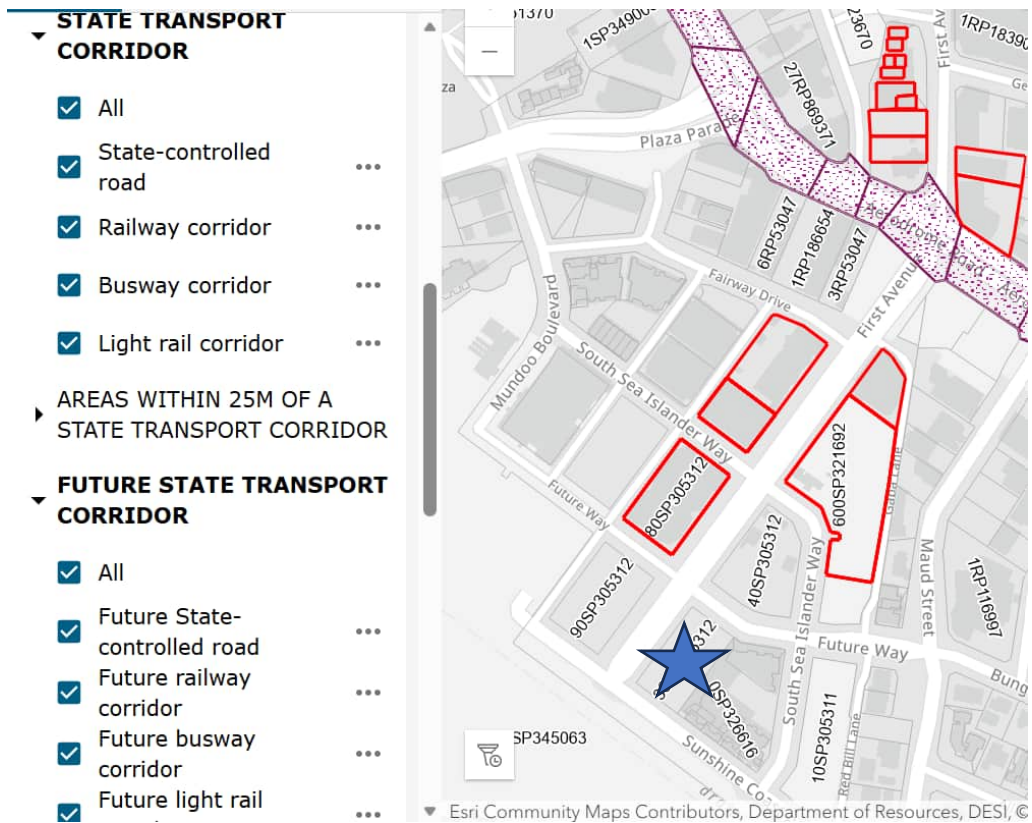
The site is not within the State Transport Noise Corridor and not indicated within Future State transport corridor (busway, light rail and state-controlled road).

On that basis, the traffic noise impacts onto the development will not be certified under the State Code. However, for the purposes of predicting indoor noise level compliance with recommendations in AS/NZS2107:2016 ($\leq 45\text{dB(A)}_{\text{Leq,av,1hr}}$ during day in living and working areas and $\leq 40\text{dB(A)}_{\text{Leq,av,1hr}}$ during night in sleeping areas), calculations of traffic noise impacts have been carried out based on the following input obtained from nearby developments (42 First Avenue):

- First Avenue traffic flow data: 9,048 vehicles during 18hour period and 60km/h speed limit with 10% heavy vehicles.

This provides a higher calculated impact than currently measured as the surrounding sites have not been fully developed. The predicted impact leads to $66\text{dB(A)}_{L_{10,18hr}}$ based on the distance and CoRTN calculation method, and $69\text{dB(A)}_{\text{Leq,av,1hr}}$ day and $64\text{dB(A)}_{\text{Leq,av,1hr}}$ night. This is considered conservative as it would result in equivalent outcomes as currently experienced along Aerodrome Road. Given the additional distance and height from the road, the traffic noise impacts onto the first residential levels have been calculated to be $68\text{dB(A)}_{\text{Leq,1hr}}$ during day and $63\text{dB(A)}_{\text{Leq,1hr}}$ during night-time.

The Metro bus line is acknowledged; however, First Avenue is not indicated within Future State transport corridor. Given the current predictions of ultimate traffic flows leading to $>6\text{dB(A)}$ higher impacts than the measured values, and the traffic information considering already 10% of heavy vehicles, the First Avenue metro buses are not predicted to increase the currently calculated conservative noise impacts, given also that the Metro but fleet (Brisbane example) would utilize electric vehicles which would be much quieter compared to the baseline CoRTN heavy vehicle assumptions. On that basis, the recommended glazing systems are based on the predicted higher noise impacts and not currently measured noise impacts.



1.3. The Corso

Site inspection on the 27th of April 2026 did not identify any notable impacts from The Corso Residential (DEV2020/1121/9, dated 27 Oct 2022) site on the ground level which would influence the façade design of the apartments above podium levels, however, the following noise generation has been considered:

1. Carparking – fully solid concrete enclosure facing Lot 30 (up to Level 4), thus limiting the noise impacts which would not lead to any façade upgrade requirements.
2. Mechanical plant – apartments have individual balcony A/C condensers, nominally not closer than 4.7metres from the Lot 30 boundary and not less than 14metres from closest apartments within Lot 30. The impacts have been considered based on typical Condenser selection of 60dB(A) at 1 metre which leads to a predicted 37dB(A)_{Leq,T} noise impact per condenser. With the combined condensers indicated on the plans of the approval, the glazing selection of Lot 30 can be limited to R_w29-32 to achieve the proposed indoor noise levels.
3. The Corso includes BBQ Dining and communal areas on Level 4 Podium with a function room which are facing Lot 30. The rest of the communal areas are facing away from Lot 30 and would therefore have limited impact. The noise emissions are based on typical similar spaces which are modelled based on residents spread across the area and emitting sound power level of 85dB(A)_{Leq,T}. The centre of the communal area is not closer than 20metres from the proposed facades of the Lot 30 residential apartments, thus the impact is calculated to be 51dB(A)_{Leq,T}. This allows the highest rated glazing to be rated at R_w32 to achieve the proposed indoor noise levels



1.4. Other Surrounding Sites

Site inspection on the 27th of April 2026 did not identify any notable impacts from other surrounding activities and on that basis, the proposed building construction shall be based on the traffic noise (Section 1.2) and The Corso noise impacts (Section 1.3).

2. SITE NOISE EMISSIONS

2.1. Mechanical Plant Noise Limits

Environmental Protection Act 1994 has been referenced which sets noise emission limits for the on-site air-conditioning and mechanical plant. Based on the default noise standards, the following apply:

1. Air-conditioning and general (440U):
 - a. Day (7am to 6pm) + 5
 - b. Evening (6pm to 10pm) +3
 - c. Night (10pm to 7am) +3
2. Pumps (440T):
 - a. Day (7am to 6pm) + 5
 - b. Evening (6pm to 10pm) +3
 - c. Night (10pm to 7am): noise must not be 'clearly audible'.

The following background noise levels have been determined as relevant for the site

Background Noise Level L_{90} , dB(A)		
Day (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
45	43	40

On the above basis, the following limits are applied for the site:

1. Air-conditioning and general (440U):
 - a. Day (7am to 6pm): 50dB(A)
 - b. Evening (6pm to 10pm): 46dB(A)
 - c. Night (10pm to 7am): 43dB(A)
2. Pumps (440T):
 - a. Day (7am to 6pm): 50dB(A)
 - b. Evening (6pm to 10pm): 43dB(A)
 - c. Night (10pm to 7am): noise must not be 'clearly audible'.

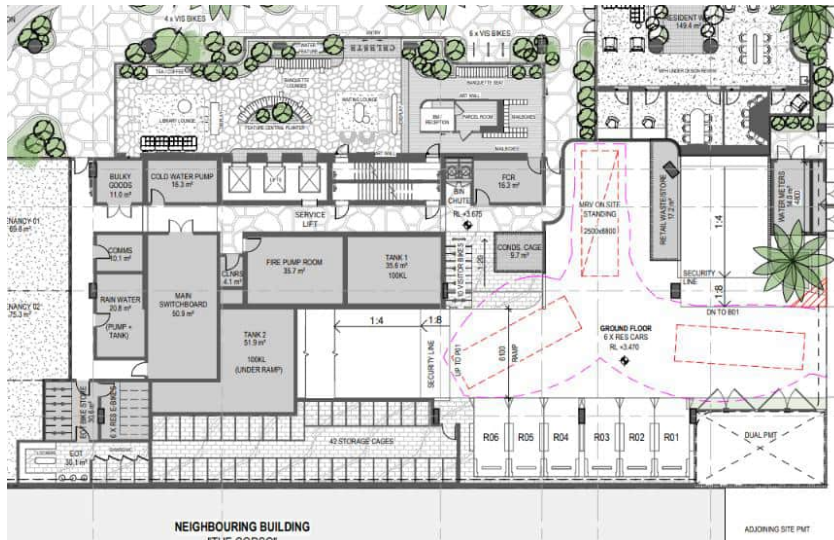
2.2. Mechanical Plant Noise Emissions

The proposed development will include ancillary mechanical services plant (e.g. condensers, exhaust fans etc). Once the mechanical plant selection is finalized, a full assessment of all selected plant shall be undertaken by a qualified acoustic consultant. All plant must be treated sufficiently to ensure compliance with the noise limits nominated in Section 2.1 are achieved.

2.2.1. Pump Room

Pump room is located on Ground Level and is in a fully enclosed room. On that basis, noise emissions are fully controlled to achieve compliance with Criteria in Section 2.1.





The top level pool and spa pump, heater etc selection is currently not known and must be acoustically treated to achieve compliance with the noise emission limits. Generally, these are in a fully enclosed space with some additional ventilation openings which are backed by lined duct/attenuator as required. Confirmation of selection and acoustic treatments to achieve noise emission limits must be provided by suitably qualified acoustic consultant.

2.2.2. Apartment Condensers

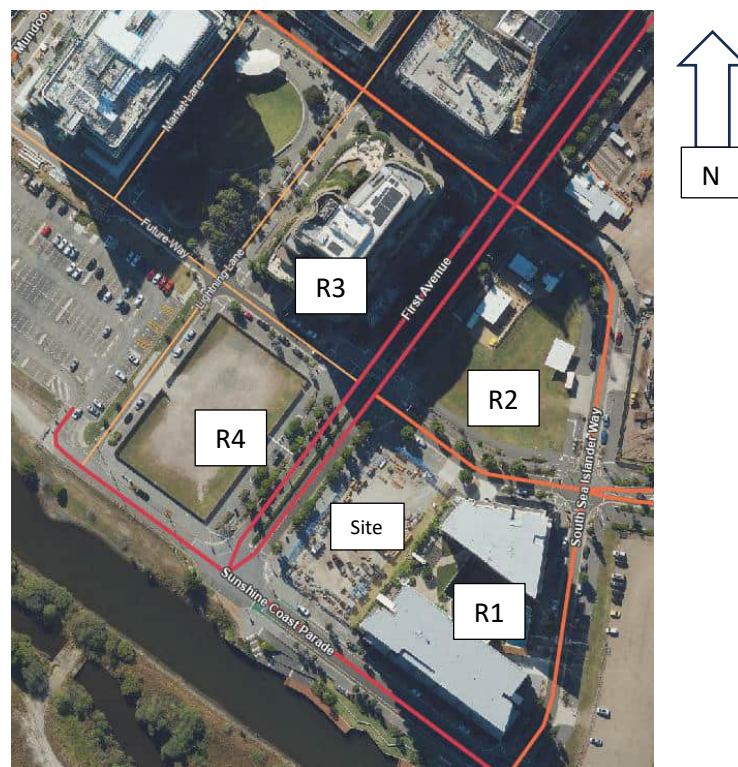
Apartment condensers are located in partially enclosed balconies along the Northern and Southern side of each floor.





All of the apartment level condenser decks are facing roads and would not be located closer than 20metres from surrounding sensitive receivers outside of the development:

- R1 – Residential receiver (>20metres, plus building shielding)
- R2 – Commercial use, >25metres
- R3 – Commercial use (Council), >50metres
- R4 – currently empty, >40metres



With a typical low noise condenser unit selection and activation of night time quiet mode, the impacts combined for all units can achieve the noise limits. Once the selection has finalized and day/night demand known, the selection must be confirmed by acoustic consultant.

Any other plant (fans, condensers etc) must be selected and acoustically treated as required to achieve noise emission limits, which must be confirmed by the acoustic consultant.

2.3. Other Noise Emissions

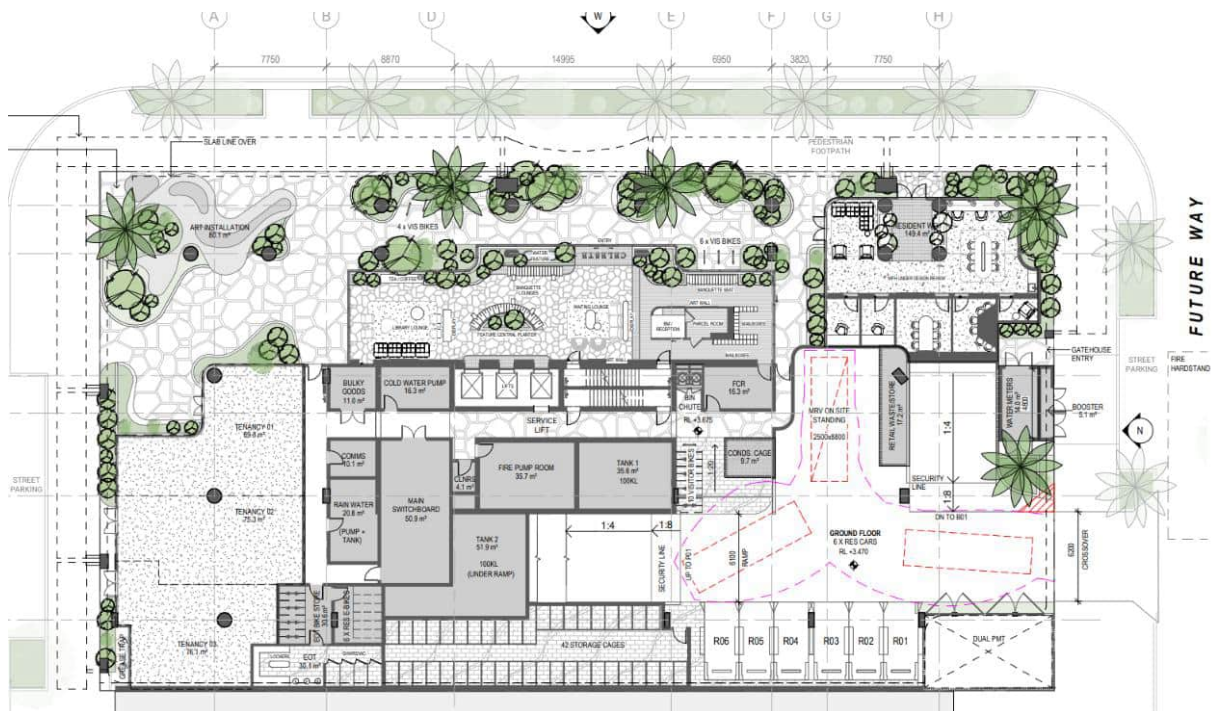
The following noise emissions have been considered:

1. Car parking Levels: car parking levels are naturally ventilated, however, solid enclosed wall is indicated toward 'The Corso' which is the closest existing residential site (R1). On that basis, impacts are controlled and compliance is predicted with the Acoustic Quality Objectives at this location. That said, it is recommended that the surface of the car parking and ramp levels is selected to limit the wheel squeal noise emissions to the noise sensitive receiver R1, and that any grate, plates etc are securely fastened to ensure rattling and noise emissions are avoided whilst cars drive over these elements.
2. Ground Level has a Tenancy area and Residents Work from Home area. The noise generation of the areas is low. With a typical small tenancy (e.g. F&B or commercial) indoor noise level of $<75\text{dB(A)}_{\text{Leq,T}}$, and considering the façade toward the Corso being fully enclosed and the openable façade toward South shall be of min 10mm glass, the controls are sufficient to achieve compliance with Acoustic Quality Objectives.

The following demonstrates the compliance:

75dB(A) indoors + 1dB(A) opened door area correction + 3dB(A) due to two tenancy doors facing road -31dB(A) distance to closest apartment (Corso apartments are elevated) -8dB(A) barrier shielding due to building edge = 40dB(A)_{Leq,T} (i.e. Compliant with the Acoustic Quality Objectives and 'background creep' defined as L₉₀+5dB(A) for time varying noise impacts).

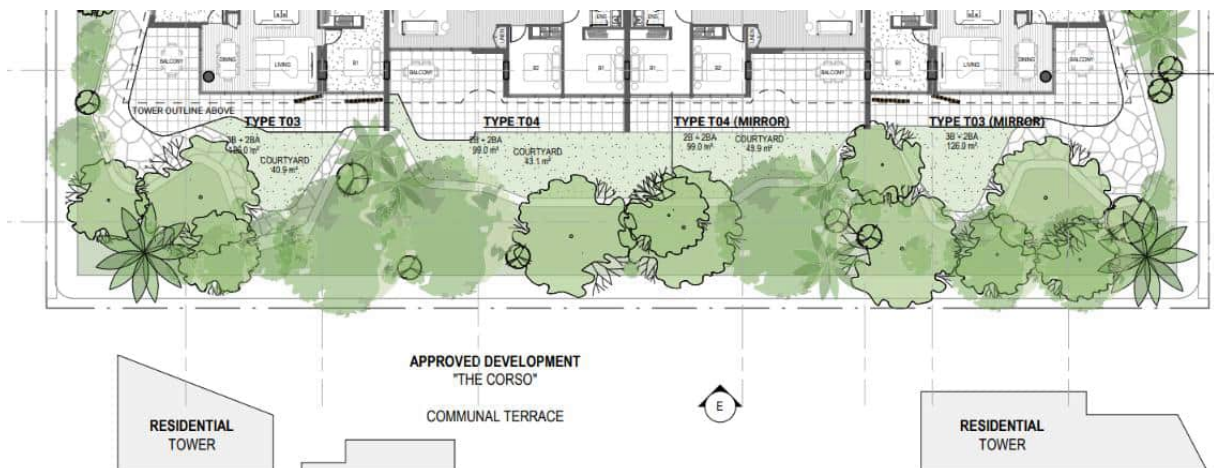
With these controls, noise is fully contained and shall achieve compliance with the Acoustic Quality objectives on the proviso that the doors are kept in the closed position after 10pm and before 7am (except for ingress) and noise emissions limited to achieve compliance with the Acoustic Quality Objectives.



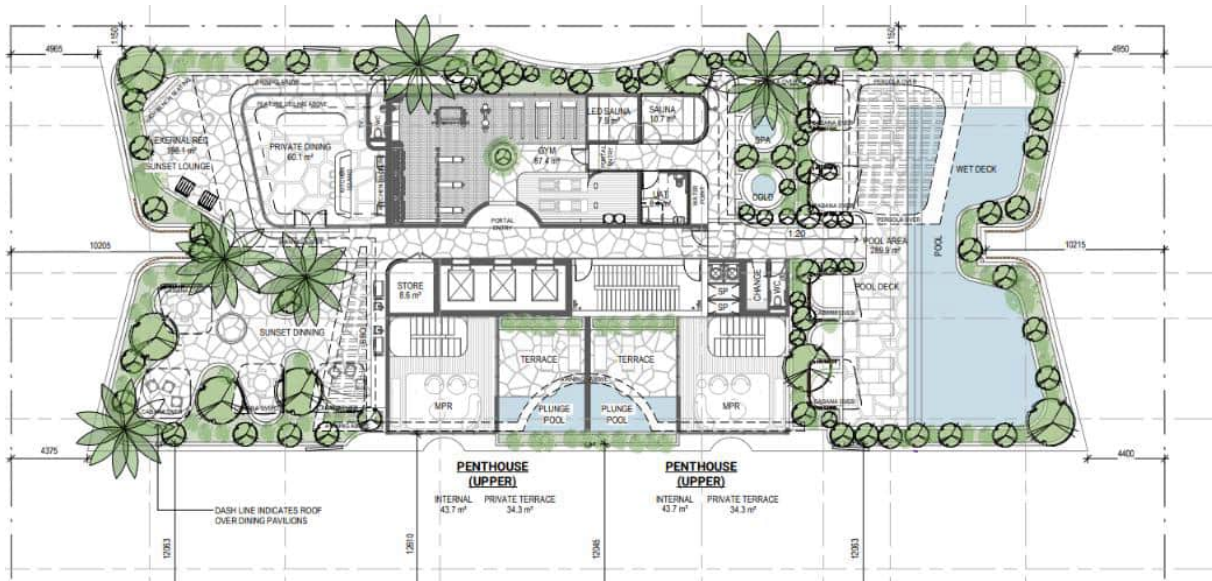
3. Ground level loading dock is accessed via Future Way. The entry is adjacent to the Corso entry which means that the impacts are no different than the impacts from existing loading docks. On that basis, no specific acoustic controls are provided.



4. Level 04 Podium Residential: the Western green area is not activated for public but will be for use of individual apartments as per advice from the developer and on that basis, the noise emissions are no different than the general private residential uses. On that basis, no specific additional acoustic controls are applied and any noise emissions and impacts shall be controlled and addressed by the Body Corporate.



5. Level 29 Rooftop recreation areas are located substantially higher than the upper level of the closest sensitive receiver (The Corso). The centre of the outdoor areas are not closer than 20 metres (horizontally) from the sensitive use. With the sound power level of 85dB(A) $L_{eq,adj,T}$ as used for the assessment of other sites in vicinity, and considering the difference of building heights and shielding from The Corso building edge, the impacts are calculated to be below 45-46dB(A) $L_{eq,T}$ which is compliant with the Acoustic Quality Objectives, as well as intermittent noise limit based on background creep ($L_{90}+5dB(A)$) during day and evening periods. On that basis, the usage between 7am to 10pm is supported whilst ensuring also that any impact from these areas (e.g. pool vibration isolation, gym floor impact treatment/isolation onto own residents) is addressed during detailed design phase of the building, and impact and airborne sound treatments achieve compliance with the National Construction Code.



3. RECOMMENDATIONS

Based on the noise impact assessment, the following acoustic recommendations are applied:

1. Rooftop recreation outdoor area uses to be limited to address noise emissions to the Corso. The allowable hours are from 7am to 10pm. Indoor areas can be used beyond these hours with facades in closed positions.
2. Acoustic treatments are applied to the rooftop recreation areas as noted in Section 2.3.
3. Car parking level and driveways to have surface finishes selected to avoid any audible wheel squeal at the Corso (e.g. non-polished concrete etc)
6. All metal grates, plates etc on trafficable areas would need to be securely fastened to ensure rattling and noise emissions are avoided whilst cars drive over these elements.
4. Ground floor tenancy façades to be constructed of 10mm glass as a minimum
5. Mechanical plant and services must be acoustically treated to achieve noise emission limits in Section 2.1. Certification by acoustic consultant is required
6. Façade of the residential apartments:
 - a. Eastern side (along the side facing the Corso) – min R_w32 rated (min 6.38mm lam or IGU 6mm glass-12mm air gap-6mm glass) with full perimeter acoustic seals
 - b. North and South – R_w35 bedrooms (min 10.38mm lam or R_w35 rated IGU system) and R_w32 living rooms, both with full perimeter acoustic seals
 - c. West (along First Avenue) –
 - i. Corner living rooms and all bedrooms: R_w38 (glass thickness confirmed by supplier, typically IGU 6mm-9mm air gap-11.52mm lam), with full perimeter acoustic seals
 - ii. Other living rooms: R_w35
 - d. Non glazed facades of concrete or other construction methods rated at R_w42 .

If you have any questions, please don't hesitate to contact the undersigned.

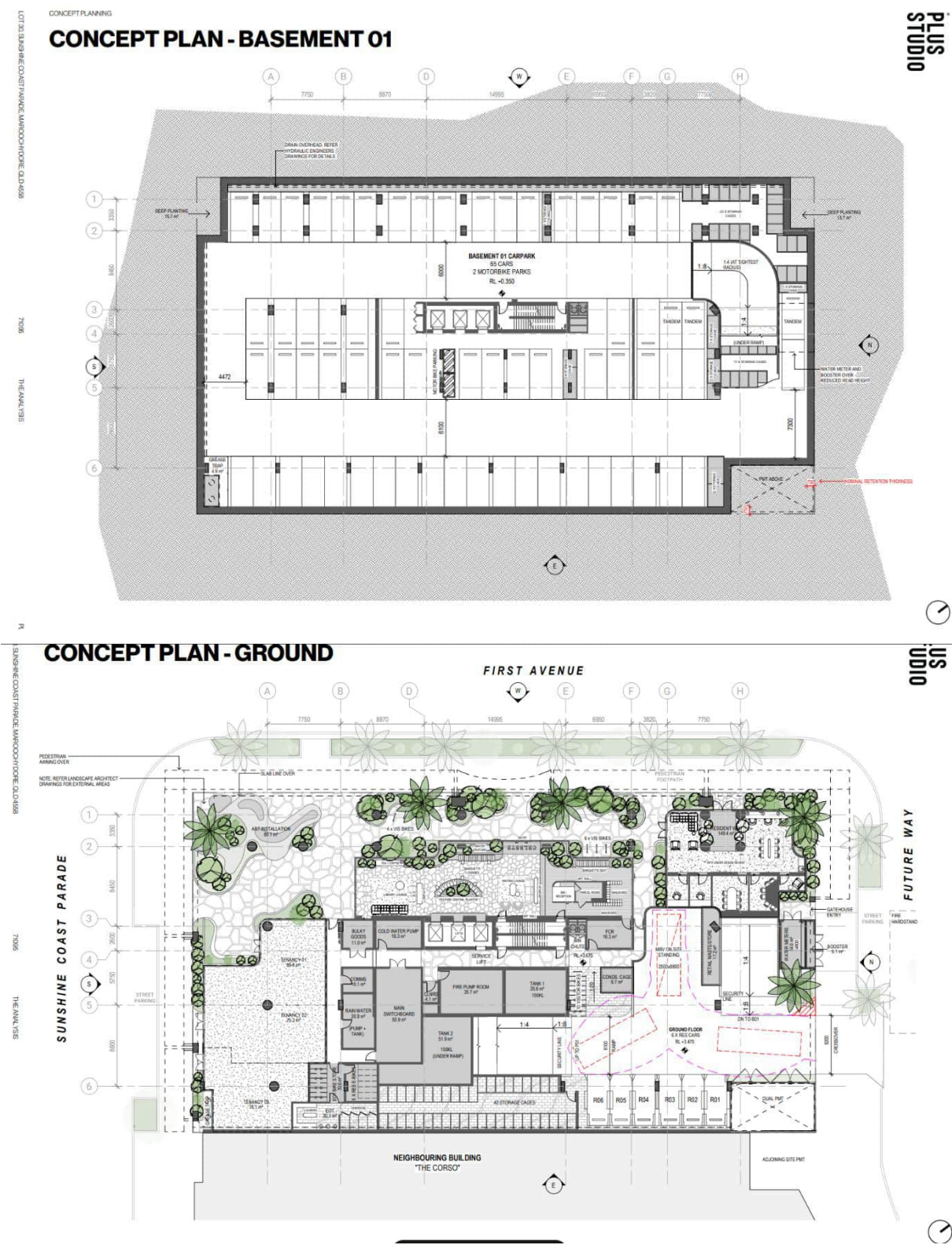
Kind Regards,

E-LAB Consulting

Tarmo Saar | Director | Acoustics and Vibration



APPENDIX A – Drawings Used in Assessment



LOT 36, SUNSHINE COAST PARADE, WIMBORCH, QLD 4508

7005 THE ANALYST

PLUSTUDIO

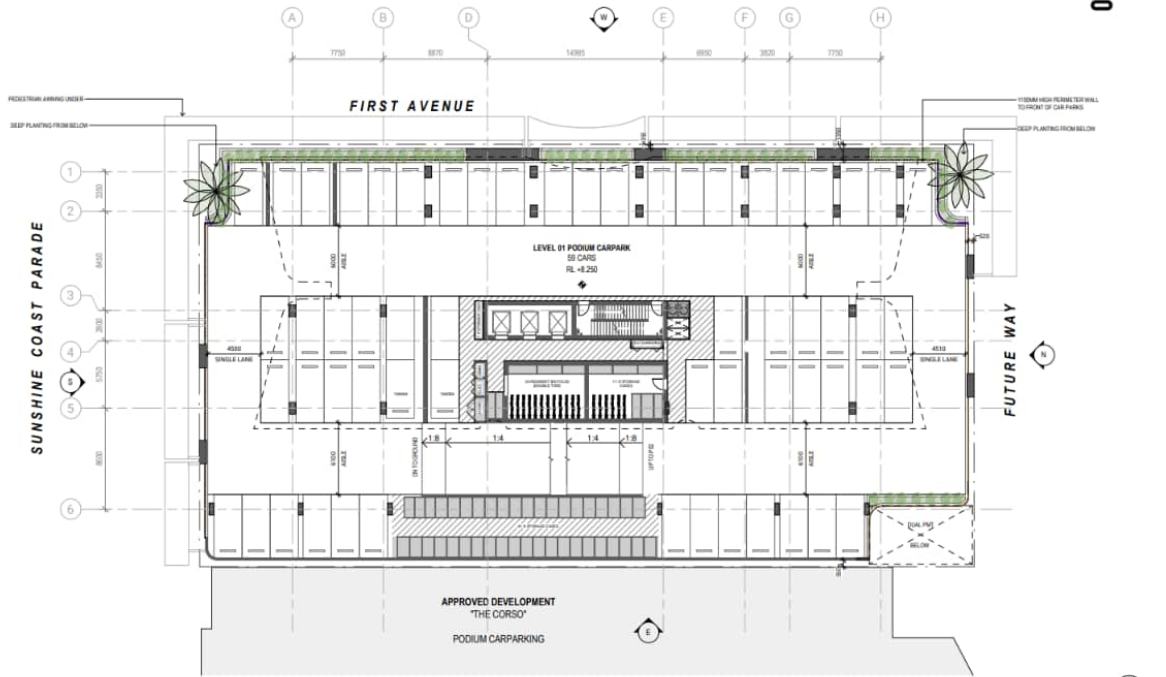
LOT 36, SUNSHINE COAST PARADE, WIMBORCH, QLD 4508

7005 THE ANALYST

PLUSTUDIO

CONCEPT PLANNING

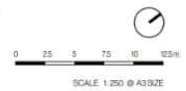
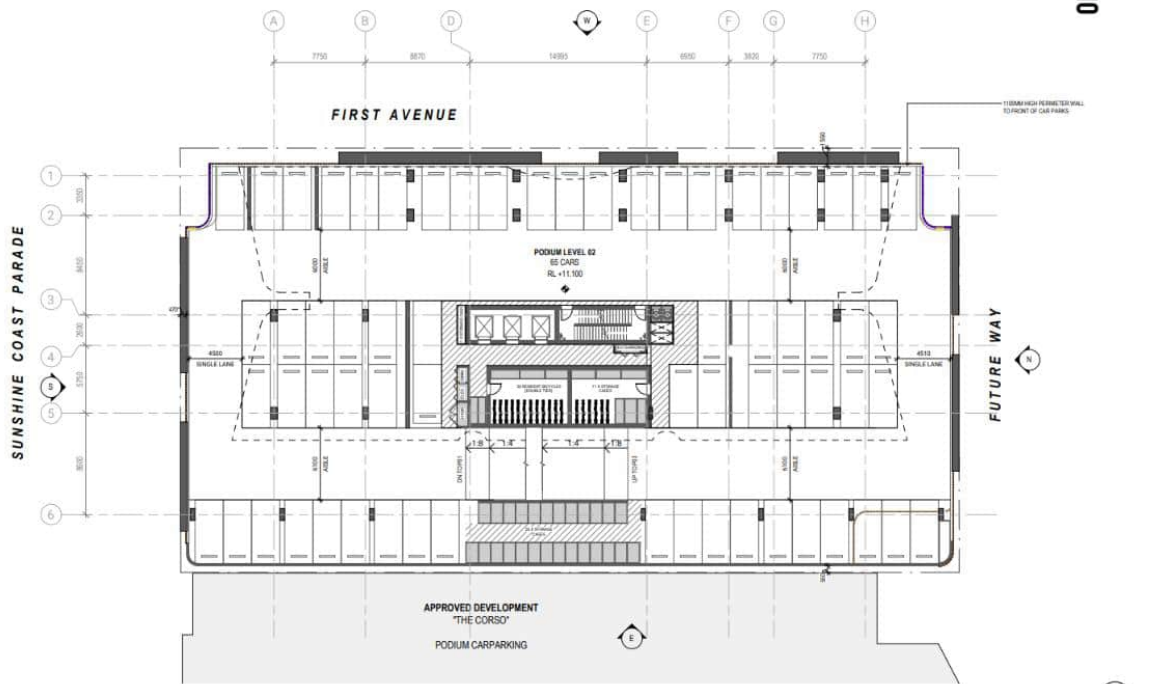
CONCEPT PLAN - PODIUM LEVEL 01



DA001 | CONSULTANT UPDATE | ISSUE 13 | 23.06.2026

CONCEPT PLANNING

CONCEPT PLAN - PODIUM LEVEL 02



DA002 | CONSULTANT UPDATE | ISSUE 13 | 23.06.2026



LOT 30, SUNSHINE COAST PARADE, LAMOOD MOORE QLD 4558

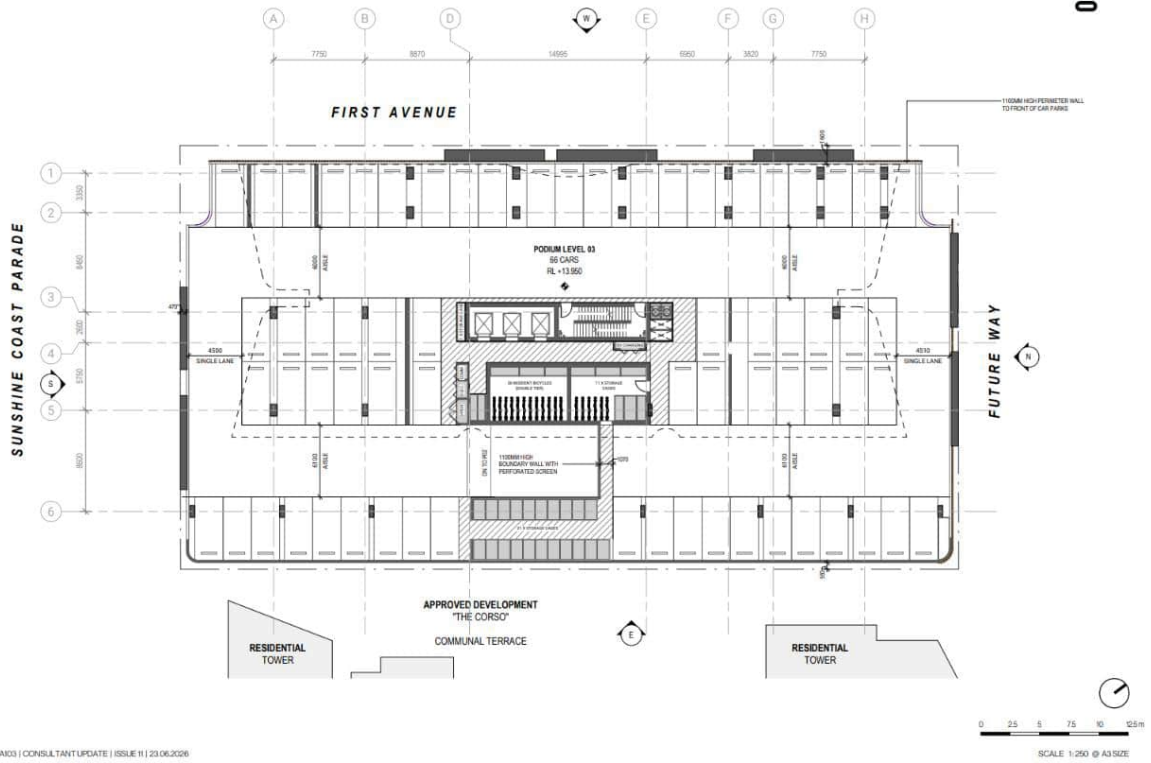
CONCEPT PLANNING

CONCEPT PLAN - PODIUM LEVEL 03

7/2025 THE ANALYSIS

PLUSTUDIO

DA03 | CONSULTANT UPDATE | ISSUE 11 | 23.06.2026



PLUS
STUDIO

LOT 30, SUNSHINE COAST PARADE, LAMOOD MOORE QLD 4558

CONCEPT PLANNING

CONCEPT PLAN - LEVEL 04 - PODIUM RESIDENTIAL

7/2025

THE ANALYSIS

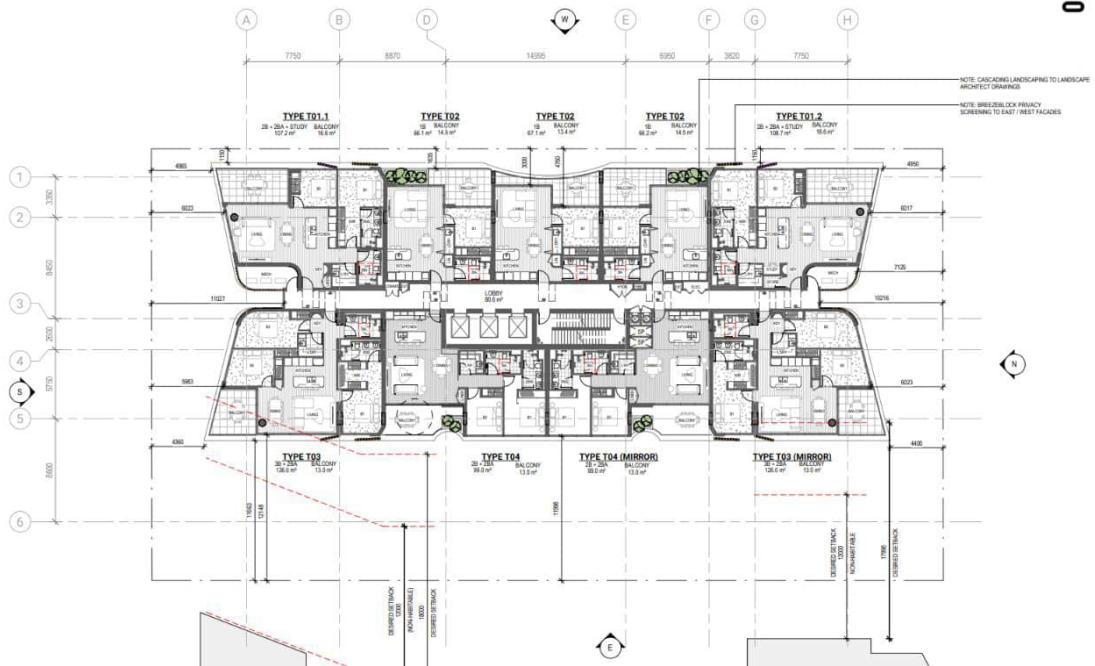


DA03 | CONSULTANT UPDATE | ISSUE 11 | 23.06.2026

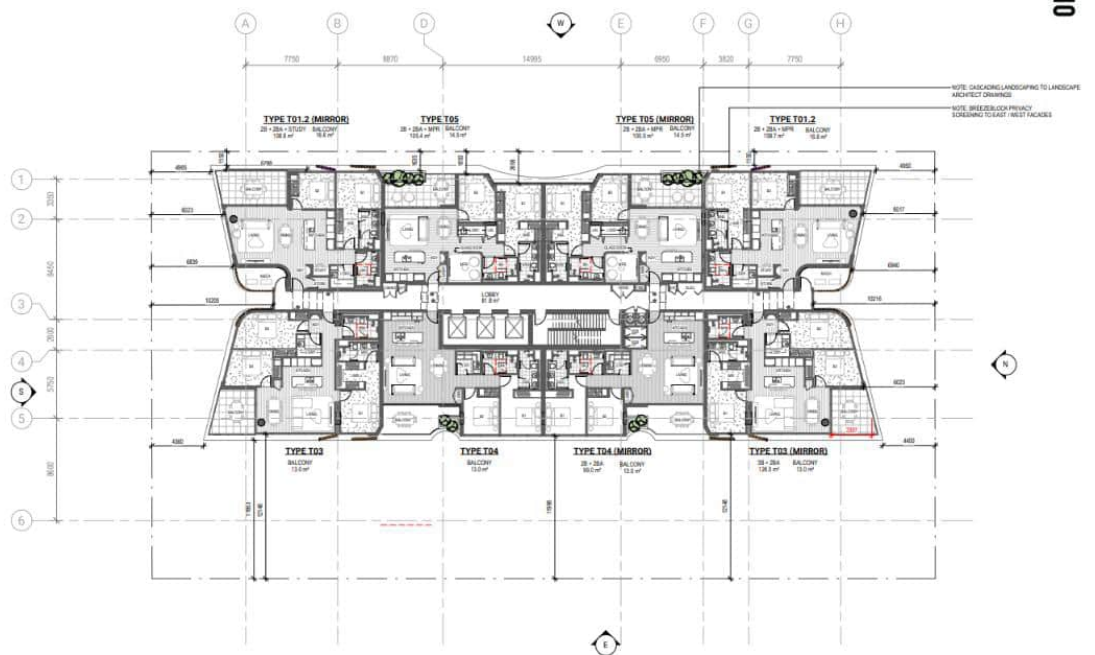


PLUS
STUDIO

CONCEPT PLAN - LOWER TYPICAL (L05 - 15)



CONCEPT PLAN - UPPER TYPICAL (L16 - 27)



PLUSSTUDIO

DA116 | CONSULTANT UPDATE | ISSUE 14 | 23.06.2020

LOT 70, 3/19/19 MC COAST PAVILION, AMERICAN OIL FIELD 65/8

70/85

THE ANALYSIS

PLUSSTUDIO

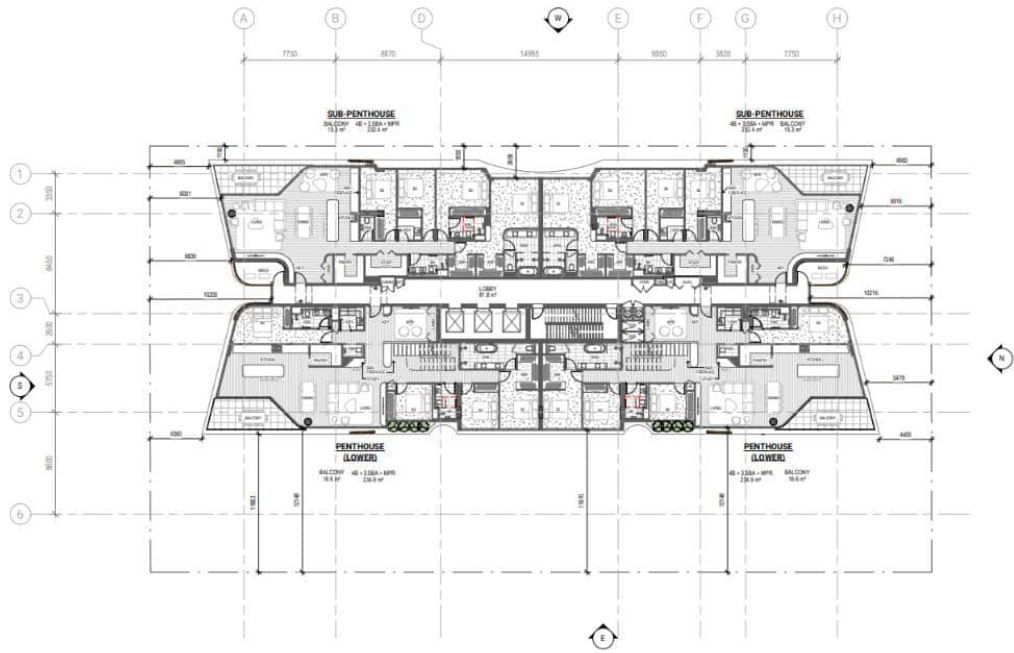
LOT 70, 3/19/19 MC COAST PAVILION, AMERICAN OIL FIELD 65/8

70/85

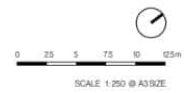
THE ANALYSIS

PLUSSTUDIO

CONCEPT PLAN - LEVEL 28 - PENTHOUSE



DA128 | CONSULTANT UPDATE | ISSUE H | 23.01.2026

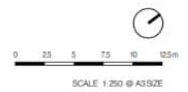


PLUS
STUDIO

CONCEPT PLAN - LEVEL 29 - ROOFTOP RECREATION



DA129 | CONSULTANT UPDATE | ISSUE I | 23.06.2026



PLUS
STUDIO



CONCEPT PLAN - ROOF PLAN

LOT 30, JALAN HECOMT, PANGKALAN BUKIT, KUALA LUMPUR

TITLE

THICK LINE

PLANTING

DATE: 01/08/2024 | CONSULTANT UPDATE | ISSUE 7 | 20.08.2024

