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Proposed Mixed use Development
27 Vista Street
Surfers Paradise

ACOUSTIC REPORT

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TABLE OF CONTENTS

1.Introduction 5
2.Site Description 5
2.1 Site Location 5
2.2 Proposal 6
2.3 Acoustic Environment 6
3.Equipment 6
4.Noise Monitoring and Receiver Location 7
4.1 Receiver Locations 7
4.2 Unattended Noise Monitoring 8
4.2.1 Road Traffic Noise Monitor 8
4.2.2 Ambient Noise Monitoring 8
5.Measured Noise Levels 9
5.2 Road Traffic Noise Levels 9
5.3 Ambient Noise Levels 10
5.4 Attended Light Rail Measurements 10
6.Noise Criteria 11
6.1 Road Traffic Noise Criteria 11
6.1.1 Queensland Design Code MP4.4 12
6.2 Light Rail Noise Criteria 13
6.2.1 State Development Assessment Provisions (SDAP) 13
6.3 Environmental Noise Criteria 15
6.3.1 Acoustic Quality Objectives 15
6.3.2 Background Creep 15
6.4 Sleep Disturbance Criteria 16
7.Road Traffic Assessment 17
7.1 Traffic Volumes 17
7.2 Road Traffic Noise Verification 17
7.3 Predicted Road Traffic Noise Levels - 2036 18
8.Light Rail Noise Assessment 22
8.1 Light Rail Noise Verification 22
8.2 Predicted Light Rail Noise 23
9.Environmental Assessment 35
9.1 Noise Levels due to Patrons – Communal Areas 35
9.2 Onsite Activities 36
9.2.1 Acoustic Quality Objectives 36
9.2.2 Background Creep 37
9.2.3 Sleep Disturbance 38
10. Recommendations 39
10.1 Façade Construction 39
10.1.1 Glazing 39
10.1.2 Alternative Ventilation 45
10.1.3 Wall construction 46
10.1.4 Roof/ceiling construction 46
10.1.5 Balcony Balustrades 46
10.2 Onsite Activities 48
10.3 Onsite Mechanical Plant 51
11. Conclusion 51
12. Appendices 52
12.1 Development Plans 52
12.2 Noise Monitoring Charts 66

TABLE INDEX

Table 1: Meteorological Conditions – Gold Coast Seaway 9
Table 2: Measured Road Traffic Noise Levels - All Time Periods 9
Table 3: Measured Ambient Noise Levels - All Time Periods 10
Table 4: Measured Light Rail Noise Levels - 13 November 2025 10
Table 5: City of Gold Coast Road Traffic Noise Criteria 11
Table 6: Applicable External Road Traffic Noise Limits 11
Table 7: Internal Traffic Noise Limits – AS2107 11
Table 8: Queensland Development Code Noise Categories 12
Table 9: SDAP Light Rail Noise Criteria 13
Table 10: Acoustic Quality Objectives at Noise Sensitive Properties 15
Table 11: Background creep noise limits 15
Table 12: Traffic Volumes 17
Table 13: Comparison of measured and predicted noise levels 17
Figure 3: SoundPLAN verification of noise monitoring location 17
Table 14: Predicted traffic noise levels - Year 2036 18
Table 15: Road Traffic Noise Impacts to Passive Recreation Areas 21
Table 16: Comparison of measured and predicted noise levels for light rail 22
Figure 8: SoundPLAN verification of noise monitoring location 22
Table 17: Predicted Light Rail Noise Impacts 23
Table 18: Outdoor Communal/Private Open Space – Light Rail 31
Table 19: Predicted sound power levels of patrons 35
Table 20: Acoustic Quality Objective Noise Assessment, 1 hour 36
Table 21: Background Creep Noise Assessment, 15min 37
Table 22: Maximum and average noise levels from site activities – Night-time 38
Table 23: Required Glazing Treatments 39
Table 24: Typical wall constructions 46
Table 25: Typical roof construction 46
Table 26: Communal/Private Open Spaces – Solid gap-free balustrades 46

FIGURE INDEX

Figure 1: Site Location (Not to Scale) 5
Figure 2: Unattended Noise Monitoring, Attended Noise Monitoring and Receiver Locations 7
Figure 4: Predicted Year 2036 Traffic Noise Levels – Level 4 19
Figure 5: Predicted Year 2036 Traffic Noise Levels – Level 12 20
Figure 6: Predicted Year 2036 Traffic Noise Levels – Level 28 20
Figure 7: Predicted Year 2036 Traffic Noise Levels – Level 3 – Free Field 21
Figure 9: Light Rail Noise Contours (Façade Corrected) – Level 4 29
Figure 10: Light Rail Noise Contours (Façade Corrected) – Level 12 30
Figure 11: Light Rail Noise Contours (Façade Corrected) – Level 28 30
Figure 12: Light Rail Noise Contours (Free Field) – Level 4 33
Figure 13: Light Rail Noise Contours (Free Field) – Level 12 34
Figure 14: Light Rail Noise Contours (Free Field) – Level 28 34
Figure 15: Recommended solid wall locations podium car parking (Ground and Level 1) 50
Figure 16: Recommended Solid Wall and balustrade Locations 51

1. Introduction

This report is in response to a request by Baharr Pty Ltd for a road traffic, light rail and environmental noise assessment of a proposed mixed use development to be located at 27 Vista Street Surfers Paradise. To facilitate the assessment, unattended and attended noise monitoring was conducted to establish existing road traffic and light rail impacts to the proposed development and determine the criteria for assessment of onsite activities to sensitive receivers. Based on the results of the assessment, recommendations for acoustic treatments and/or management controls are specified.

This report (ref: 2025438 R01E) has been updated in September 2026 due to changes in the architectural plans.

2. Site Description

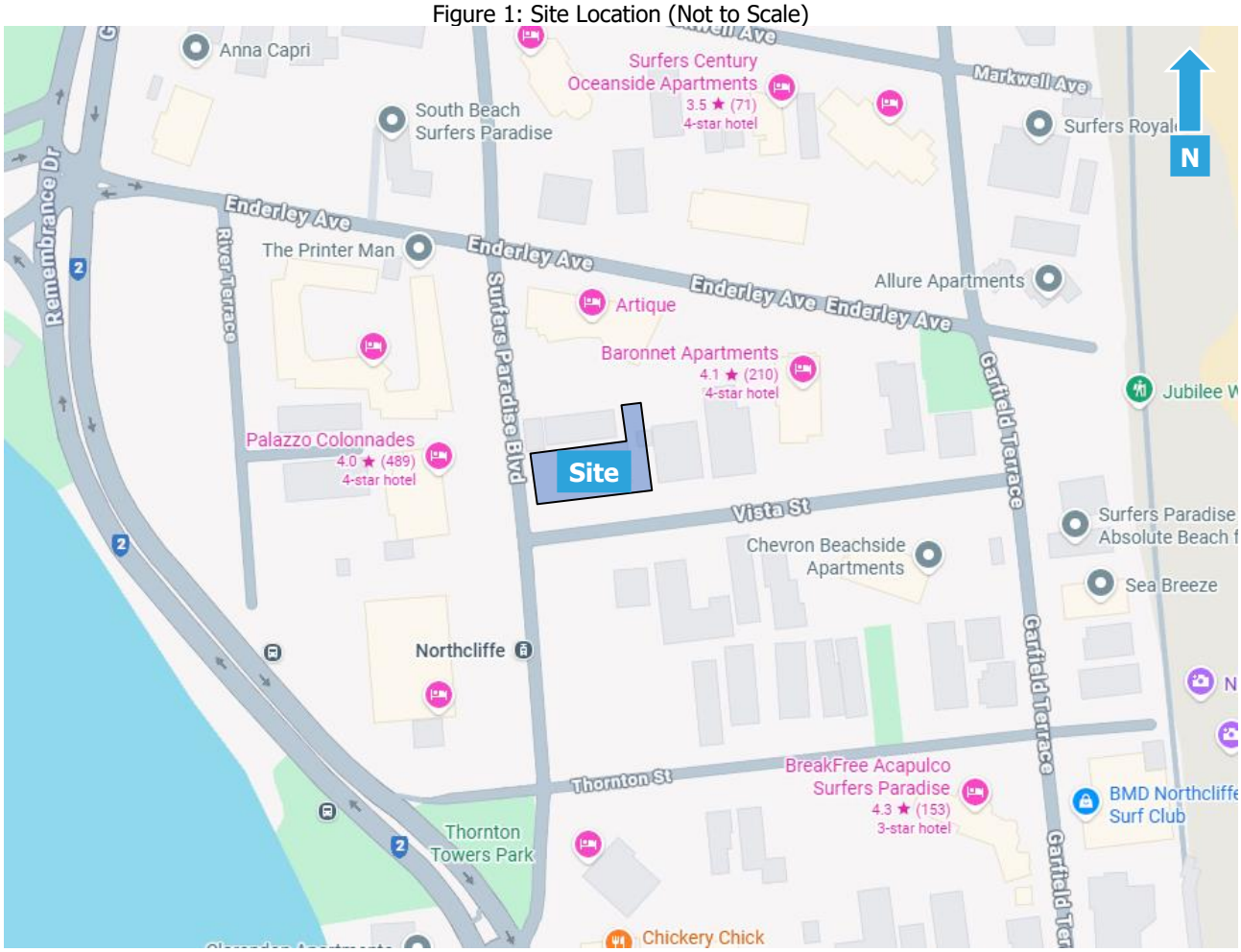
2.1 Site Location

The site is described by the following:

25 to 27 Vista Street and 2959 Surfers Paradise Boulevard, Surfers Paradise
Lot 205 on RP21845, Lot 2 on RP48704 and Lot 6 on SP243229

Refer to Figure 1 for site location.

Figure 1: Site Location (Not to Scale)



A site survey was conducted on the 3rd of October 2025 and identified the following:

a) A single storey residential dwelling currently occupies the site and will be demolished to make way for the proposed development.
b) Surfers Paradise Boulevard and light rail lines bound the site to the west, separating the development from residential apartments.
c) Vista Street is located adjacent the southern site boundary, separating the development and residential buildings.
d) Residential buildings bound the site to the north and east.

2.2 Proposal

The proposal is to develop a 29 storey mixed use building as follows:

- Site area of 1,268m^2.
- Cafe, lobby, retail store, refuse area, services and staff car parking at ground floor level.
- 46 car parks from ground to level 2.
- Pool, spa, sauna, kids area, amenities, owners lounge/kitchen, wellness, executive boardroom and open fitness area on level 3.
- 96 residential apartments on levels 4 to 28.

Refer to the Appendices for development plans.

2.3 Acoustic Environment

The site and surrounding area are primarily affected by local road traffic noise, rail noise associated with the light rail lines and residential noise from surrounding residential apartments.

3. Equipment

The following equipment was used to record noise levels:

- Rion NL-42 Environmental Noise Monitor
- Norsonic Nor140 Sound Level Meter
- Pulsar Model 105 Sound Calibrator

The noise monitors hold current NATA Laboratory Certification and was field calibrated before and after the monitoring period, no significant drift from the reference signal was recorded.

4. Noise Monitoring and Receiver Location

4.1 Receiver Locations

The nearest noise sensitive receiver locations were identified as follows:

1. 31 storey 'Artique' apartment building to the north of the site at 16-18 Enderley Avenue.
2. A three storey residential building is located to the north of the site at 2961 Surfers Paradise Boulevard.
3. A four storey residential building is located at 21 Vista Street to the east of the site.
4. A two storey residential building is located to the south of the site at 20 Vista Street.
5. Nine storey 'Palazzo Colonnades' residential building is located to the west of the site at 2994 Surfers Paradise Boulevard.

Figure 2: Unattended Noise Monitoring, Attended Noise Monitoring and Receiver Locations

4.2 Unattended Noise Monitoring

4.2.1 Road Traffic Noise Monitor

A Rion NL42 noise monitor was placed onsite at 27 Vista Street approximately 27 metres from the nearest lane of Surfers Paradise Boulevard to measure road traffic noise levels. The monitor was located in a free field position with the microphone approximately 2.2 metres above ground surface level. The noise monitor was set to record noise levels between 3rd and 13th of November 2025.

The noise monitor was set to record noise levels in "A" Weighting, Fast response using 15-minute statistical intervals. Road traffic noise monitoring was conducted in accordance with Australian Standard *AS2702:1984 'Acoustics - Methods for the measurement of road traffic noise'*. Refer to Figure 2 for the unattended noise monitoring location.

4.2.2 Ambient Noise Monitoring

A Rion NL42 environmental noise monitor was placed onsite at 27 Vista Street to measure ambient noise levels. The monitor was located in a free-field position with the microphone approximately 2.3 metres above ground surface level. The noise monitor was set to record noise levels between the 3rd and 13th of November 2025.

The noise monitor was set to record noise levels in "A" Weighting, Fast response using 15-minute statistical intervals. Road traffic noise monitoring conducted in accordance with Australian Standard AS1055:2018 *Acoustics – Description and measurement of environmental noise*. Refer to Figure 2 for noise monitoring location.

4.3 Attended Measurements

4.3.1 Light Rail Attended Measurements

Attended noise measurements of the Gold Coast Light Rail were conducted on site at the corner of Vista Street and Surfers Paradise Boulevard on 13th of November 2025, with the results presented in Section 5.4. Measurements were conducted generally in accordance with Australian Standard AS1055:2018 *Acoustics – Description and measurement of environmental noise*. Refer to Figure 2 for the measurement location.

5. Measured Noise Levels

The following tables present the measured noise levels from the unattended noise surveys. Any periods of inclement weather or extraneous noise were omitted from the measured data prior to determining the results.

5.1 Meteorological Conditions

Meteorological observations during the unattended noise monitoring survey were obtained from the Bureau of Meteorology website (http://www.bom.gov.au/climate/data), shown in Table 1 below.

Table 1: Meteorological Conditions – Gold Coast Seaway

Day	Date	Rainfall (mm)	Wind			
			9am		3pm	
			Direction	Speed (km/h)	Direction	Speed (km/h)
Monday	3/11/2025	19.6	NNW	15	NNE	28
Tuesday	4/11/2025	2.6	NW	7	NNE	13
Wednesday	5/11/2025	0.6	E	9	ESE	20
Thursday	6/11/2025	0	SE	17	ESE	24
Friday	7/11/2025	0	SE	9	NE	20
Saturday	8/11/2025	0	NNW	20	NNE	22
Sunday	9/11/2025	17.6	NNW	13	NW	7
Monday	10/11/2025	1	SSE	17	SSE	15
Tuesday	11/11/2025	6.2	ESE	9	NE	26
Wednesday	12/11/2025	0.2	SSE	33	SSE	28
Thursday	13/11/2025	0	ENE	11	NNE	30

5.2 Road Traffic Noise Levels

The measured road traffic noise levels at the monitoring location are as follows:

Table 2: Measured Road Traffic Noise Levels - All Time Periods

Day	Date	L10(18h)	Leq(1h) Day	Leq(1h) Night	L90(8h)	L90(18h)
Monday*	3/11/2025		57	63		
Tuesday*	4/11/2025	57	65	58	46	49
Wednesday	5/11/2025	56	59	53	46	49
Thursday	6/11/2025	57	61	55	46	51
Friday	7/11/2025	57	61	55	46	50
Saturday	8/11/2025	58	68	55	46	50
Sunday*	9/11/2025	56	57	52	46	49
Monday	10/11/2025	61	69	55	46	53
Tuesday*	11/11/2025	58	59	57	47	50
Wednesday	12/11/2025	58	61	57	47	52
Thursday	13/11/2025		63	54		
Overall value		58	63	55	46	51

Road traffic data for the weekends was not utilised as it is not considered relevant to the assessment. Refer to the appendix for a graphical representation on the noise monitoring data.

5.3 Ambient Noise Levels

The ambient noise levels measured at the monitoring location are as follows:

Table 3: Measured Ambient Noise Levels - All Time Periods

Day	Date	Average Background Level L90 dB(A)		
		Day (7am-6pm)	Evening (6pm-10pm)	Night (10pm-7am)
Monday*	3/11/2025	52	47	47
Tuesday*	4/11/2025	49	47	45
Wednesday	5/11/2025	49	48	45
Thursday	6/11/2025	51	48	45
Friday	7/11/2025	50	48	45
Saturday	8/11/2025	49	49	45
Sunday*	9/11/2025	48	47	45
Monday	10/11/2025	52	49	45
Tuesday*	11/11/2025	50	47	46
Wednesday	12/11/2025	51	48	45
Thursday	13/11/2025	51		45
Overall		50	48	45

*Note rainfall recorded on the 3rd, 4th, 9th and 11th of November was found to affect the measured noise levels, therefore the affected time periods were removed. Refer to the appendix for a graphical representation of the noise monitoring.

5.4 Attended Light Rail Measurements

Results of the attended measurements of light rail noise are presented in the table below.

Table 4: Measured Light Rail Noise Levels - 13 November 2025

Time	Distance from Measurement Location (meters)	Tram Direction	LAeq (dBA)	LAE (dBA)	LAmax (dBA)	Duration (sec)
3:49pm	16	North	71	81	76	9
3:55pm	13	South	65	79	73	26
4:00pm	16	North	67	81	72	23
4:05pm	16	North	64	79	71	24
4:10pm	13	South	68	80	74	17
4:11pm	16	North	67	80	73	17
4:15pm	13	South	68	80	73	15
4:16pm	16	North	68	80	73	16
4:22pm	13	South	67	80	72	19
4:26pm	16	North	67	79	72	16
4:29pm	13	South	68	80	74	16
4:34pm	16	North	66	80	72	21
4:37pm	13	South	68	79	71	12
4:41pm	16	North	67	80	73	20
4:44pm	13	South	67	80	73	16

Based on an average of 15 light rail movements per hour during the daytime and 8 movements during the nighttime, the calculated LAeq (1h) at the measurement position is 56 dBA for the daytime and 53 for the nighttime. The average LAmax of the measured light rail movements is 73 dBA.

6. Noise Criteria

6.1 Road Traffic Noise Criteria

The noise criteria are applied by City of Gold Coast under the City Plan Version 12 (commenced 27 June 2025) Regional Infrastructure Overlay Code. The applicable criteria for the development in the year 2036 (ten-year planning horizon) requires road traffic noise to be assessed as follows:

Table 5: City of Gold Coast Road Traffic Noise Criteria

Measurement location	Design level road noise criteria
1m in front of the most exposed part of a proposed sensitive land use	60 dBA L10 (18 hour) or less, where existing levels measured at the setback for the zone are greater than 40 dBA L90 (8 hour) between 10pm and 6am. (L10 (18 hour) is the arithmetic average Level 17 hourly L10 levels measured in dBA between the hours of 6am and midnight). 57 dBA L10 (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 40 dBA L90 (8 hour) between 10pm and 6am. Where the above criteria cannot be met, internal maximum design criterion levels specified in Table 1 AS2107-2016 apply, particularly for buildings greater than 1 storey high.
Balconies and formal external open space	60 dBA L10 (18 hour) or less, where existing levels measured at the setback for the zone are greater than 45 dBA L90 (18 hour). 57 dBA L10 (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 45 dBA L90 (18 hour).

Based on the measured noise levels, the applicable road traffic noise limits for the development are as follows:

Table 6: Applicable External Road Traffic Noise Limits

Location	Noise Level dBA
All Facades	LA10(18hr) 60 dBA
All open spaces and recreation areas of accommodation activities and residential care facilities (free field)	LA10(18hr) 60 dBA

The applicable internal noise limits from Australian Standard AS2107:2016 *"Acoustics-Recommended design sound levels and reverberation times for building interiors"* are provided in Table 7.

Table 7: Internal Traffic Noise Limits – AS2107

Houses and apartments in inner city areas or entertainment districts or near major roads—	Noise Level Leq dBA
Living Areas	35-45
Sleeping Areas	35-40
Work Areas	35-45

6.1.1 Queensland Design Code MP4.4

To determine the minimum design requirements for any new residential buildings located in a transport noise corridor, the Queensland Development Code Part 4.4 may be applied if no alternative solutions are provided. In accordance with MP4.4, the noise categories are stated in Table 8.

Table 8: Queensland Development Code Noise Categories

Category	Noise level L10 (18hr) dBA (including façade correction)
Category 4	≥ 73
Category 3	68-72
Category 2	63-67
Category 1	58-62
Category 0	≤ 57

The building treatment for any future development onsite shall be determined at Building Approval stage, in general accordance with the Queensland Development Code. Alternative solution may be provided on request.

6.2 Light Rail Noise Criteria

As the development is located near a light rail corridor, the criteria detailed in Section 6.2.1 applies.

6.2.1 State Development Assessment Provisions (SDAP)

The applicable light rail noise criteria are provided in the *SDAP* Version 3.5 dated 12 December 2025 by the Department of Infrastructure, Local Government and Planning (DILGP). The SDAP *State Code 4: Development in a light rail environment* sets out matters of interest for the assessment of developments near rail corridors. The applicable criteria for the development require rail noise to be assessed in accordance with Table 4.2.2 of the policy as follows;

Table 9: SDAP Light Rail Noise Criteria

Performance Outcome	Acceptable Outcome
Accommodation Activities	
PO17 Development involving: 1. An accommodation activity; or 2. Land for a future accommodation activity Minimises noise intrusion from a light rail in habitable rooms	**AO17.1** A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria at all facades of the building envelope: a. ≤55 dBA Leq (1 hour) façade corrected (maximum hour between 6 am and 10 pm) b. ≤50 dBA Leq (1 hour) façade corrected (maximum hour between 10 pm and 6 am) c. ≤64 dBA Lmax façade corrected (between 10pm and 6am) 2. in accordance with Chapter 7 – *Integrated noise barrier design of the Transport Noise management Code of Practice – Volume 1* Road Traffic Noise, Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 2.7 of the Guide to Development in a Transport Environment: Light Rail, Department of Transport and Main Roads, 2018. If the building envelope is unknown, the deemed-to-comply setback distances for building stipulated by the local planning instrument or relevant building regulations should be used. In some instances, the design of noise barriers and mounds to achieve the noise criteria above the ground floor may not be reasonable or practicable. In these instances, any relaxation of the criteria is at the discretion of the Department of Transport and Main Roads. OR all of the following acceptable outcomes apply: **AO17.2** Buildings which include a habitable room are setback the maximum distance possible from the light rail. AND **AO17.3** Buildings are designed and oriented so that habitable rooms are located furthest from the light rail.

Performance Outcome	Acceptable Outcome
Accommodation Activities	
	AND **AO17.4** Buildings are designed and constructed using materials which ensure that habitable rooms meet the following internal noise criteria: 1. ≤35 dBA Leq (1hour) (maximum hour over 24 hours) Note: Noise levels from a light rail are to be measured in accordance with AS1055.1-1997 Acoustics – Description and measurement of environmental noise. To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with section 2.7 of the Guide to Development in a Transport Environment: Light Rail, Department of Transport and Main Roads, 2018.
PO18 Development involving an **accommodation activity** minimises noise intrusion from a **light rail** in **outdoor spaces for passive recreation**.	**AO18.1** A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria in **outdoor spaces** for **passive recreation**: a. ≤52 dBA Leq (1 hour) free field (maximum hour between 6 am and 10 pm) b. ≤66 dBA Lmax free field 2. in accordance with Chapter 7 – *Integrated noise barrier design of the Transport Noise management Code of Practice – Volume 1* Road Traffic Noise, Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment is provided, prepared in accordance with section 2.7 of the Guide to Development in a Transport Environment: Light Rail, Department of Transport and Main Roads, 2018. OR **AO18.2** Each dwelling has access to an **outdoor space for passive recreation** which is shielded from **light rail transport infrastructure** by a building, solid gap-free fence, or other solid gap-free **structure**. AND **AO18.3** Each dwelling with a balcony directly exposed to noise from a **light rail** has a continuous solid gap-free balustrade (other than gaps required for drainage purposes to comply with the Building Code of Australia).

6.3 Environmental Noise Criteria

The noise criteria as applied by City of Gold Coast are as follows:

6.3.1 Acoustic Quality Objectives

Table 10 presents the acoustic quality objectives at noise sensitive receptors as detailed in Schedule 1 of the EPP (Noise) 2008.

Table 10: Acoustic Quality Objectives at Noise Sensitive Properties

Sensitive Receptor	Time of Day	Acoustic Quality Objectives, dBA		
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$
Dwelling (outdoors)	Day and Evening (7am – 10pm)	50	55	65
Dwelling (Indoors)	Day and Evening (7am – 10pm)	35	40	45
	Night (10pm – 7am)	30	35	40

6.3.2 Background Creep

The Background Creep criteria are as follows:

Time-varying noise:

$$L_{Aeq,adj,T,} \leq \text{Ambient } L_{A90,T} + 5\text{dBA}$$

Steady-state noise:

$$L_{A90,T} \leq \text{Ambient } L_{A90,T}$$

The time period (T) is a time interval of at least 15 minutes, or if the noise continues for less than 15 minutes, the duration of the noise source.

Based on the results of ambient noise monitoring, the project specific background creep noise limits are shown in Table 11.

Table 11: Background creep noise limits

Time Period	Noise Level Limits SPL dBA	
	$L_{Aeq,T}$	$L_{A90,T}$
Day 7am – 6pm	55	50
Evening 6pm – 10pm	53	48
Night 10pm – 7am	50	45

6.4 Sleep Disturbance Criteria

Criteria for sleep disturbance under the WHO Guideline is addressed is as follows:

> *"As a rule for planning for short-term or transient noise events, for good sleep over 8 hours the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45 dB(A) $_{LA,(Max)}$ more than 10 or 15 times per night'.*
>
> *'Where noise is continuous, the equivalent sound pressure level should not exceed 30 dB(A) indoors, if negative effects on sleep are to be avoided'."*

7. Road Traffic Assessment

Road traffic noise associated with Surfers Paradise Boulevard for a ten-year planning horizon was assessed at the development to determine compliance with the criteria (refer to Section 6.1) and any requirements for acoustic treatments.

7.1 Traffic Volumes

Traffic volumes were obtained from the City of Gold Coast Open Data Portal and are provided inTable 12 . Traffic volumes predictions for the years 2025 and 2036 were based upon an annual growth rate of approximately 1% per annum.

Table 12: Traffic Volumes

Road	Traffic Volume AADT			% Heavy Vehicles	Annual Growth %
	Year 2017	Predicted Year 2025	Predicted Year 2036		
Surfers Paradise Boulevard	4,073	4,410	4,871	4%	1%

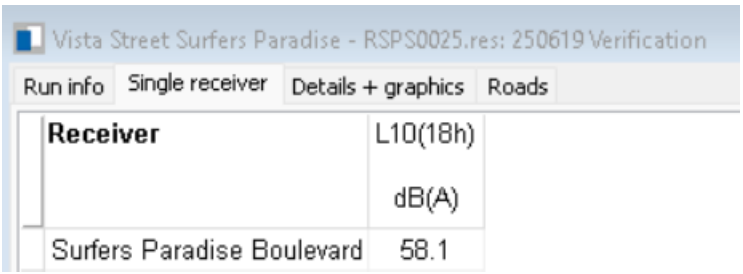
7.2 Road Traffic Noise Verification

To determine if the SoundPLAN noise model is accurate, a verification model of the predicted LA10 (18hr) was created and compared to the measured noise level. The CoRTN method allows a ±2dBA variation between the predicted and measured level, if the variation exceeds 2dBA, a correction to the predicted level is required.

Table 13: Comparison of measured and predicted noise levels

Location	Measured $L_{A10(18hr)}$ dB(A)	Predicted $L_{A10(18hr)}$ dB(A)	Correction
Surfers Paradise Boulevard	57.8	58.1	0

Figure 3: SoundPLAN verification of noise monitoring location



7.3 Predicted Road Traffic Noise Levels - 2036

Road traffic noise modelling for the proposed development was based on the following information:

- Site layout, floor plans and elevations provided by Studio Snell, project no. 980, dated 2/9/2026.
- Surfers Paradise Boulevard speed limit of 40km/h.
- Receiver heights were based on 1.6m above finished floor level.
- +2.5dB(A) Façade correction
- -0.7dB(A) (Free field) and -1.7dB(A) (Façade) corrections for Queensland Conditions.

Table 14 presents the predicted road traffic noise impacts to the development.

Table 14: Predicted traffic noise levels - Year 2036

Unit	Room	Levels	Predicted Road Traffic Noise Impacts (Façade Corrected) 2036 (dBA)	QDC Noise Categories	Complies with CoGCC Criteria? LA10 ≤ 60 dB(A)
			$L_{A10(18h)}$		
Unit 1	Bed 1	4-10	57.7	1	Yes
Unit 1	Bed 2	4-10	57.6	1	Yes
Unit 1	KDL	4-10	61.6	1	No
Unit 2	Bed 1	4-10	59.5	1	Yes
Unit 2	Bed 2	4-10	59.5	1	Yes
Unit 2	KDL	4-10	59.2	0	Yes
Unit 3	Bed 1	4-10	54	0	Yes
Unit 3	Bed 2	4-10	54.5	0	Yes
Unit 3	KDL	4-10	56.1	0	Yes
Unit 4	Bed 1	4-10	55.5	0	Yes
Unit 4	Bed 2	4-10	56.1	0	Yes
Unit 4	KDL	4-10	55	0	Yes
Unit 1	Bed 1	11-20	56.4	1	Yes
Unit 1	Bed 2	11-20	56.2	1	Yes
Unit 1	KDL	11-20	61.2	1	No
Unit 2	Bed 1	11-20	59.6	0	Yes
Unit 2	Bed 2	11-20	58	0	Yes
Unit 2	KDL	11-20	54	0	Yes
Unit 3	Bed 1	11-20	54.4	0	Yes
Unit 3	Bed 2	11-20	54.4	0	Yes
Unit 3	KDL	11-20	56.2	0	Yes
Unit 4	Bed 1	11-20	53.3	0	Yes
Unit 4	Bed 2	11-20	55.4	0	Yes
Unit 4	KDL	11-20	54.2	0	Yes
Unit 1	Bed 1	21-28	55.1	1	No
Unit 1	Bed 2	21-28	54.5	0	Yes
Unit 1	KDL	21-28	61.2	1	No
Unit 2	Bed 1	21-28	60.5	0	Yes
Unit 2	Bed 2	21-28	60.1	0	Yes
Unit 2	KDL	21-28	54.1	0	Yes
Unit 3	Bed 1	21-28	52.8	0	Yes
Unit 3	Bed 2	21-28	53	0	Yes
Unit 3	KDL	21-28	53.2	0	Yes
Unit 4	Bed 1	21-28	54.4	0	Yes
Unit 4	Bed 2	21-28	54	0	Yes
Unit 4	KDL	21-28	53	0	Yes

Based on the predicted noise impacts, facade treatments would be required in accordance with the City of Gold Coast Council criteria. Refer to Section 10 for façade treatments.

The 3D SoundPLAN CoRTN noise model predicts $L_{A10,18hour}$ levels as shown in Figure 4 to Figure 6.

Figure 4: Predicted Year 2036 Traffic Noise Levels – Level 4

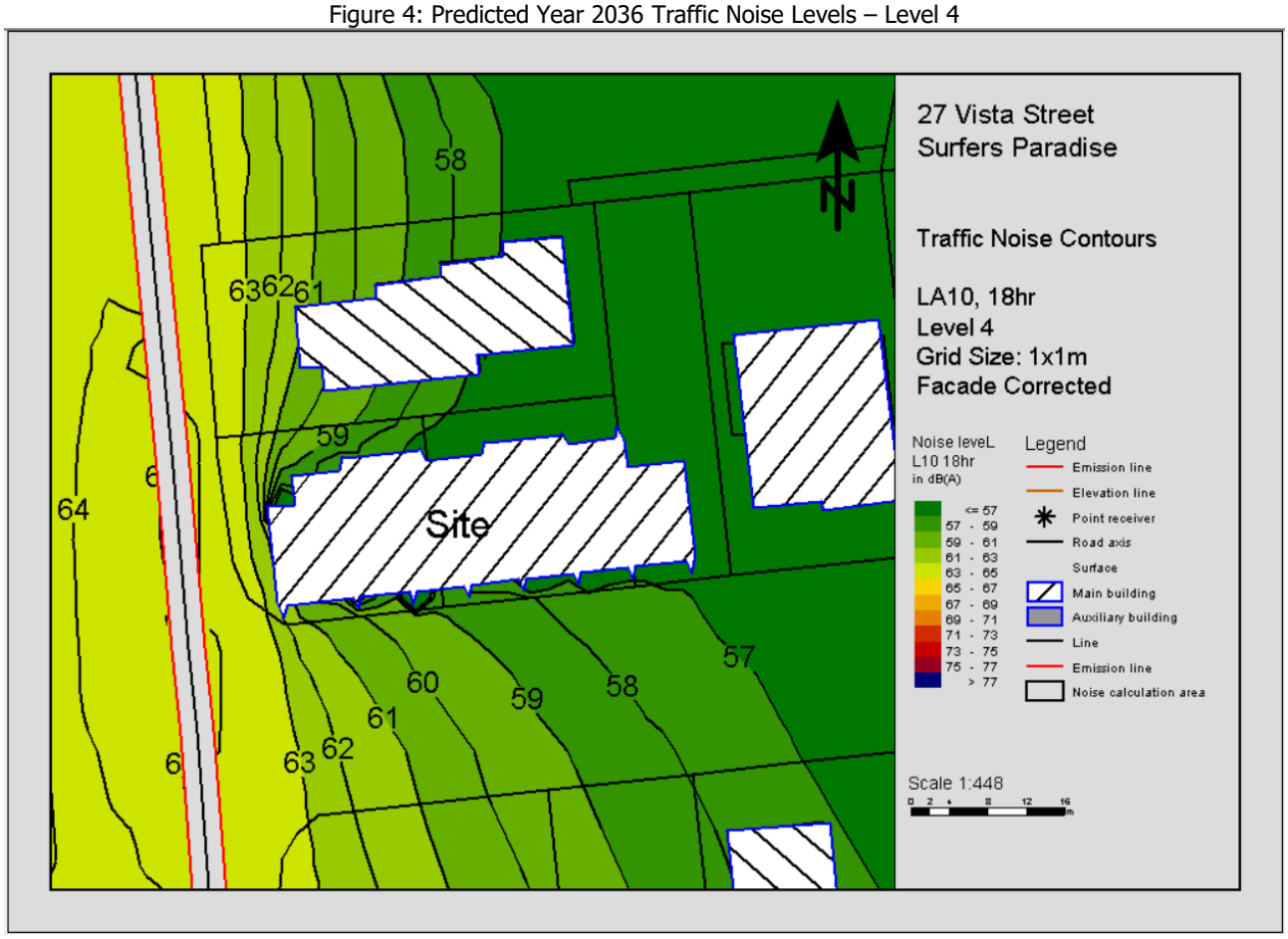


Figure 5: Predicted Year 2036 Traffic Noise Levels – Level 12

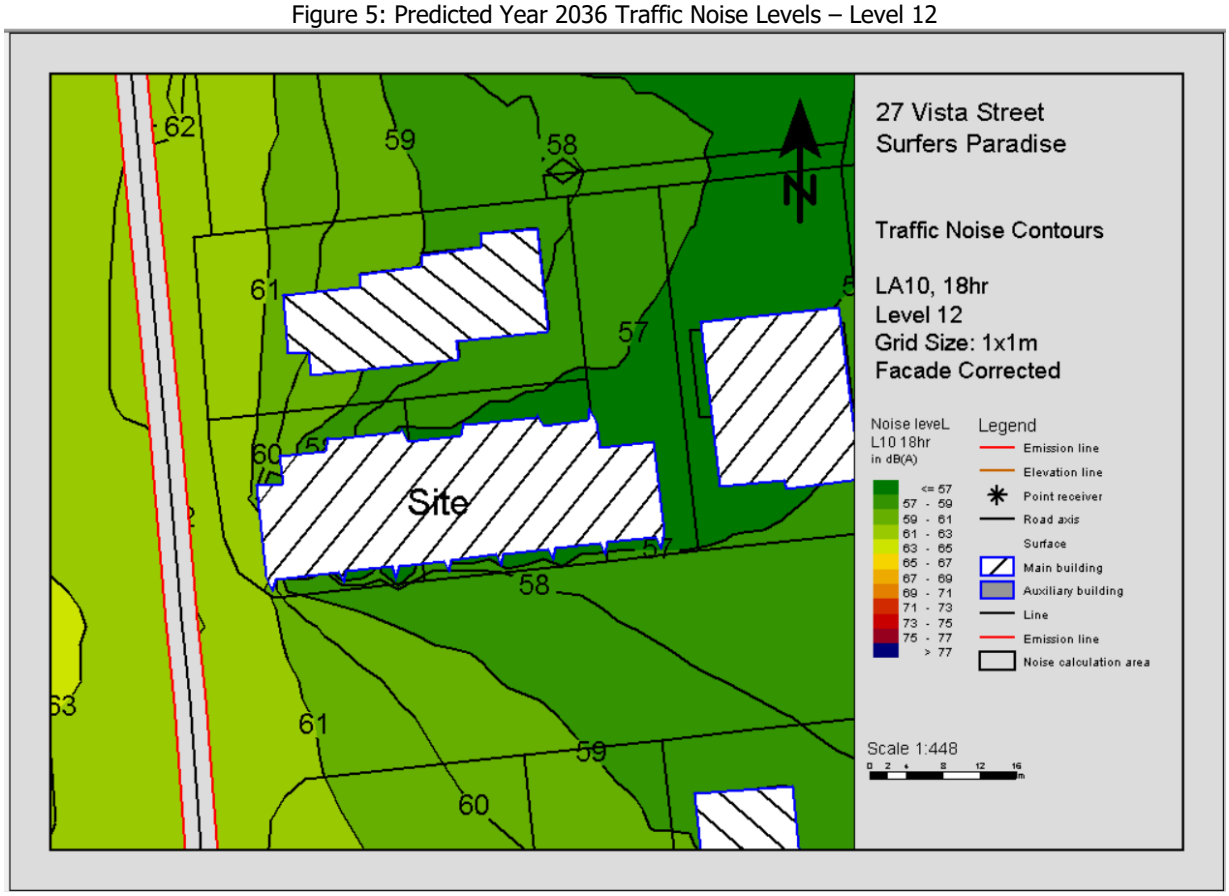
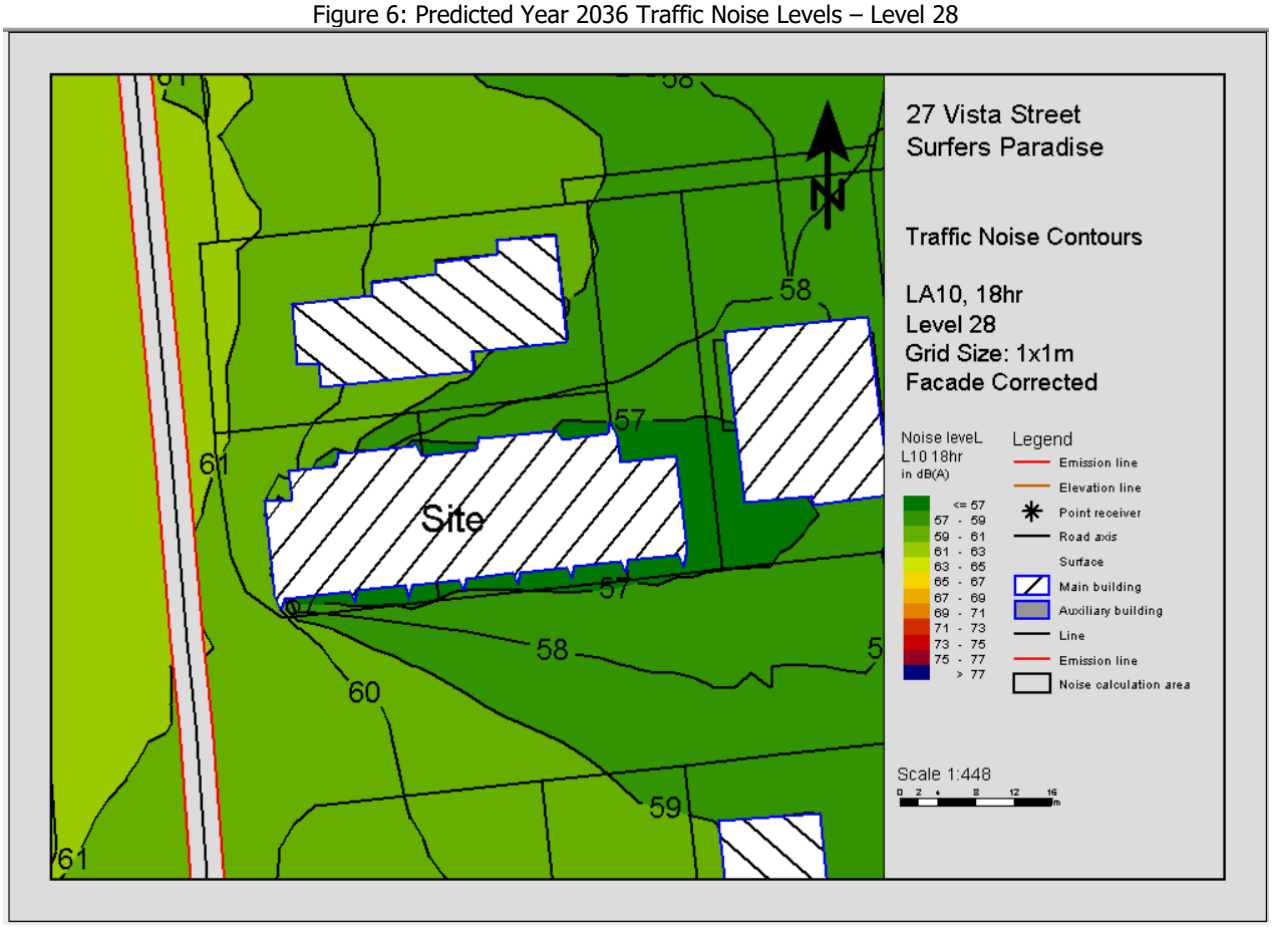


Figure 6: Predicted Year 2036 Traffic Noise Levels – Level 28



Noise impacts to communal open spaces areas are presented in the following table:

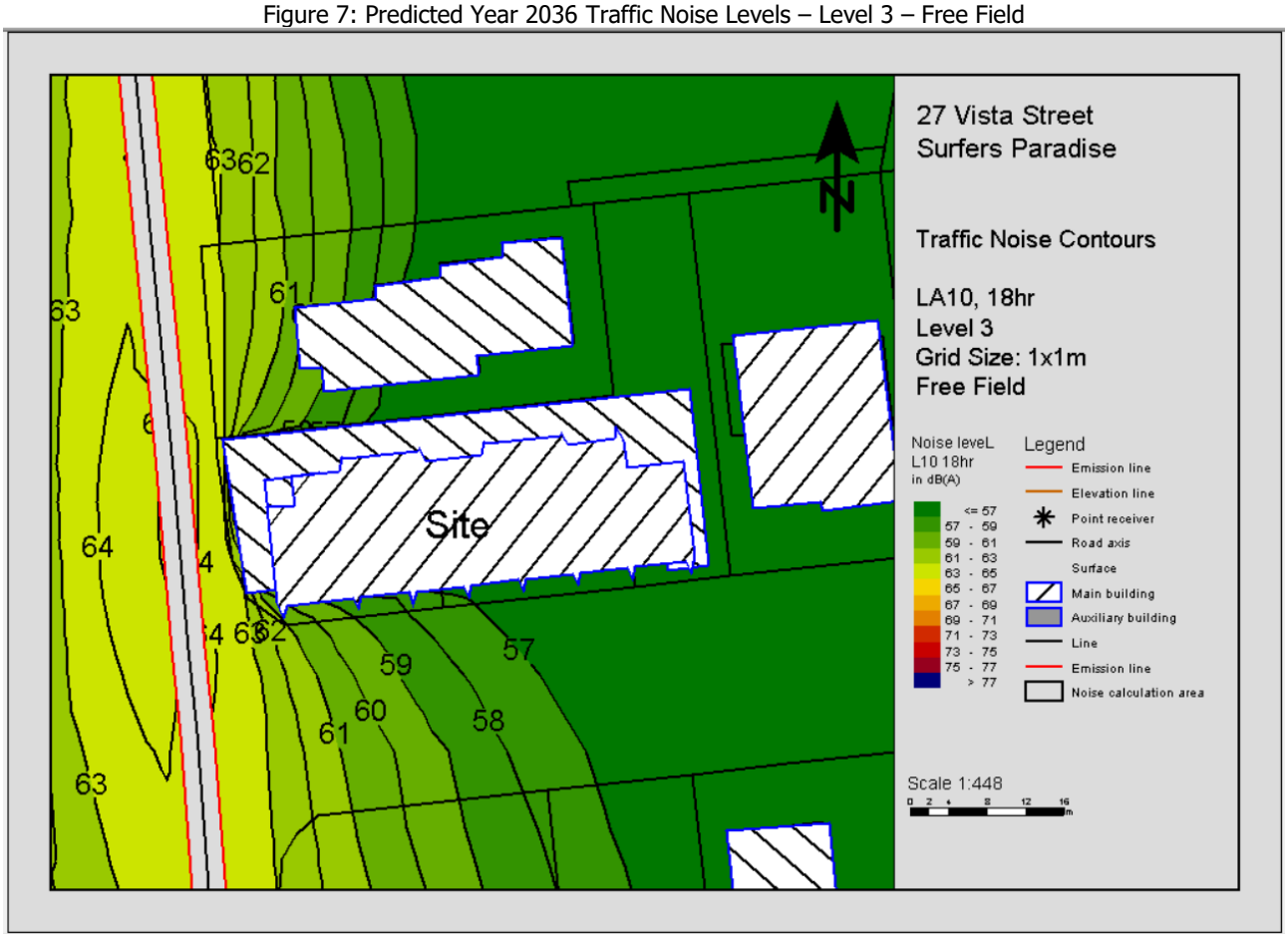
Table 15: Road Traffic Noise Impacts to Passive Recreation Areas

Location			Predicted Road Traffic Noise Impacts (Free Field) 2035	Complies with CoGCC Criteria?
Location	Level	FFL (m)	$L_{A10(18hr)}$ dB(A)	LA10 ≤ 60 dB(A)
Open Air Gym	F3	16.4	51.4	Yes
Owners Wellness	F3	16.4	56	Yes
Pool Deck	F3	16.4	48.2	Yes
Sun Lounges	F3	16.4	51.3	Yes
Yoga Deck	F3	16.4	54.6	Yes

Compliance with the communal open space criteria is predicted without the need for further acoustic treatments.

The 3D SoundPLAN CoRTN noise model predicts $L_{A10,18hour}$ levels for the communal open spaces as shown in Figure 7.

Figure 7: Predicted Year 2036 Traffic Noise Levels – Level 3 – Free Field



8. Light Rail Noise Assessment

8.1 Light Rail Noise Verification

Rail noise modelling for the proposed development was based on the following information:

- Site layout, floor plans and elevations provided by Studio Snell, project no. 980, dated 2/9/2026.
- Receiver heights were based on 1.5m above finished floor level.
- +2.5dB(A) Façade correction

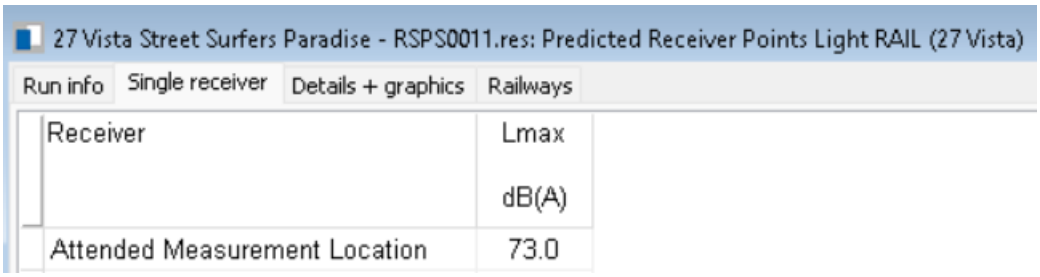
The model used to generate predictions was SoundPLAN 8.2 "Nordic Prediction Method for Train Noise" with the verification of the measured noise levels presented in Table 16.

The *"Nordic Prediction Method for Train Noise"* used in the SoundPLAN model calculates various noise sources of a light rail passby for the selected train type, in this case electric trams as used on the Gold Coast line. Source noises such as wheels on the tracks, wheel squeal, motors and engines, and noise from the train façade are combined in the SoundPLAN model to provide an overall LAmax impact from train passbys. These sources are all at the relevant heights in relation to the train types. The S-M32 Gothenburg Tramway was used within the model as it most closely resembles the G-Link Light Rail.

Table 16: Comparison of measured and predicted noise levels for light rail

Location	Measured Rail Noise Level dB(A)	Predicted Rail Noise Level dB(A)	Correction
	L_{Amax}	L_{Amax}	
Gold Coast Line	73.0	73.0	0

Figure 8: SoundPLAN verification of noise monitoring location



8.2 Predicted Light Rail Noise

Light rail noise impacts to the development are shown in Table 17 below.

Table 17: Predicted Light Rail Noise Impacts

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour\ Day}$	$L_{eq\ 1\ hour\ Night}$			
Unit 1	Bed 1	F 4	21.3	69.4	52.4	49.4	No	Yes	Yes
Unit 1	Bed 2	F 4	21.3	69.2	52.2	49.2	No	Yes	Yes
Unit 1	KDL	F 4	21.3	72.9	55.9	52.9	No	No	No
Unit 2	Bed 1	F 4	21.3	66.6	49.6	46.6	No	Yes	Yes
Unit 2	Bed 2	F 4	21.3	65.3	48.3	45.3	No	Yes	Yes
Unit 2	KDL	F 4	21.3	64.7	47.7	44.7	No	Yes	Yes
Unit 3	Bed 1	F 4	21.3	63.8	46.8	43.8	Yes	Yes	Yes
Unit 3	Bed 2	F 4	21.3	63.2	46.2	43.2	Yes	Yes	Yes
Unit 3	KDL	F 4	21.3	65.8	48.8	45.8	No	Yes	Yes
Unit 4	Bed 1	F 4	21.3	63.5	46.5	43.5	Yes	Yes	Yes
Unit 4	Bed 2	F 4	21.3	60.5	43.5	40.5	Yes	Yes	Yes
Unit 4	KDL	F 4	21.3	61	44	41	Yes	Yes	Yes
Unit 1	Bed 1	F 5	24.4	71.6	54.6	51.6	No	Yes	No
Unit 1	Bed 2	F 5	24.4	68.3	51.3	48.3	No	Yes	Yes
Unit 1	KDL	F 5	24.4	72.2	55.2	52.2	No	Yes	No
Unit 2	Bed 1	F 5	24.4	65.8	48.8	45.8	No	Yes	Yes
Unit 2	Bed 2	F 5	24.4	65	48	45	No	Yes	Yes
Unit 2	KDL	F 5	24.4	64.6	47.6	44.6	No	Yes	Yes
Unit 3	Bed 1	F 5	24.4	63.5	46.5	43.5	Yes	Yes	Yes
Unit 3	Bed 2	F 5	24.4	62.6	45.6	42.6	Yes	Yes	Yes
Unit 3	KDL	F 5	24.4	65.8	48.8	45.8	No	Yes	Yes
Unit 4	Bed 1	F 5	24.4	63.2	46.2	43.2	Yes	Yes	Yes
Unit 4	Bed 2	F 5	24.4	60.4	43.4	40.4	Yes	Yes	Yes
Unit 4	KDL	F 5	24.4	60.9	43.9	40.9	Yes	Yes	Yes
Unit 1	Bed 1	F 6	27.5	71	54	51	No	Yes	No
Unit 1	Bed 2	F 6	27.5	67.7	50.7	47.7	No	Yes	Yes
Unit 1	KDL	F 6	27.5	71.5	54.5	51.5	No	Yes	No
Unit 2	Bed 1	F 6	27.5	65.5	48.5	45.5	No	Yes	Yes
Unit 2	Bed 2	F 6	27.5	64.7	47.7	44.7	No	Yes	Yes
Unit 2	KDL	F 6	27.5	64.4	47.4	44.4	No	Yes	Yes
Unit 3	Bed 1	F 6	27.5	63.3	46.3	43.3	Yes	Yes	Yes
Unit 3	Bed 2	F 6	27.5	62.4	45.4	42.4	Yes	Yes	Yes
Unit 3	KDL	F 6	27.5	65.6	48.6	45.6	No	Yes	Yes
Unit 4	Bed 1	F 6	27.5	62.9	45.9	42.9	Yes	Yes	Yes
Unit 4	Bed 2	F 6	27.5	60.3	43.3	40.3	Yes	Yes	Yes
Unit 4	KDL	F 6	27.5	60.8	43.8	40.8	Yes	Yes	Yes
Unit 1	Bed 1	F 7	30.6	70.4	53.4	50.4	No	Yes	Yes
Unit 1	Bed 2	F 7	30.6	67.3	50.3	47.3	No	Yes	Yes
Unit 1	KDL	F 7	30.6	70.8	53.8	50.8	No	Yes	No
Unit 2	Bed 1	F 7	30.6	65.2	48.2	45.2	No	Yes	Yes
Unit 2	Bed 2	F 7	30.6	64.4	47.4	44.4	No	Yes	Yes
Unit 2	KDL	F 7	30.6	64.2	47.2	44.2	No	Yes	Yes
Unit 3	Bed 1	F 7	30.6	63.2	46.2	43.2	Yes	Yes	Yes
Unit 3	Bed 2	F 7	30.6	62.3	45.3	42.3	Yes	Yes	Yes
Unit 3	KDL	F 7	30.6	65.4	48.4	45.4	No	Yes	Yes
Unit 4	Bed 1	F 7	30.6	62.8	45.8	42.8	Yes	Yes	Yes

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour}$ Day	$L_{eq\ 1\ hour}$ Night			
Unit 4	Bed 2	F 7	30.6	60.2	43.2	40.2	Yes	Yes	Yes
Unit 4	KDL	F 7	30.6	60.6	43.6	40.6	Yes	Yes	Yes
Unit 1	Bed 1	F 8	33.7	69.9	52.9	49.9	No	Yes	Yes
Unit 1	Bed 2	F 8	33.7	66.9	49.9	46.9	No	Yes	Yes
Unit 1	KDL	F 8	33.7	70.2	53.2	50.2	No	Yes	Yes
Unit 2	Bed 1	F 8	33.7	64.9	47.9	44.9	No	Yes	Yes
Unit 2	Bed 2	F 8	33.7	64.2	47.2	44.2	Yes	Yes	Yes
Unit 2	KDL	F 8	33.7	64.1	47.1	44.1	Yes	Yes	Yes
Unit 3	Bed 1	F 8	33.7	63	46	43	Yes	Yes	Yes
Unit 3	Bed 2	F 8	33.7	62.1	45.1	42.1	Yes	Yes	Yes
Unit 3	KDL	F 8	33.7	65.1	48.1	45.1	No	Yes	Yes
Unit 4	Bed 1	F 8	33.7	62.6	45.6	42.6	Yes	Yes	Yes
Unit 4	Bed 2	F 8	33.7	60	43	40	Yes	Yes	Yes
Unit 4	KDL	F 8	33.7	60.5	43.5	40.5	Yes	Yes	Yes
Unit 1	Bed 1	F 9	36.8	69.3	52.3	49.3	No	Yes	Yes
Unit 1	Bed 2	F 9	36.8	66.4	49.4	46.4	No	Yes	Yes
Unit 1	KDL	F 9	36.8	69.6	52.6	49.6	No	Yes	Yes
Unit 2	Bed 1	F 9	36.8	64.6	47.6	44.6	No	Yes	Yes
Unit 2	Bed 2	F 9	36.8	63.9	46.9	43.9	Yes	Yes	Yes
Unit 2	KDL	F 9	36.8	63.9	46.9	43.9	Yes	Yes	Yes
Unit 3	Bed 1	F 9	36.8	62.7	45.7	42.7	Yes	Yes	Yes
Unit 3	Bed 2	F 9	36.8	61.9	44.9	41.9	Yes	Yes	Yes
Unit 3	KDL	F 9	36.8	64.9	47.9	44.9	No	Yes	Yes
Unit 4	Bed 1	F 9	36.8	62.4	45.4	42.4	Yes	Yes	Yes
Unit 4	Bed 2	F 9	36.8	59.9	42.9	39.9	Yes	Yes	Yes
Unit 4	KDL	F 9	36.8	60.4	43.4	40.4	Yes	Yes	Yes
Unit 1	Bed 1	F 10	39.9	68.8	51.8	48.8	No	Yes	Yes
Unit 1	Bed 2	F 10	39.9	66	49	46	No	Yes	Yes
Unit 1	KDL	F 10	39.9	69	52	49	No	Yes	Yes
Unit 2	Bed 1	F 10	39.9	64.3	47.3	44.3	Yes	Yes	Yes
Unit 2	Bed 2	F 10	39.9	63.6	46.6	43.6	Yes	Yes	Yes
Unit 2	KDL	F 10	39.9	63.2	46.2	43.2	Yes	Yes	Yes
Unit 3	Bed 1	F 10	39.9	62.5	45.5	42.5	Yes	Yes	Yes
Unit 3	Bed 2	F 10	39.9	61.7	44.7	41.7	Yes	Yes	Yes
Unit 3	KDL	F 10	39.9	64.6	47.6	44.6	Yes	Yes	Yes
Unit 4	Bed 1	F 10	39.9	62.3	45.3	42.3	Yes	Yes	Yes
Unit 4	Bed 2	F 10	39.9	59.8	42.8	39.8	Yes	Yes	Yes
Unit 4	KDL	F 10	39.9	60.2	43.2	40.2	Yes	Yes	Yes
Unit 1	Bed 1	F 11	43	68.3	51.3	48.3	No	Yes	Yes
Unit 1	Bed 2	F 11	43	65.6	48.6	45.6	No	Yes	Yes
Unit 1	KDL	F 11	43	68.5	51.5	48.5	No	Yes	Yes
Unit 2	Bed 1	F 11	43	63.9	46.9	43.9	Yes	Yes	Yes
Unit 2	Bed 2	F 11	43	63.3	46.3	43.3	Yes	Yes	Yes
Unit 2	KDL	F 11	43	63.1	46.1	43.1	Yes	Yes	Yes
Unit 3	Bed 1	F 11	43	62.3	45.3	42.3	Yes	Yes	Yes
Unit 3	Bed 2	F 11	43	61.5	44.5	41.5	Yes	Yes	Yes
Unit 3	KDL	F 11	43	63.9	46.9	43.9	Yes	Yes	Yes
Unit 4	Bed 1	F 11	43	62	45	42	Yes	Yes	Yes
Unit 4	Bed 2	F 11	43	59.6	42.6	39.6	Yes	Yes	Yes
Unit 4	KDL	F 11	43	60.1	43.1	40.1	Yes	Yes	Yes
Unit 1	Bed 1	F 12	46.1	67.8	50.8	47.8	No	Yes	Yes
Unit 1	Bed 2	F 12	46.1	65.2	48.2	45.2	No	Yes	Yes

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour}$ Day	$L_{eq\ 1\ hour}$ Night			
Unit 1	KDL	F 12	46.1	68	51	48	No	Yes	Yes
Unit 2	Bed 1	F 12	46.1	63.6	46.6	43.6	Yes	Yes	Yes
Unit 2	Bed 2	F 12	46.1	63	46	43	Yes	Yes	Yes
Unit 2	KDL	F 12	46.1	62.8	45.8	42.8	Yes	Yes	Yes
Unit 3	Bed 1	F 12	46.1	62.1	45.1	42.1	Yes	Yes	Yes
Unit 3	Bed 2	F 12	46.1	61.3	44.3	41.3	Yes	Yes	Yes
Unit 3	KDL	F 12	46.1	63.6	46.6	43.6	Yes	Yes	Yes
Unit 4	Bed 1	F 12	46.1	61.3	44.3	41.3	Yes	Yes	Yes
Unit 4	Bed 2	F 12	46.1	59.5	42.5	39.5	Yes	Yes	Yes
Unit 4	KDL	F 12	46.1	59.9	42.9	39.9	Yes	Yes	Yes
Unit 1	Bed 1	F 13	49.2	67.3	50.3	47.3	No	Yes	Yes
Unit 1	Bed 2	F 13	49.2	64.8	47.8	44.8	No	Yes	Yes
Unit 1	KDL	F 13	49.2	67.5	50.5	47.5	No	Yes	Yes
Unit 2	Bed 1	F 13	49.2	63.2	46.2	43.2	Yes	Yes	Yes
Unit 2	Bed 2	F 13	49.2	62.8	45.8	42.8	Yes	Yes	Yes
Unit 2	KDL	F 13	49.2	62.6	45.6	42.6	Yes	Yes	Yes
Unit 3	Bed 1	F 13	49.2	61.9	44.9	41.9	Yes	Yes	Yes
Unit 3	Bed 2	F 13	49.2	61.1	44.1	41.1	Yes	Yes	Yes
Unit 3	KDL	F 13	49.2	63.3	46.3	43.3	Yes	Yes	Yes
Unit 4	Bed 1	F 13	49.2	60.8	43.8	40.8	Yes	Yes	Yes
Unit 4	Bed 2	F 13	49.2	59.3	42.3	39.3	Yes	Yes	Yes
Unit 4	KDL	F 13	49.2	59.7	42.7	39.7	Yes	Yes	Yes
Unit 1	Bed 1	F 14	52.3	66.9	49.9	46.9	No	Yes	Yes
Unit 1	Bed 2	F 14	52.3	64.4	47.4	44.4	No	Yes	Yes
Unit 1	KDL	F 14	52.3	67	50	47	No	Yes	Yes
Unit 2	Bed 1	F 14	52.3	62.9	45.9	42.9	Yes	Yes	Yes
Unit 2	Bed 2	F 14	52.3	62.5	45.5	42.5	Yes	Yes	Yes
Unit 2	KDL	F 14	52.3	62.3	45.3	42.3	Yes	Yes	Yes
Unit 3	Bed 1	F 14	52.3	61.6	44.6	41.6	Yes	Yes	Yes
Unit 3	Bed 2	F 14	52.3	60.8	43.8	40.8	Yes	Yes	Yes
Unit 3	KDL	F 14	52.3	63.1	46.1	43.1	Yes	Yes	Yes
Unit 4	Bed 1	F 14	52.3	60.6	43.6	40.6	Yes	Yes	Yes
Unit 4	Bed 2	F 14	52.3	59.2	42.2	39.2	Yes	Yes	Yes
Unit 4	KDL	F 14	52.3	59.5	42.5	39.5	Yes	Yes	Yes
Unit 1	Bed 1	F 15	55.4	66.5	49.5	46.5	No	Yes	Yes
Unit 1	Bed 2	F 15	55.4	64	47	44	Yes	Yes	Yes
Unit 1	KDL	F 15	55.4	66.6	49.6	46.6	No	Yes	Yes
Unit 2	Bed 1	F 15	55.4	62.6	45.6	42.6	Yes	Yes	Yes
Unit 2	Bed 2	F 15	55.4	62.2	45.2	42.2	Yes	Yes	Yes
Unit 2	KDL	F 15	55.4	62	45	42	Yes	Yes	Yes
Unit 3	Bed 1	F 15	55.4	61.4	44.4	41.4	Yes	Yes	Yes
Unit 3	Bed 2	F 15	55.4	60.6	43.6	40.6	Yes	Yes	Yes
Unit 3	KDL	F 15	55.4	62.8	45.8	42.8	Yes	Yes	Yes
Unit 4	Bed 1	F 15	55.4	60.4	43.4	40.4	Yes	Yes	Yes
Unit 4	Bed 2	F 15	55.4	59	42	39	Yes	Yes	Yes
Unit 4	KDL	F 15	55.4	59.3	42.3	39.3	Yes	Yes	Yes
Unit 1	Bed 1	F 16	58.5	66	49	46	No	Yes	Yes
Unit 1	Bed 2	F 16	58.5	63.7	46.7	43.7	Yes	Yes	Yes
Unit 1	KDL	F 16	58.5	66.1	49.1	46.1	No	Yes	Yes
Unit 2	Bed 1	F 16	58.5	62.3	45.3	42.3	Yes	Yes	Yes
Unit 2	Bed 2	F 16	58.5	61.9	44.9	41.9	Yes	Yes	Yes
Unit 2	KDL	F 16	58.5	61.8	44.8	41.8	Yes	Yes	Yes

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour}$ Day	$L_{eq\ 1\ hour}$ Night			
Unit 3	Bed 1	F 16	58.5	61.2	44.2	41.2	Yes	Yes	Yes
Unit 3	Bed 2	F 16	58.5	60.3	43.3	40.3	Yes	Yes	Yes
Unit 3	KDL	F 16	58.5	62.6	45.6	42.6	Yes	Yes	Yes
Unit 4	Bed 1	F 16	58.5	60.2	43.2	40.2	Yes	Yes	Yes
Unit 4	Bed 2	F 16	58.5	58.8	41.8	38.8	Yes	Yes	Yes
Unit 4	KDL	F 16	58.5	59.2	42.2	39.2	Yes	Yes	Yes
Unit 1	Bed 1	F 17	61.6	65.6	48.6	45.6	No	Yes	Yes
Unit 1	Bed 2	F 17	61.6	63.4	46.4	43.4	Yes	Yes	Yes
Unit 1	KDL	F 17	61.6	65.6	48.6	45.6	No	Yes	Yes
Unit 2	Bed 1	F 17	61.6	62	45	42	Yes	Yes	Yes
Unit 2	Bed 2	F 17	61.6	61.6	44.6	41.6	Yes	Yes	Yes
Unit 2	KDL	F 17	61.6	61.5	44.5	41.5	Yes	Yes	Yes
Unit 3	Bed 1	F 17	61.6	60.9	43.9	40.9	Yes	Yes	Yes
Unit 3	Bed 2	F 17	61.6	60.1	43.1	40.1	Yes	Yes	Yes
Unit 3	KDL	F 17	61.6	62.2	45.2	42.2	Yes	Yes	Yes
Unit 4	Bed 1	F 17	61.6	60	43	40	Yes	Yes	Yes
Unit 4	Bed 2	F 17	61.6	58.7	41.7	38.7	Yes	Yes	Yes
Unit 4	KDL	F 17	61.6	59.2	42.2	39.2	Yes	Yes	Yes
Unit 1	Bed 1	F 18	64.7	65.2	48.2	45.2	No	Yes	Yes
Unit 1	Bed 2	F 18	64.7	63	46	43	Yes	Yes	Yes
Unit 1	KDL	F 18	64.7	65.2	48.2	45.2	No	Yes	Yes
Unit 2	Bed 1	F 18	64.7	61.7	44.7	41.7	Yes	Yes	Yes
Unit 2	Bed 2	F 18	64.7	61.3	44.3	41.3	Yes	Yes	Yes
Unit 2	KDL	F 18	64.7	61.3	44.3	41.3	Yes	Yes	Yes
Unit 3	Bed 1	F 18	64.7	60.7	43.7	40.7	Yes	Yes	Yes
Unit 3	Bed 2	F 18	64.7	59.9	42.9	39.9	Yes	Yes	Yes
Unit 3	KDL	F 18	64.7	62	45	42	Yes	Yes	Yes
Unit 4	Bed 1	F 18	64.7	59.8	42.8	39.8	Yes	Yes	Yes
Unit 4	Bed 2	F 18	64.7	58.5	41.5	38.5	Yes	Yes	Yes
Unit 4	KDL	F 18	64.7	59	42	39	Yes	Yes	Yes
Unit 1	Bed 1	F 19	67.8	64.8	47.8	44.8	No	Yes	Yes
Unit 1	Bed 2	F 19	67.8	62.7	45.7	42.7	Yes	Yes	Yes
Unit 1	KDL	F 19	67.8	64.8	47.8	44.8	No	Yes	Yes
Unit 2	Bed 1	F 19	67.8	61.4	44.4	41.4	Yes	Yes	Yes
Unit 2	Bed 2	F 19	67.8	61.1	44.1	41.1	Yes	Yes	Yes
Unit 2	KDL	F 19	67.8	61	44	41	Yes	Yes	Yes
Unit 3	Bed 1	F 19	67.8	60.3	43.3	40.3	Yes	Yes	Yes
Unit 3	Bed 2	F 19	67.8	59.7	42.7	39.7	Yes	Yes	Yes
Unit 3	KDL	F 19	67.8	61.7	44.7	41.7	Yes	Yes	Yes
Unit 4	Bed 1	F 19	67.8	59.5	42.5	39.5	Yes	Yes	Yes
Unit 4	Bed 2	F 19	67.8	58.3	41.3	38.3	Yes	Yes	Yes
Unit 4	KDL	F 19	67.8	58.8	41.8	38.8	Yes	Yes	Yes
Unit 1	Bed 1	F 20	70.9	64.5	47.5	44.5	No	Yes	Yes
Unit 1	Bed 2	F 20	70.9	62.3	45.3	42.3	Yes	Yes	Yes
Unit 1	KDL	F 20	70.9	64.5	47.5	44.5	No	Yes	Yes
Unit 2	Bed 1	F 20	70.9	61.1	44.1	41.1	Yes	Yes	Yes
Unit 2	Bed 2	F 20	70.9	60.8	43.8	40.8	Yes	Yes	Yes
Unit 2	KDL	F 20	70.9	60.8	43.8	40.8	Yes	Yes	Yes
Unit 3	Bed 1	F 20	70.9	60.1	43.1	40.1	Yes	Yes	Yes
Unit 3	Bed 2	F 20	70.9	59.4	42.4	39.4	Yes	Yes	Yes
Unit 3	KDL	F 20	70.9	61.5	44.5	41.5	Yes	Yes	Yes
Unit 4	Bed 1	F 20	70.9	59.3	42.3	39.3	Yes	Yes	Yes

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour}$ Day	$L_{eq\ 1\ hour}$ Night			
Unit 4	Bed 2	F 20	70.9	58.2	41.2	38.2	Yes	Yes	Yes
Unit 4	KDL	F 20	70.9	58.7	41.7	38.7	Yes	Yes	Yes
Unit 1	Bed 1	F 21	74	64.2	47.2	44.2	Yes	Yes	Yes
Unit 1	Bed 2	F 21	74	62	45	42	Yes	Yes	Yes
Unit 1	KDL	F 21	74	64.1	47.1	44.1	Yes	Yes	Yes
Unit 2	Bed 1	F 21	74	60.8	43.8	40.8	Yes	Yes	Yes
Unit 2	Bed 2	F 21	74	60.5	43.5	40.5	Yes	Yes	Yes
Unit 2	KDL	F 21	74	60.6	43.6	40.6	Yes	Yes	Yes
Unit 3	Bed 1	F 21	74	59.8	42.8	39.8	Yes	Yes	Yes
Unit 3	Bed 2	F 21	74	59.2	42.2	39.2	Yes	Yes	Yes
Unit 3	KDL	F 21	74	61.2	44.2	41.2	Yes	Yes	Yes
Unit 4	Bed 1	F 21	74	59.1	42.1	39.1	Yes	Yes	Yes
Unit 4	Bed 2	F 21	74	58	41	38	Yes	Yes	Yes
Unit 4	KDL	F 21	74	58.5	41.5	38.5	Yes	Yes	Yes
Unit 1	Bed 1	F 22	77.1	63.8	46.8	43.8	Yes	Yes	Yes
Unit 1	Bed 2	F 22	77.1	61.7	44.7	41.7	Yes	Yes	Yes
Unit 1	KDL	F 22	77.1	63.8	46.8	43.8	Yes	Yes	Yes
Unit 2	Bed 1	F 22	77.1	60.5	43.5	40.5	Yes	Yes	Yes
Unit 2	Bed 2	F 22	77.1	60.3	43.3	40.3	Yes	Yes	Yes
Unit 2	KDL	F 22	77.1	60.3	43.3	40.3	Yes	Yes	Yes
Unit 3	Bed 1	F 22	77.1	59.6	42.6	39.6	Yes	Yes	Yes
Unit 3	Bed 2	F 22	77.1	59.1	42.1	39.1	Yes	Yes	Yes
Unit 3	KDL	F 22	77.1	60.9	43.9	40.9	Yes	Yes	Yes
Unit 4	Bed 1	F 22	77.1	58.9	41.9	38.9	Yes	Yes	Yes
Unit 4	Bed 2	F 22	77.1	57.8	40.8	37.8	Yes	Yes	Yes
Unit 4	KDL	F 22	77.1	58.3	41.3	38.3	Yes	Yes	Yes
Unit 1	Bed 1	F 23	80.2	63.4	46.4	43.4	Yes	Yes	Yes
Unit 1	Bed 2	F 23	80.2	61.4	44.4	41.4	Yes	Yes	Yes
Unit 1	KDL	F 23	80.2	63.5	46.5	43.5	Yes	Yes	Yes
Unit 2	Bed 1	F 23	80.2	60.2	43.2	40.2	Yes	Yes	Yes
Unit 2	Bed 2	F 23	80.2	60	43	40	Yes	Yes	Yes
Unit 2	KDL	F 23	80.2	60.1	43.1	40.1	Yes	Yes	Yes
Unit 3	Bed 1	F 23	80.2	59.4	42.4	39.4	Yes	Yes	Yes
Unit 3	Bed 2	F 23	80.2	58.9	41.9	38.9	Yes	Yes	Yes
Unit 3	KDL	F 23	80.2	60.7	43.7	40.7	Yes	Yes	Yes
Unit 4	Bed 1	F 23	80.2	58.7	41.7	38.7	Yes	Yes	Yes
Unit 4	Bed 2	F 23	80.2	57.7	40.7	37.7	Yes	Yes	Yes
Unit 4	KDL	F 23	80.2	58.1	41.1	38.1	Yes	Yes	Yes
Unit 1	Bed 1	F 24	83.3	63	46	43	Yes	Yes	Yes
Unit 1	Bed 2	F 24	83.3	61.1	44.1	41.1	Yes	Yes	Yes
Unit 1	KDL	F 24	83.3	63.1	46.1	43.1	Yes	Yes	Yes
Unit 2	Bed 1	F 24	83.3	60	43	40	Yes	Yes	Yes
Unit 2	Bed 2	F 24	83.3	59.8	42.8	39.8	Yes	Yes	Yes
Unit 2	KDL	F 24	83.3	59.9	42.9	39.9	Yes	Yes	Yes
Unit 3	Bed 1	F 24	83.3	59.2	42.2	39.2	Yes	Yes	Yes
Unit 3	Bed 2	F 24	83.3	58.8	41.8	38.8	Yes	Yes	Yes
Unit 3	KDL	F 24	83.3	60.4	43.4	40.4	Yes	Yes	Yes
Unit 4	Bed 1	F 24	83.3	58.5	41.5	38.5	Yes	Yes	Yes
Unit 4	Bed 2	F 24	83.3	57.5	40.5	37.5	Yes	Yes	Yes
Unit 4	KDL	F 24	83.3	58	41	38	Yes	Yes	Yes
Unit 1	Bed 1	F 25	86.4	62.5	45.5	42.5	Yes	Yes	Yes
Unit 1	Bed 2	F 25	86.4	60.8	43.8	40.8	Yes	Yes	Yes

Unit	Room	Level	FFL (m)	Predicted Light Rail Noise Impacts (Facade Corrected) dB(A)			Complies with ≤64 dB(A) Lmax façade corrected Yes/No	Complies with ≤55 dB(A) Leq (1h) Day façade corrected Yes/No	Complies with ≤50 dB(A) Leq (1h) Eve façade corrected Yes/No
				L_{Amax}	$L_{eq\ 1\ hour}$ Day	$L_{eq\ 1\ hour}$ Night			
Unit 1	KDL	F 25	86.4	61.8	44.8	41.8	Yes	Yes	Yes
Unit 2	Bed 1	F 25	86.4	59.7	42.7	39.7	Yes	Yes	Yes
Unit 2	Bed 2	F 25	86.4	59.5	42.5	39.5	Yes	Yes	Yes
Unit 2	KDL	F 25	86.4	59.7	42.7	39.7	Yes	Yes	Yes
Unit 3	Bed 1	F 25	86.4	59	42	39	Yes	Yes	Yes
Unit 3	Bed 2	F 25	86.4	58.6	41.6	38.6	Yes	Yes	Yes
Unit 3	KDL	F 25	86.4	60.2	43.2	40.2	Yes	Yes	Yes
Unit 4	Bed 1	F 25	86.4	58.3	41.3	38.3	Yes	Yes	Yes
Unit 4	Bed 2	F 25	86.4	57.3	40.3	37.3	Yes	Yes	Yes
Unit 4	KDL	F 25	86.4	57.8	40.8	37.8	Yes	Yes	Yes
Unit 1	Bed 1	F 26	89.5	62.2	45.2	42.2	Yes	Yes	Yes
Unit 1	Bed 2	F 26	89.5	60.5	43.5	40.5	Yes	Yes	Yes
Unit 1	KDL	F 26	89.5	61.5	44.5	41.5	Yes	Yes	Yes
Unit 2	Bed 1	F 26	89.5	59.7	42.7	39.7	Yes	Yes	Yes
Unit 2	Bed 2	F 26	89.5	59.3	42.3	39.3	Yes	Yes	Yes
Unit 2	KDL	F 26	89.5	59.5	42.5	39.5	Yes	Yes	Yes
Unit 3	Bed 1	F 26	89.5	58.7	41.7	38.7	Yes	Yes	Yes
Unit 3	Bed 2	F 26	89.5	58.4	41.4	38.4	Yes	Yes	Yes
Unit 3	KDL	F 26	89.5	60	43	40	Yes	Yes	Yes
Unit 4	Bed 1	F 26	89.5	58.1	41.1	38.1	Yes	Yes	Yes
Unit 4	Bed 2	F 26	89.5	57.1	40.1	37.1	Yes	Yes	Yes
Unit 4	KDL	F 26	89.5	57.6	40.6	37.6	Yes	Yes	Yes
Unit 1	Bed 1	F 27	92.6	61.8	44.8	41.8	Yes	Yes	Yes
Unit 1	Bed 2	F 27	92.6	60.2	43.2	40.2	Yes	Yes	Yes
Unit 1	KDL	F 27	92.6	61.2	44.2	41.2	Yes	Yes	Yes
Unit 2	Bed 1	F 27	92.6	59.4	42.4	39.4	Yes	Yes	Yes
Unit 2	Bed 2	F 27	92.6	59.1	42.1	39.1	Yes	Yes	Yes
Unit 2	KDL	F 27	92.6	59.3	42.3	39.3	Yes	Yes	Yes
Unit 3	Bed 1	F 27	92.6	58.5	41.5	38.5	Yes	Yes	Yes
Unit 3	Bed 2	F 27	92.6	58.3	41.3	38.3	Yes	Yes	Yes
Unit 3	KDL	F 27	92.6	59.7	42.7	39.7	Yes	Yes	Yes
Unit 4	Bed 1	F 27	92.6	57.9	40.9	37.9	Yes	Yes	Yes
Unit 4	Bed 2	F 27	92.6	56.9	39.9	36.9	Yes	Yes	Yes
Unit 4	KDL	F 27	92.6	57.4	40.4	37.4	Yes	Yes	Yes
Unit 1	Bed 1	F 28	95.7	61.5	44.5	41.5	Yes	Yes	Yes
Unit 1	Bed 2	F 28	95.7	59.9	42.9	39.9	Yes	Yes	Yes
Unit 1	KDL	F 28	95.7	60.9	43.9	40.9	Yes	Yes	Yes
Unit 2	Bed 1	F 28	95.7	59.2	42.2	39.2	Yes	Yes	Yes
Unit 2	Bed 2	F 28	95.7	58.9	41.9	38.9	Yes	Yes	Yes
Unit 2	KDL	F 28	95.7	59.1	42.1	39.1	Yes	Yes	Yes
Unit 3	Bed 1	F 28	95.7	58.3	41.3	38.3	Yes	Yes	Yes
Unit 3	Bed 2	F 28	95.7	58.1	41.1	38.1	Yes	Yes	Yes
Unit 3	KDL	F 28	95.7	59.5	42.5	39.5	Yes	Yes	Yes
Unit 4	Bed 1	F 28	95.7	57.7	40.7	37.7	Yes	Yes	Yes
Unit 4	Bed 2	F 28	95.7	56.8	39.8	36.8	Yes	Yes	Yes
Unit 4	KDL	F 28	95.7	57.2	40.2	37.2	Yes	Yes	Yes

Façade treatments will be required as per SDAP PO17. Refer to Section 10 for façade treatments recommendations.

Figure 9 to Figure 11 show the predicted light rail noise contours for the development (Façade Corrected).

Figure 9: Light Rail Noise Contours (Façade Corrected) – Level 4

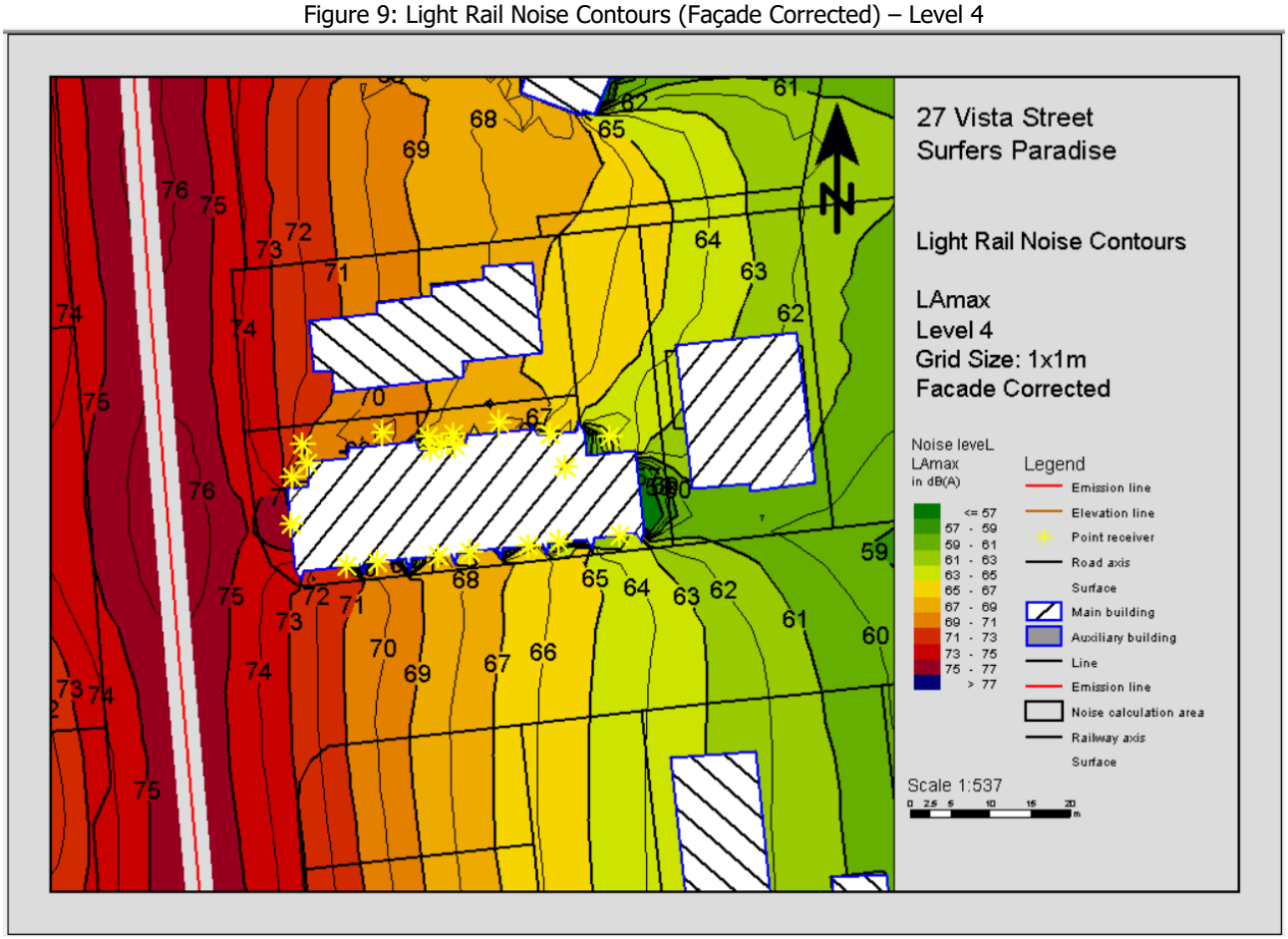


Figure 10: Light Rail Noise Contours (Façade Corrected) – Level 12

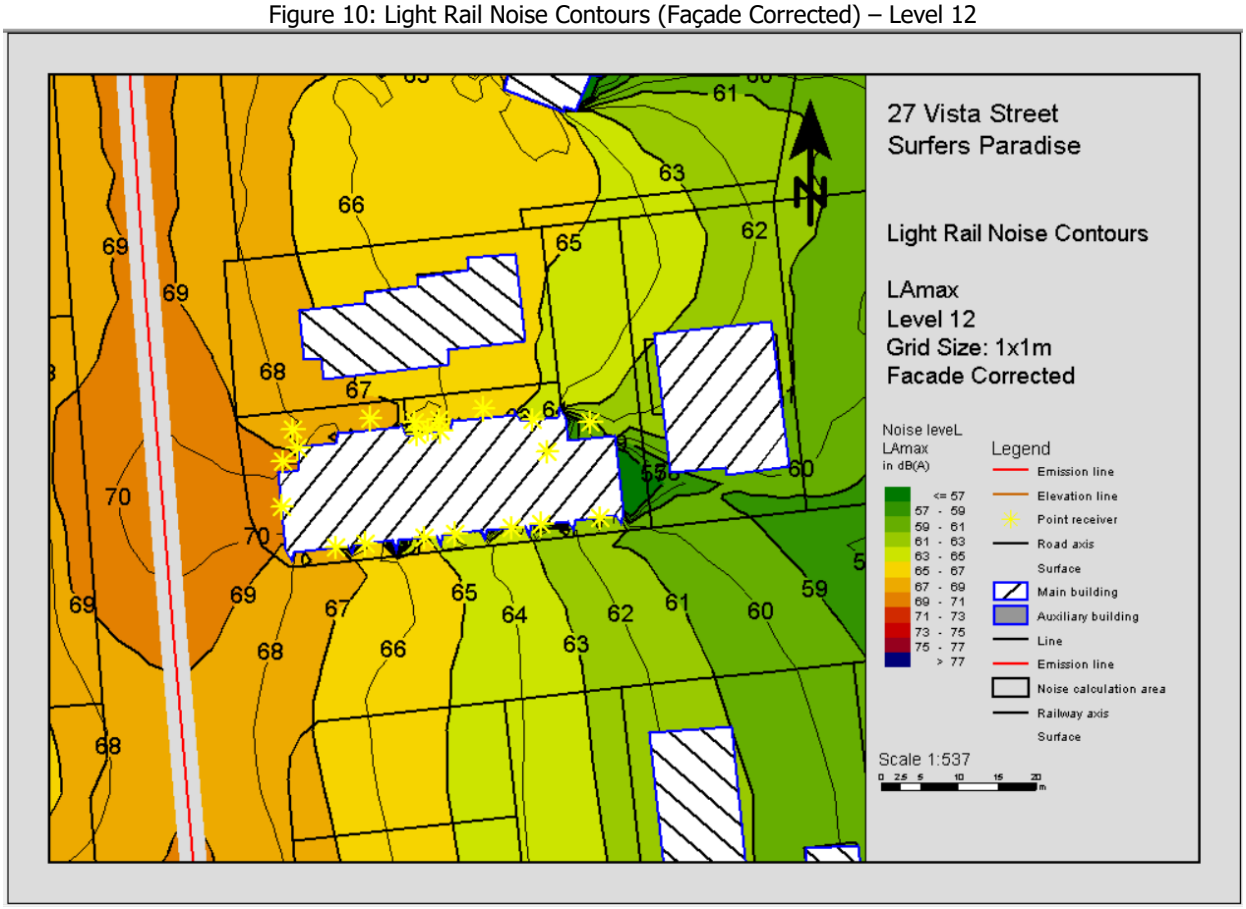
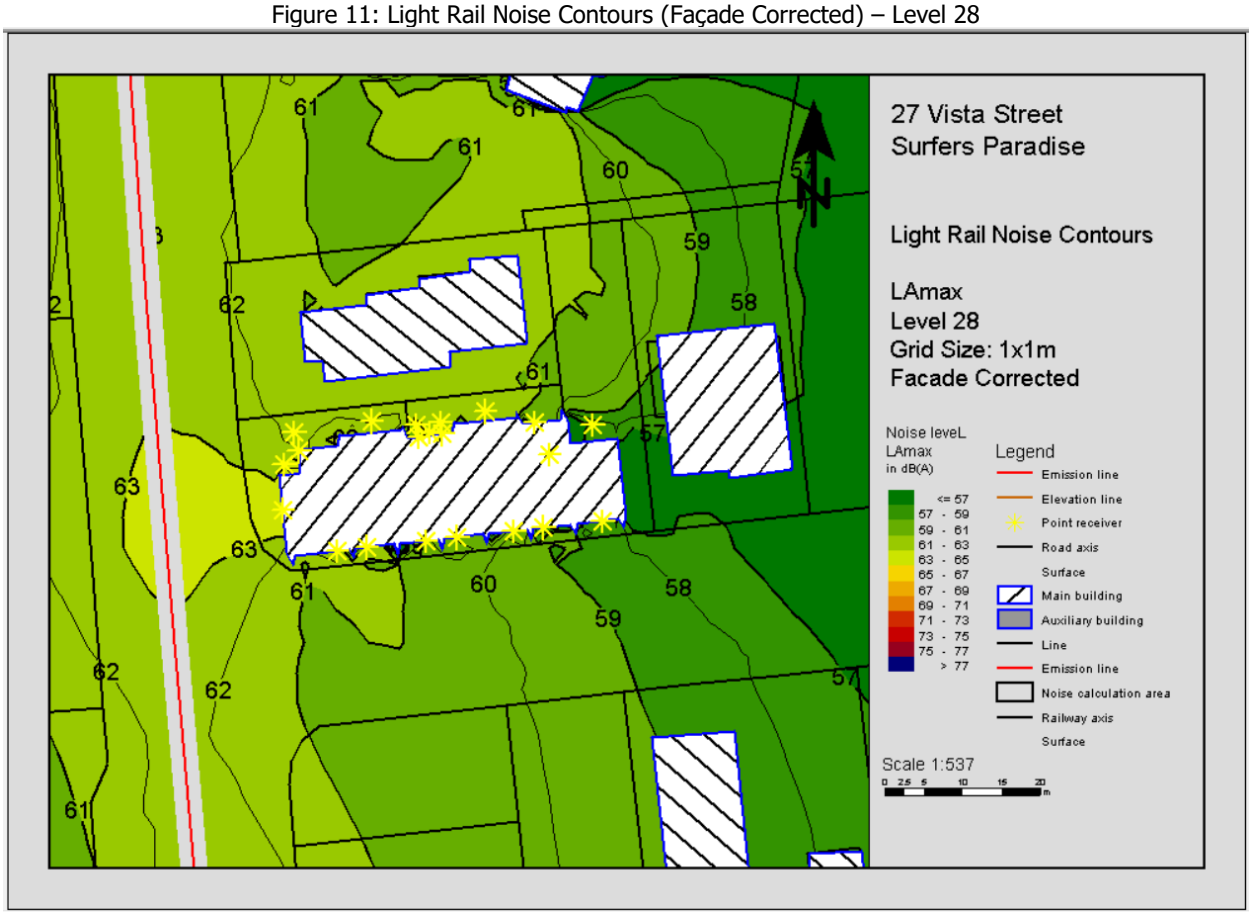


Figure 11: Light Rail Noise Contours (Façade Corrected) – Level 28



An assessment of outdoor areas was conducted with the results presented in Table 18.

Table 18: Outdoor Communal/Private Open Space – Light Rail

Description			Predicted Light Rail Noise Impacts (Free Field)		Complies with ≤66 dB(A) Lmax free field Yes/No	Complies with ≤52 dB(A) Leq (1h) free field Yes/No
Location	Floor	FFL (m)	LAmax dB(A)	Leq (1h) Day dB(A)		
Open Air Gym	F3	16.4	62.3	44.3	Yes	Yes
Owners Wellness	F3	16.4	65.7	47.7	Yes	Yes
Pool Deck	F3	16.4	55.7	37.7	Yes	Yes
Sun Lounges	F3	16.4	64	46	Yes	Yes
Yoga Deck	F3	16.4	65.5	47.5	Yes	Yes
Unit 1 Terrace	F 4	21.3	70.3	52.3	No	Yes
Unit 2 Terrace	F 4	21.3	64.4	46.4	Yes	Yes
Unit 3 Terrace	F 4	21.3	64	46	Yes	Yes
Unit 4 Terrace	F 4	21.3	59.5	41.5	Yes	Yes
Unit 1 Terrace	F 5	24.4	70.1	52.1	No	Yes
Unit 2 Terrace	F 5	24.4	64.4	46.4	Yes	Yes
Unit 3 Terrace	F 5	24.4	64.1	46.1	Yes	Yes
Unit 4 Terrace	F 5	24.4	58.8	40.8	Yes	Yes
Unit 1 Terrace	F 6	27.5	69.9	51.9	No	Yes
Unit 2 Terrace	F 6	27.5	64.3	46.3	Yes	Yes
Unit 3 Terrace	F 6	27.5	63.9	45.9	Yes	Yes
Unit 4 Terrace	F 6	27.5	58.7	40.7	Yes	Yes
Unit 1 Terrace	F 7	30.6	69.2	51.2	No	Yes
Unit 2 Terrace	F 7	30.6	64.1	46.1	Yes	Yes
Unit 3 Terrace	F 7	30.6	63.7	45.7	Yes	Yes
Unit 4 Terrace	F 7	30.6	58.5	40.5	Yes	Yes
Unit 1 Terrace	F 8	33.7	68.7	50.7	No	Yes
Unit 2 Terrace	F 8	33.7	63.9	45.9	Yes	Yes
Unit 3 Terrace	F 8	33.7	63.5	45.5	Yes	Yes
Unit 4 Terrace	F 8	33.7	58.3	40.3	Yes	Yes
Unit 1 Terrace	F 9	36.8	68.1	50.1	No	Yes
Unit 2 Terrace	F 9	36.8	63.5	45.5	Yes	Yes
Unit 3 Terrace	F 9	36.8	63.3	45.3	Yes	Yes
Unit 4 Terrace	F 9	36.8	58.1	40.1	Yes	Yes
Unit 1 Terrace	F 10	39.9	67.6	49.6	No	Yes
Unit 2 Terrace	F 10	39.9	63.1	45.1	Yes	Yes
Unit 3 Terrace	F 10	39.9	63	45	Yes	Yes
Unit 4 Terrace	F 10	39.9	57.8	39.8	Yes	Yes
Unit 1 Terrace	F 11	43	67.1	49.1	No	Yes
Unit 2 Terrace	F 11	43	62.7	44.7	Yes	Yes
Unit 3 Terrace	F 11	43	62.6	44.6	Yes	Yes
Unit 4 Terrace	F 11	43	57.7	39.7	Yes	Yes
Unit 1 Terrace	F 12	46.1	66.6	48.6	No	Yes
Unit 2 Terrace	F 12	46.1	62.4	44.4	Yes	Yes
Unit 3 Terrace	F 12	46.1	62.3	44.3	Yes	Yes
Unit 4 Terrace	F 12	46.1	57.6	39.6	Yes	Yes
Unit 1 Terrace	F 13	49.2	66.1	48.1	Yes	Yes
Unit 2 Terrace	F 13	49.2	62.2	44.2	Yes	Yes
Unit 3 Terrace	F 13	49.2	62.1	44.1	Yes	Yes
Unit 4 Terrace	F 13	49.2	57.3	39.3	Yes	Yes
Unit 1 Terrace	F 14	52.3	65.7	47.7	Yes	Yes
Unit 2 Terrace	F 14	52.3	61.8	43.8	Yes	Yes
Unit 3 Terrace	F 14	52.3	61.8	43.8	Yes	Yes
Unit 4 Terrace	F 14	52.3	56.6	38.6	Yes	Yes
Unit 1 Terrace	F 15	55.4	65.3	47.3	Yes	Yes
Unit 2 Terrace	F 15	55.4	61.6	43.6	Yes	Yes

Description			Predicted Light Rail Noise Impacts (Free Field)		Complies with ≤66 dB(A) Lmax free field Yes/No	Complies with ≤52 dB(A) Leq (1h) free field Yes/No
Location	Floor	FFL (m)	LAmax dB(A)	Leq (1h) Day dB(A)		
Unit 3 Terrace	F 15	55.4	61.5	43.5	Yes	Yes
Unit 4 Terrace	F 15	55.4	56.4	38.4	Yes	Yes
Unit 1 Terrace	F 16	58.5	64.8	46.8	Yes	Yes
Unit 2 Terrace	F 16	58.5	61.3	43.3	Yes	Yes
Unit 3 Terrace	F 16	58.5	61.2	43.2	Yes	Yes
Unit 4 Terrace	F 16	58.5	56.3	38.3	Yes	Yes
Unit 1 Terrace	F 17	61.6	64.3	46.3	Yes	Yes
Unit 2 Terrace	F 17	61.6	61	43	Yes	Yes
Unit 3 Terrace	F 17	61.6	60.9	42.9	Yes	Yes
Unit 4 Terrace	F 17	61.6	56.1	38.1	Yes	Yes
Unit 1 Terrace	F 18	64.7	64	46	Yes	Yes
Unit 2 Terrace	F 18	64.7	60.7	42.7	Yes	Yes
Unit 3 Terrace	F 18	64.7	60.6	42.6	Yes	Yes
Unit 4 Terrace	F 18	64.7	55.9	37.9	Yes	Yes
Unit 1 Terrace	F 19	67.8	63.6	45.6	Yes	Yes
Unit 2 Terrace	F 19	67.8	60.4	42.4	Yes	Yes
Unit 3 Terrace	F 19	67.8	60.4	42.4	Yes	Yes
Unit 4 Terrace	F 19	67.8	55.8	37.8	Yes	Yes
Unit 1 Terrace	F 20	70.9	63.3	45.3	Yes	Yes
Unit 2 Terrace	F 20	70.9	60.1	42.1	Yes	Yes
Unit 3 Terrace	F 20	70.9	60.1	42.1	Yes	Yes
Unit 4 Terrace	F 20	70.9	55.6	37.6	Yes	Yes
Unit 1 Terrace	F 21	74	62.9	44.9	Yes	Yes
Unit 2 Terrace	F 21	74	59.8	41.8	Yes	Yes
Unit 3 Terrace	F 21	74	59.8	41.8	Yes	Yes
Unit 4 Terrace	F 21	74	55.5	37.5	Yes	Yes
Unit 1 Terrace	F 22	77.1	62.6	44.6	Yes	Yes
Unit 2 Terrace	F 22	77.1	59.6	41.6	Yes	Yes
Unit 3 Terrace	F 22	77.1	59.6	41.6	Yes	Yes
Unit 4 Terrace	F 22	77.1	55.2	37.2	Yes	Yes
Unit 1 Terrace	F 23	80.2	62.1	44.1	Yes	Yes
Unit 2 Terrace	F 23	80.2	59.3	41.3	Yes	Yes
Unit 3 Terrace	F 23	80.2	59.3	41.3	Yes	Yes
Unit 4 Terrace	F 23	80.2	55	37	Yes	Yes
Unit 1 Terrace	F 24	83.3	61.5	43.5	Yes	Yes
Unit 2 Terrace	F 24	83.3	59	41	Yes	Yes
Unit 3 Terrace	F 24	83.3	59	41	Yes	Yes
Unit 4 Terrace	F 24	83.3	54.6	36.6	Yes	Yes
Unit 1 Terrace	F 25	86.4	61	43	Yes	Yes
Unit 2 Terrace	F 25	86.4	58.7	40.7	Yes	Yes
Unit 3 Terrace	F 25	86.4	58.7	40.7	Yes	Yes
Unit 4 Terrace	F 25	86.4	54.3	36.3	Yes	Yes
Unit 1 Terrace	F 26	89.5	60.5	42.5	Yes	Yes
Unit 2 Terrace	F 26	89.5	58.4	40.4	Yes	Yes
Unit 3 Terrace	F 26	89.5	58.4	40.4	Yes	Yes
Unit 4 Terrace	F 26	89.5	54.1	36.1	Yes	Yes
Unit 1 Terrace	F 27	92.6	60.2	42.2	Yes	Yes
Unit 2 Terrace	F 27	92.6	57.9	39.9	Yes	Yes
Unit 3 Terrace	F 27	92.6	58.1	40.1	Yes	Yes
Unit 4 Terrace	F 27	92.6	53.9	35.9	Yes	Yes
Unit 1 Terrace	F 28	95.7	59.9	41.9	Yes	Yes
Unit 2 Terrace	F 28	95.7	57.7	39.7	Yes	Yes
Unit 3 Terrace	F 28	95.7	57.8	39.8	Yes	Yes
Unit 4 Terrace	F 28	95.7	53.7	35.7	Yes	Yes

Balcony balustrades will be required in accordance with SDAP P018 for the areas exceeding the free field criteria. Refer to Section 10.1.5 for further recommendations.

Figure 12 to Figure 14 show the predicted light rail noise contours for the development (Free Field).

Figure 12: Light Rail Noise Contours (Free Field) – Level 4

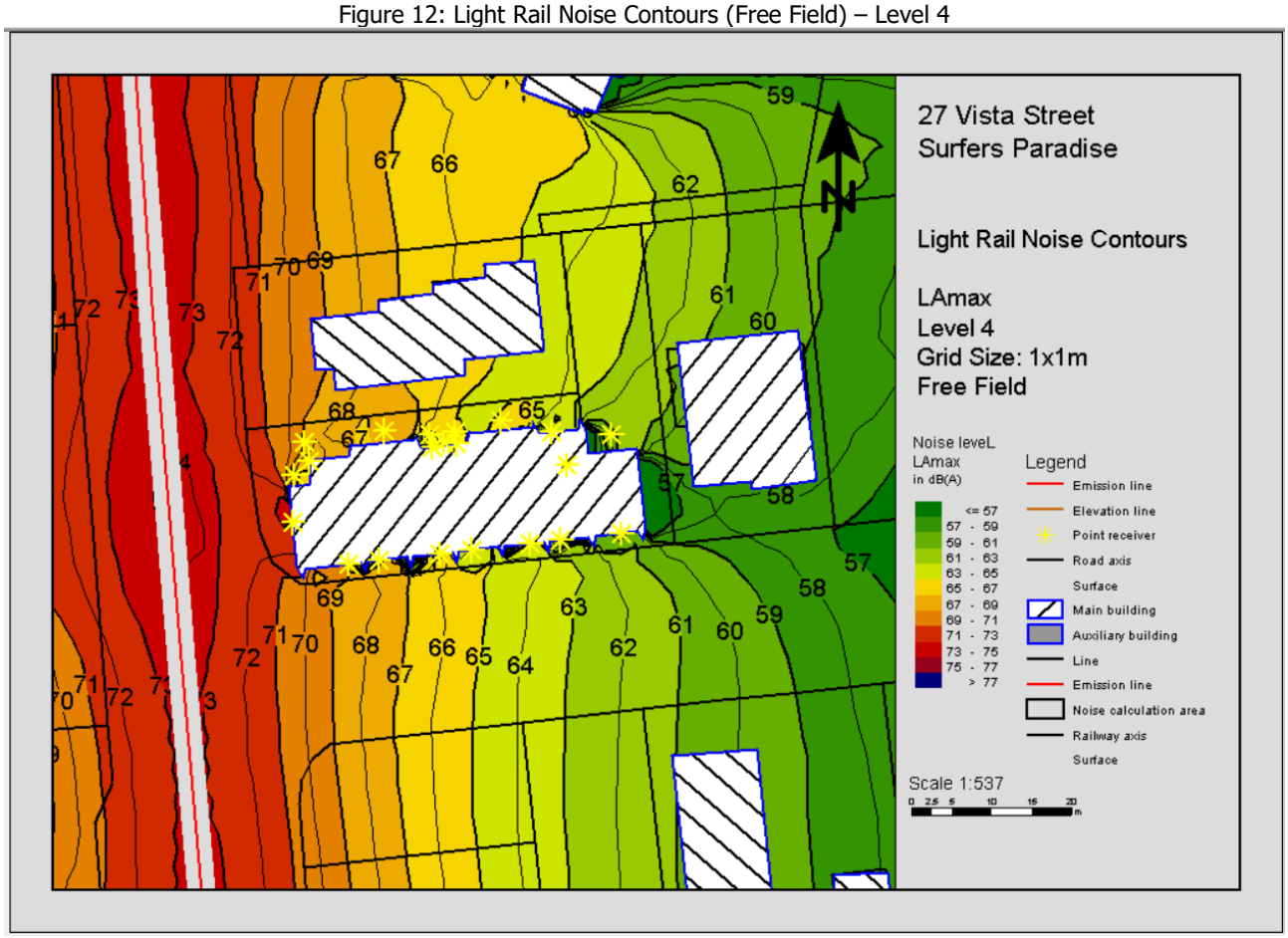


Figure 13: Light Rail Noise Contours (Free Field) – Level 12

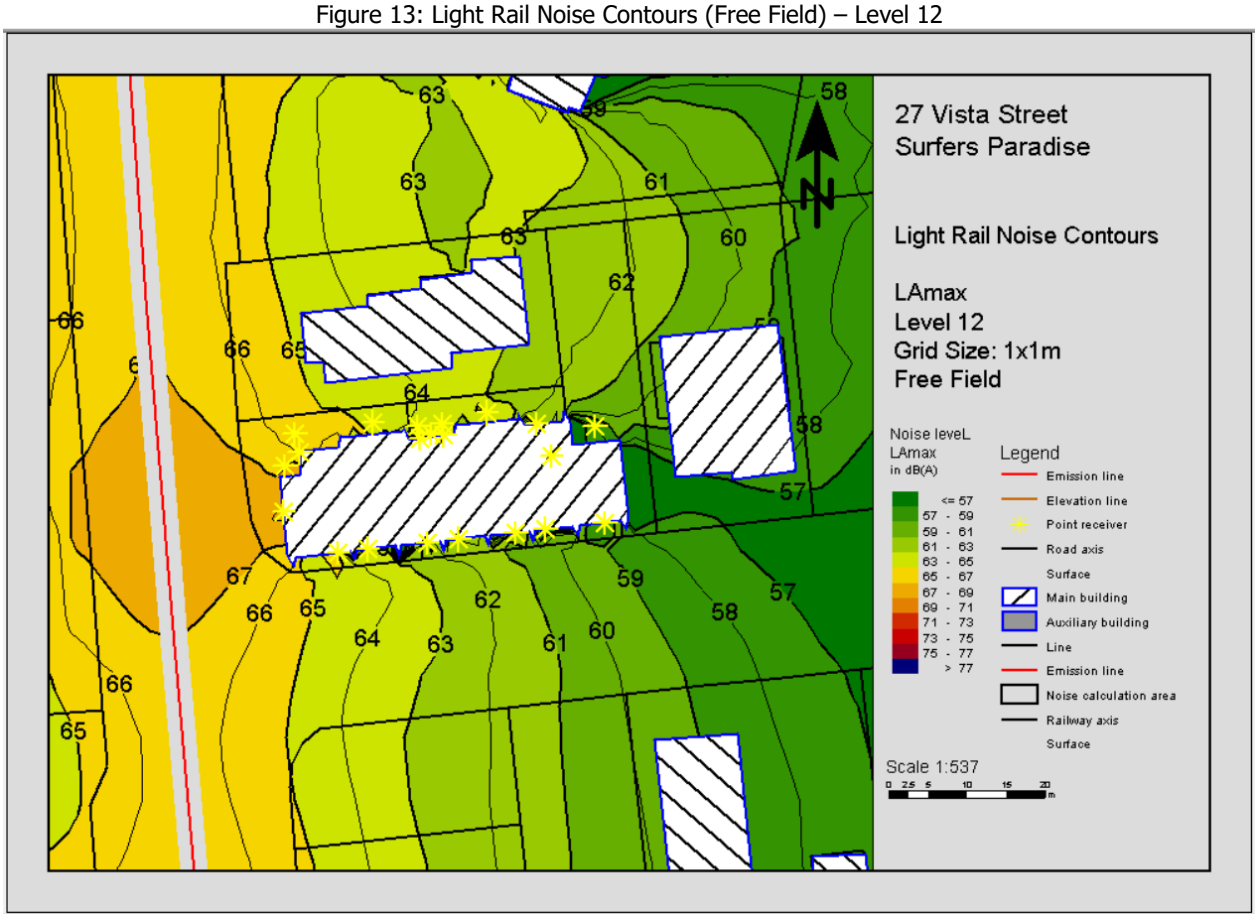
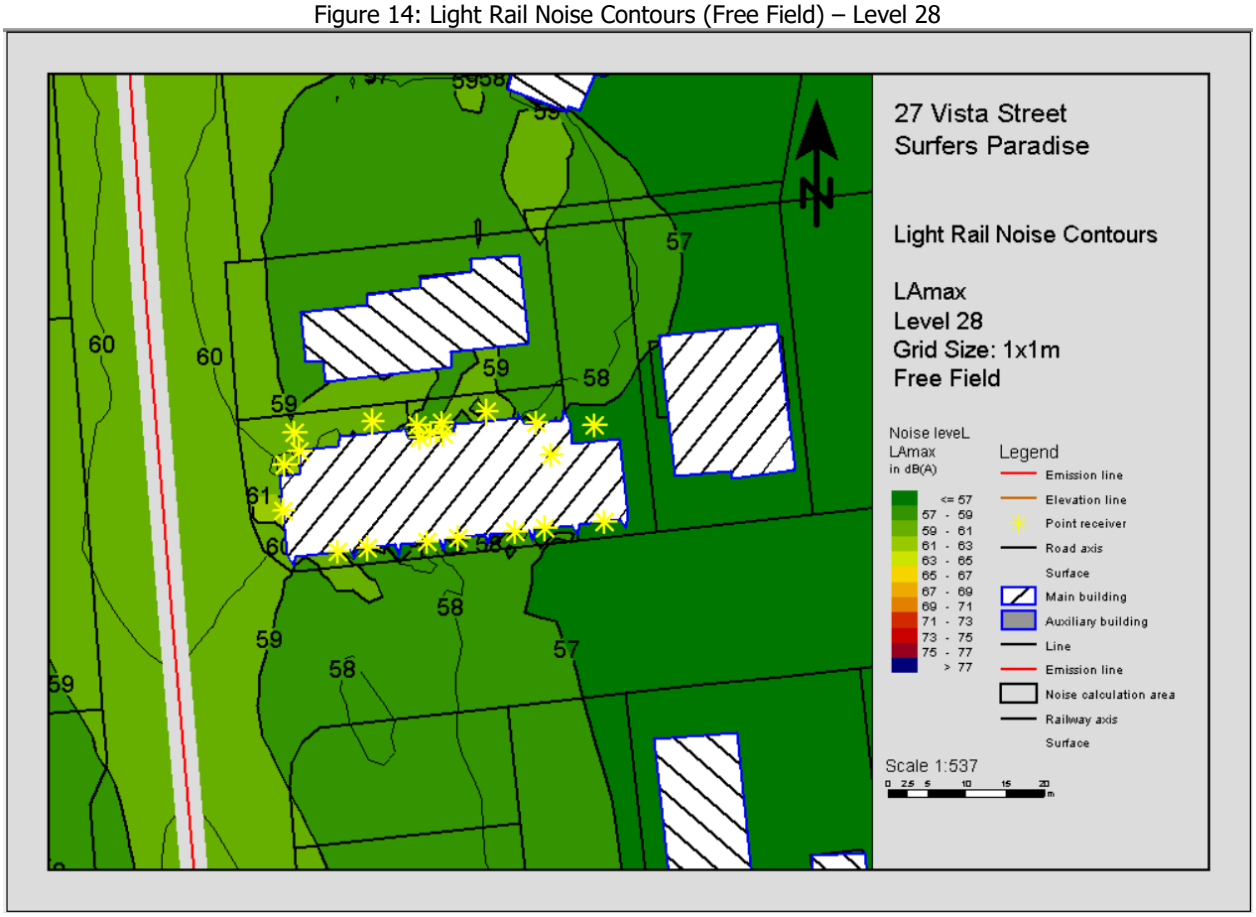


Figure 14: Light Rail Noise Contours (Free Field) – Level 28



9. Environmental Assessment

9.1 Noise Levels due to Patrons – Communal Areas

Noise associated with patrons attending the ground floor cafe is based on a technical paper '*Prediction of Noise from Small to Medium Sized Crowds*' (Hayne et al, 2011). The paper was based upon attended noise measurements conducted at a sample of premises to account for range of patron numbers. Based on the measured levels, the resulting analysis determined that the Sound Power Level (LAeq, T) of a small-medium crowd could be predicted by the following equation:

$$L_{WAeq} = 15 \log (\text{number of patrons}) + 64 \text{ dBA (approx. maximum 100 patrons)}$$

The Lmax value is predicted by the following equation:

$$L_{WMax} = 11 \log (\text{number of patrons}) + 81 \text{ dBA (approx. maximum 100 patrons)}$$

Using the above formulae, the predicted overall patron sound power level is presented in Table 19.

At this early DA stage, the assumptions described below are indicative only and should be used as a general guide;

- Internal patron numbers have been assessed as 1 patron per 3m^2 within the indoor areas of the Restaurant, Neighbourhood Store, Table Tennis, Gym, Owners lounge and Owners wellness Centre. Due to the type of activities within the Lobby, patron numbers have been assessed as 1 patron per 10m^2. The assumed internal numbers are listed in Table 19.
- The external patron numbers have been assessed as 1 patron per nominal seat shown on the architectural plans in the outdoor areas where seating is detailed. For outdoor areas without known seating, patron numbers have been assessed as 1 patron per 3m^2. Outdoor patron numbers are listed in Table 19.
- Sound pressure levels are taken to be 8dB lower than the sound power levels.

Table 19: Predicted sound power levels of patrons

Location	Number of Patrons Assessed	Predicted L_{Aeq} Sound Power Level dBA	Predicted L_{Aeq} Sound Pressure Level dBA	Predicted L_{AMax} Sound Power Level dBA
Ground Floor – Cafe (Indoor)	40	88	80	99
Ground Floor – Cafe Terrace (outdoor)	18	83	75	95
Ground Floor – Neighbourhood Store (Indoor)	8	76	68	91
Ground Floor – Lobby (Indoor)	14	81	73	94
Third Floor – Pool and Pool Deck (Outdoor)	53	90	82	100
Third Floor – BBQ Area (Outdoor)	10	79	71	91
Third Floor – Gym (Indoor)	18	83	75	95
Third Floor – Owners Lounge (Indoor)	25	85	77	96
Third Floor – Executive Lounge (Indoor)	17	81	73	94
Third Floor – Owners Wellness area (Outdoor)	10	79	71	92

9.2 Onsite Activities

Noise associated with the development was assessed based on previous measurements of similar activities. The calculations assume that the nominated activities are located at the closest representative point within the development site to each receiver location. Any relevant shielding, building transmission loss or recommended acoustic screens are taken into account for these activities.

9.2.1 Acoustic Quality Objectives

The average maximum noise source levels and predicted impacts at the receiver locations are shown in

Table 20 as follows. Note: L_{A10} and L_{A1} results are not shown in cases where the total duration of the events is less than the minimum time required e.g. $L_{A10(1hr)}$ requires noise events to occur for at least 360 seconds of an hour-long period. L_{Aeq} results are not shown where the calculated total is less than 0dBA.

Table 20: Acoustic Quality Objective Noise Assessment, 1 hour

Receivers
1. 16-18 Enderley Avenue (N)
2. 2961 Surfers Surfer Paradise Boulevard (N)
3. 21 Vista Street (E)
4. 20 Vista Street (S)
5. 2994 Surfer Paradise Boulevard (W)

Receiver	Description	Source Leq@1m dB(A)	Correction dB(A) *	Corrected Leq@1m dB(A)	No. of events per 1hr Day	No. of events per 1hr Eve	No. of events per 1hr Night	Duration per event	Distance (m) Receiver	Barrier (height (m)) Inc	Barrier screening dB	Transmission Loss dB	Building Screening dB	Dist atten. @6dB/dd	LAeq adj.,1hr ext. dB(A) Day	LAeq adj.,1hr int. dB(A) Day	LAeq adj.,1hr ext. dB(A) Eve	LAeq adj.,1hr int. dB(A) Eve	LAeq adj.,1hr ext. dB(A) Night	LAeq adj.,1hr int. dB(A) Night	LA10 adj.,1hr ext. dB(A) Day	LA10 adj.,1hr int. dB(A) Day	LA10 adj.,1hr ext. dB(A) Eve	LA10 adj.,1hr int. dB(A) Eve	LA10 adj.,1hr ext. dB(A) Night	LA10 adj.,1hr int. dB(A) Night	LA1 adj.,1hr ext. dB(A) Day	LA1 adj.,1hr int. dB(A) Day	LA1 adj.,1hr ext. dB(A) Eve	LA1 adj.,1hr int. dB(A) Eve	LA1 adj.,1hr ext. dB(A) Night	LA1 adj.,1hr int. dB(A) Night	Amenity LAeq Compliance Day / eve	Amenity LAeq Compliance Day / eve indoor	Amenity LAeq Compliance Night indoor	LA10 Compliance Day / eve	LA10 Compliance Day / eve indoor	LA10 Compliance Night indoor	LA1 Compliance Day / eve	LA1 Compliance Day / eve indoor	LA1 Compliance Night indoor
	Criteria																																50	35	30	55	40	35	65	45	40
	Car start	74	2	76	60	44	32	2	37					-31	30	20	29	19	27	17							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1	Car door closure	75	2	77	60	44	32	2	37					-31	31	21	30	20	28	18							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	60	44	32	15	45					-33	30	20	29	19	27	17	30	20	30	20	30	20	33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	4	4		900	54				-21	-35	22	12	22	12			22	12	22	12			22	12	22	12			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	4	4		900	56			-15		-35	21	11	21	11			21	11	21	11			25	15	25	15			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	4	4	4	600	58			-25		-35	6		6		6		6		6		6		10		10		10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	4	4	0	900	54					-35	39	29	39	29			39	29	39	29			43	33	43	33			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – BBQ Area (Outdoor)	72		72	4	4	0	900	44					-33	39	29	39	29			39	29	39	29			43	33	43	33			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Gym (Indoor)	75		75	4	4	4	900	53				-21	-34	20	10	20	10	20	10	20	10	20	10	20	10	24	14	24	14	24	14	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	4	4	4	900	46				-21	-33	19	9	19	9	19	9	19	9	19	9	19	9	23	13	23	13	23	13	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	4	4	0	900	46					-33	34	24	34	24			34	24	34	24			38	28	38	28			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Deliveries	78	2	80	4	0	0	60	58			-15		-35	18	8											22	12					Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor - Weight Deck (Outdoor)	82		82	4	4	4	20	53					-34	31	21	31	21	31	21							31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	4	4	4	900	58			-25		-35	13	3	13	3	13	3	13	3	13	3	13	3	13	3	13	3	13	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total														44	34	44	34	35	25	43	33	43	33	33	21	48	38	48	38	39	29	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																50	35	30	55	40	35	65	45	40
	Car start	74	2	76	60	44	32	2	12				-25	-22	15	5	13	3	12	2							19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Car door closure	75	2	77	60	44	32	2	12				-25	-22	16	6	14	4	13	3							19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	60	44	32	15	12				-25	-22	16	6	15	5	14	4	16	6	16	6	16	6	19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	4	4		900	15				-21	-24	33	23	33	23			33	23	33	23			33	23	33	23			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	4	4		900	15			-15		-24	32	22	32	22			32	22	32	22			36	26	36	26			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	4	4	4	600	18			-25		-25	16	6	16	6	16	6	16	6	16	6	16	6	20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	4	4		900	24	1.2	-16			-28	30	20	30	20			30	20	30	20			34	24	34	24			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	4	4		900	20			-10		-26	36	26	36	26			36	26	36	26			40	30	40	30			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	4	4		900	23				-21	-27	27	17	27	17			27	17	27	17			31	21	31	21			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Owners Lounge (Indoor)	73		73	4	4	4	900	19			-15		-26	32	22	32	22	32	22	32	22	32	22	32	22	36	26	36	26	36	26	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	4	4		900	10			-10		-20	37	27	37	27			37	27	37	27			41	31	41	31			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Deliveries	78	2	80	4			60	18				-25	-25	18	8											22	12					Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82				20	23			-15		-27																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Third Floor - Executive Lounge (Indoor)	73		73				900	18			-25		-25																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total														42	32	42	32	33	23	42	32	42	32	33	23	46	36	46	36	37	27	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																50	35	30	55	40	35	65	45	40
	Car start	74	2	76	60	44	32	2	10				-20	-20	21	11	20	10	18	8							25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Car door closure	75	2	77	60	44	32	2	10				-20	-20	22	12	21	11	19	9							25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	60	44	32	15	12				-20	-22	21	11	20	10	19	9	21	11	21	11	21	11	24	14	24	14	24	14	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	4	4		900	45				-21	-33	24	14	24	14			24	14	24	14			24	14	24	14			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	4	4		900	51			-20		-34	16	6	16	6			16	6	16	6			20	10	20	10			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	4	4	4	600	38				-21	-32	13	3	13	3	13	3	13	3	13	3	13	3	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	4	4		900	14	1.2	-16			-23	35	25	35	25			35	25	35	25			39	29	39	29			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	4	4		900	21			-15		-26	31	21	31	21			31	21	31	21			35	25	35	25			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	4	4		900	45				-21	-33	21	11	21	11			21	11	21	11			25	15	25	15			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Owners Lounge (Indoor)	73		73	4	4	4	900	27				-21	-29	23	13	23	13	23	13	23	13	23	13	23	13	27	17	27	17	27	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	4	4		900	46			-20		-33	14	4	14	4			14	4	14	4			18	8	18	8			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Deliveries	78	2	80	4			60	20				-25	-26	17	7											21	11					Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82				20	50			-25		-34																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Third Floor - Executive Lounge (Indoor)	73		73				900	31				-21	-30																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total														37	27	37	27	27	17	37	27	37	27	26	16	41	31	41	31	32	22	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																50	35	30	55	40	35	65	45	40
	Car start	74	2	76	60	44	32	2	37					-31	30	20	29	19	27	17							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Car door closure	75	2	77	60	44	32	2	36					-31	31	21	30	20	28	18							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	60	44	32	15	36					-31	32	22	31	21	29	19	32	22	32	22	32	22	35	25	35	25	35	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	4	4		900	31				-21	-30	27	17	27	17			27	17	27	17			27	17	27	17			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	4	4		900	37			-5		-31	35	25	35	25			35	25	35	25			39	29	39	29			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	4	4	4	600	45				-21	-33	12	2	12	2	12	2	12	2	12	2	12	2	16	6	16	6	16	6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	4	4		900	37					-31	43	33	43	33			43	33	43	33			47	37	47	37			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	4	4		900	40			-25		-32	15	5	15	5			15	5	15	5			19	9	19	9			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	4	4		900	37				-21	-31	23	13	23	13			23	13	23	13			27	17	27	17			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Owners Lounge (Indoor)	73		73	4	4	4	900	38				-21	-32	20	10	20	10	20	10	20	10	20	10	20	10	24	14	24	14	24	14	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	4	4		900	44					-33	34	24	34	24			34	24	34	24			38	28	38	28			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Deliveries	78	2	80	4			60	32			-25		-30	13	3											17	7					Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82				20	35					-31																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Third Floor - Executive Lounge (Indoor)	73		73				900	29				-21	-29																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total														45	35	44	34	33	23	44	34	44	34	32	22	48	38	48	38	39	29	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																50	35	30	55	40	35	65	45	40
	Car start	74	2	76	60	44	32	2	38					-32	30	20	28	18	27	17							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Car door closure	75	2	77	60	44	32	2	38					-32	31	21	29	19	28	18							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	60	44	32	15	42					-32	31	21	29	19	28	18	31	21	31	21	31	21	34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	4	4		900	50				-21	-34	23	13	23	13			23	13	23	13			23	13	23	13			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	4	4		900	39					-32	39	29	39	29			39	29	39	29			43	33	43	33			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	4	4	4	600	50				-21	-34	11	1	11	1	11	1	11	1	11	1	11	1	15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	4	4		900	76			-25		-38	11	1	11	1			11	1	11	1			15	5	15	5			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	4	4		900	65					-36	36	26	36	26			36	26	36	26			40	30	40	30			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	4	4		900	41				-21	-32	22	12	22	12			22	12	22	12			26	16	26	16			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Third Floor – Owners Lounge (Indoor)	73		73	4	4	4	900	56				-21	-35	17	7	17	7	17	7	17	7	17	7	17	7	21	11	21	11	21	11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	4	4		900	40					-32	35	25	35	25			35	25	35	25			39	29	39	29			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Deliveries	78	2	80	4			60	67			-25		-37	7												11	1					Yes	n/a	n/a	Yes	n/a	n/a	Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82				20	37					-31																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Third Floor - Executive Lounge (Indoor)	73		73				900	56				-21	-35																			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total														43	33	43	33	33	23	42	32	42	32	31	21	47	37	47	37	38	28	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted with the Acoustic Quality Objectives at all locations with the exception of the internal evening criteria for receivers 1, 2, 3 and 5. Based on the existing ambient noise levels, and current growth of the surrounding area, these exceedances are not predicted to be an annoyance at nearby residents on the condition the management strategies and acoustic recommendations listed in Section 10.2 are implemented.

9.2.2 Background Creep

Based on assessment of all time periods, the noise source levels and predicted impacts at the receiver locations are shown as follows;

Table 21: Background Creep Noise Assessment, 15min

Receiver	Description	Source Leq@1m dB(A)	Correction dB(A)*	Corrected Leq@2m dB(A)	No. of events per 15min Day	No. of events per 15min Eve	No. of events per 15min Night	Duration per event	Distance (m) Receiver	Barrier (height (m)) No	Barrier screening dB	Building Screening dB	Building Transmission Loss dB	Dist atten. @-6dB/dd	LAeq adj, T ext. dB(A) Day	LAeq adj, T int. dB(A) Day	LAeq adj, T ext. dB(A) Eve	LAeq adj, T int. dB(A) Eve	LAeq adj, T ext. dB(A) Night	LAeq 15 min Compliance Day	Eve	Night
	Receivers: 1. 16-18 Enderley Avenue (N); 2. 2961 Surfers Surfer Paradise Boulevard (N); 3. 21 Vista Street (E); 4. 20 Vista Street (S); 5. 2994 Surfer Paradise Boulevard (W)																					
	Criteria																			55	53	50
	Car start	74	2	76	15	11	8	2	37					-31	30	20	29	19	27	Yes	Yes	Yes
1	Car door closure	75	2	77	15	11	8	2	37					-31	31	21	30	20	28	Yes	Yes	Yes
	Car passby	69		69	15	11	8	15	45					-33	30	20	29	19	27	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	1	1		900	54				-21	-35	22	12	22	12		Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	1	1		900	56			-15		-35	21	11	21	11		Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	1	1	1	600	58			-25		-35	6		6		6	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	1	1		900	54					-35	39	29	39	29		Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	1	1		900	44					-33	39	29	39	29		Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	1	1	1	900	53				-21	-34	20	10	20	10	20	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	1	1	1	900	46				-21	-33	19	9	19	9	19	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	1	1		900	46					-33	34	24	34	24		Yes	Yes	n/a
	Deliveries	78	2	80	1			60	58			-15		-35	18	8				Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82	1	1	1	20	53					-34	31	21	31	21	31	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	1	1	1	900	58			-25		-35	13	3	13	3	13	Yes	Yes	Yes
	Total														44	34	44	34	35	**Yes**	**Yes**	**Yes**
	Criteria																			55	53	50
	Car start	74	2	76	15	11	8	2	12				-25	-22	15	5	13	3	12	Yes	Yes	Yes
2	Car door closure	75	2	77	15	11	8	2	12				-25	-22	16	6	14	4	13	Yes	Yes	Yes
	Car passby	69		69	15	11	8	15	12				-25	-22	16	6	15	5	14	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	1	1		900	15				-21	-24	33	23	33	23		Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	1	1		900	15			-15		-24	32	22	32	22		Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	1	1	1	600	18			-25		-25	16	6	16	6	16	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	1	1		900	24	1.2	-16			-28	30	20	30	20		Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	1	1		900	20			-10		-26	36	26	36	26		Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	1	1	1	900	23				-21	-27	27	17	27	17	27	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	1	1	1	900	19			-15		-26	32	22	32	22	32	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	1	1		900	10			-10		-20	37	27	37	27		Yes	Yes	n/a
	Deliveries	78	2	80	1			60	18				-25	-25	18	8				Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82	1	1	1	20	23			-15		-27	23	13	23	13	23	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	1	1	1	900	18			-25		-25	23	13	23	13	23	Yes	Yes	Yes
	Total														42	32	42	32	34	**Yes**	**Yes**	**Yes**
	Criteria																			55	53	50
	Car start	74	2	76	15	11	8	2	10				-20	-20	21	11	20	10	18	Yes	Yes	Yes
3	Car door closure	75	2	77	15	11	8	2	10				-20	-20	22	12	21	11	19	Yes	Yes	Yes
	Car passby	69		69	15	11	8	15	12				-20	-22	21	11	20	10	19	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	1	1		900	45				-21	-33	24	14	24	14		Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	1	1		900	51			-20		-35	16	6	16	6		Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	1	1	1	600	38				-21	-32	13	3	13	3	13	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	1	1		900	14	1.2	-16			-23	35	25	35	25		Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	1	1		900	21			-15		-26	31	21	31	21		Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	1	1	1	900	45				-21	-33	21	11	21	11	21	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	1	1	1	900	27				-21	-29	23	13	23	13	23	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	1	1		900	46			-20		-33	14	4	14	4		Yes	Yes	n/a
	Deliveries	78	2	80	1			60	20				-25	-26	17	7				Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82	1	1	1	20	50			-25		-34	6		6		6	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	1	1	1	900	31				-21	-30	22	12	22	12	22	Yes	Yes	Yes
	Total														38	28	37	27	29	**Yes**	**Yes**	**Yes**
	Criteria																			55	53	50
	Car start	74	2	76	15	11	8	2	37					-31	30	20	29	19	27	Yes	Yes	Yes
4	Car door closure	75	2	77	15	11	8	2	36					-31	31	21	30	20	28	Yes	Yes	Yes
	Car passby	69		69	15	11	8	15	36					-31	32	22	31	21	29	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	1	1		900	31				-21	-30	27	17	27	17		Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	1	1		900	37			-5		-31	35	25	35	25		Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	1	1	1	600	45				-21	-33	12	2	12	2	12	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	1	1		900	37					-31	43	33	43	33		Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	1	1		900	40			-25		-32	15	5	15	5		Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	1	1	1	900	37				-21	-31	23	13	23	13	23	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	1	1	1	900	38				-21	-32	20	10	20	10	20	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	1	1		900	44					-33	34	24	34	24		Yes	Yes	n/a
	Deliveries	78	2	80	1			60	32			-25		-30	13	3				Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82	1	1	1	20	35					-31	35	25	35	25	35	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	1	1	1	900	29				-21	-29	23	13	23	13	23	Yes	Yes	Yes
	Total														45	35	45	35	37	**Yes**	**Yes**	**Yes**
	Criteria																			55	53	50
	Car start	74	2	76	15	11	8	2	38					-32	30	20	28	18	27	Yes	Yes	Yes
5	Car door closure	75	2	77	15	11	8	2	38					-32	31	21	29	19	28	Yes	Yes	Yes
	Car passby	69		69	15	11	8	15	42					-32	31	21	29	19	28	Yes	Yes	Yes
	Ground Floor – Cafe (Indoor)	78		78	1	1		900	50				-21	-34	23	13	23	13		Yes	Yes	n/a
	Ground Floor – Cafe Terrace (outdoor)	71		71	1	1		900	39					-32	39	29	39	29		Yes	Yes	n/a
	Ground Floor – Neighbourhood Store (Indoor)	68		68	1	1	1	600	50				-21	-34	11	1	11	1	11	Yes	Yes	Yes
	Third Floor – Pool and Pool Deck (Outdoor)	74		74	1	1		900	76			-25		-38	11	1	11	1		Yes	Yes	n/a
	Third Floor – BBQ Area (Outdoor)	72		72	1	1		900	65					-36	36	26	36	26		Yes	Yes	n/a
	Third Floor – Gym (Indoor)	75		75	1	1	1	900	41				-21	-32	22	12	22	12	22	Yes	Yes	Yes
	Third Floor – Owners Lounge (Indoor)	73		73	1	1	1	900	56				-21	-35	17	7	17	7	17	Yes	Yes	Yes
	Third Floor – Owners Wellness area (Outdoor)	67		67	1	1		900	40					-32	35	25	35	25		Yes	Yes	n/a
	Deliveries	78	2	80	1			60	67			-25		-37	7					Yes	n/a	n/a
	Third Floor - Weight Deck (Outdoor)	82		82	1	1	1	20	37					-31	34	24	34	24	34	Yes	Yes	Yes
	Third Floor - Executive Lounge (Indoor)	73		73	1	1	1	900	56				-21	-35	17	7	17	7	17	Yes	Yes	Yes
	Total														43	33	43	33	37	**Yes**	**Yes**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted with the Background Creep criteria on the conditions the recommendations listed in Section 10.2 are implemented.

9.2.3 Sleep Disturbance

The noise source levels and predicted levels of noise at the receiver locations are shown in Table Table 22.

Table 22: Maximum and average noise levels from site activities – Night-time

Receiver	Receivers 1. 16-18 Enderley Avenue (N) 2. 2961 Surfers Surfer Paradise Boulevard (N) 3. 21 Vista Street (E) 4. 20 Vista Street (S) 5. 2994 Surfer Paradise Boulevard (W) Description	Source @1m dB(A)	Correction dB(A)*	Corrected dB(A)	Distance (m)	Barrier (height (m)) No	Barrier screening dB	Building Screening dB	Building Transmission Loss dB	Dist atten. @-6dB/dd	LAmax adj,T ext. dB(A)	LAmax adj,T int. dB(A)	Complies Night Lmax dB(A)
	Criteria												45
1	Car start	81	2	83	37					-31	52	42	Yes
	Car door closure	82	2	84	37					-31	53	43	Yes
	Car Passby	76		76	45					-33	43	33	Yes
	Ground Floor – Neighbourhood Store (Indoor)	73		73	58			-25		-35	13	3	Yes
	Third Floor – Gym (Indoor)	80		80	53				-21	-34	25	15	Yes
	Third Floor – Owners Lounge (Indoor)	78		78	46				-21	-33	24	14	Yes
	Third Floor - Weight Deck (Outdoor)	85		85	53					-34	51	41	Yes
	Third Floor - Executive Lounge (Indoor)	78	2	80	58			-25		-35	20	10	Yes
	Criteria												45
2	Car start	81	2	83	12				-25	-22	36	26	Yes
	Car door closure	82	2	84	12				-25	-22	37	27	Yes
	Car Passby	76		76	12				-25	-22	29	19	Yes
	Ground Floor – Neighbourhood Store (Indoor)	73		73	18			-25		-25	23	13	Yes
	Third Floor – Gym (Indoor)	80		80	23				-21	-27	32	22	Yes
	Third Floor – Owners Lounge (Indoor)	78		78	19			-15		-26	37	27	Yes
	Third Floor - Weight Deck (Outdoor)	85		85	23			-15		-27	43	33	Yes
	Third Floor - Executive Lounge (Indoor)	78	2	80	18			-25		-25	30	20	Yes
	Criteria												45
3	Car start	81	2	83	10				-20	-20	43	33	Yes
	Car door closure	82	2	84	10				-20	-20	44	34	Yes
	Car Passby	76		76	12				-20	-22	34	24	Yes
	Ground Floor – Neighbourhood Store (Indoor)	73		73	38				-21	-32	20	10	Yes
	Third Floor – Gym (Indoor)	80		80	45				-21	-33	26	16	Yes
	Third Floor – Owners Lounge (Indoor)	78		78	27				-21	-29	28	18	Yes
	Third Floor - Weight Deck (Outdoor)	85		85	50			-25		-34	26	16	Yes
	Third Floor - Executive Lounge (Indoor)	78	2	80	31				-21	-30	29	19	Yes
	Criteria												45
4	Car start	81	2	83	37					-31	52	42	Yes
	Car door closure	82	2	84	36					-31	53	43	Yes
	Car Passby	76		76	36					-31	45	35	Yes
	Ground Floor – Neighbourhood Store (Indoor)	73		73	45				-21	-33	19	9	Yes
	Third Floor – Gym (Indoor)	80		80	37				-21	-31	28	18	Yes
	Third Floor – Owners Lounge (Indoor)	78		78	38				-21	-32	25	15	Yes
	Third Floor - Weight Deck (Outdoor)	85		85	35					-31	54	44	Yes
	Third Floor - Executive Lounge (Indoor)	78	2	80	29				-21	-29	30	20	Yes
	Criteria												45
5	Car start	81	2	83	38					-32	51	41	Yes
	Car door closure	82	2	84	38					-32	52	42	Yes
	Car Passby	76		76	42					-32	44	34	Yes
	Ground Floor – Neighbourhood Store (Indoor)	73		73	50				-21	-34	18	8	Yes
	Third Floor – Gym (Indoor)	80		80	41				-21	-32	27	17	Yes
	Third Floor – Owners Lounge (Indoor)	78		78	56				-21	-35	22	12	Yes
	Third Floor - Weight Deck (Outdoor)	85		85	37					-31	54	44	Yes
	Third Floor - Executive Lounge (Indoor)	78	2	80	56				-21	-35	24	14	Yes

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted with the Background Creep criteria on the conditions the recommendations listed in Section 10.2 are implemented.

10. Recommendations

10.1 Façade Construction

Facade construction was determined based on the highest noise impacts from road traffic and light rail.

10.1.1 Glazing

The minimum glazing treatments presented in Table 23 are required to comply with the following:

- The minimum glass thickness specified shall not be reduced regardless of the R_w performance of the glass unless the glazier can provider a specific (non-generic) NATA Test report proving the proposed glazing system complies (the test report must be based on the same configuration proposed for the development). Note an estimation or calculated performance will not be accepted.
- If compliance cannot be achieved with the minimum R_w ratings, the glazing system shall be upgraded until compliance is achieved.
- Glazing specified with acoustic seals requires a seal that has been tested with a glazing system or door to achieve an Rw rating in accordance with AS/NZS ISO 717.1, mohair seals are not acceptable.
- The glazier shall provide NATA test reports on request to verify compliance with the minimum R_w ratings. Generic reports are not acceptable.
- Living areas are defined as habitable rooms other than bedrooms (excluding garages, kitchens, bathrooms & hallways).

The glazier shall provide NATA test reports on request to verify compliance with the minimum Rw ratings. Generic reports are not acceptable.

Table 23: Required Glazing Treatments

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 1	Bed 1	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 4	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 4	Bed 1	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 5	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 6	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 7	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 8	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 9	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 1	KDL	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 10	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 11	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 12	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 13	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 3	Bed 2	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 14	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 15	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 16	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 17	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 18	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 1	Bed 1	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 19	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 20	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 21	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 22	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 2	KDL	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 23	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 24	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 25	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 26	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Unit	Room	Level	Rw Ratings			Glazing	Acoustic seals
			Wall	Roof	Glazing	Minimum Construction Requirements	
Unit 4	Bed 2	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 27	40	-	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 1	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	Bed 2	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 1	KDL	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 1	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	Bed 2	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 2	KDL	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 1	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	Bed 2	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 3	KDL	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 1	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	Bed 2	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes
Unit 4	KDL	F 28	40	35	31	6.38 Laminate or 6mm/12 Gap/6mm	yes

Any locations not identified in Table 23 would require 6.38 laminate or 6mm/12mm airgap/6mm for windows (minimum R_w 22) and 6.38 laminate or 6mm/12mm airgap/6mm for sliding doors (minimum R_w 22).

10.1.2 Alternative Ventilation

We recommend that all locations nominated in Table 23 that require acoustic seals have the provision for an alternative ventilation system similar to air-conditioning or mechanical ventilation to allow doors and windows to be closed.

10.1.3 Wall construction

Typical constructions to achieve the minimum Rw41 acoustic rating are listed below;

Table 24: Typical wall constructions

Description	R_W rating
Single leaf of clay brick masonry at last 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11 kg/m3 positioned between studs; and (iii) One layer of plasterboard at least 10mm thick fixed to outside face of studs OR Single leaf of brick masonry at least 110mm thick with at least 13mm thick render on each face OR Concrete brickwork at least 110mm thick OR In-situ concrete at least 100mm thick OR Precast concrete at least 100mm thick and without joints.	41

The systems listed above are not the only systems that could be used. Other wall systems may be used providing they achieve the acoustic rating or greater.

10.1.4 Roof/ceiling construction

Typical constructions to achieve the minimum Rw35 acoustic rating are listed below;

Table 25: Typical roof construction

Description	Minimum R_W rating
Minimum 100mm Concrete Slab	35

The systems listed above are not the only systems that could be used. Other wall systems may be used providing they achieve the acoustic rating or greater.

10.1.5 Balcony Balustrades

In accordance with the SDAP *State Code 4: Development in a light rail environment*, all balconies exceeding the free field criteria shall be constructed with a solid balustrade.

Table 26: Communal/Private Open Spaces – Solid gap-free balustrades

Location	Level	Solid Balustrade Required Yes/No
Open Air Gym	F3	No
Owners Wellness	F3	No
Pool Deck	F3	No
Sun Lounges	F3	No
Yoga Deck	F3	No
Unit 1 Terrace	F 5	Yes
Unit 2 Terrace	F 5	No
Unit 3 Terrace	F 5	No
Unit 4 Terrace	F 5	No
Unit 1 Terrace	F 6	Yes
Unit 2 Terrace	F 6	No
Unit 3 Terrace	F 6	No

Location	Level	Solid Balustrade Required Yes/No
Unit 4 Terrace	F 6	No
Unit 1 Terrace	F 7	Yes
Unit 2 Terrace	F 7	No
Unit 3 Terrace	F 7	No
Unit 4 Terrace	F 7	No
Unit 1 Terrace	F 8	Yes
Unit 2 Terrace	F 8	No
Unit 3 Terrace	F 8	No
Unit 4 Terrace	F 8	No
Unit 1 Terrace	F 9	Yes
Unit 2 Terrace	F 9	No
Unit 3 Terrace	F 9	No
Unit 4 Terrace	F 9	No
Unit 1 Terrace	F 10	Yes
Unit 2 Terrace	F 10	No
Unit 3 Terrace	F 10	No
Unit 4 Terrace	F 10	No
Unit 1 Terrace	F 11	Yes
Unit 2 Terrace	F 11	No
Unit 3 Terrace	F 11	No
Unit 4 Terrace	F 11	No
Unit 1 Terrace	F 12	Yes
Unit 2 Terrace	F 12	No
Unit 3 Terrace	F 12	No
Unit 4 Terrace	F 12	No
Unit 1 Terrace	F 13	Yes
Unit 2 Terrace	F 13	No
Unit 3 Terrace	F 13	No
Unit 4 Terrace	F 13	No
Unit 1 Terrace	F 14	No
Unit 2 Terrace	F 14	No
Unit 3 Terrace	F 14	No
Unit 4 Terrace	F 14	No
Unit 1 Terrace	F 15	No
Unit 2 Terrace	F 15	No
Unit 3 Terrace	F 15	No
Unit 4 Terrace	F 15	No
Unit 1 Terrace	F 16	No
Unit 2 Terrace	F 16	No
Unit 3 Terrace	F 16	No
Unit 4 Terrace	F 16	No
Unit 1 Terrace	F 17	No
Unit 2 Terrace	F 17	No
Unit 3 Terrace	F 17	No
Unit 4 Terrace	F 17	No
Unit 1 Terrace	F 18	No
Unit 2 Terrace	F 18	No
Unit 3 Terrace	F 18	No
Unit 4 Terrace	F 18	No
Unit 1 Terrace	F 19	No
Unit 2 Terrace	F 19	No
Unit 3 Terrace	F 19	No
Unit 4 Terrace	F 19	No
Unit 1 Terrace	F 20	No
Unit 2 Terrace	F 20	No
Unit 3 Terrace	F 20	No
Unit 4 Terrace	F 20	No
Unit 1 Terrace	F 21	No
Unit 2 Terrace	F 21	No
Unit 3 Terrace	F 21	No

Location	Level	Solid Balustrade Required Yes/No
Unit 4 Terrace	F 21	No
Unit 1 Terrace	F 22	No
Unit 2 Terrace	F 22	No
Unit 3 Terrace	F 22	No
Unit 4 Terrace	F 22	No
Unit 1 Terrace	F 23	No
Unit 2 Terrace	F 23	No
Unit 3 Terrace	F 23	No
Unit 4 Terrace	F 23	No
Unit 1 Terrace	F 24	No
Unit 2 Terrace	F 24	No
Unit 3 Terrace	F 24	No
Unit 4 Terrace	F 24	No
Unit 1 Terrace	F 25	No
Unit 2 Terrace	F 25	No
Unit 3 Terrace	F 25	No
Unit 4 Terrace	F 25	No
Unit 1 Terrace	F 26	No
Unit 2 Terrace	F 26	No
Unit 3 Terrace	F 26	No
Unit 4 Terrace	F 26	No
Unit 1 Terrace	F 27	No
Unit 2 Terrace	F 27	No
Unit 3 Terrace	F 27	No
Unit 4 Terrace	F 27	No
Unit 1 Terrace	F 28	No
Unit 2 Terrace	F 28	No
Unit 3 Terrace	F 28	No
Unit 4 Terrace	F 28	No

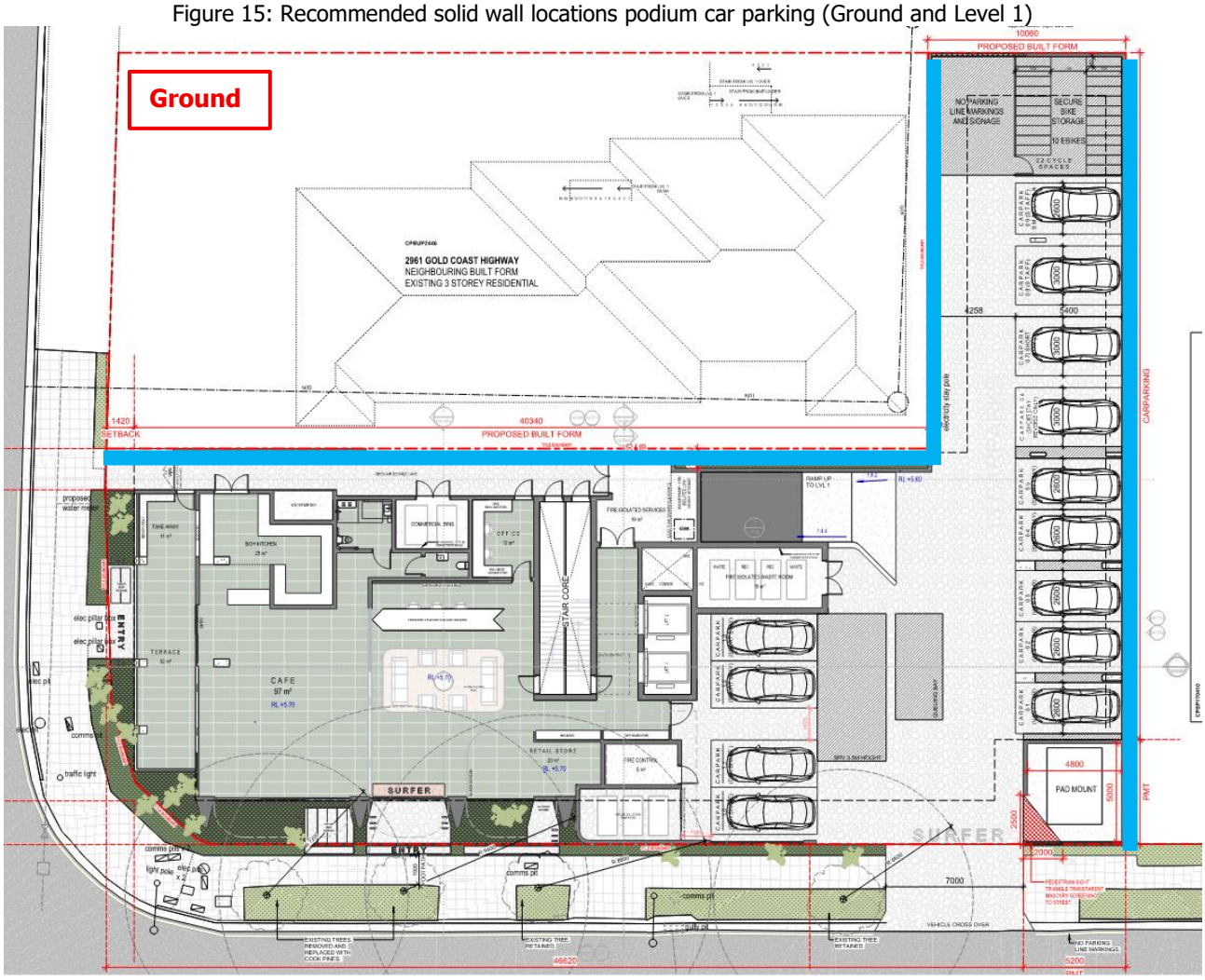
Outdoor open spaces not nominated in Table 26 do not require solid gap free balustrades.

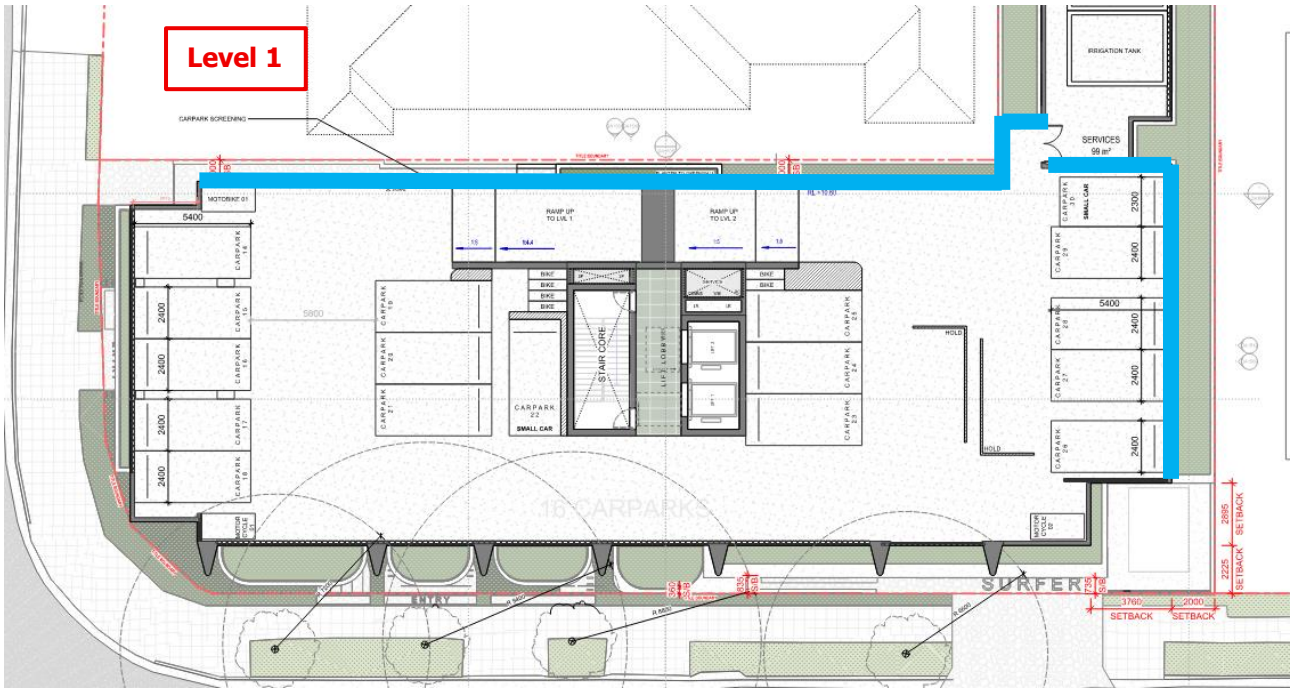
10.2 Onsite Activities

Based on the predicted noise levels of the site and surrounds for all time periods, noise impacts at the residential receiver locations are predicted to comply on the condition the following acoustic treatments are implemented:

- Based on the assessment, the recommended operating hours for each area are as follows:
  - Cafe and Outdoor Terrace; 7am-10pm.
  - Neighbourhood Store; 24/7 operation.
  - Pool and surrounding recreational decking area; 7am to 10pm.
  - Gym area; 24/7 operation.
  - Owners Lounge and Dining; indoor area as 24/7; outdoor seating as 7am-10pm.
  - Owners Wellness Area; 7am to 10pm.
- The façade of the following rooms is to remain closed when in use, utilising automatic door closers on the entry doors:
  - Gym
  - Owners Lounge
  - Executive Lounge
- The façade of the Gym is to be constructed to the following requirements:
  - Minimum Rw35 with 10.38mm laminate glazing with acoustic seals (windows and doors are to remain closed when in use)
  - Minimum Rw41 for all external walls and roof.
- The facade of the café is to be constructed to the following requirements:
  - Minimum Rw35 with 10.38mm laminate glazing with acoustic seals (windows and doors are to remain closed when in use)
  - Minimum Rw45 for all external walls.
- We recommend waste collection be conducted in accordance with existing residential collections in the area to reduce the potential for disturbance.
- Carpark finished surfaces should consist of materials which provides low tyre squeal characteristics. Any traversable drainage grates must be securely fastened.
- A solid wall or balustrade shall be constructed to the height and extent shown in figure 4. The barrier should be constructed using either masonry, 9mm fibre cement sheet, Hebel, Perspex, plywood, or other materials with a minimum surface density of 12kg/m^2 and shall be free of gaps and holes.

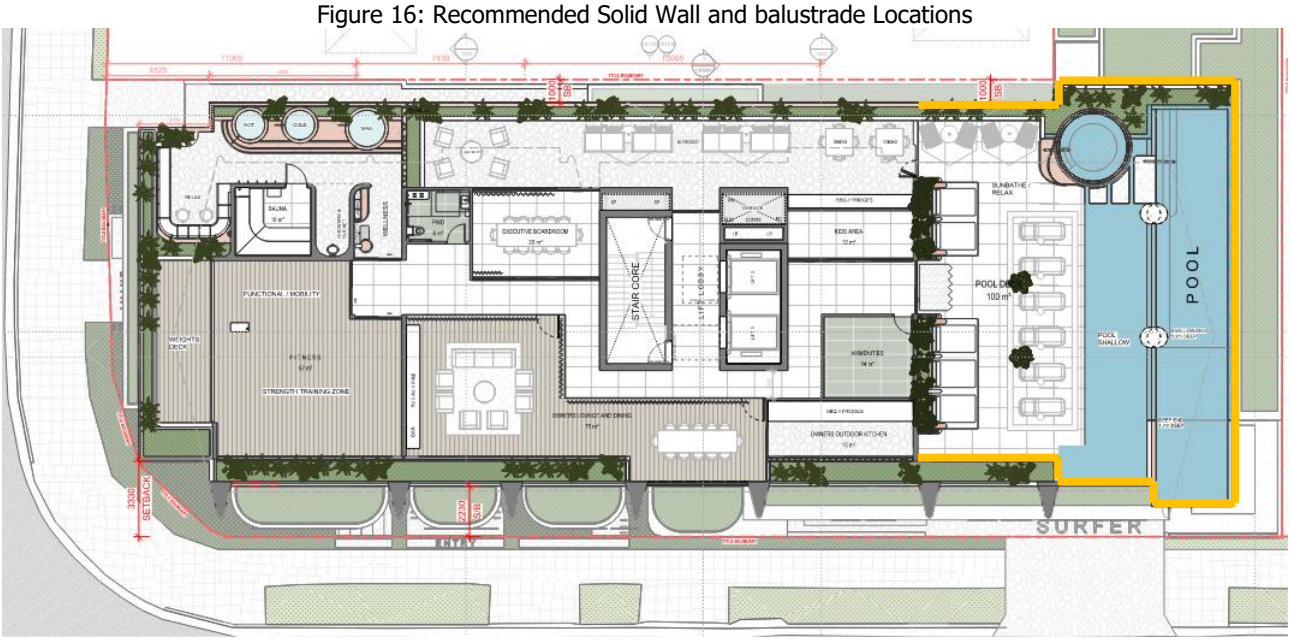
Figure 15: Recommended solid wall locations podium car parking (Ground and Level 1)





Solid Wall from Slab to Soffit

Figure 16: Recommended Solid Wall and balustrade Locations



1.2m Solid Balustrade

10.3 Onsite Mechanical Plant

No information regarding mechanical services was available at the time of the assessment. We recommend that any new mechanical plant is designed to comply with the criteria in Section 6.3.2 and an assessment by qualified acoustic consultant to be conducted prior to installation.

11. Conclusion

An environmental, light rail and road traffic noise assessment was conducted for the proposed mixed-use development to be located at 27 Vista Street, Surfers Paradise. On the condition the recommendations detailed in Section 10 are implemented, compliance is predicted with Gold Coast City Council criteria.

If you should have any queries, please do not hesitate to contact us.

Yours faithfully,

Marco Scoca
Acoustic Consultant
BEng (Civil Eng. Hons)
GradDipEngSc (Mechanical Eng.)
acousticworks

12. Appendices

12.1 Development Plans

PROJECT

SURFER APARTMENTS

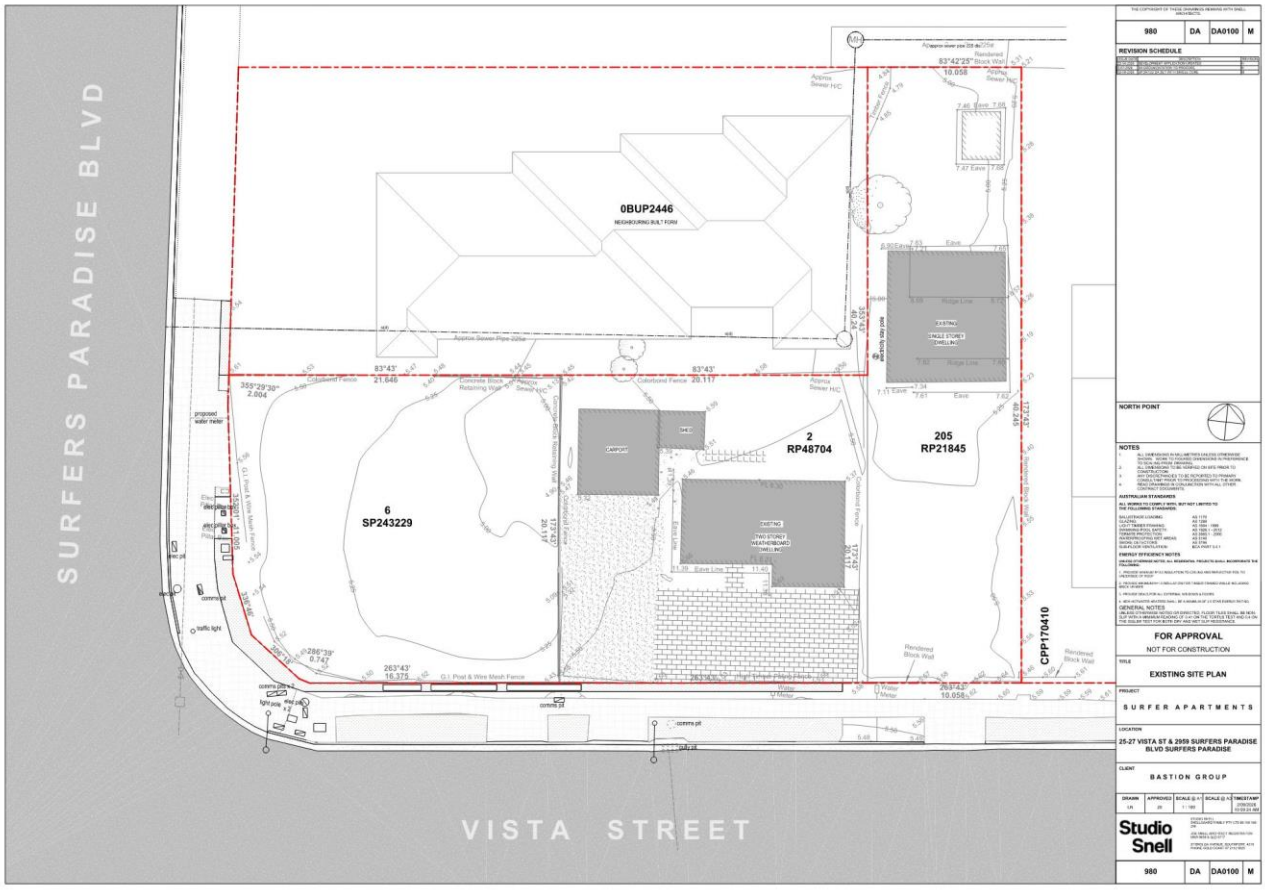
LOCATION

25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE

CLIENT

BASTION GROUP

Studio Snell



16 / 18 ENDERLEY AVE
EXISTING 32 STOREY RESIDENTIAL
36 ENDERLEY AVE
EXISTING 3-4 STOREY RESIDENTIAL
SURFERS PARADISE BLVD
2961 GOLD COAST HIGHWAY
NEIGHBOURING BUILT FORM
EXISTING 3 STOREY RESIDENTIAL
2988/2994 SURFERS PARADISE BLVD
EXISTING 10 STOREY RESIDENTIAL
PROPOSED MIXED-USE DEVELOPMENT
21 VISTA STREET
NEIGHBOURING BUILT FORM
EXISTING 3-4 STOREY RESIDENTIAL
VISTA STREET
33 THORNTON STREET
EXISTING 10 STOREY RESIDENTIAL
980 DA DA1001 M
REVISION SCHEDULE
NORTH POINT
NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
SITE CONTEXT PLAN
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell
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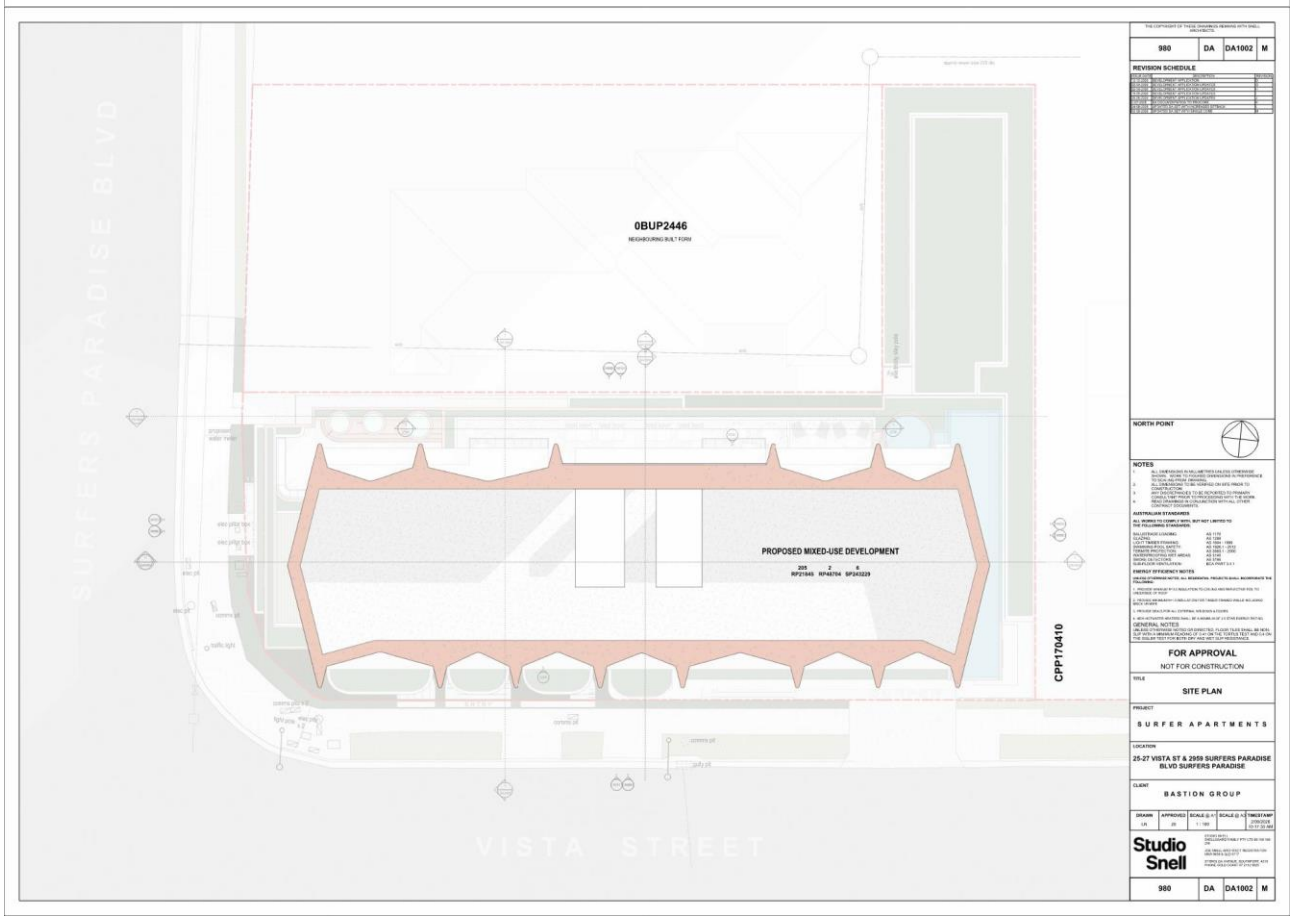
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VISTA STREET
NORTH POINT
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NOT FOR CONSTRUCTION
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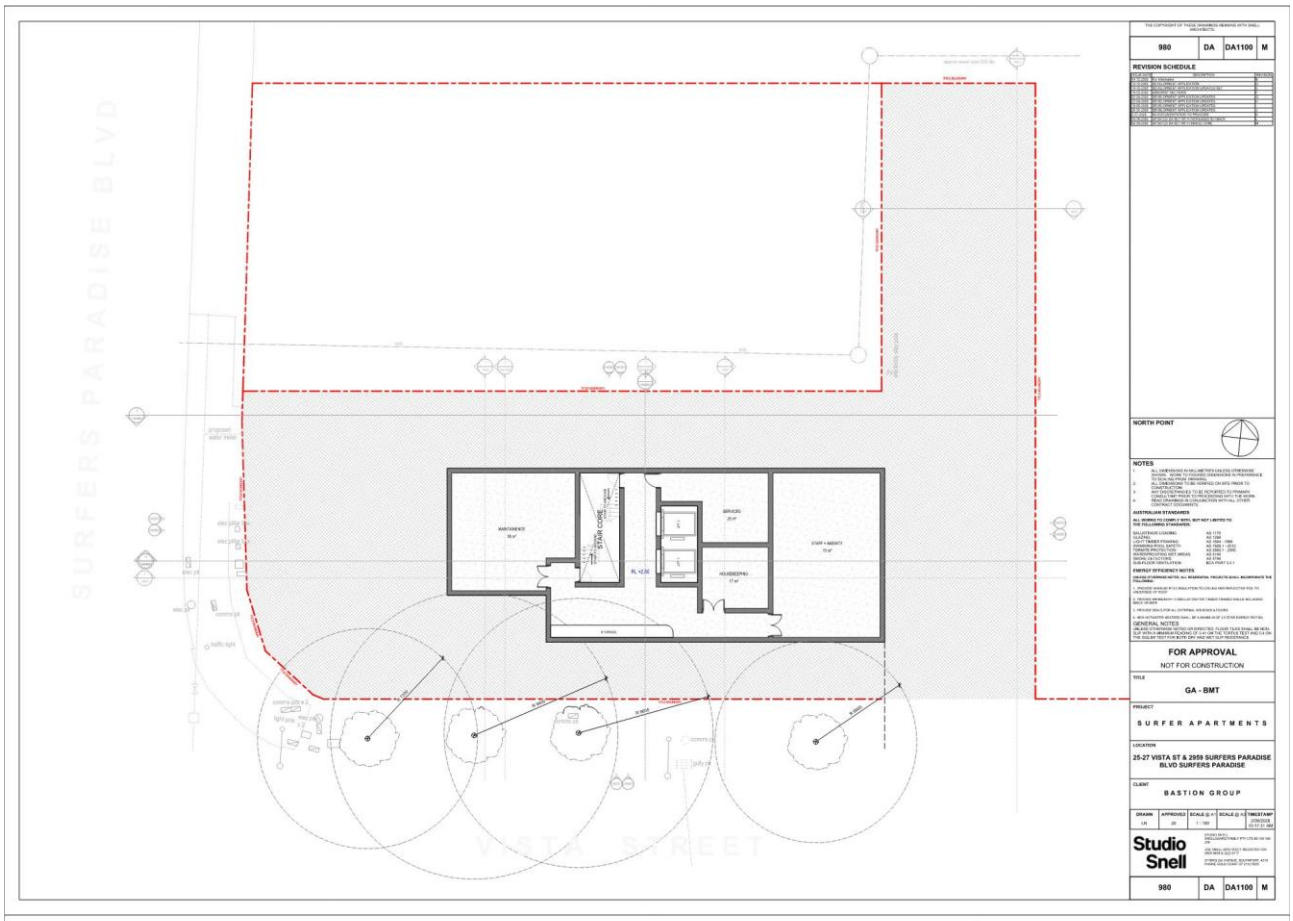
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell
980 DA DA1002 M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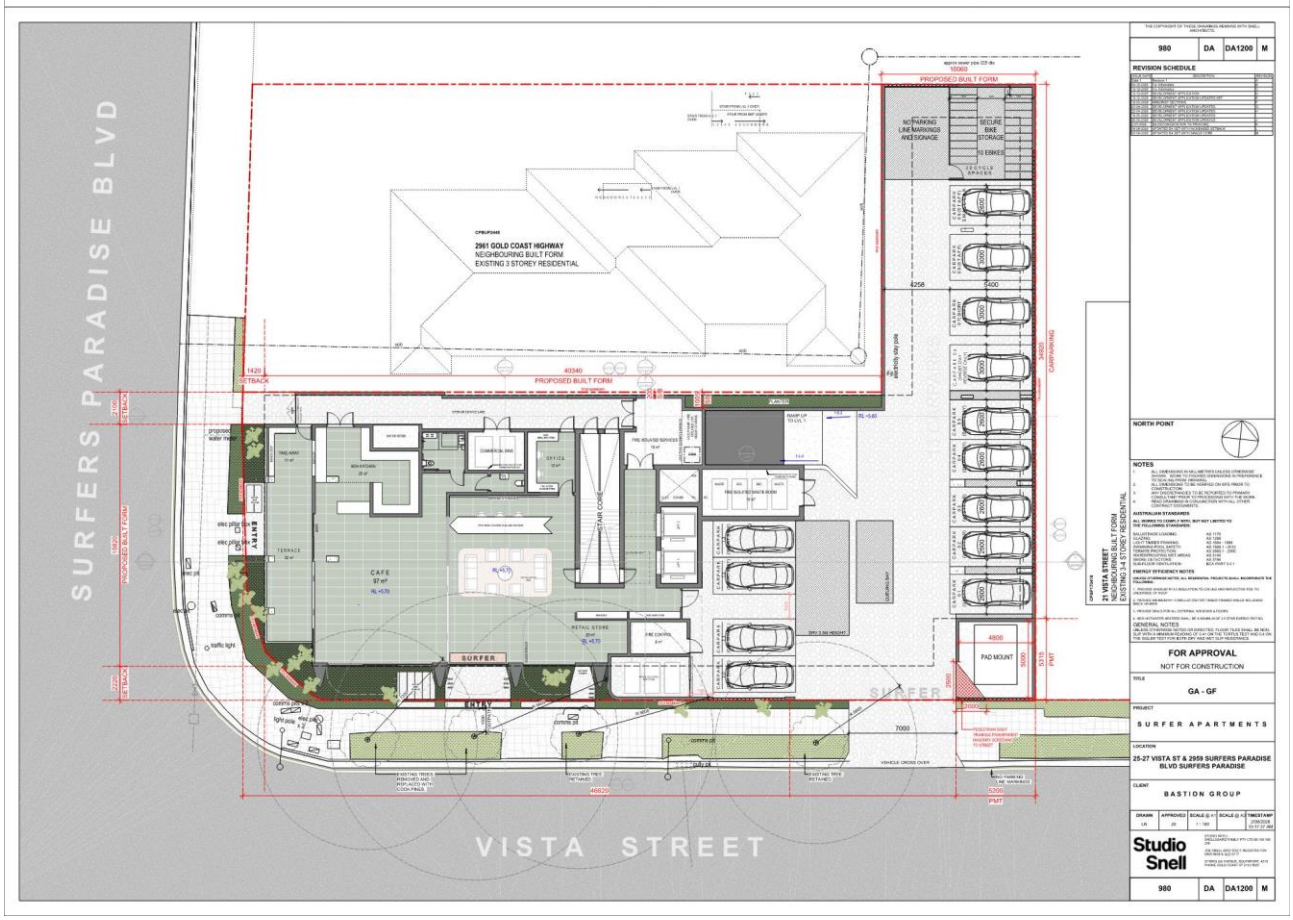
BASTION GROUP
Studio Snell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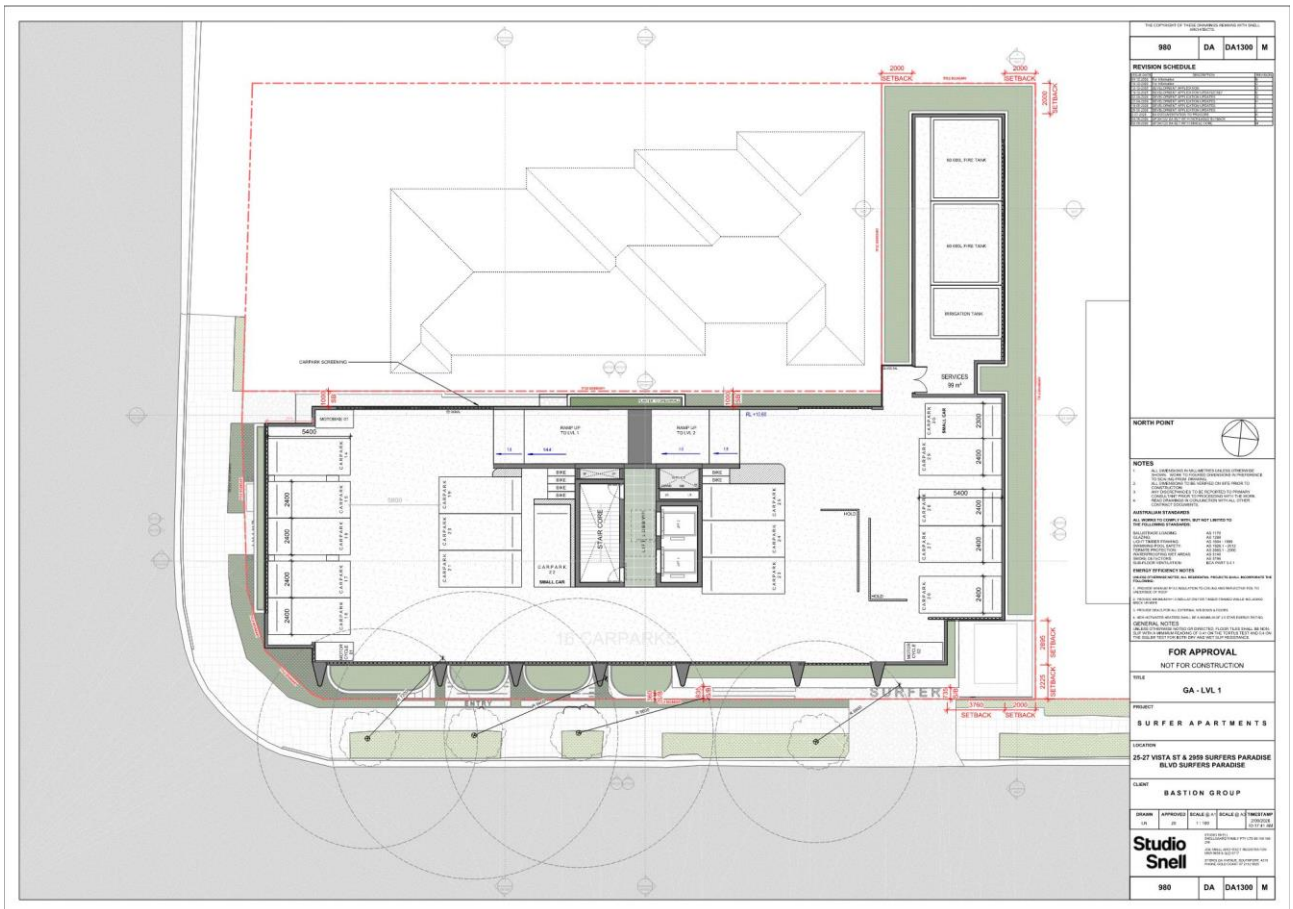
2961 GOLD COAST HIGHWAY
NEIGHBOURING BUILT FORM
EXISTING 3 STOREY RESIDENTIAL
NO PARKING LINE MARKINGS AND SIGNAGE
SECURE BIKE STORAGE
CAFE
ENTRY
SURFER
PAD MOUNT
NORTH POINT
NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
GA - GF
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell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Studio Snell
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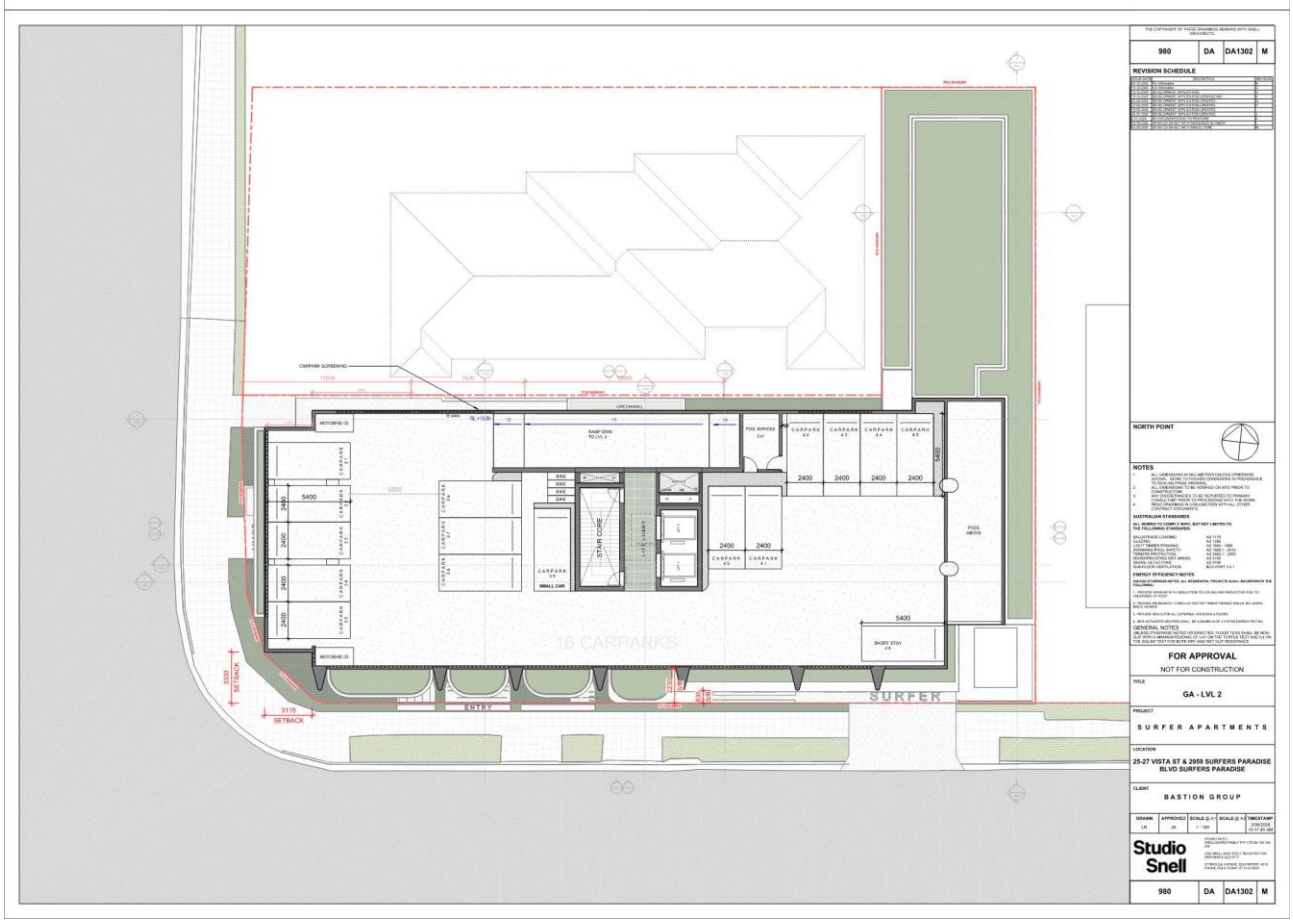
STAIR CORE
SERVICES
SETBACK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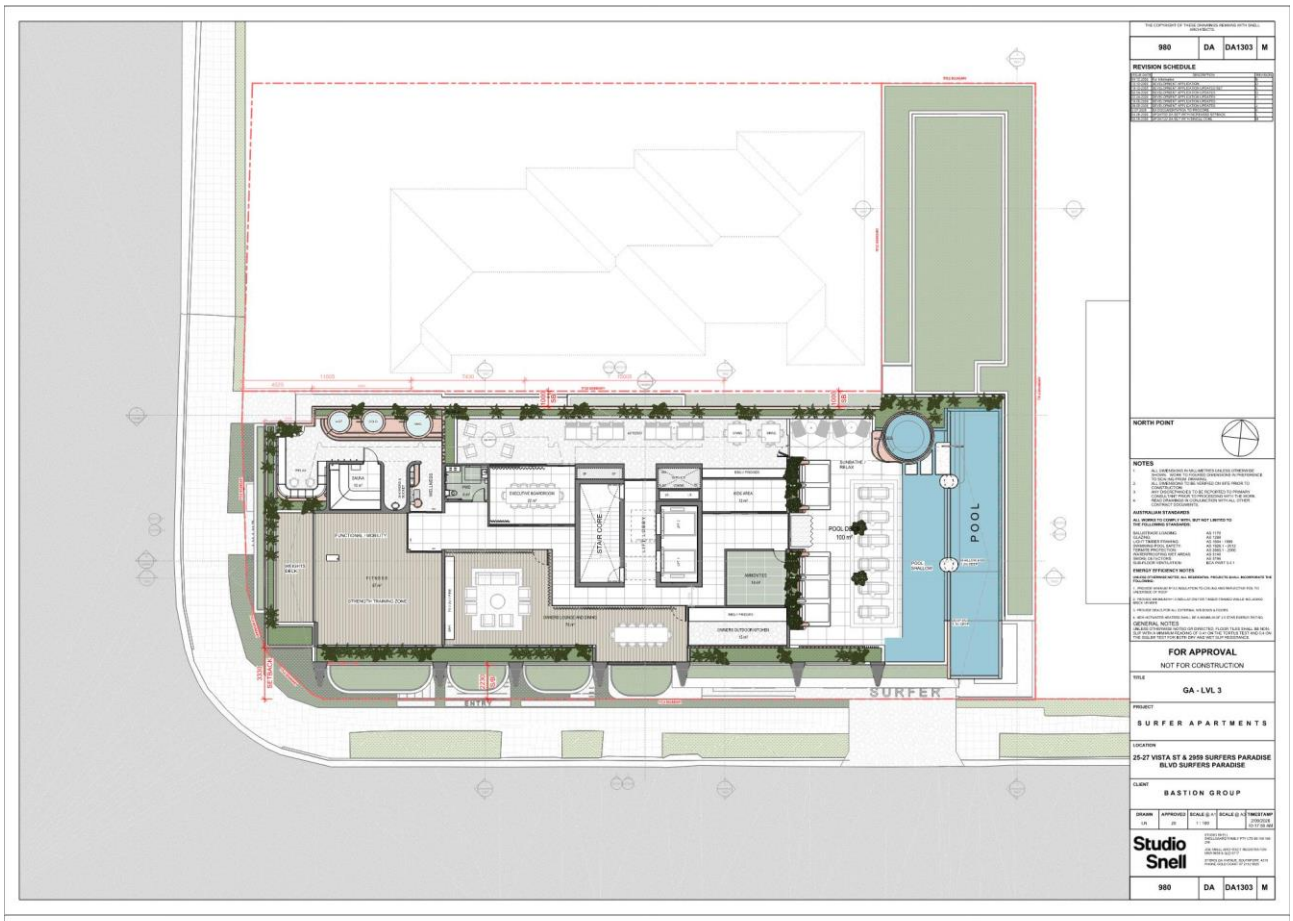
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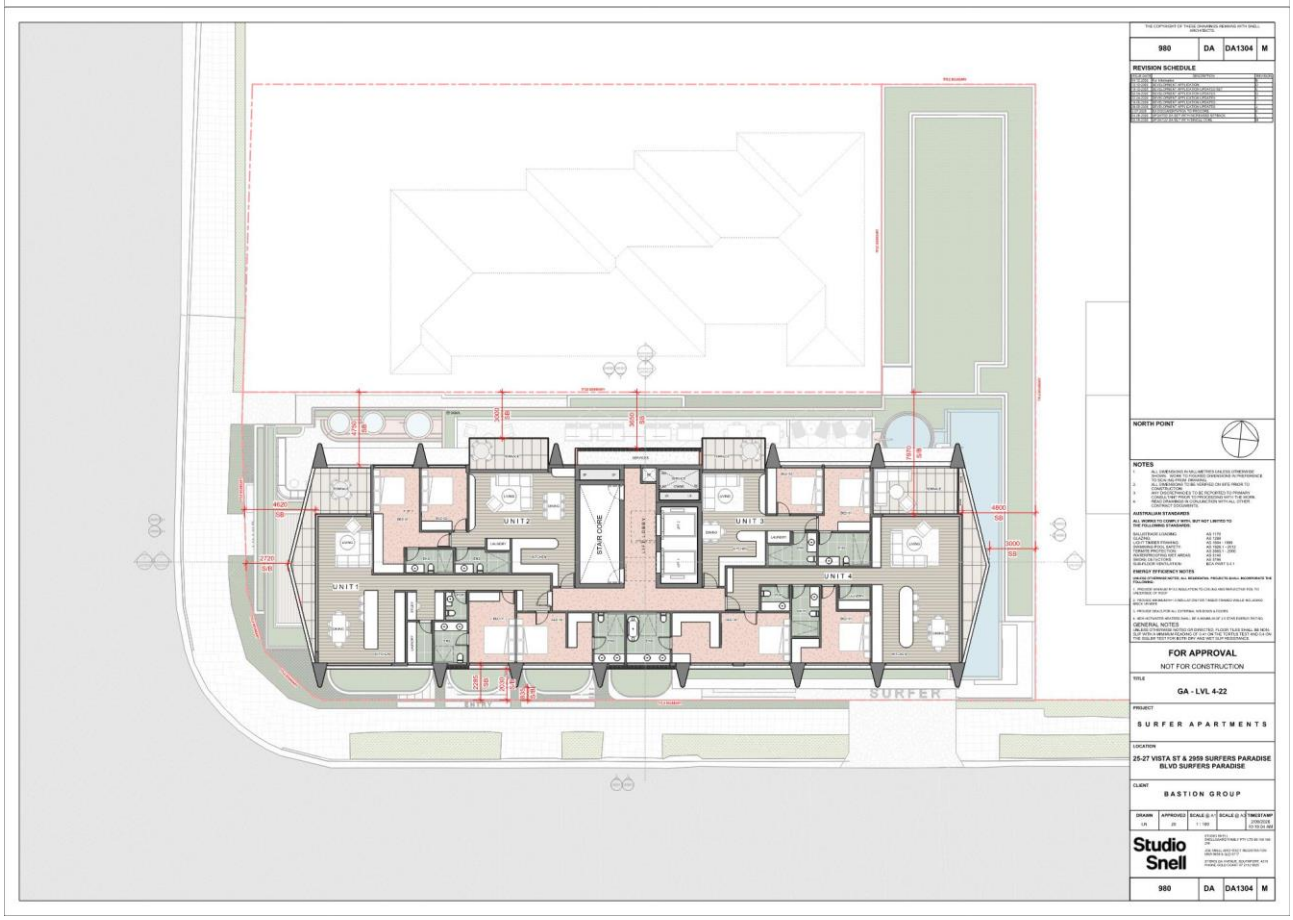
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UNIT3
UNIT4
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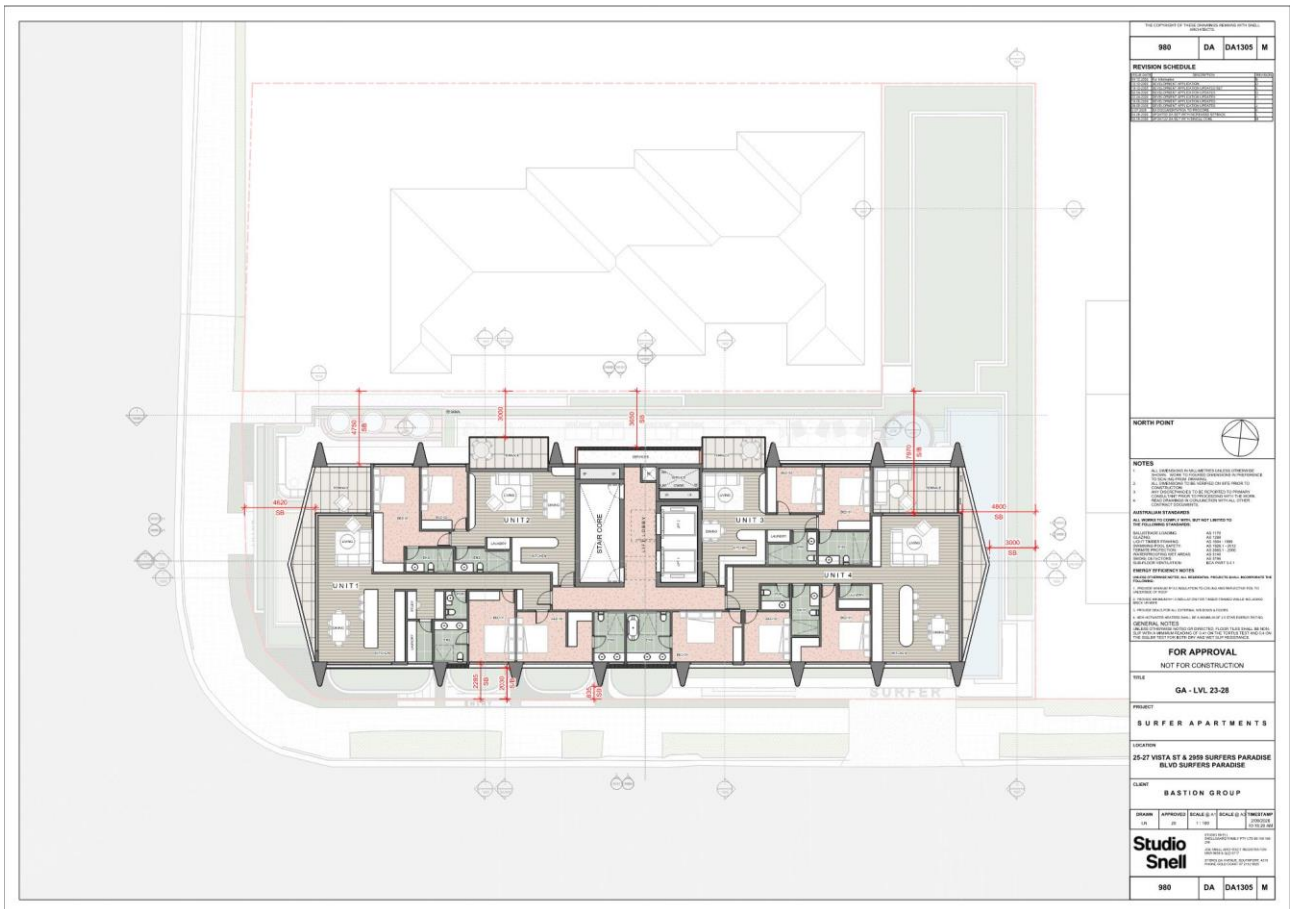
ENTRY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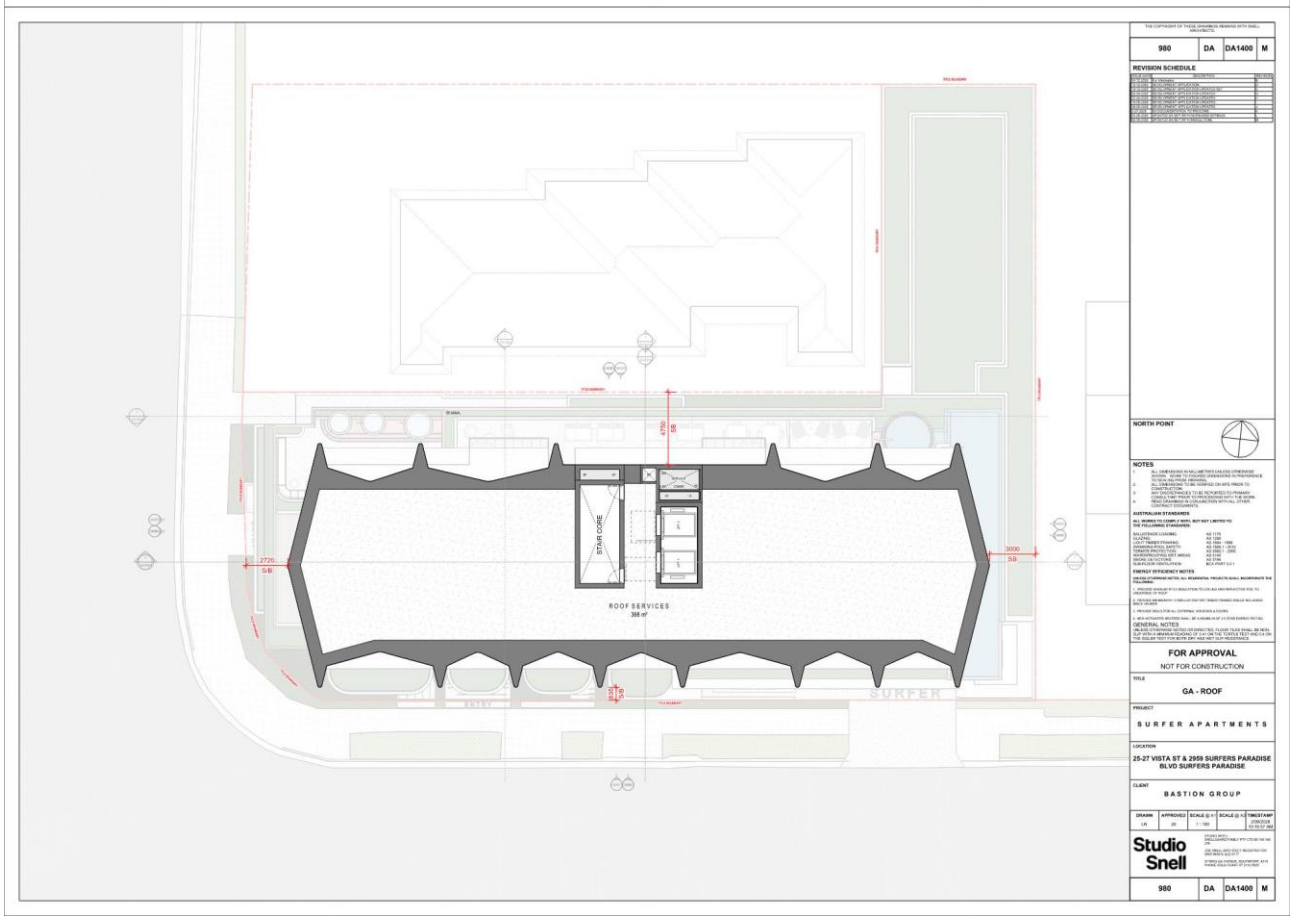
UNIT 2
UNIT 3
UNIT 4
STAIR CORE
SURFER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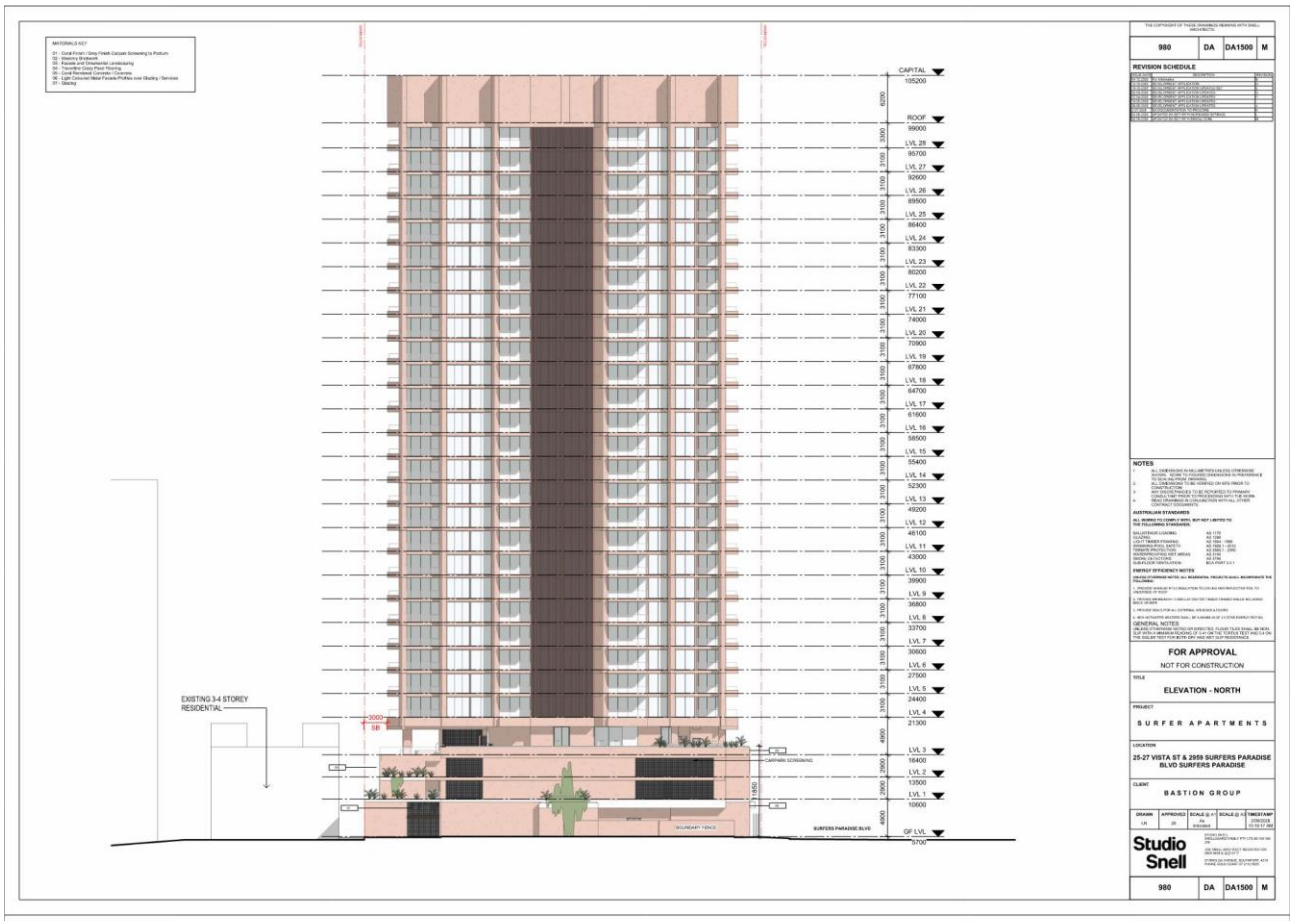
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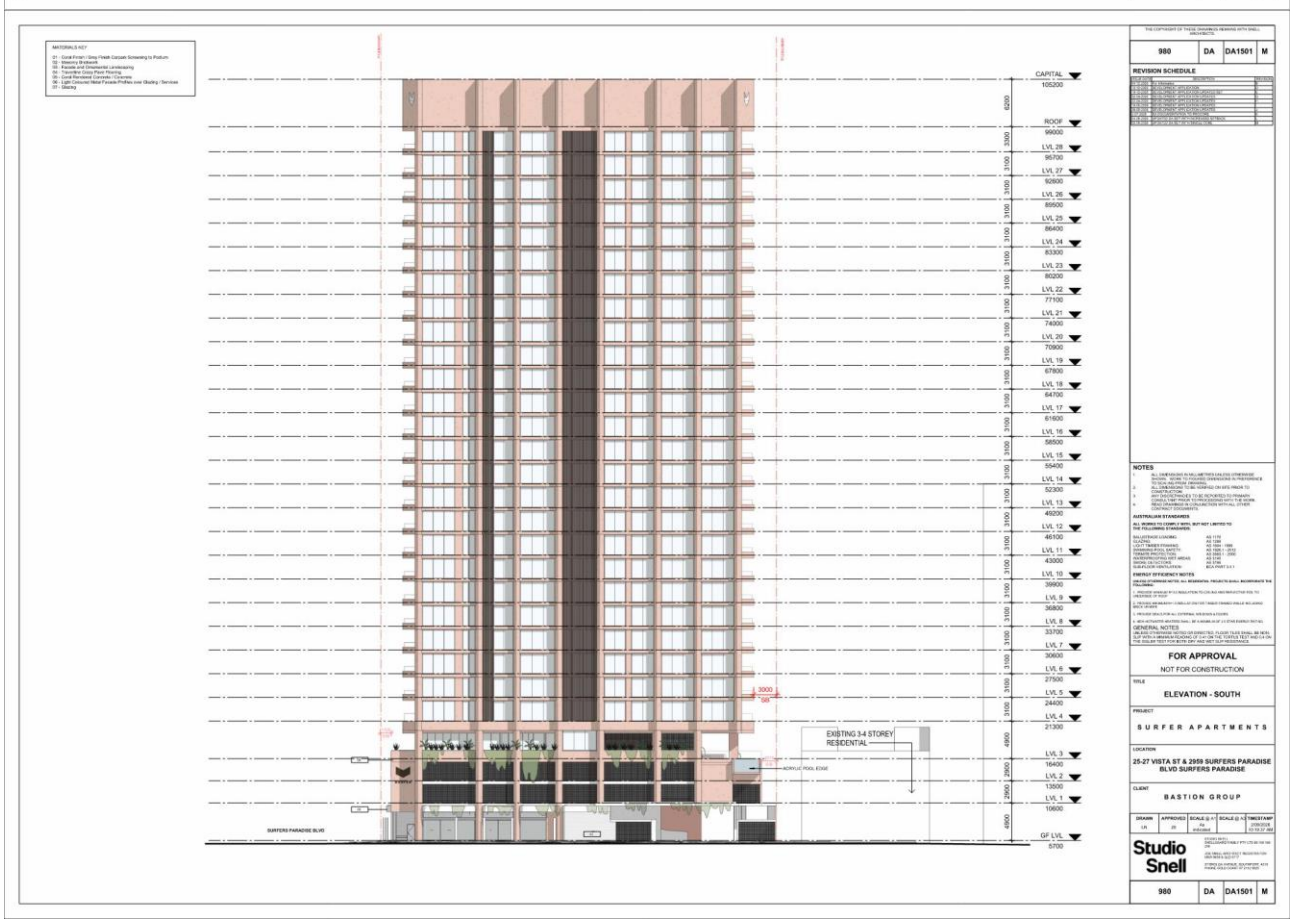
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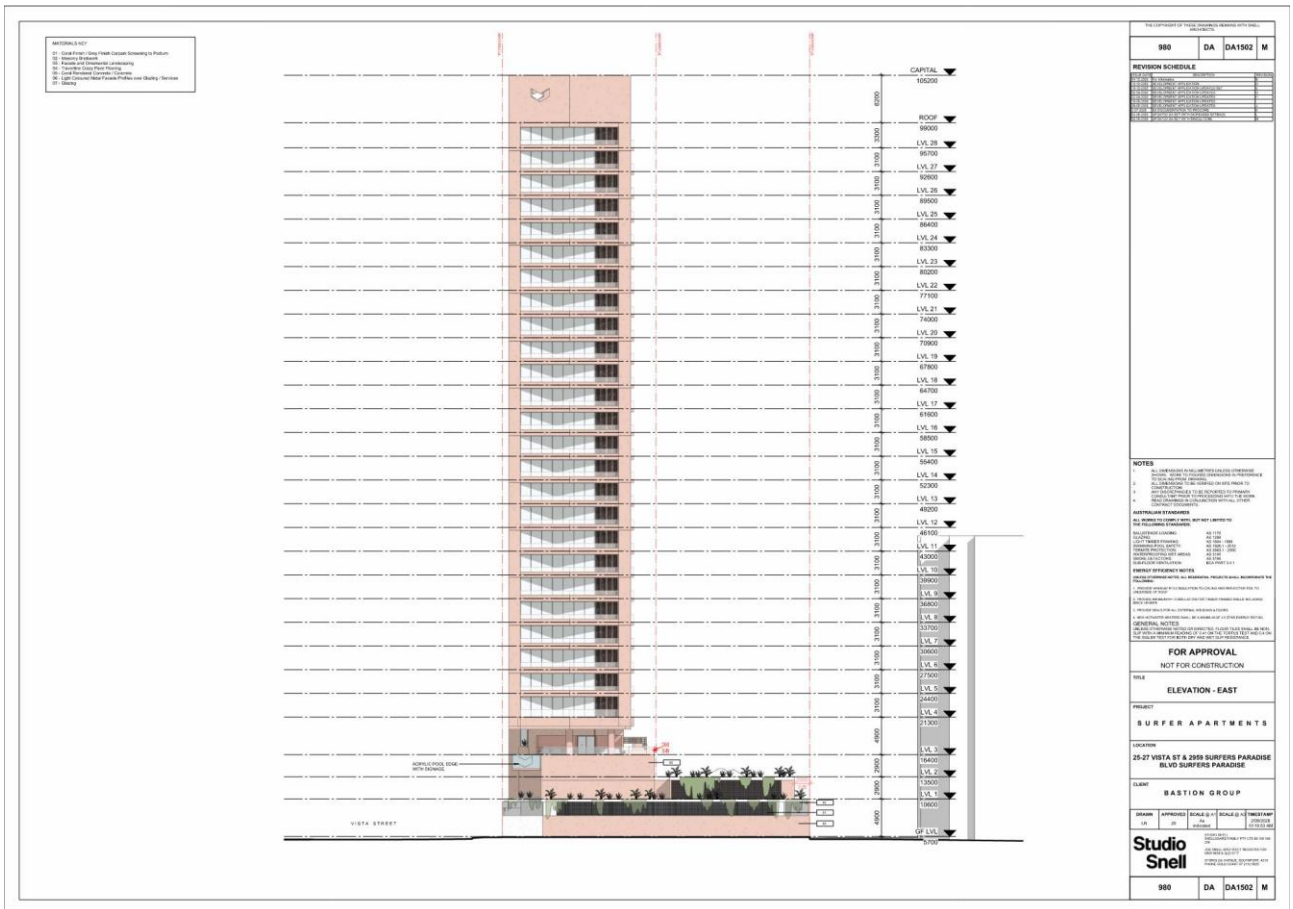
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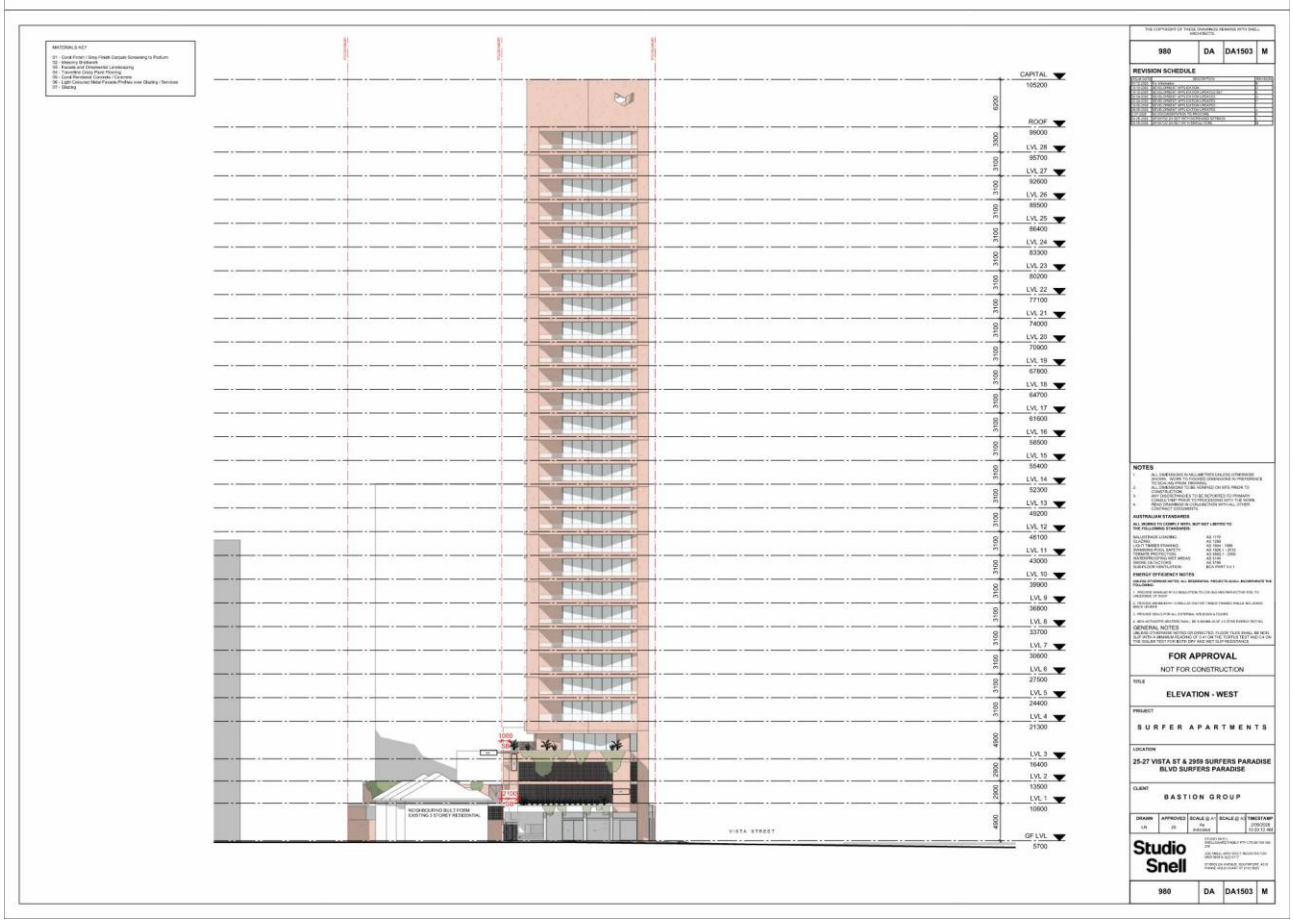
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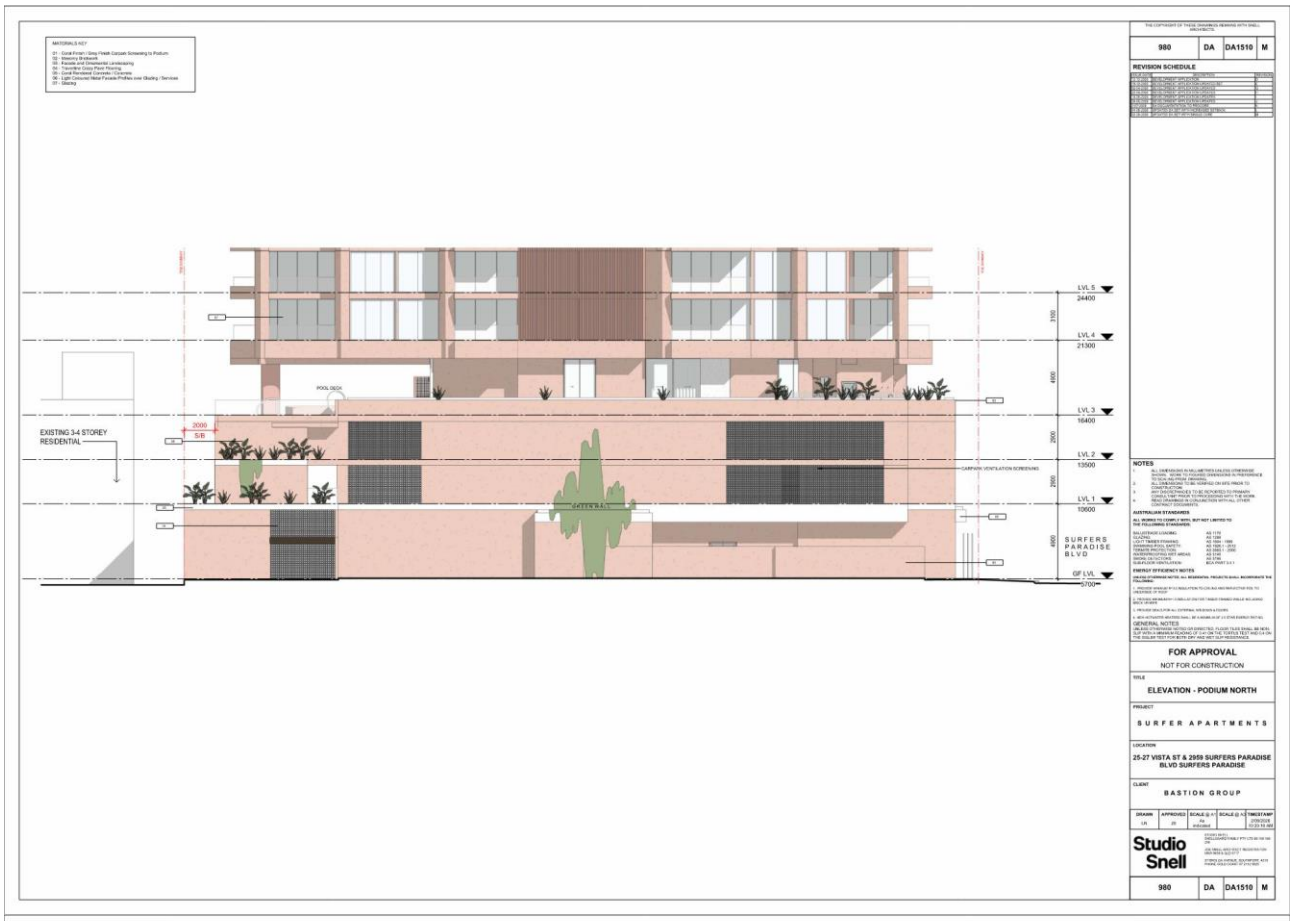
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S/B
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FOR APPROVAL
NOT FOR CONSTRUCTION
ELEVATION - PODIUM NORTH
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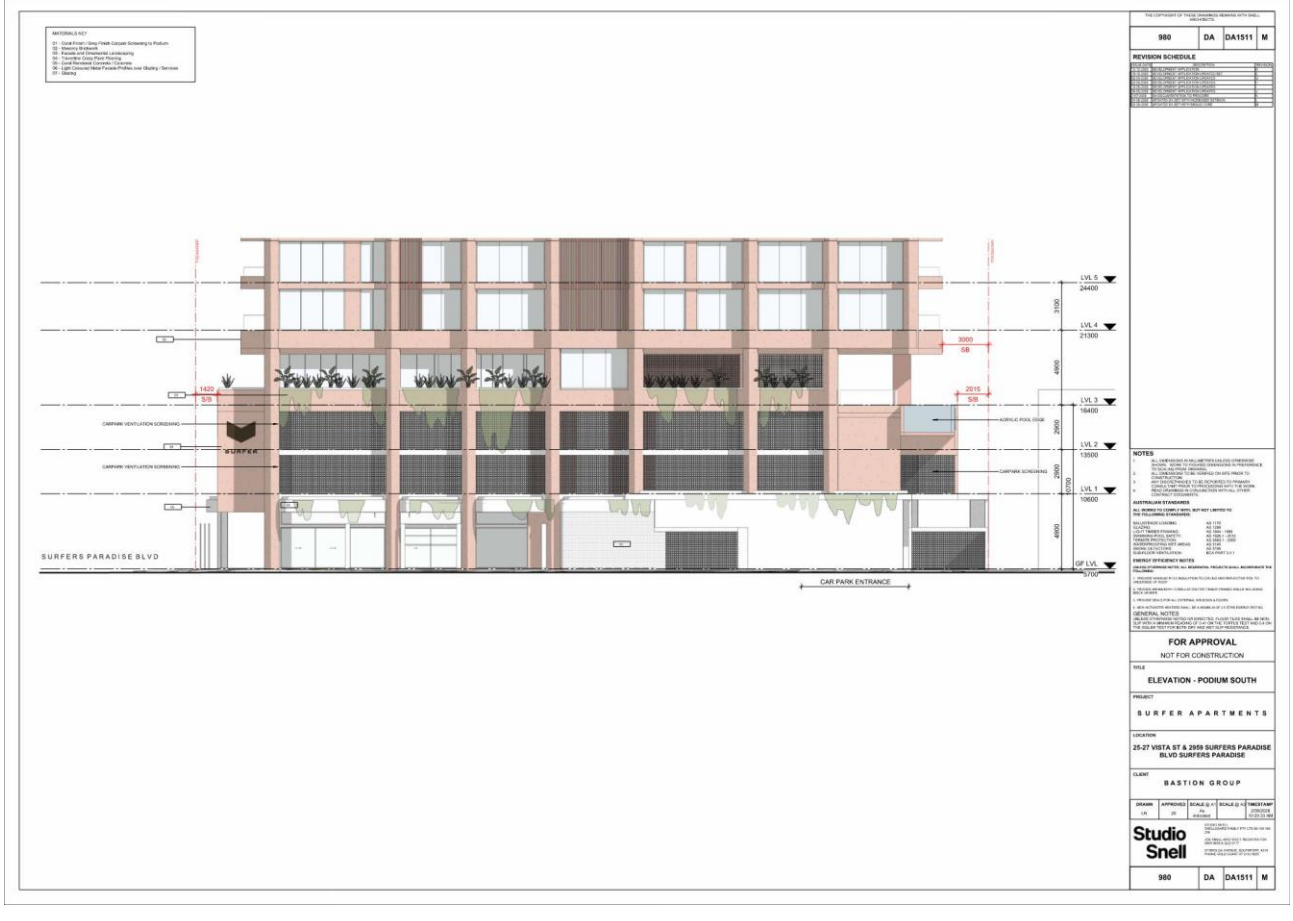
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S/B
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S/B
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SURFER
ACRYLIC POOL EDGE
CARPARK SCREENING
SURFERS PARADISE BLVD
CAR PARK ENTRANCE
FOR APPROVAL
NOT FOR CONSTRUCTION
ELEVATION - PODIUM SOUTH
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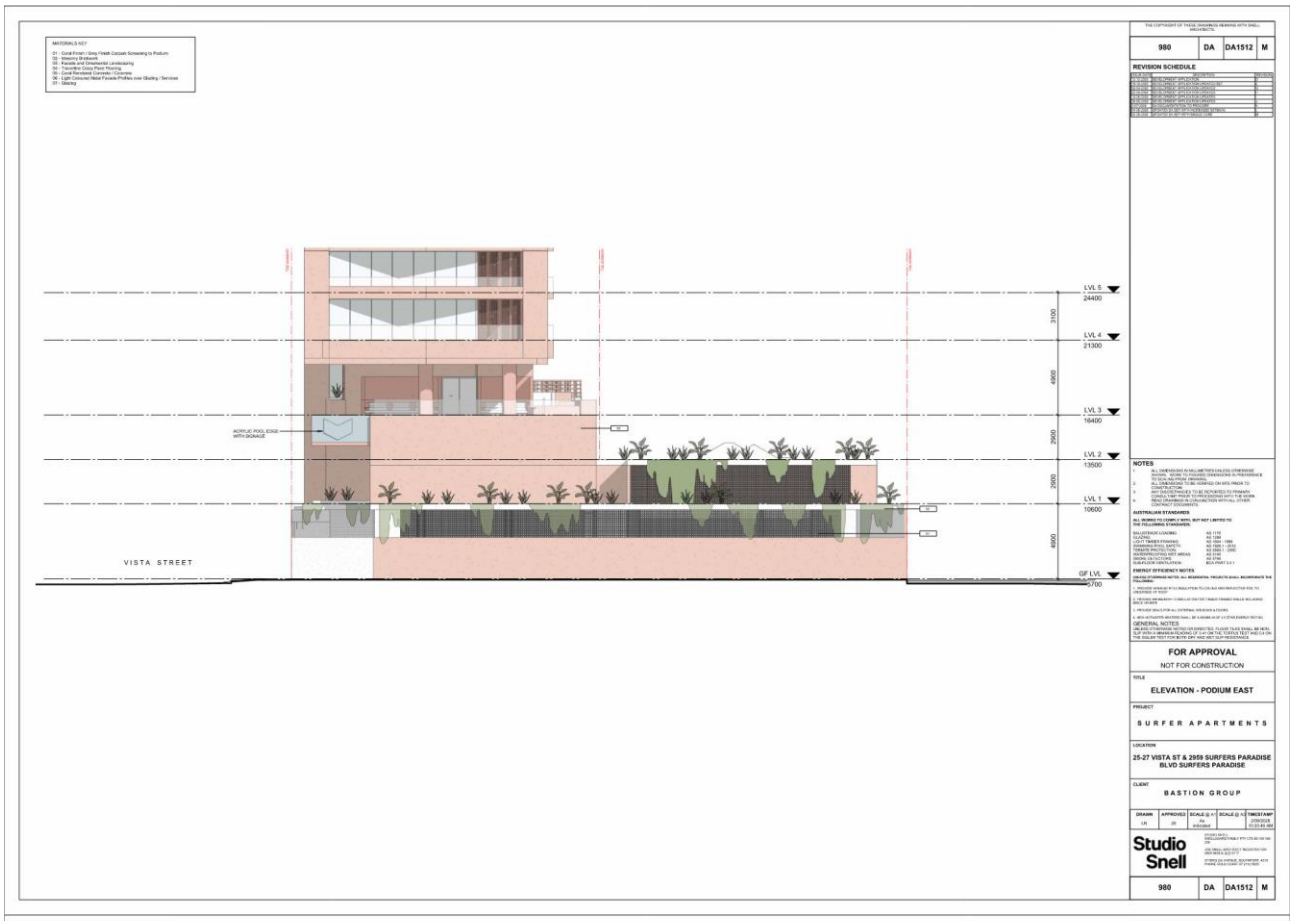
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NOT FOR CONSTRUCTION
ELEVATION - PODIUM EAST
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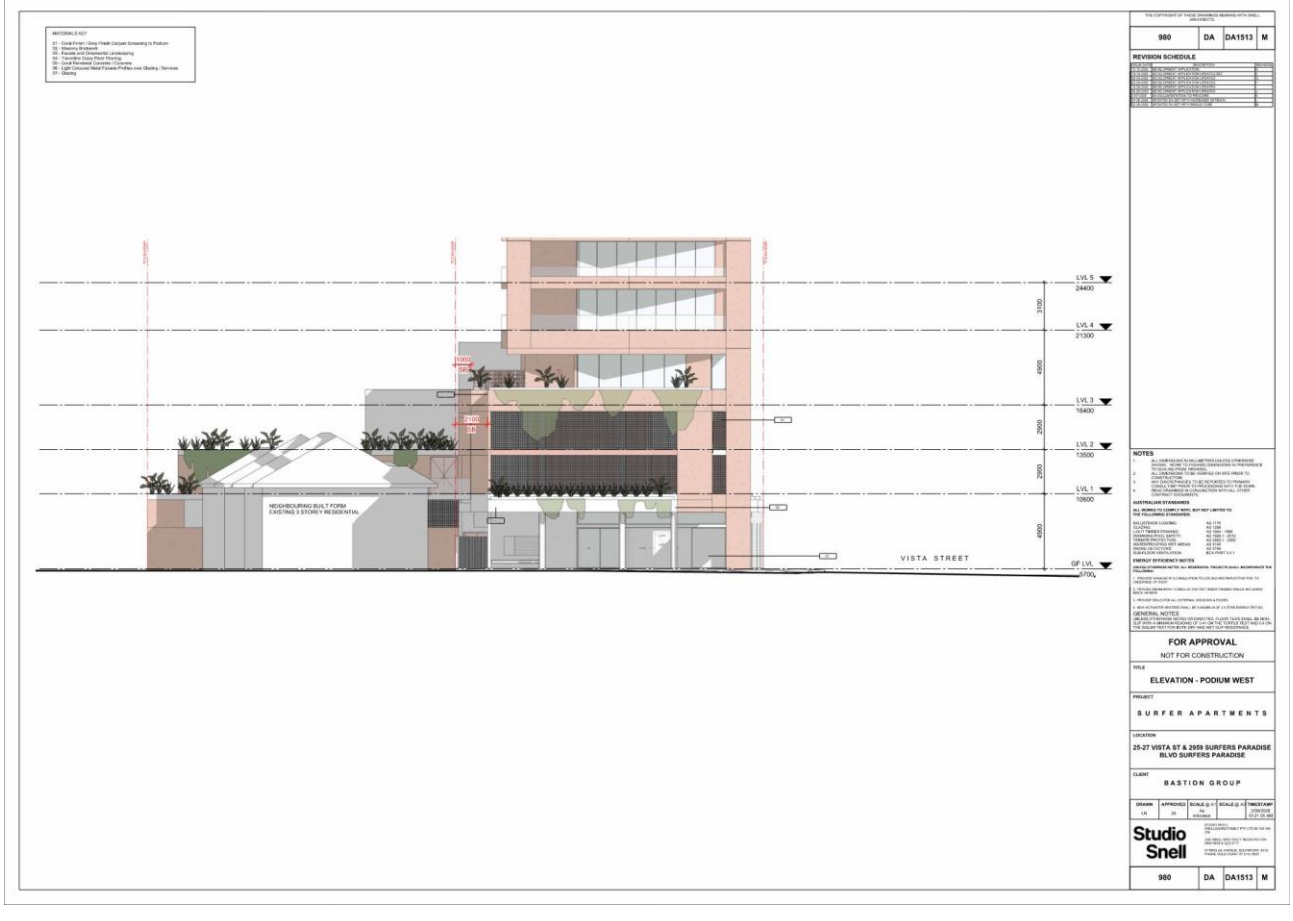
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VISTA STREET
FOR APPROVAL
NOT FOR CONSTRUCTION
ELEVATION - PODIUM WEST
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell
980
DA
DA1513
M

ROOF SERVICES
APARTMENT
FITNESS
SHARED LOUNGE AND DINING
POOL DECK
LG2 CAR PARK
LG1 CAR PARK
L01 CAR PARK
GF CAR PARK
TERRACE
CAFE
LOBBY
MAINTENANCE
HOUSEKEEPING
STAFF + AMENITY
SURFERS PARADISE BLVD
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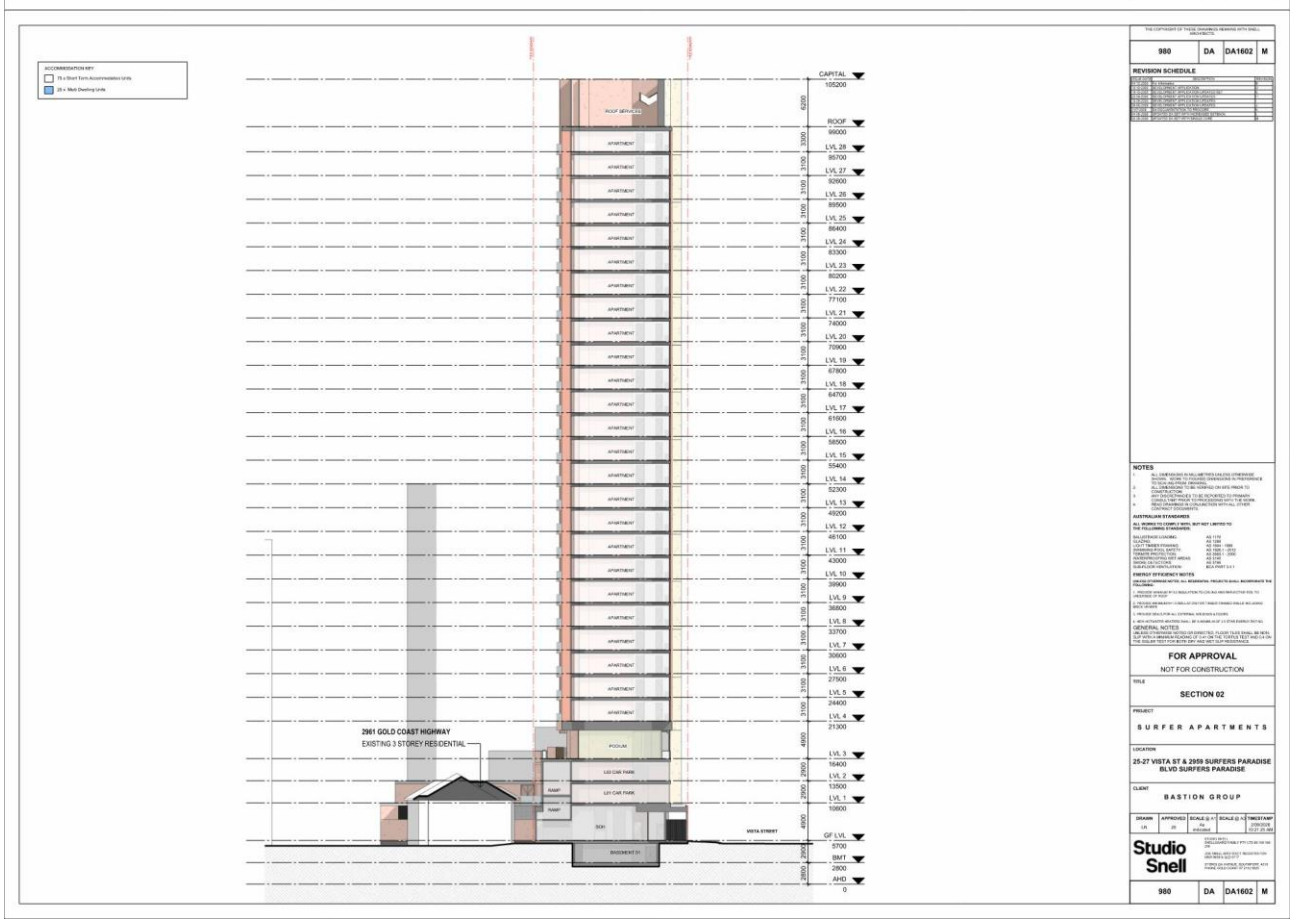
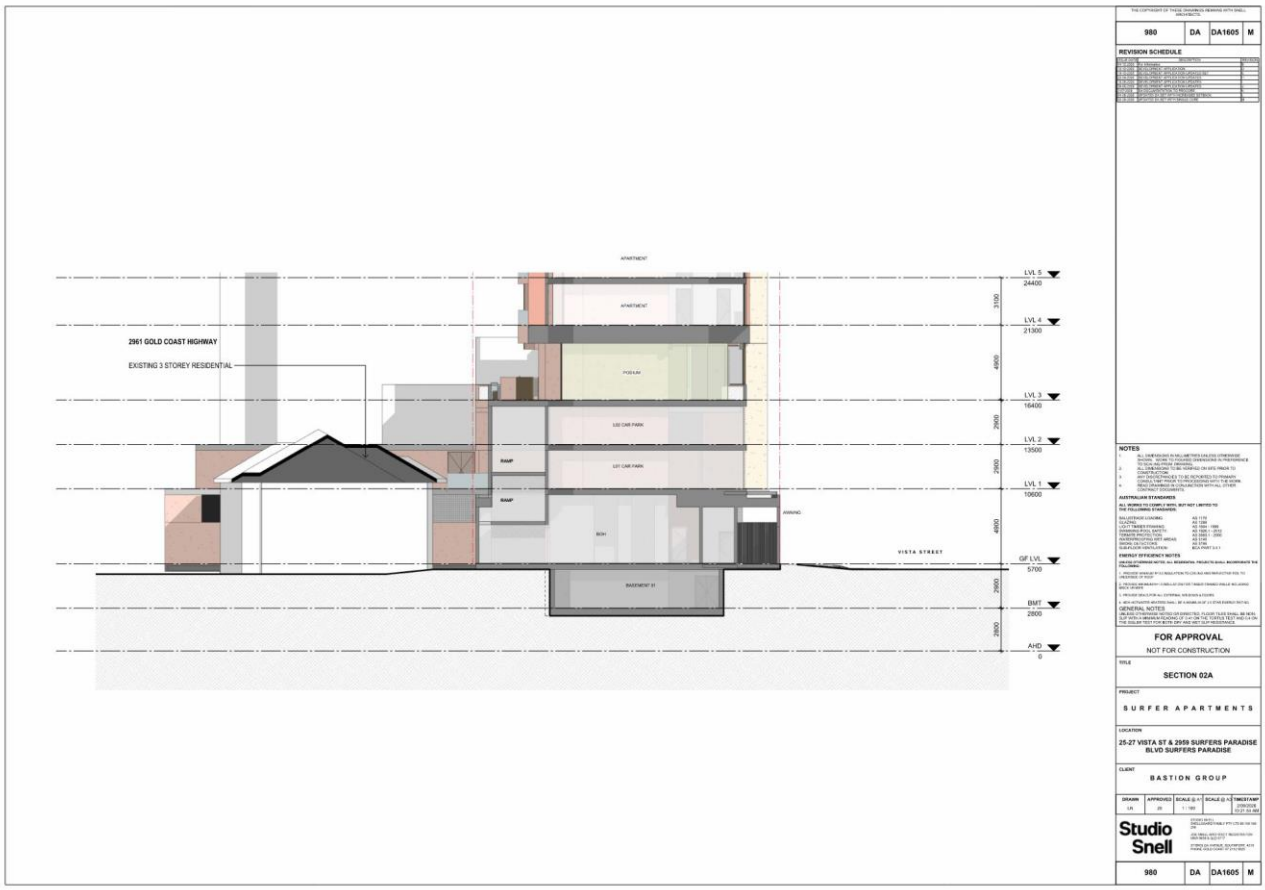
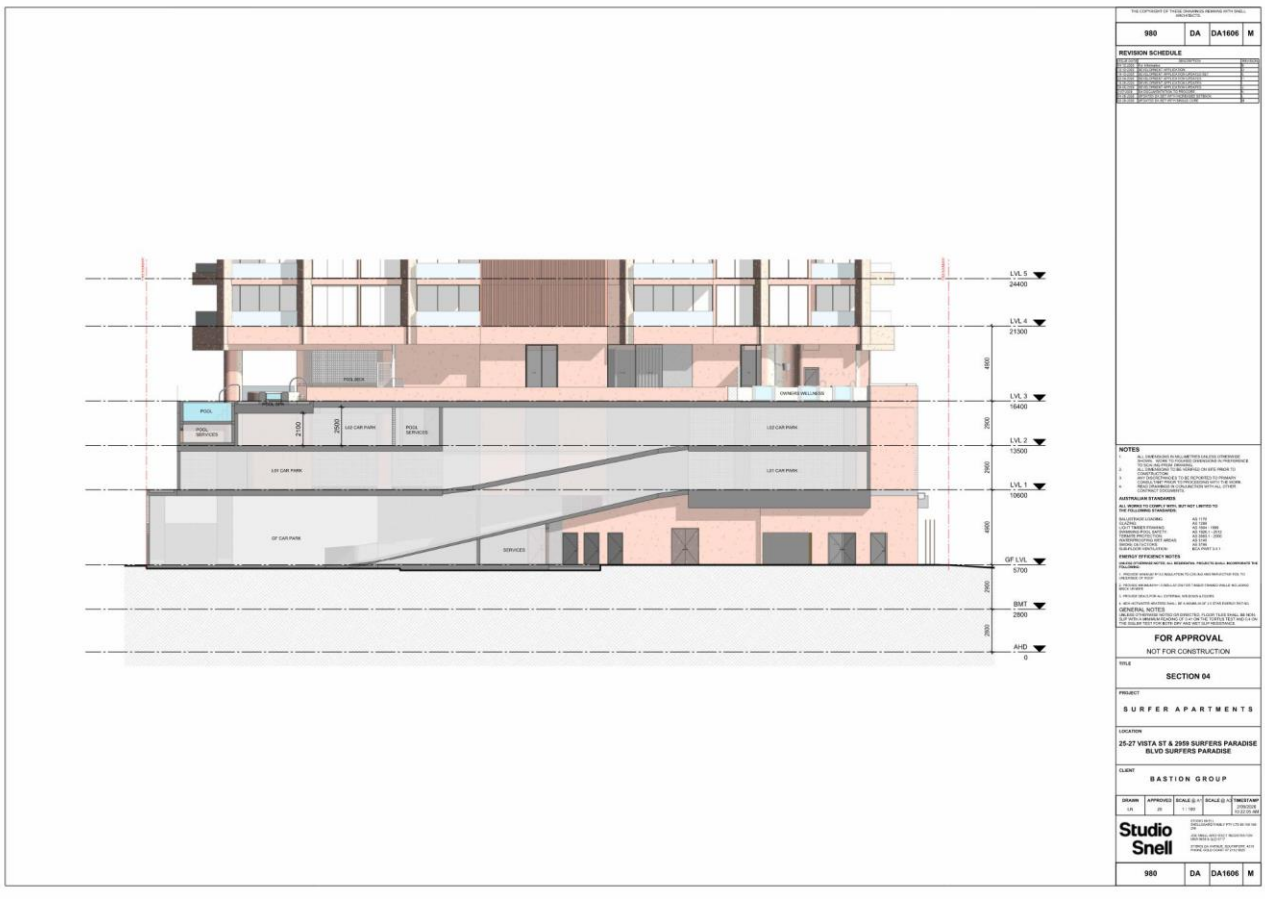
REVISION SCHEDULE
NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 01
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell


ROOF SERVICES
APARTMENT
PODIUM
LG2 CAR PARK
LG1 CAR PARK
RAMP
SGH
BASEMENT 01
2961 GOLD COAST HIGHWAY
EXISTING 3 STOREY RESIDENTIAL
VISTA STREET
CAPITAL 105200
ROOF 99000
LVL 28 95700
LVL 27 92600
LVL 26 89500
LVL 25 86400
LVL 24 83300
LVL 23 80200
LVL 22 77100
LVL 21 74000
LVL 20 70900
LVL 19 67800
LVL 18 64700
LVL 17 61600
LVL 16 58500
LVL 15 55400
LVL 14 52300
LVL 13 49200
LVL 12 46100
LVL 11 43000
LVL 10 39900
LVL 9 36800
LVL 8 33700
LVL 7 30600
LVL 6 27500
LVL 5 24400
LVL 4 21300
LVL 3 16400
LVL 2 13500
LVL 1 10600
GF LVL 5700
BMT 2800
AHD 0
980 DA DA1602 M
REVISION SCHEDULE
NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 02
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell

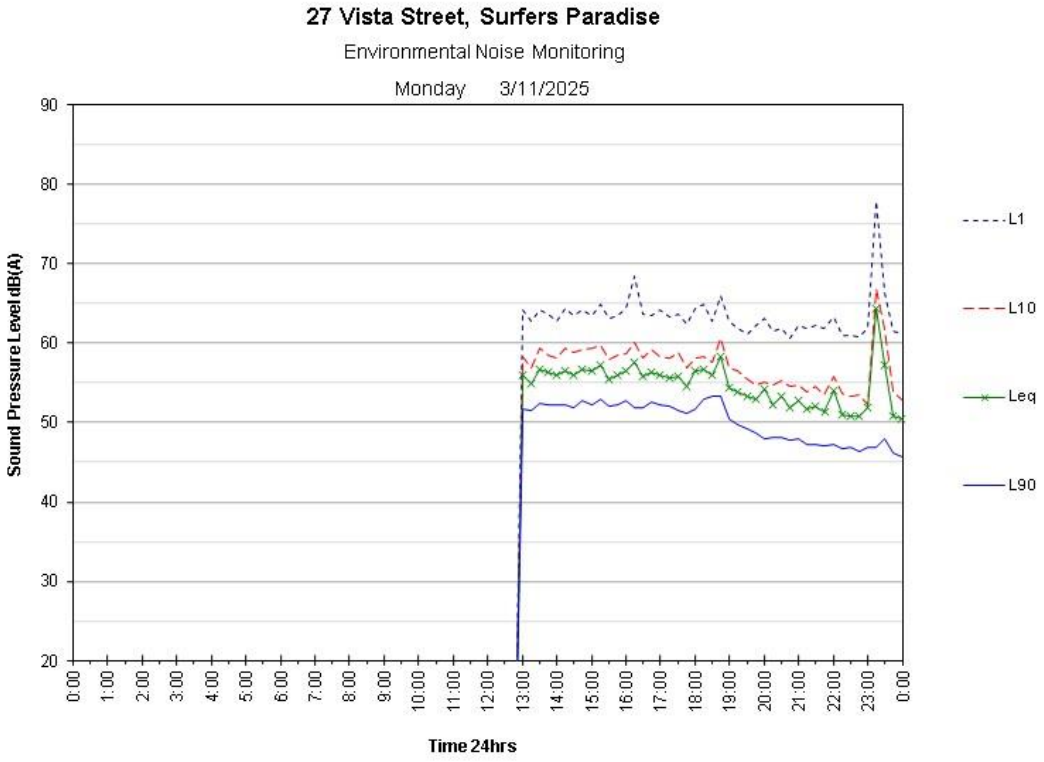
CAPITAL
105200
ROOF
99000
LVL 28
95700
LVL 27
92600
LVL 26
89500
LVL 25
86400
LVL 24
83300
LVL 23
80200
LVL 22
77100
LVL 21
74000
LVL 20
70900
LVL 19
67800
LVL 18
64700
LVL 17
61600
LVL 16
58500
LVL 15
55400
LVL 14
52300
LVL 13
49200
LVL 12
46100
LVL 11
43000
LVL 10
39900
LVL 9
36800
LVL 8
33700
LVL 7
30600
LVL 6
27500
LVL 5
24400
LVL 4
21300
LVL 3
16400
LVL 2
13500
LVL 1
10600
GF LVL
5700
BMT
2800
AHD
0
NEIGHBOURING BUILT FORM
EXISTING 3 STOREY RESIDENTIAL
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 03
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell
980
DA
DA1603
M

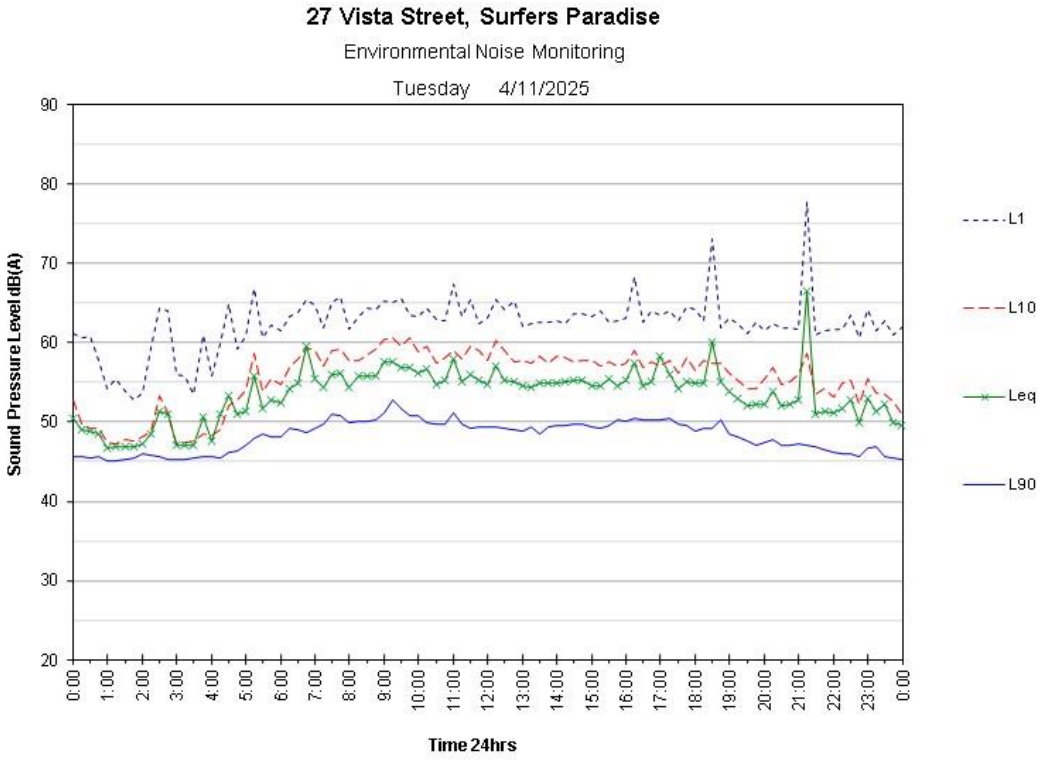
LVL 5
24400
LVL 4
21300
LVL 3
16400
LVL 2
13500
LVL 1
10600
GF LVL
5700
BMT
2800
AHD
0
21 VISTA STREET
EXISTING 3-4 STOREY
RESIDENTIAL
SURFERS PARADISE BLVD
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 01A
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell
980
DA
DA1604
M

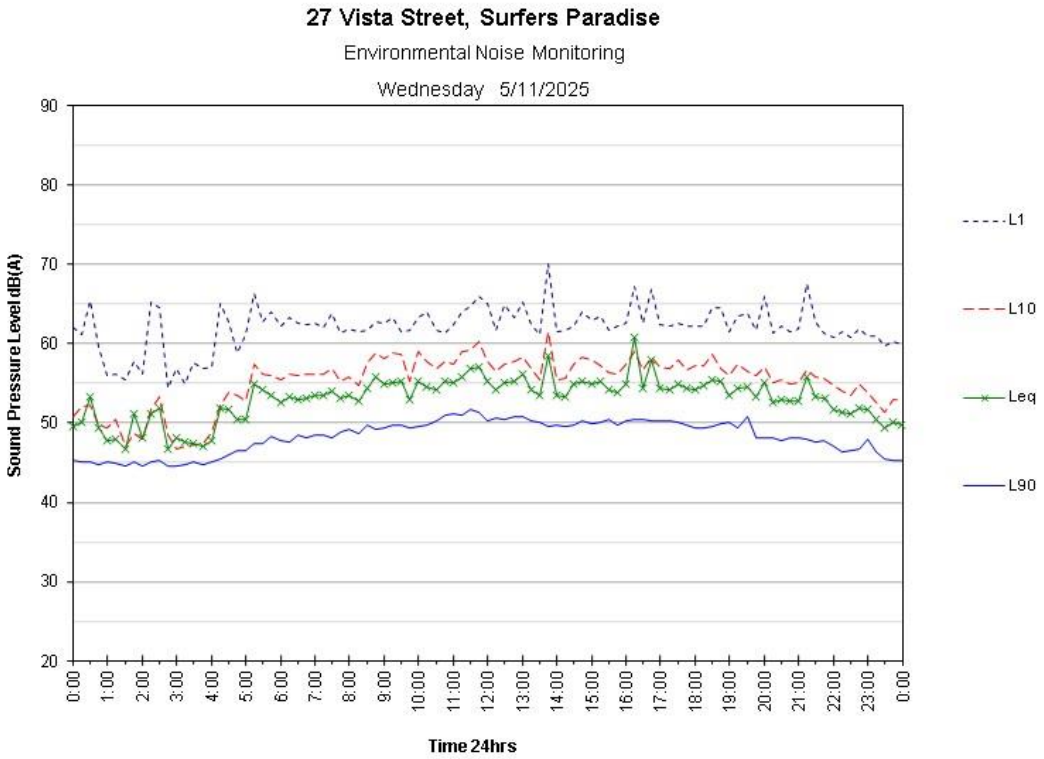

2961 GOLD COAST HIGHWAY
EXISTING 3 STOREY RESIDENTIAL
APARTMENT
POS LAV
L02 CAR PARK
L01 CAR PARK
RAMP
BOH
AWNING
VISTA STREET
BASEMENT 01
LVL 5
24400
LVL 4
21300
LVL 3
16400
LVL 2
13500
LVL 1
10600
GF LVL
5700
BMT
2800
AHD
0
980
DA
DA1605
M
REVISION SCHEDULE
NOTES
AUSTRALIAN STANDARDS
ENERGY EFFICIENCY NOTES
GENERAL NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 02A
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell

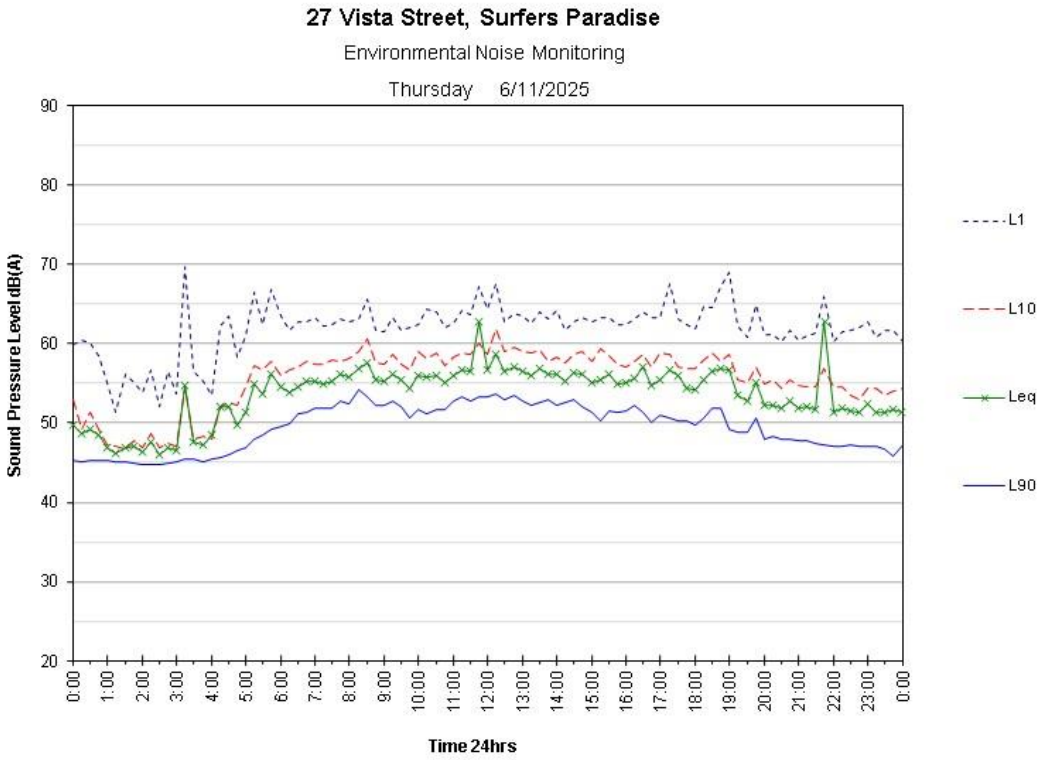

POOL DECK
OWNERS WELLNESS
POOL
POOL SERVICES
POOL SPA
L02 CAR PARK
L01 CAR PARK
GF CAR PARK
SERVICES
LVL 5
24400
LVL 4
21300
LVL 3
16400
LVL 2
13500
LVL 1
10600
GF LVL
5700
BMT
2800
AHD
0
980
DA
DA1606
M
REVISION SCHEDULE
NOTES
AUSTRALIAN STANDARDS
ENERGY EFFICIENCY NOTES
GENERAL NOTES
FOR APPROVAL
NOT FOR CONSTRUCTION
SECTION 04
SURFER APARTMENTS
25-27 VISTA ST & 2959 SURFERS PARADISE BLVD SURFERS PARADISE
BASTION GROUP
Studio Snell

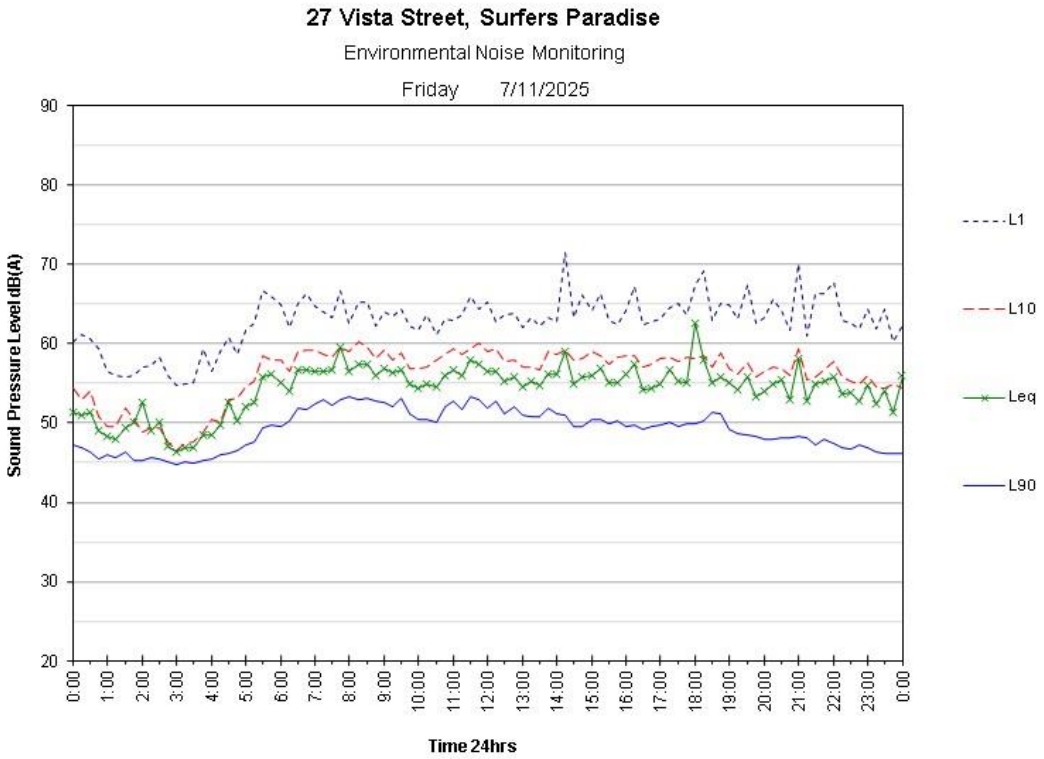
12.2 Noise Monitoring Charts

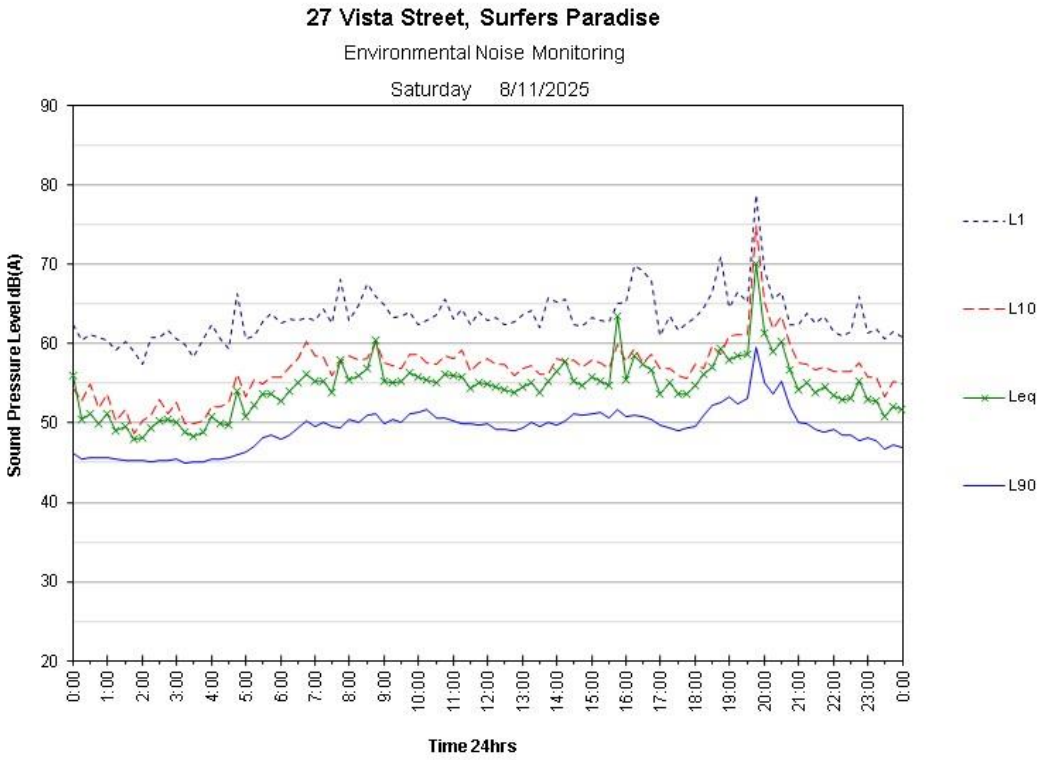


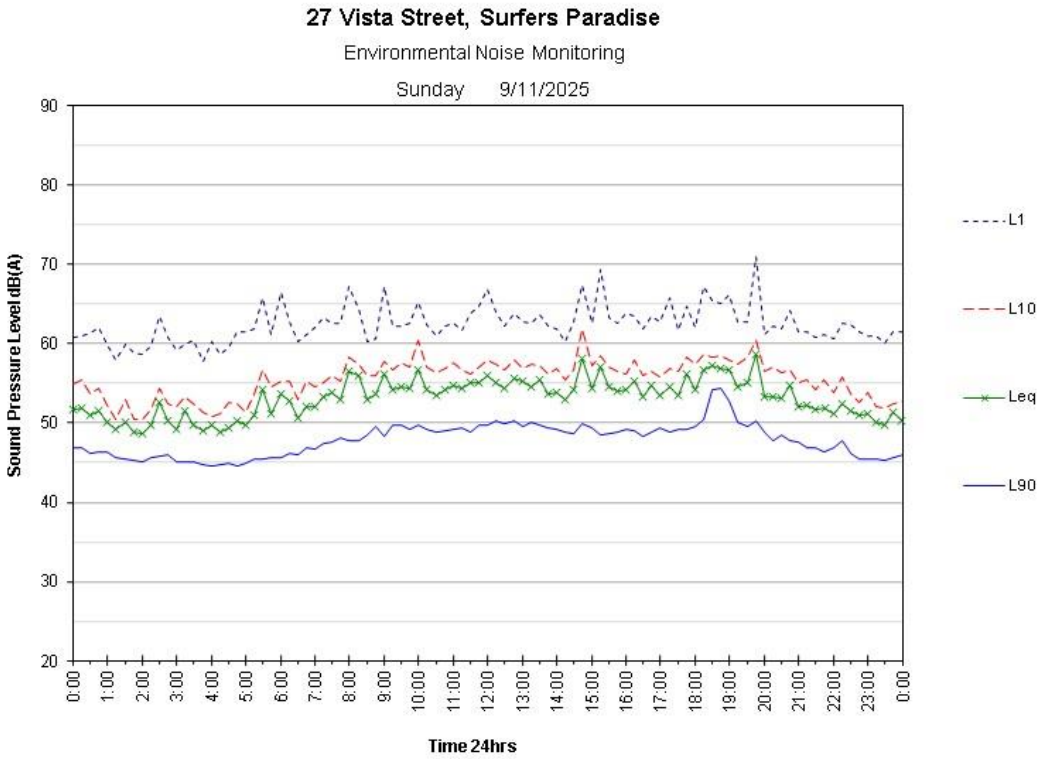


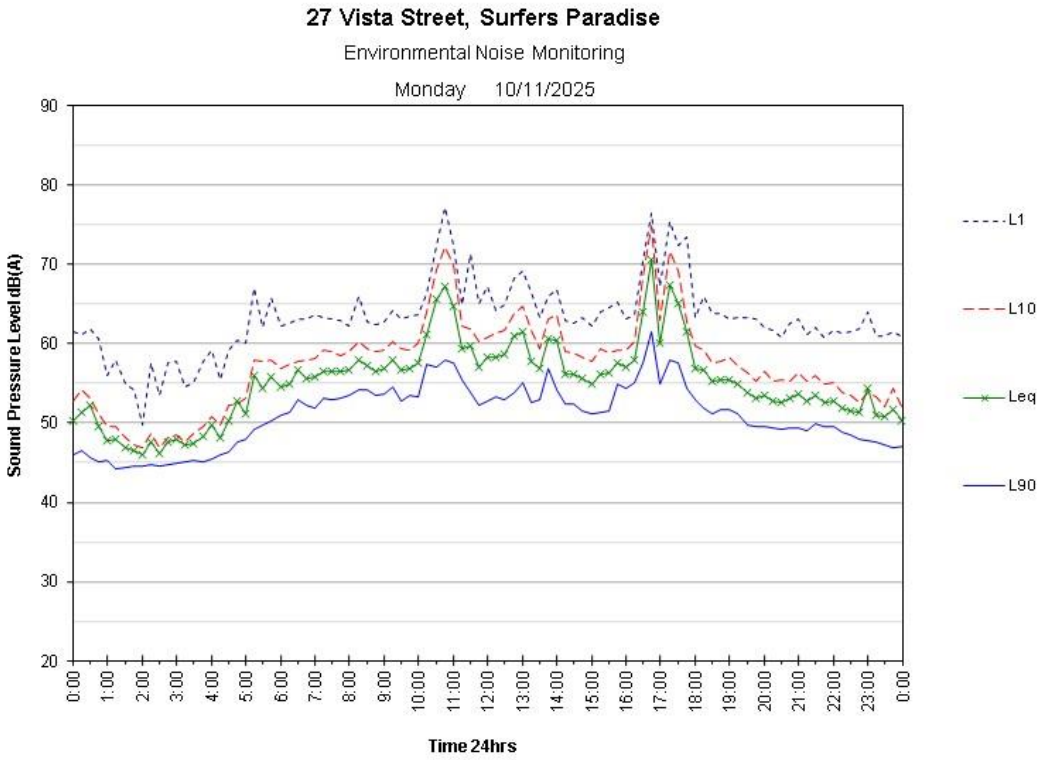

27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Wednesday 5/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

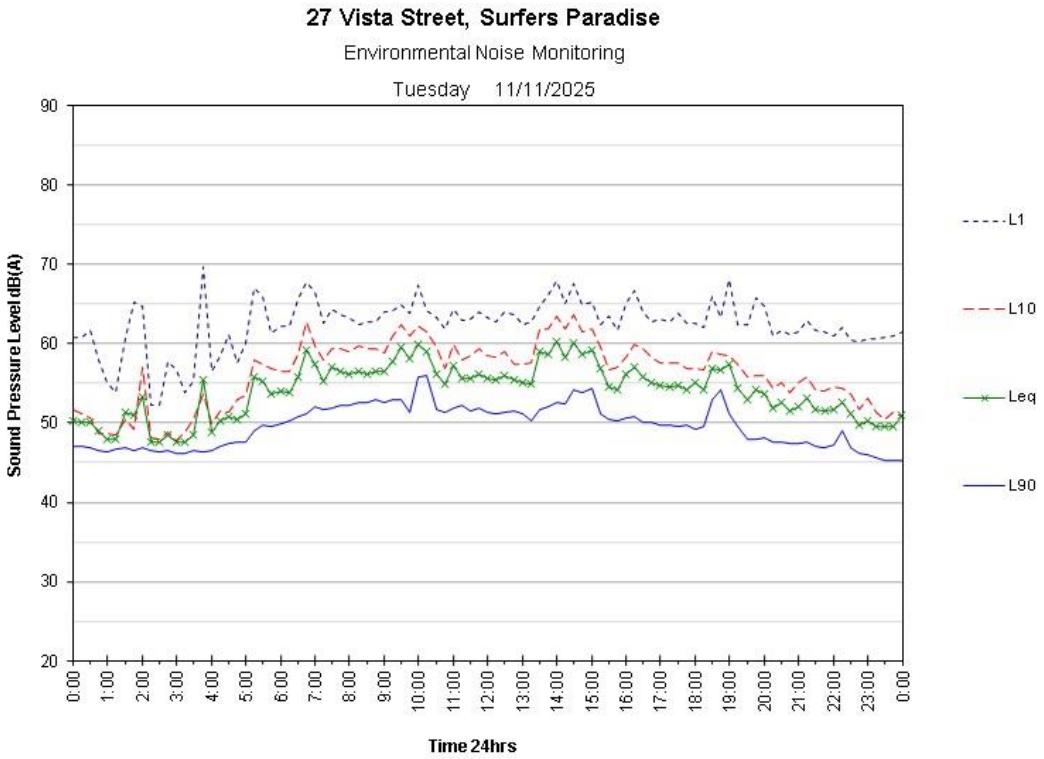

27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Thursday 6/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

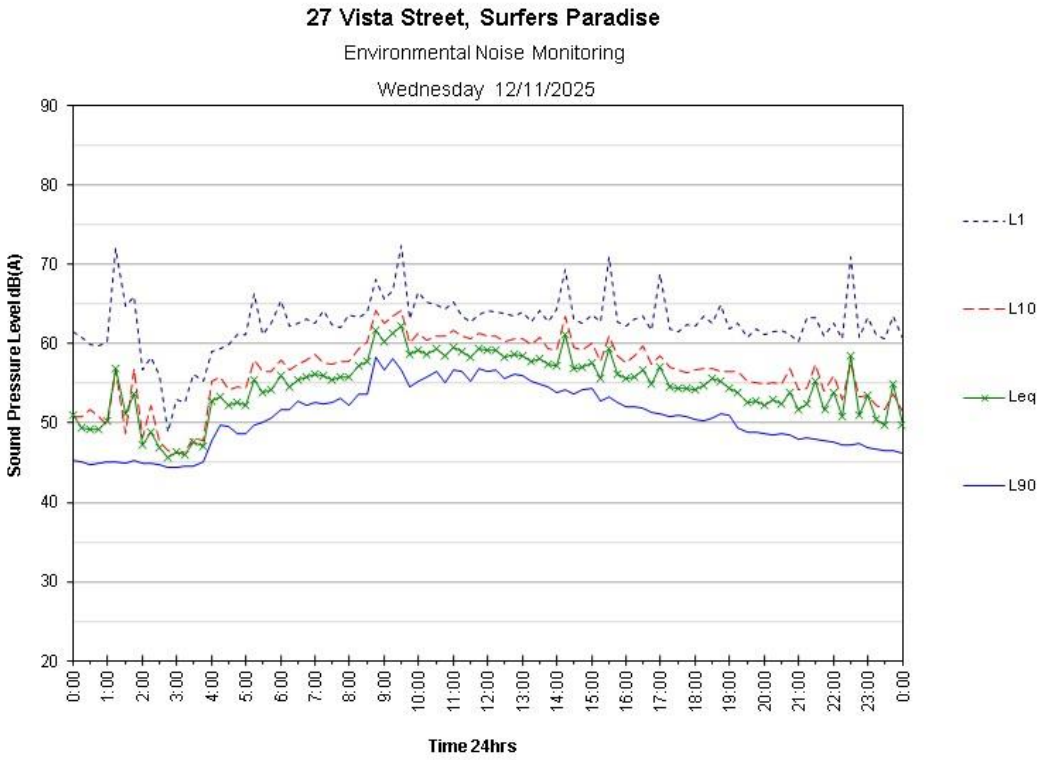

27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Friday 7/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

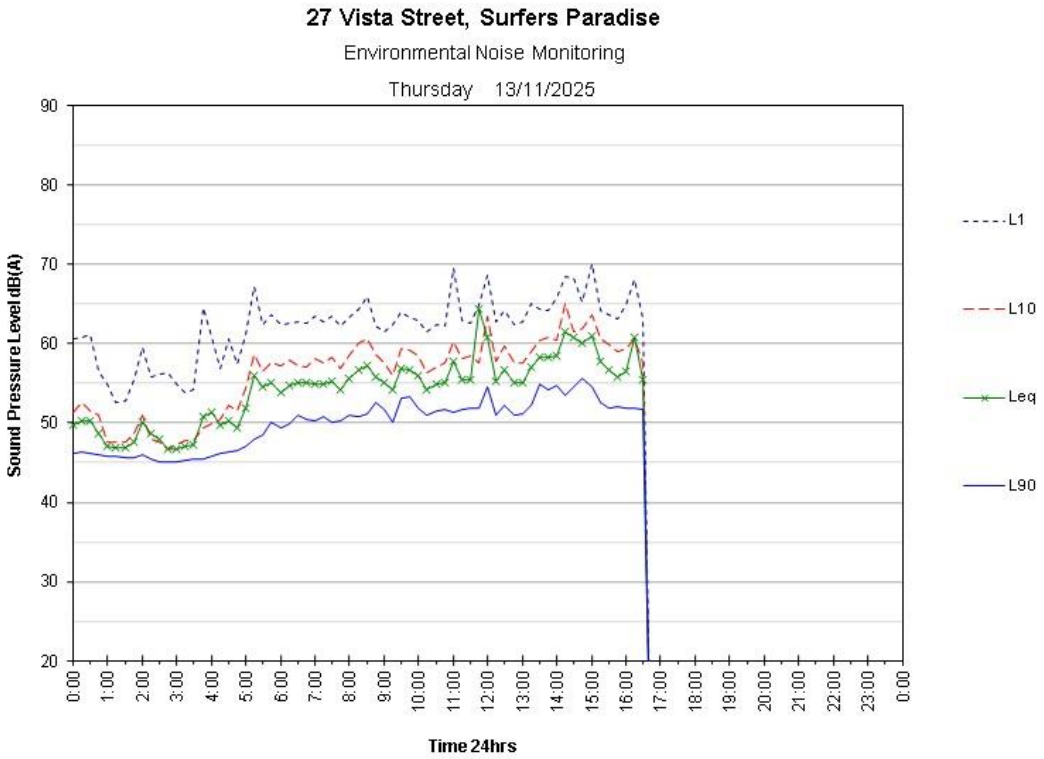

27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Saturday 8/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Sunday 9/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Monday 10/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Tuesday 11/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Wednesday 12/11/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


27 Vista Street, Surfers Paradise
Environmental Noise Monitoring
Thursday 13/11/2025
Sound Pressure Level dB(A)
90
80
70
60
50
40
30
20
0:00
1:00
2:00
3:00
4:00
5:00
6:00
7:00
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
0:00
Time 24hrs
L1
L10
Leq
L90