

Appendix H

Acoustics / Noise Impact Assessment



0262 Annandale MID Annandale Christian College

Noise Impact Assessment

Townsville Christian Education Association Ltd

PO Box 198
Spring Hill QLD 4004

Prepared by:

SLR Consulting Australia

SLR Project No.: 620.041341.00001

15 May 2026

Revision: v3.0

Making Sustainability Happen

Revision Record

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Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Townsville Christian Education Association Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



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1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Townsville Christian Education Association Ltd, trading as Annandale Christian College to conduct a Noise Impact Assessment to support the upgrade of Annandale Christian College located at 104-156 Yolanda Drive, Annandale QLD.

The purpose of the assessment is to demonstrate the viability of the Project from an environmental noise perspective by assessing the noise emissions from the Project onto external noise sensitive receptors.

This report outlines the applicable noise assessment criteria from State authorities, demonstrates the compatibility of the education use in relation to noise emissions, and provides in-principle reasonable and feasible mitigation measures that can be implemented during the planning and design stages.

The noise assessment described in this report comprises the quantification of the existing noise environment via long-term unattended noise monitoring at the project site, noise level predictions via computational acoustic modelling and the assessment of the noise predictions against the applicable noise criterion levels:

2.0 Project Description

2.1 Proposed Development

The site is subject to master planning proposed to be staged and depicted in **Figure 1**. The proposed development comprises a range of major and minor capital works across the college campus involving new buildings, extensions, refurbishment of existing buildings, and upgrades to outdoor spaces and site infrastructure as summarised below and depicted in **Figure 2**.

Major Capital Works

- Construction of a new two-storey administration building including staff facilities, meeting spaces, café and executive offices, with demolition of the existing H Block.
- Adaptation of 9 Jonquil Crescent to provide primary staff facilities and specialist learning areas.

Minor Capital Works

- Internal refurbishment of E Block to convert existing spaces into classrooms, hospitality facilities and withdrawal areas.
- Creation of new student gathering areas and informal learning spaces.
- New covered walkways and campus linkages.
- Reconfiguration and extension of existing car parking areas.
- New staff courtyard and additional student social spaces.
- Landscaping works including planting, shade trees and environmental buffers.
- New bicycle storage facilities.

Operating hours will match the current school day (with extra curricular activities) of 7:00 am to 6:00 pm. Peak periods of noise will likely occur near standard class starting and finishing times.



The location of the project in relation to proposed development area, noise monitoring and nearest residential receptors area shown in **Figure 3**.

2.2 Residential Receptors

The nearest sensitive receptors (NSRs) that have been identified consist of one and two-storey residential dwellings as detailed in **Table 1**. If compliance is deemed to be achieved at these closest identified receptors then it is expected that noise criteria will also be compliant at all surrounding noise sensitive receptors farther back.



Figure 1 Existing Masterplan – Annandale Christian College



Figure 2 Current Proposed Works – Annandale Christian College

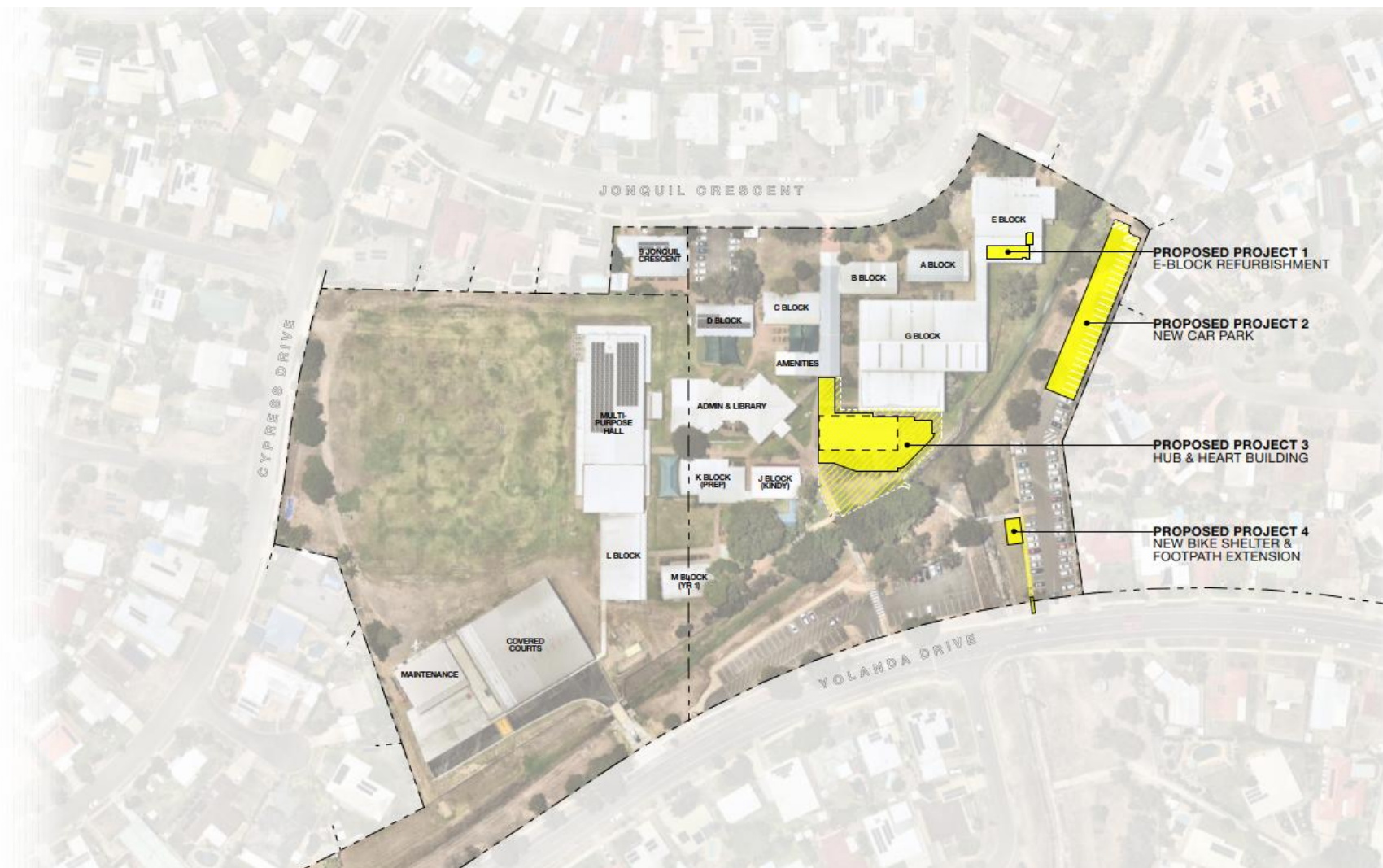


Table 1 Identified Nearest Noise Sensitive Receptors to the Proposed Development

NSR	Address	Receptor Type
NSR1	7 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR2	5 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR3	3 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR4	2 Jade Ct, Annandale QLD 4814	Two storey residence
NSR5	3 Jade Ct, Annandale QLD 4814	One storey residence
NSR6	125 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR7	127 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR8	129 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR9	131 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR10	133 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR11	135 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR12	137 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR13	139 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR14	141 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR15	143 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR16	145 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR17	3 Honeysuckle Dr, Annandale QLD 4814	One storey residence
NSR18	30 Serissa Cres, Annandale QLD 4814	One storey residence
NSR19	153 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR20	160 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR21	158 Yolanda Dr, Annandale QLD 4814	One storey residence
NSR22	7 Linaria Cres, Annandale QLD 4814	Two storey residence
NSR23	8 Linaria Cres, Annandale QLD 4814	Two storey residence
NSR24	9 Linaria Cres, Annandale QLD 4814	Two storey residence
NSR25	10 Linaria Cres, Annandale QLD 4814	Two storey residence
NSR26	18 Indigo Cres, Annandale QLD 4814	One storey residence
NSR27	27 Jonquil Cres, Annandale QLD 4814	Two storey residence
NSR28	16 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR29	14 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR30	12 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR31	10 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR32	8 Jonquil Cres, Annandale QLD 4814	One storey residence
NSR33	27 Cypress Dr, Annandale QLD 4814	One storey residence
NSR34	29 Cypress Dr, Annandale QLD 4814	One storey residence



NSR	Address	Receptor Type
NSR35	31 Cypress Dr, Annandale QLD 4814	Two storey residence
NSR36	32 Cypress Dr, Annandale QLD 4814	One storey residence
NSR37	34 Cypress Dr, Annandale QLD 4814	One storey residence
NSR38	1 Larkspur Cres, Annandale QLD 4814	One storey residence
NSR39	38 Cypress Dr, Annandale QLD 4814	One storey residence
NSR40	40 Cypress Dr, Annandale QLD 4814	One storey residence
NSR41	34 Larkspur Cres, Annandale QLD 4814	One storey residence
NSR42	45 Cypress Dr, Annandale QLD 4814	One storey residence



3.0 Existing Acoustic Environment

An initial on-site noise survey was conducted at the site (NML1) between 15 July and 22 July 2024 and then supplementary neighbouring noise sensitive receptors (NML2) between 12 June and 20th June 2025 as the school masterplan was updated. The measured noise levels have been used to establish the existing noise environment which forms the basis for project noise limits.

Monitoring was conducted using noise loggers programmed to record 'A weighted' and 'fast' response noise levels in 15-minute intervals. The microphone of the noise logger was positioned 1.8 m above ground level and fitted with a microphone windshield. The noise logger was configured to record A-weighted Fast-response statistical noise levels, including the L_{A10} , L_{A90} , L_{Aeq} and L_{Amax} noise levels at 15 minute intervals. Calibration of the instrument was checked before and after the monitoring, with the instruments exhibiting a drift less than ± 1.0 dB during the monitoring; therefore, measurements are considered valid.

Instrumentation used is detailed in **Table 2**. At the time of the measurement, all the instrumentation used held a current calibration certificate issued by a National Association of Testing Authorities (NATA) accredited laboratory.

Table 2 Noise Monitoring Details and Instrumentation

Noise Measurement Location			Manufacturer & Type	Serial Number	Calibration	
ID	(UTM Zone 55K)				Pre	Post
	Easting	Northing				
NML1	476,864	7,864,678	ARL Ngara Noise Logger	878202	94	94
			SVAN SV30A Acoustic Calibrator	24513		
NML2	477,044	7,864,659	SVAN 977 Noise Logger	45704	94	93.8
			G.R.A.S 42 AG Class 1 Acoustic Calibrator	279304		

A summary of background noise levels and existing outdoor play area measurements during the school breaks are presented in **Table 3** Statistical monitoring results are presented in **Appendix B**.

Table 3 Summary of Measured Background Noise Levels

Parameter	Period	15-minute Measured Noise Levels (dBA)	
		NML1	NML2
Rating Background Level (RBL)	Daytime (7 am-6 pm)	37	40
	Evening (6 pm-10 pm)	37	38
	Night (10 pm-7 am)	30	33
	Daytime (7 am-6 pm)	42	41



Parameter	Period	15-minute Measured Noise Levels (dBA)	
		NML1	NML2
Average Background Noise Level (LA90)	Evening (6 pm-10 pm)	39	41
	Night (10 pm-7 am)	35	36
Average LAeq	Daytime (7 am-6 pm)	60	56
	Evening (6 pm-10 pm)	50	48
	Night (10 pm-7 am)	48	45
Average LA1	Daytime (7 am-6 pm)	59	54
	Evening (6 pm-10 pm)	52	49
	Night (10 pm-7 am)	50	47
Average LA10	Daytime (7 am-6 pm)	52	48
	Evening (6 pm-10 pm)	46	45
	Night (10 pm-7 am)	44	42
Average LAMax	Daytime (7 am-6 pm)	69	65
	Evening (6 pm-10 pm)	59	56
	Night (10 pm-7 am)	57	54
Measured outdoor play area (NML1)	1 st & 2 nd Breaks (11-11:30 am & 1:30-2 pm)	69	-

4.0 Assessment Criteria

The potential noise impacts from the Project have been assessed with reference to the relevant environmental legislation and local planning benchmarks. While the Project is understood to be assessable under the Council assessment criteria, the state-level requirements, as outlined in the Environmental Protection (Noise) Policy 2019 (EPP Noise) have also been presented.

4.1 Townsville City Plan 2014 - Planning Scheme Policy SC6.4.19

4.1.1 Intrusive Noise Criteria

As outlined in Planning Scheme Policy SC6.4.19,

Intrusive noise levels require that LAeq,15-minute noise levels from the site during the relevant operational periods (i.e., day, evening, and night) do not exceed the rating background level by more than 5 dB. The intrusive criteria outlined was established primarily to deal with individual development applications. In the case of multiple developments, such as a new industrial area, a strategic approach should be implemented to ensure an equitable share of the remaining available allocation of noise for each industrial development is achieved.

Based on the measured rating background levels as detailed in **Table 3**, the resultant intrusive criteria assigned to the NSRs are detailed below in **Table 4**.



Table 4 Intrusive noise criteria

NML	Period	Measured RBL, dBA	Intrusive Noise Criteria LAeq,15-minute, dBA
NML2	Daytime (7 am-6 pm)	40	45

4.1.2 Amenity Noise Criteria

As outlined in Planning Scheme Policy SC6.4.19.6,

(3) *Amenity noise level*

Assessment of amenity is based on noise levels specific to the land use as per the table 'Maximum Recommended Amenity of Noise Levels'.

SC6.4.19.1 - Maximum Recommended Amenity of Noise Levels For All Sources

Receiver	Noise Amenity Area	Time of Day	Maximum Recommended Amenity Noise Level for All Sources L _{Aeq 15} minutes, dB(A)
Residence	<i>Rural - an area with an acoustical environment that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels</i>	Day	50
		Evening	45
		Night	40
	<i>Suburban - an area that has local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. This area often has the following characteristic: evening ambient noise levels defined by the natural environment and human activity.</i>	Day	55
		Evening	45
		Night	40



<i>Receiver</i>	<i>Noise Amenity Area</i>	<i>Time of Day</i>	<i>Maximum Recommended Amenity Noise Level for All Sources $L_{Aeq\ 15}$ minutes, dB(A)</i>
	<i>Urban – an area with an acoustical environment that: is dominated by ‘urban hum’ or industrial source noise has through traffic with characteristically heavy and continuous traffic flows during peak periods is near commercial districts or industrial districts has any combination of the above or where ‘urban hum’ means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources.</i>	<i>Day</i>	60
		<i>Evening</i>	50
		<i>Night</i>	40
<i>School classroom – internal</i>	<i>All</i>	<i>Noisiest 1-hour period when in use.</i>	35 (internal)
<i>Active recreation area (e.g. school playground, golf course)</i>	<i>All</i>	<i>When in use</i>	55

4.2 Queensland EP Act and EPP (Noise)

The environmental values of public amenity, public safety, and ecological health are to be maintained under the Queensland Environmental Protection Act 1994 (EP Act 1994). Relevant to the proposed premises, the EP Act 1994 contains noise criteria applicable to the operation of air-conditioning (section 440U, item 2) and refrigeration equipment (section 440V, item 2), which require that:

- Equipment must not be operated before 7 am if it makes a noise of more than 3 dBA above the background noise level.
- Equipment must not be operated from 7 am to 10 pm if it makes a noise of more than 5 dBA above the background noise level.
- Equipment must not be operated after 10 pm if it makes a noise of more than 3 dBA above the background noise level.



The EPP (Noise) prescribes environmental values aligned with those of the EP Act 1994, including:

- The qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems.
- The qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following:
 - Sleep.
 - Study or learn.
 - Be involved in recreation, including relaxation and conversation.
- The qualities of the acoustic environment conducive to protecting the amenity of the community.

The EPP (Noise) contains Acoustic Quality Objectives (AQO) for receptors potentially sensitive to noise. Where the overall level of noise at the receptors, from all sources but excluding road and rail transport noise, are within the AQO, the environmental values are considered to be achieved. The AQO for the noise sensitive receptors and land use surrounding the Project are presented in Table.

Table 5 EPP (Noise) Acoustic Quality Objectives

Sensitive receptor	Time of day	Acoustic Quality Objectives (measured at receptor) dBA			Environmental value
		L _{Aeq,adj,1hr}	L _{A10,adj,1hr}	L _{A1,adj,1hr}	
Residence (for outdoors)	Daytime and evening	50	55	65	Health and wellbeing
Residence (for indoors)	Daytime and evening	35	40	45	Health and wellbeing
	Night-time	30	35	40	Health and wellbeing, in relation to the ability to sleep



4.3 Project Noise limits

Based on the above assessment criteria, and the proposed operating hours of the school, criteria applicable to the Project is shown in **Table 6**.

Table 6 Project Noise Limits

Receptors	Day (7:00 am – 6:00 pm)
Townsville City Plan Intrusive Noise Criteria	45 dBA $L_{Aeq,adj,15\text{ minutes}}$
Townsville City Plan Acoustic Amenity Criteria	53 dBA $L_{Aeq,adj,15\text{ minutes}}$
Project Noise Trigger Level	45 dBA $L_{Aeq,adj,15\text{ minutes}}$
QLD EPP Noise for Dwellings (Time varying) – for information only	50 dBA $L_{Aeq,adj,1\text{ hr}}$
	55 dBA $L_{A10,adj,1\text{ hr}}$
	65 dBA $L_{A1,adj,1\text{ hr}}$
QLD EPP Noise Dwellings (Continuous) – for information only	45 dBA $L_{Aeq,adj,1\text{ hr}}$

Evening and night criteria are not applicable based on the proposed operating hours.



5.0 Assessment of Noise Impacts

5.1 Noise Modelling Parameters

Modelling of Project noise emission was conducted using the ISO 9613-2:2024 - *Acoustics attenuation of sound during propagation outdoors Part 2: Engineering method for the prediction of sound pressure levels outdoors* incorporated in the SoundPLAN (version 9.0) noise modelling software. A three-dimensional digital terrain map giving all relevant topographic information was used in the modelling process. The model used this map, together with noise source data provided by the client along with source data measured at other similar sites (or from SLR's noise source database), ground cover and atmospheric information to predict noise levels at the nearest potentially affected receptors.

5.2 Noise Source Emissions

Details of the noise emissions of the activities pertaining the development and related operations are presented in this section and shown in figure.

5.2.1 Vehicles in carpark and set down areas

The proposed development will include on-site external car parking facilities and set down areas with assumed maximum speed limit of 10 km/h within the development. Light vehicle movements in the car parking area and set down areas have been modelled in the sections indicated in Figure. Movements have been modelled as line sources and car door closes and car starts as point sources. The vehicle counts have been conservatively estimated based on the number of bays, short parks, allocated car parking areas and provided traffic peak hour trip distributions (**Appendix D**) as detailed in **Table 7**. The Sound Power Levels (SWL) and octave band spectra are detailed in **Table 8**.

Table 7 Vehicle set down and parking scenarios

Activity Zone	Vehicles per hour	Comments
Site Access 2&3 - Pick up / Drop off zone (18 bays)	174	Rapid turnover: frequent low-speed "stop-start" movements, door slams, brief engine idling and acceleration events.
Site Access 2&3 - Short Stay (42 bays)		Moderate turnover: vehicles parking for short durations with engine starts, idling, door slams and loading/unloading of younger students.
Site Access 4 - Large Car Park (Staff / Senior Students / Overflow)	76	Lower turnover: dispersed vehicle movements including engine starts, door slams and slow-speed circulation within the car park.
Site Access 6 - Small North Car Park (16 bays)	10	Limited turnover: occasional vehicle arrivals and departures with localised door slams and low-speed manoeuvring.
TOTAL	260	Combined parent, staff and student movements representing a conservative peak hourly arrival/departure scenario.



Note: The 1-hour vehicle movements represent a conservative peak scenario, with a high proportion of arrivals assumed to occur within a condensed period. The majority of activity is concentrated within the designated set-down and short-stay areas, reflecting typical school pick-up/drop-off behaviour, while remaining movements are distributed across parking areas with lower turnover characteristics. SLR notes that the proposed development results in a minimal increase in student numbers, and as such, the adopted scenario represents an upper-bound assessment of on-site traffic-related noise generation. For modelling it has been assumed that ¼ of the traffic will pass in a 15 minute period.

Table 8 Carpark and Setdown Noise Sources – SWL and Spectra

Noise source	Source type	Octave band frequency spectrum (Hz), dB Linear								Overall Leq SWL, dBA	Lmax dBA	Penalty adjustment
		63	125	250	500	1K	2K	4K	8K			
Carpark vehicle movement ^{Note 1}	Line	93	87	83	81	81	77	73	70	85	+8	N/A
Door closure (Carpark) ^{Note 1}	Point	93	86	83	88	86	78	75	72	89	+5	+5 dBA, door closure

Note 1: SWL from SLR database from previous DA noise assessments

5.2.2 Mechanical plant

The external mechanical plant details have not been finalised. It is expected the most significant source of external mechanical plant noise would be air conditioning condensers.

It is expected that those would include several condensers appropriately located to eliminate direct line of sight and maximise separation distance (at least 15 m) to any receptor. Medium-sized split system condensers commonly used at relatively small commercial premises with a SWL of 85 dBA have been assumed for this assessment.



Figure 4 Modelled noise sources



6.0 Predicted Noise Levels

Noise emissions from the development onto nearby noise sensitive receptors were assessed and predicted. Predicted noise levels from the mechanical plant were assessed independently to determine compliance to continuous noise project limits and then cumulatively assessed with car parking noise emissions.

6.1 Mechanical Plant Noise Emissions

As indicated above, it is expected the most significant source of external mechanical plant noise would be air conditioning condensers and is expected that those would include several condensers appropriately located to eliminate direct line of sight and maximise separation distance (at least 15 m) to any receptor.

A calculation was conducted using the computer model and with a SWL of 85 dBA for each cluster as indicated in **Figure 4**, it is found to comply with the project noise limits for continuous noise sources.

6.2 Predicted Cumulative Levels

Results of the noise prediction of car parking and set down area noise cumulatively with mechanical plant noise indicated exceedances of the noise criteria. Noise barriers as shown in **Figure 5** were modelled as described in **Section 7** to mitigate noise emissions and the resultant cumulative levels are detailed in **Table 9**.

Table 9 Cumulative noise predictions – Car parking and Mechanical plant units with noise barriers as per Figure 5

NSR	Predicted Cumulative Project Noise Level	
	Day time $L_{Aeq,Adj,15min}$ 45 dBA	Compliance
NSR 1	45	Yes
NSR 2	41	Yes
NSR 3	36	Yes
NSR 4	39	Yes
NSR 5	39	Yes
NSR 6	36	Yes
NSR 7	38	Yes
NSR 8	39	Yes
NSR 9	40	Yes
NSR 10	41	Yes
NSR 11	44	Yes
NSR 12	45	Yes
NSR 13	46	Marginal 1dB exceedance



NSR	Predicted Cumulative Project Noise Level	
	Day time L _{Aeq,Adj,15min} 45 dBA	Compliance
NSR 14	47	Minor 2dB exceedance
NSR 15	48	Minor 2dB exceedance
NSR 16	48	Minor 3dB exceedance
NSR 17	40	Yes
NSR 18	37	Yes
NSR 19	42	Yes
NSR 20	40	Yes
NSR 21	45	Yes
NSR 22	45	Yes
NSR 23	45	Yes
NSR 24	42	Yes
NSR 25	39	Yes
NSR 26	40	Yes
NSR 27	36	Yes
NSR 28	39	Yes
NSR 29	43	Yes
NSR 30	42	Yes
NSR 31	41	Yes
NSR 32	36	Yes
NSR 33	37	Yes
NSR 34	37	Yes
NSR 35	37	Yes
NSR 36	23	Yes
NSR 37	33	Yes
NSR 38	35	Yes
NSR 39	33	Yes
NSR 40	32	Yes
NSR 41	30	Yes
NSR 42	35	Yes

In summary, with results presented in the above tables show that the noise control recommendations as described in **Section 7** are applied, compliance is expected, with exception of the potential minor exceedance at NSR13, 14, 15 and 16 on Yolanda Drive.



Specific consideration is given to these receptors and no further treatment is proposed based on the following rationale:

- 1 The predicted potential exceedances of the Townsville criteria at NSRs 13, 14, 15 and 16 are minor, ranging from 1 to 3 dBA. SLR notes that the highest predicted noise level of 48 dBA $L_{Aeq,Adj,15min}$ remains below the EPP (Noise) State daytime criterion of 50 dBA $L_{Aeq,1hr}$. As the 15-minute level represents the highest expected noise level, the corresponding 1-hour L_{Aeq} level would be equal to or lower.
- 2 The predicted exceedances are primarily attributable to vehicle movements within the southern set-down area. As all vehicles accessing this area also travel along Yolanda Drive, the on-site noise contributions are expected to be comparable to, or lower than, those from traffic on Yolanda Drive occurring concurrently. Therefore, the significance of the predicted exceedances is considered to be low, given the existing noise environment and the contribution of surrounding road traffic.
- 3 Potential noise treatments, such as introducing a noise barrier along Yolanda Drive will not be practicable due to conflicts with other performance outcomes for the project. The Townsville City Plan 9.3.5 Transport impact, access and parking code PO16 requires that parking areas are designed to enhance public safety by discouraging crime and antisocial behaviour having regard to provision of opportunities for casual surveillance, the use of fencing to define public and private spaces whilst allowing for appropriate sight lines, minimising potential concealment points and assault locations and minimising opportunities for graffiti and other vandalism. In addition, The Crime Prevention Through Environmental Design Guideline (2021) states that residential streets lined with high fences are not desirable as they compromise the principle of surveillance and visibility.



7.0 Observations and Noise Control Recommendations

An acoustic barrier of height and extent specified in **Figure 5** forms the basis of this assessment; therefore, is recommended to be constructed on the specified site boundaries. Barrier height to be measured from the finished ground / pad level of the development. It is required that the acoustic barrier be impervious from the ground to the recommended height and contain no gaps that would allow the passage of sound. Minimum surface density (at air dry moisture content) is 15 kg/m². Suitable materials include, but are not limited to, 25 mm lapped and capped timber palings with 30% overlap, 9 mm fibrous cement sheeting, or 75 mm thick Hebel Power Panel.



Figure 5 Recommended noise barriers



8.0 Conclusion

SLR has been commissioned to undertake a noise impact assessment of the proposed development of the Annandale Christian College located at 104-156 Yolanda Drive, Annandale QLD.

A noise model was developed in order to predict representative operational activities at the proposed development to assess potential noise emission onto surrounding noise sensitive receptors.

Noise predictions (Section 6) as part of this assessment showed that proposed development can be designed to operate in a manner compliant with the current legislation, with barriers of 1.8 and 2.4m high acoustic fence is built along the site eastern boundary as detailed in **Figure 5**, notwithstanding the minor conflict noted for Yolanda Drive residences.

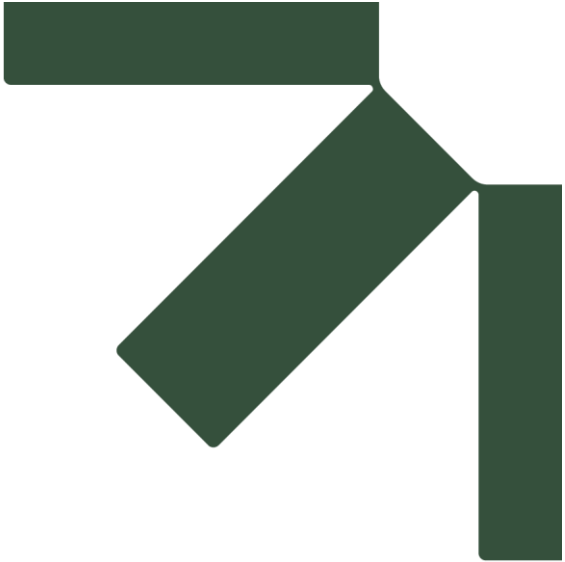


9.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via <https://www.slrconsulting.com/en/feedback>. We recognise the value of your time and we will make a \$10 donation to our Charity Partner - Lifeline, for every completed form.





Appendix A Acoustic Terminology

0262 Annandale MID Annandale Christian College

Noise Impact Assessment

Townsville Christian Education Association Ltd

SLR Project No.: 620.041341.00001

15 May 2026



1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or LP are commonly used to represent Sound Pressure Level. The symbol LA represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

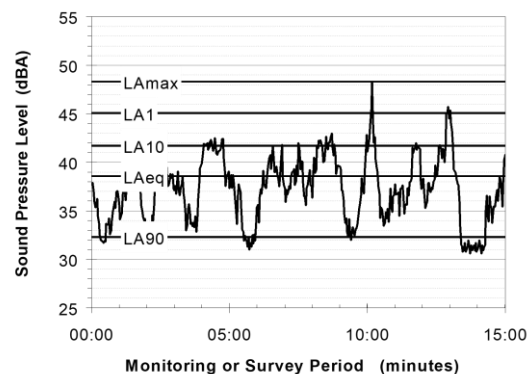
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

LA1 The noise level exceeded for 1% of the 15 minute interval.

LA10 The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

LA90 The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

LAeq The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

5. Frequency Analysis

Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

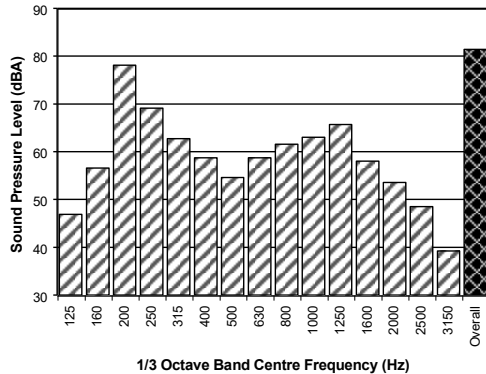
The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)



The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

7. Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements (ie vertical, longitudinal and transverse).

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V , expressed in mm/s can be converted to decibels by the formula $20 \log (V/V_0)$, where V_0 is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used.

8. Human Perception of Vibration

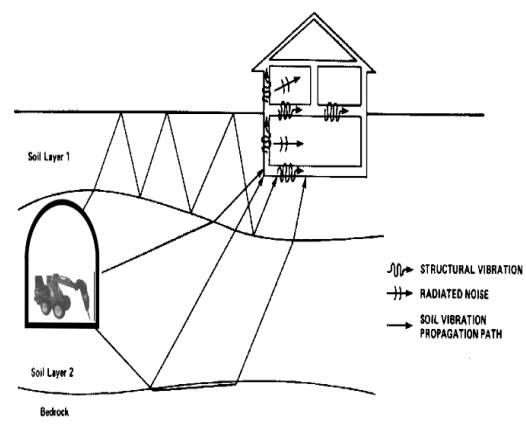
People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

9. Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

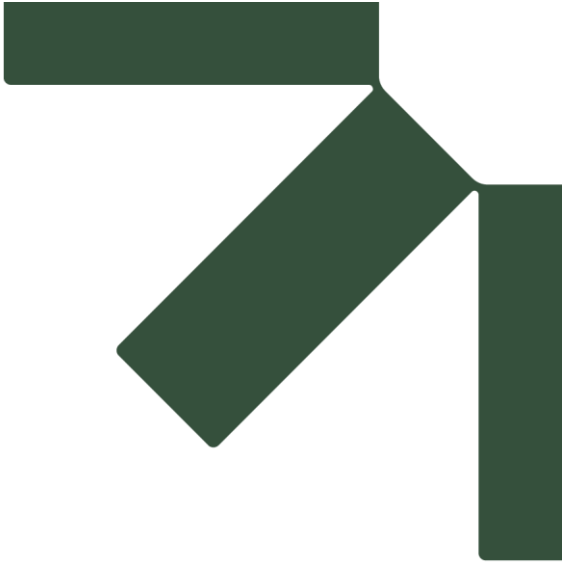
Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents an example of the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise.





Appendix B Unattended Noise Monitoring Results

0262 Annandale MID Annandale Christian College

Noise Impact Assessment

Townsville Christian Education Association Ltd

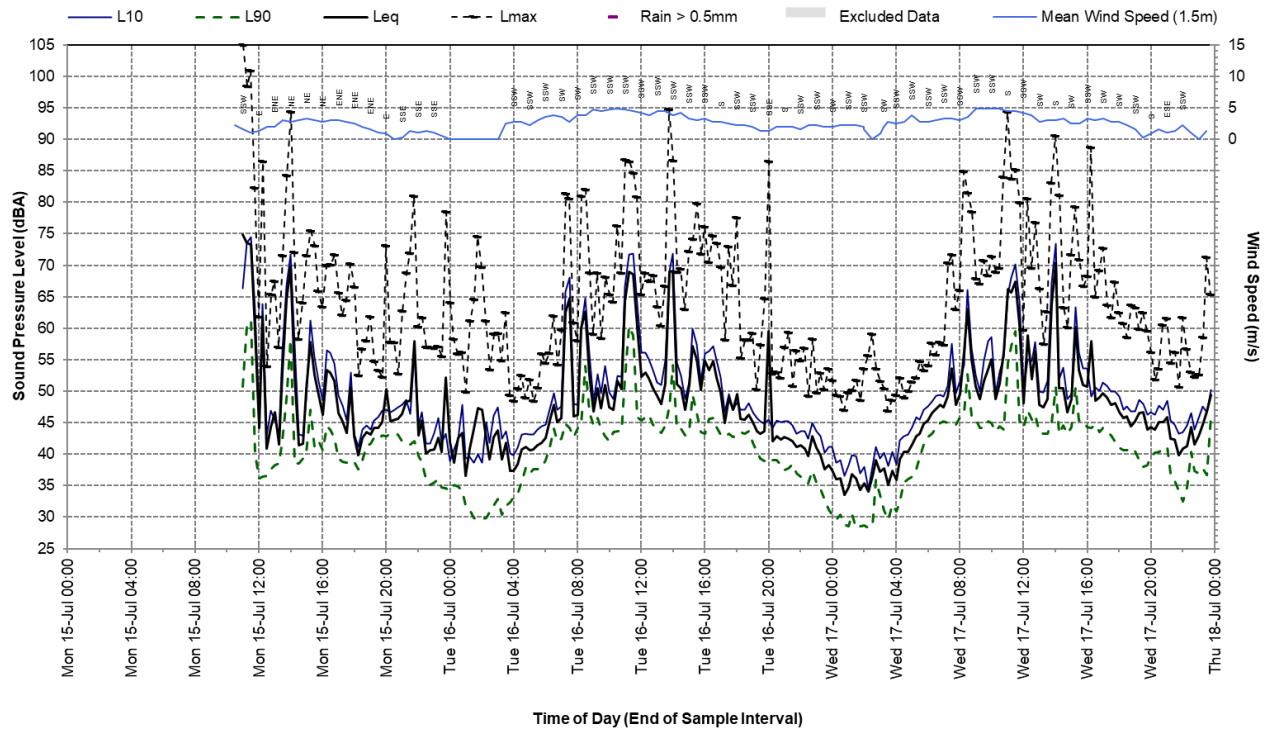
SLR Project No.: 620.041341.00001

15 May 2026



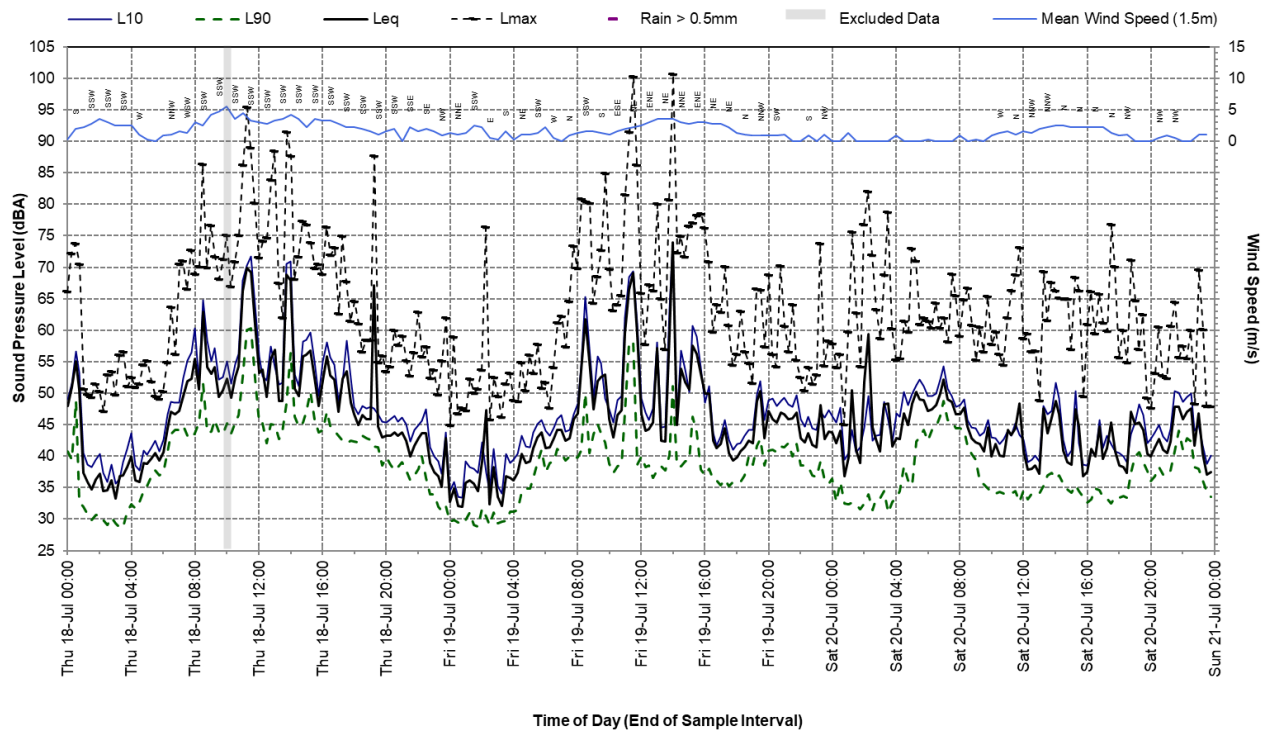
Statistical Ambient Noise Levels

NML1 - ACC boundary near 9 Jonquil Cres, Annandale - Monday, 15 July 2024

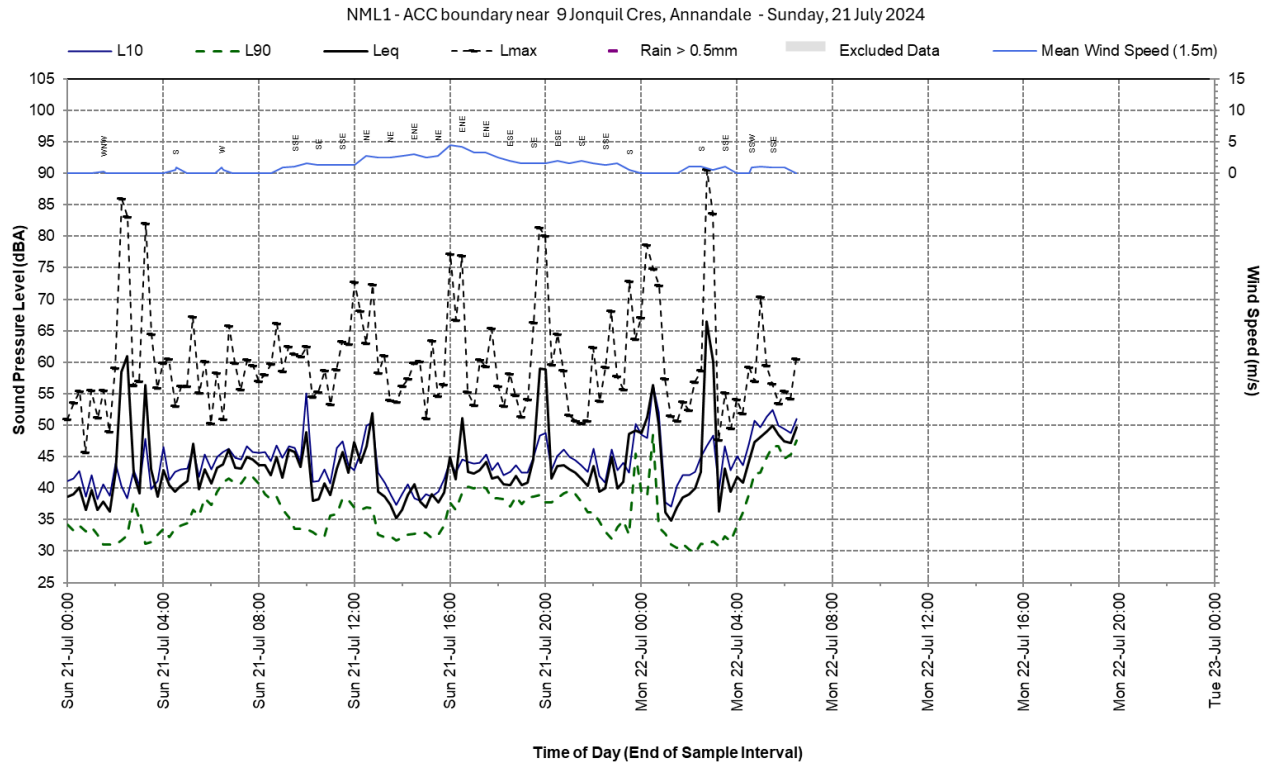


Statistical Ambient Noise Levels

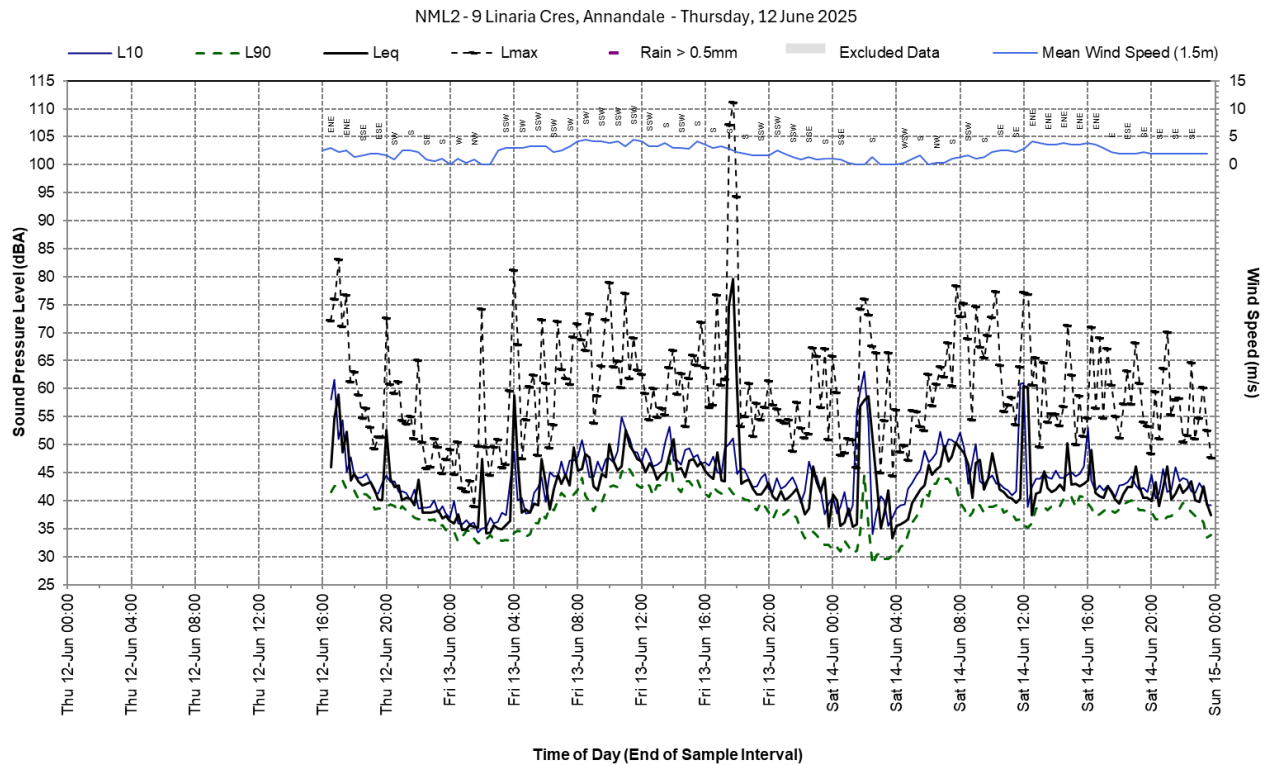
NML1 - ACC boundary near 9 Jonquil Cres, Annandale - Thursday, 18 July 2024



Statistical Ambient Noise Levels

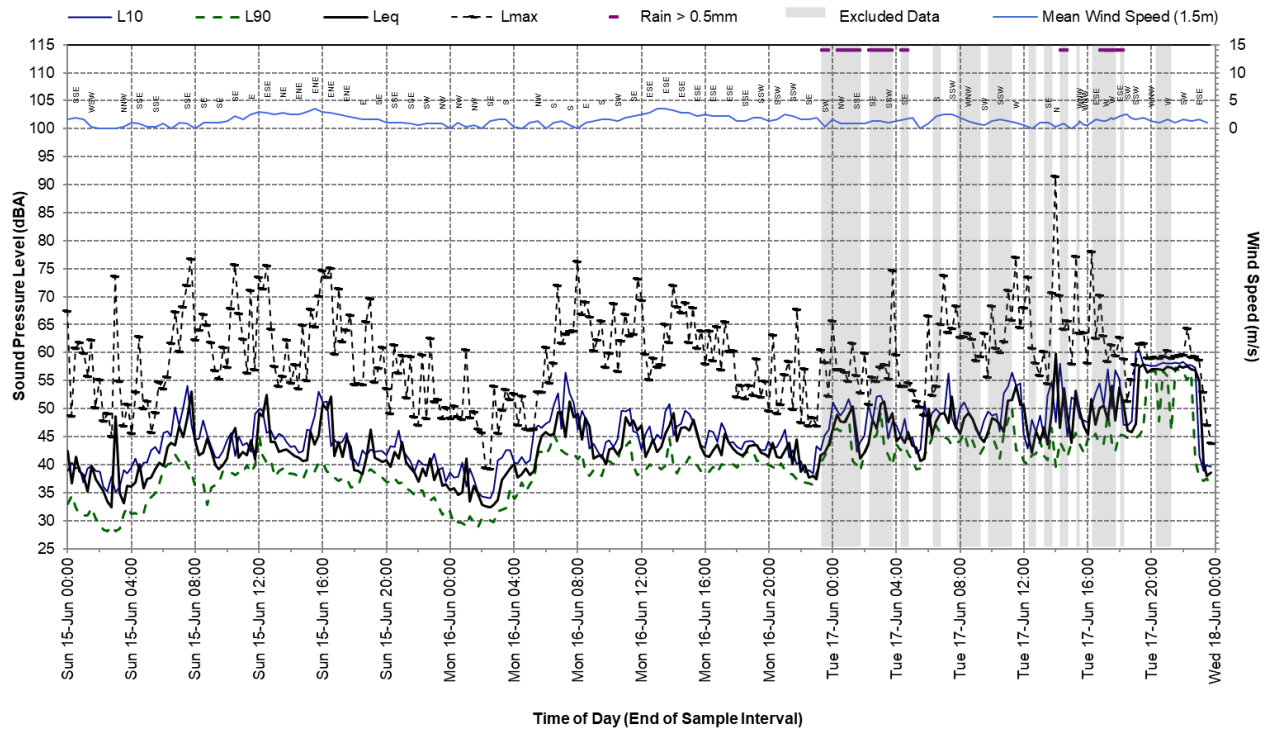


Statistical Ambient Noise Levels



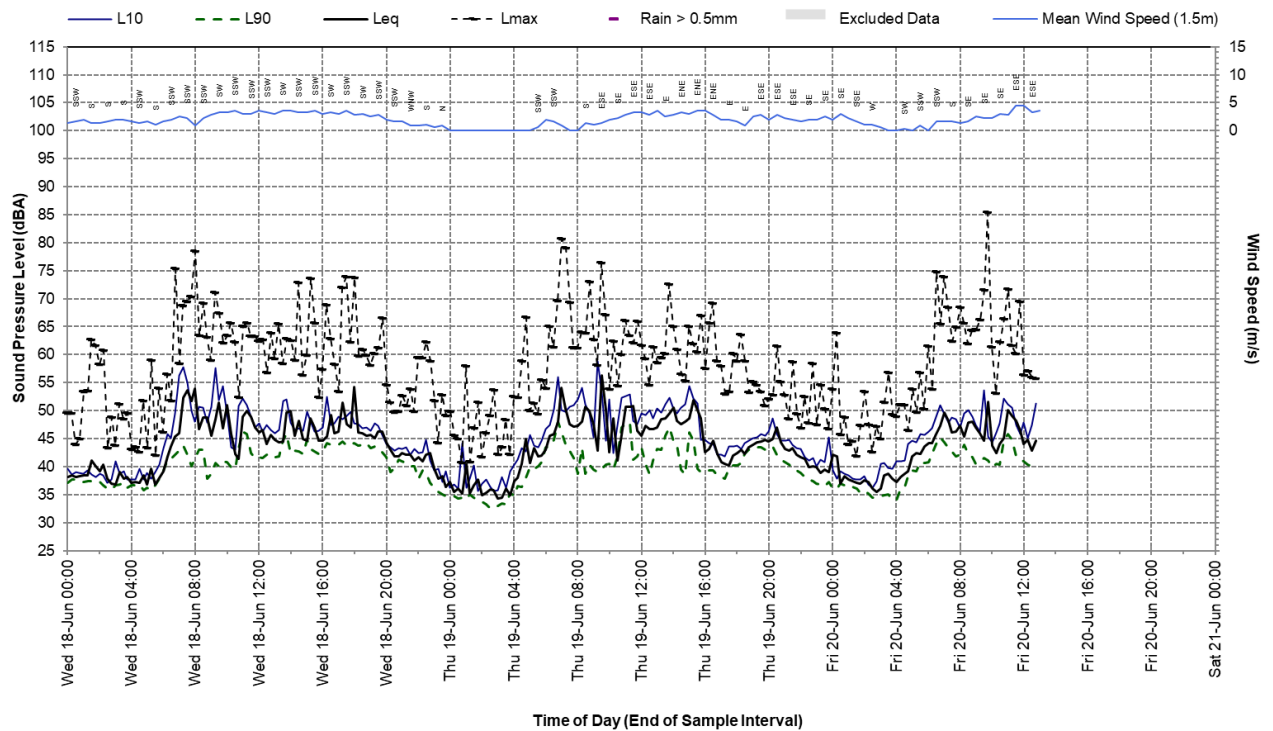
Statistical Ambient Noise Levels

NML2 - 9 Linaria Cres, Annandale - Sunday, 15 June 2025



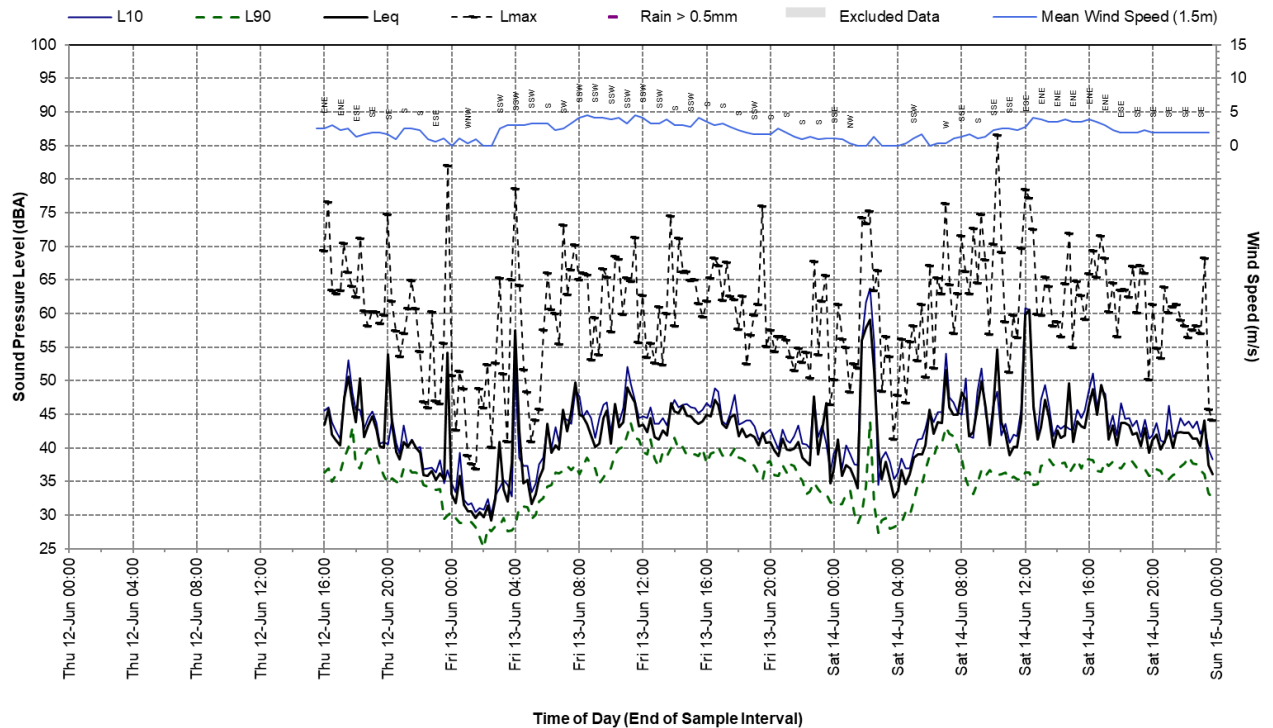
Statistical Ambient Noise Levels

NML2 - 9 Linaria Cres, Annandale - Wednesday, 18 June 2025



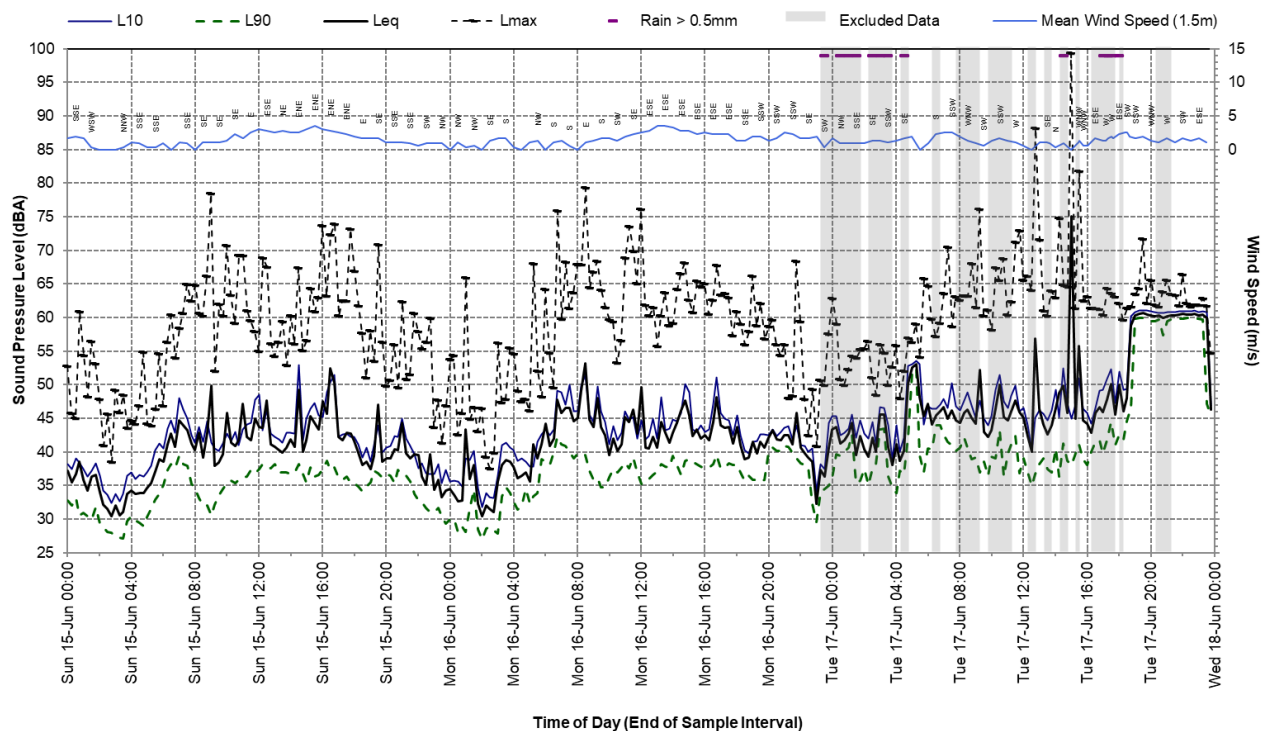
Statistical Ambient Noise Levels

NML3 - 4 Linaria Court, Annandale QLD 4814 - Thursday, 12 June 2025



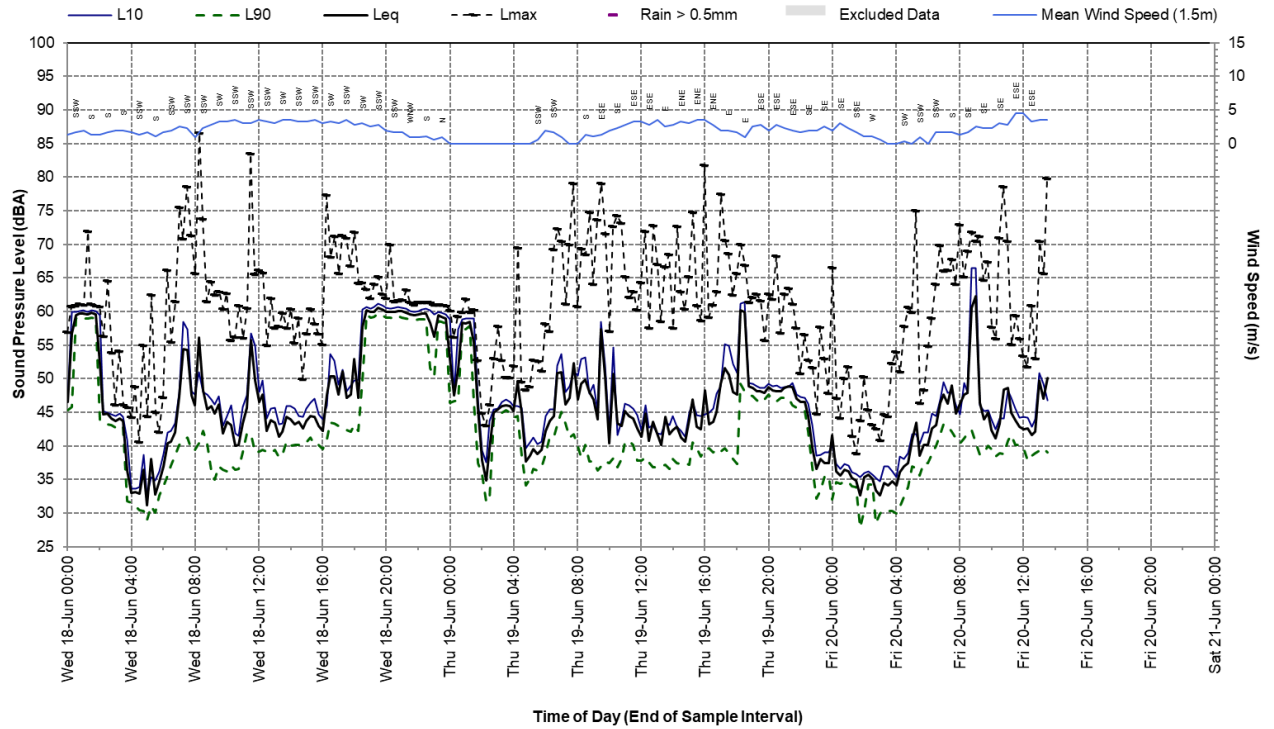
Statistical Ambient Noise Levels

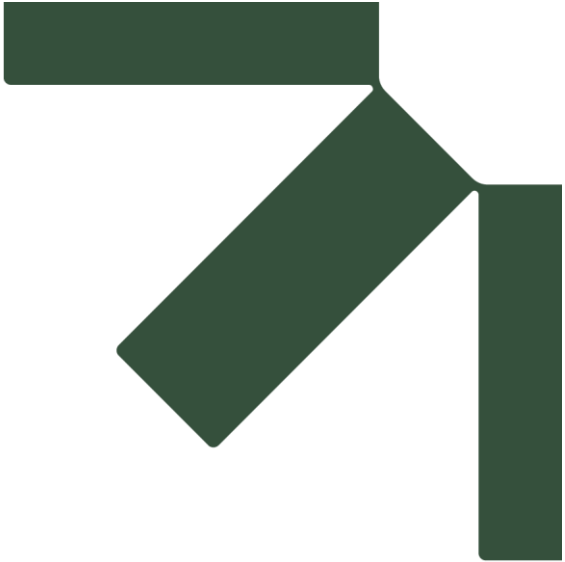
NML3 - 4 Linaria Court, Annandale QLD 4814 - Sunday, 15 June 2025



Statistical Ambient Noise Levels

NML3 - 4 Linaria Court, Annandale QLD 4814 - Wednesday, 18 June 2025





Appendix C Project Plans and Stages

0262 Annandale MID Annandale Christian College

Noise Impact Assessment

Townsville Christian Education Association Ltd

SLR Project No.: 620.041341.00001

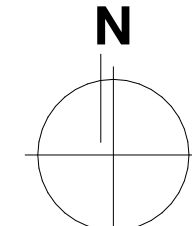
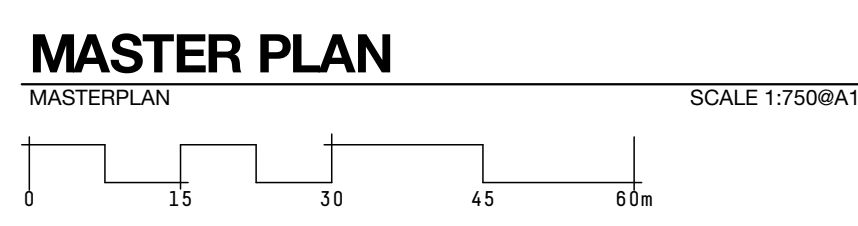
15 May 2026



LEGEND

- NEW BUILDING
- EXISTING BUILDING
- EXISTING BUILDING TO BE DEMOLISHED
- REINVENTION OF EXISTING BUILDING
- ROAD - SEALED
- PATHWAYS
- COVERED WALKWAYS

THIS PLAN HAS BEEN PRODUCED TO
SUPPORT MASTERPLANNING
DISCUSSIONS AND FOR GUIDANCE ONLY.
VIABILITY OF MASTERPLAN RELIANT OF
DISCUSSIONS AND AGREEMENT WITH
LOCAL AUTHORITY.



ANNANDALE CHRISTIAN COLLEGE
MASTERPLAN
LOCATION: 148 _YOLANDA DRIVE_ANNANDALE_QLD_4818 .

EXISTING BUILDINGS

- A. A BLOCK - YEAR 6 & COMPUTER LAB
- B. B BLOCK - YEAR 5 & LEARNING SUPPORT (6 STAFF)
- C. C BLOCK - YEAR 3
- D. D BLOCK - YEAR 4 & COUNSELLOR & HEAD OF CURRICULUM (PRIMARY) x2
- E. E BLOCK - SECONDARY BUILDING & MANUAL ARTS & BIKE STORAGE AREA
- F. ADMINISTRATION & LIBRARY & SICK BAY & AMENITIES & STORAGE & HUB (STAFF ROOM & COMMS ROOM)
- G. G BLOCK - SECONDARY BUILDING & HOSPITALITY & IT & SERVER ROOM
- H. H BLOCK - OSHC & CLASSROOM (TO BE DEMOLISHED)
- I. AMENITIES BLOCK & P&F SHED & CLEANERS' STORAGE (TO BE DEMOLISHED)
- J. J BLOCK - KINDY
- K. K BLOCK - PREP
- L. L BLOCK - YEAR 2 & STAFF ROOM & LEARNING SUPPORT & SPORTS STORE & AMENITIES
- M. M BLOCK - YEAR 1 (TO BE DEMOLISHED)
- N. COVERED SPORTS COURTS
- P. P BLOCK - MULTIPURPOSE HALL & MUSIC & DRAMA & EALD & SECONDARY ENGLISH
- Q. 9 JONQUIL CRESCENT
- R. MAINTENANCE COMPOUND & STORE (TO BE DEMOLISHED)
- S. SHED (TO BE DEMOLISHED)
- T. CARPARK
- U. SPORTS FIELD
- V. PLAYGROUND
- W. SERVICES
- X. MAINTENANCE & EMERGENCY VEHICLE CIRCULATION
- Y. STUDENT WELLBEING (TO BE REMOVED)

MASTERPLAN LEGEND

- MAJOR CAPITAL WORK PROJECTS**
(IN NO PARTICULAR ORDER)
- MAIN ADMINISTRATION, TWO STOREY BUILDING:**
GROUND FLOOR: RECEPTION & ADMINISTRATION, SECONDARY STAFF ROOM (DESKS & LOCKERS) + 2x HOT DESKS, ALL STAFF LOUNGE & COLLAB SPACE (CPDS & SOCIAL TIMES), MEETING ROOMS, P&F SPACE, CAFÉ, IT, STORAGE, AMENITIES.
FIRST FLOOR: EXECUTIVE STAFF OFFICES, BOARDROOM, ROOF GARDEN, STORAGE, AMENITIES.
FACADE TO BE ARTICULATED TO IDENTIFY AS COLLEGE ENTRY & PROVIDE STREET PRESENCE. DEMOLITION OF EXISTING H BLOCK.
 - WELLNESS & KNOWLEDGE CENTRE:**
REINVENTION & EXPANSION OF EXISTING ADMINISTRATION & LIBRARY; PRIMARY & SECONDARY RESOURCE CENTRE, STUDENT / STAFF LOUNGE, STAFF / STUDENT WELLBEING, CHAPLAIN / COUNSELLOR ROOMS, LEARNING SUPPORT, STAFF AREA, STUDENT SERVICES (STUDENT LATE CHECK IN), SICK BAY (SEPARATE PRIMARY & SECONDARY WITH CENTRAL RECEPTION), STORAGE, AMENITIES.
DEMOLITION OF EXISTING AMENITIES BLOCK.
 - EXISTING J BLOCK REINVENTION & EXTENSION:**
INFILL EXTERNAL WASH UP AREAS, 2x YEAR 2 CLASSROOMS, PRIMARY SPECIALIST CLASSROOMS (FLA / STEM, HEALTH & FITNESS GYM, SPORTS STORE, AMENITIES, FACADE TO BE ARTICULATED TO PROVIDE STREET PRESENCE. DEMOLITION OF EXISTING M BLOCK.
 - EXISTING J BLOCK REINVENTION & EXTENSION:**
KINDY / OSHC, 2x PREP CLASSROOMS, AMENITIES, STORAGE, FACADE TO BE ARTICULATED TO PROVIDE STREET PRESENCE.
 - EXISTING E BLOCK REINVENTION:**
BIKE STORAGE TO BECOME SECONDARY STUDENT LOUNGE, INFILL FIRST FLOOR EXTERNAL AREA INTO SECONDARY WITHDRAWAL SPACE.
 - EXISTING D BLOCK REINVENTION:**
2x YEAR 4 CLASSROOMS, WITHDRAWAL SPACE.
 - EXISTING C BLOCK REINVENTION & EXTENSION:**
2x YEAR 3 CLASSROOMS, WITHDRAWAL SPACE.
 - EXISTING B BLOCK REINVENTION:**
2x YEAR 6 CLASSROOMS, WITHDRAWAL SPACE.
 - EXISTING A BLOCK REINVENTION & EXTENSION:**
2x YEAR 6 CLASSROOMS, WITHDRAWAL SPACE, YEAR 6 SOCIAL DECK, RELOCATION OF G BLOCK A/C CONDENSERS.
 - EXISTING 9 JONQUIL CRESCENT REINVENTION:**
PRIMARY STAFF LOUNGE, PRIMARY SPECIALIST CLASSROOMS.
 - EXISTING G BLOCK C.O.L.A. REINVENTION:**
DEMOLISH RAMP, DOUBLE HEIGHT STUDENT GALLERY / EXHIBITION SPACE, STUDENT SOCIAL C.O.L.A., NEW LIFT & STAIR, ACCESS TO GREEN SPACE ALONG WATERCOURSE.
- MINOR CAPITAL WORK PROJECTS**
(IN NO PARTICULAR ORDER)
- EXISTING G BLOCK REINVENTION:**
CONVERT COMPUTER LABS INTO CLASSROOMS, REFURBISH HOSPITALITY, RELOCATE IT & CONVERT INTO WITHDRAWAL SPACE, CONVERT STAFF ROOMS INTO WITHDRAWAL SPACES.
 - MAINTENANCE COMPOUND & STORE.**
 - COLLEGE ENTRY FORECOURT / GATHERING SPACE, CAFÉ.**
 - COVERED WALKWAY LINKS.**
 - STUDENT GATHERING SPACE, AGILE / INFORMAL LEARNING AREA.**
 - EXISTING CARPARK REINVENTION, ROOF INSTALLED, DUAL USE COVERED AREA, C.O.L.A. / CARPARK.**
 - REVITALISED COLLEGE VEHICLE & PEDESTRIAN ENTRY / EXIT:**
NEW COLLEGE FACADE TO PROVIDE STREET PRESENCE, DEDICATED COVERED PICK-UP & DROP-OFF ZONE, ANGLED CARPARKING, COLLEGE STORAGE, GATHERING / MEETING SPACE AT BRIDGE.
 - EXISTING CARPARK EXTENSION, STAFF / STUDENT CARPARKING.**
 - STAFF COURTYARD**
 - SECONDARY STUDENT GATHERING SPACE, AGILE / INFORMAL LEARNING / PLAY AREA**
 - EXISTING PRIMARY PLAYGROUND RELOCATION**
 - KINDY / OSHC PLAY SPACE, FIXED COVERED SHADE AREA**
 - PREP PLAY SPACE, FIXED COVERED SHADE AREA**
 - PRIMARY NATURE PLAY SPACE, FIXED COVERED SHADE AREA**
 - PRIMARY AMPHITHEATRE**
 - PRIMARY MULTIPURPOSE HARDCOURT**
 - PRIMARY OPEN GRASS AREA, SOCCER NETS**
 - EXTENSION OF MAINTENANCE & EMERGENCY VEHICLE CIRCULATION**
 - MASS PLANTING AREAS INCLUDING BUFFERS, LANDSCAPE FEATURES AND SHADE TREE PLANTING**
 - SUSTAINABLE / ENVIRONMENTAL DESIGN ELEMENTS:**
ADDITIONAL SOLAR PANEL SYSTEM (100kW) - LOCATION TBC,
WATER HARVESTING & TANKS - LOCATION TBC
 - NEW BIKE STORAGE AREA**

JOB:
ACT00

DATE:
10/11/2025

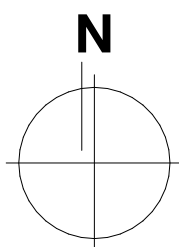
BURLINGBROWN

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P +61 7 5532 2044 / ABN 35 071 453 257
MAIL@BURLINGBROWN.COM
BURLINGBROWN.COM

Preliminary
Issue

STAGING PLAN

MASTERPLAN SCALE 1:750@A1
0 15 30 45 60m



ANNANDALE CHRISTIAN COLLEGE
MASTERPLAN
LOCATION: 148 _YOLANDA DRIVE_ANNANDALE_QLD_4818 .

CYPRESS DRIVE

JONQUIL CRESCENT

YOLANDA DRIVE

STAGE 1

STAGE 8b

STAGE 8a

STAGE 11

STAGE 5

STAGE 9

STAGES
2a & 12

STAGE 10

STAGE 7a

STAGE 7d

STAGE 7c

STAGE 7b

STAGE 4a

STAGE 2c

STAGE 13

STAGE 2b

STAGE 4b

STAGE 6

STAGE 3

STAGE 4a

BUILDING STAGING

(TO BE REVIEWED & CONFIRMED)

1. MAINTENANCE COMPOUND & STORE.
- 2a. EXISTING 9 JONQUIL CRESCENT REINVENTION;
RESOURCE TEAM ADMIN SPACE & AQUATICS.
- 2b. EXISTING G BLOCK REINVENTION;
UPGRADE HOSPITALITY.
- 2c. EXISTING G BLOCK REINVENTION;
CONVERT COMPUTER LABS INTO CLASSROOMS.
3. EXISTING CARPARK EXTENSION, STAFF / STUDENT CARPARKING.
- 4a. EXISTING E BLOCK REINVENTION;
BIKE STORAGE TO BECOME TEMPORARY OSHC SPACE, INFILL FIRST FLOOR
EXTERNAL AREA INTO SECONDARY WITHDRAWAL SPACE.
NEW BIKE STORAGE AREA TO BE INSTALLED.
- 4b. EXISTING G BLOCK C.O.L.A. REINVENTION;
NEW LIFT & STAIR, ACCESS TO GREEN SPACE ALONG WATERCOURSE.
5. OSHC TO RELOCATE TO E BLOCK;
ADMIN TO RELOCATE TO H BLOCK;
NEW DEMOUNTABLE TO BE USED AS TEMPORARY LIBRARY DURING
CONSTRUCTION.
WELLNESS & KNOWLEDGE CENTRE;
REINVENTION & EXPANSION OF EXISTING ADMINISTRATION & LIBRARY;
PRIMARY & SECONDARY RESOURCE CENTRE, STUDENT / STAFF LOUNGE,
STAFF / STUDENT WELLBEING, CHAPLIN / COUNSELLOR ROOMS, LEARNING
SUPPORT, STAFF AREA, STUDENT SERVICES (STUDENT LATE CHECK IN),
SICK BAY (SEPARATE PRIMARY & SECONDARY WITH CENTRAL RECEPTION),
STORAGE, AMENITIES.
6. ADMIN TO RELOCATE TO DEMOUNTABLE DURING CONSTRUCTION.
DEMOLISH EXISTING H BLOCK
MAIN ADMINISTRATION; TWO STOREY BUILDING;
GROUND FLOOR: RECEPTION & ADMINISTRATION, SECONDARY STAFF ROOM (DESKS & LOCKERS) + 2 x HOT DESKS, ALL STAFF LOUNGE & COLLAB SPACE (CPDS & SOCIAL TIMES), MEETING ROOMS, P & F SPACE, CAFE, IT, STORAGE, AMENITIES.
FIRST FLOOR: EXECUTIVE STAFF OFFICES, BOARDROOM, ROOF GARDEN, STORAGE, AMENITIES.
FACADE TO BE ARTICULATED TO IDENTIFY AS COLLEGE ENTRY & PROVIDE STREET PRESENCE.
- 7a. EXISTING D BLOCK REINVENTION;
2 x YEAR 4 CLASSROOMS, WITHDRAWAL SPACE
DEMOUNTABLE TO BE USED AS 2 x TEMPORARY CLASSROOMS DURING CONSTRUCTION
- 7b. EXISTING A BLOCK REINVENTION & EXTENSION;
2 x YEAR 6 CLASSROOMS, WITHDRAWAL SPACE, YEAR 6 SOCIAL DECK,
RELOCATION OF G BLOCK A/C CONDENSERS.
DEMOUNTABLE TO BE USED AS 2 x TEMPORARY CLASSROOMS DURING CONSTRUCTION.
- 7c. EXISTING B BLOCK REINVENTION;
2 x YEAR 5 CLASSROOMS, WITHDRAWAL SPACE.
DEMOUNTABLE TO BE USED AS 2 x TEMPORARY CLASSROOMS DURING CONSTRUCTION.
- 7d. EXISTING C BLOCK REINVENTION & EXTENSION;
2 x YEAR 3 CLASSROOMS, WITHDRAWAL SPACE.
DEMOUNTABLE TO BE USED AS 2 x TEMPORARY CLASSROOMS DURING CONSTRUCTION.
DEMOLISH EXISTING AMENITIES BLOCK & RELOCATE EXISTING PRIMARY PLAYGROUND.
- 8a. EXISTING L BLOCK EXTENSION;
2 x YEAR 2 CLASSROOMS.
FACADE TO BE ARTICULATED TO PROVIDE STREET PRESENCE.
EXTENSION OF NEW CLASSROOMS TO BE COMPLETED FIRST TO ALLOW 2x YEAR 2 CLASSROOMS FOR REINVENTION OF EXISTING L BLOCK.
- 8b. EXISTING L BLOCK REINVENTION;
INFILL EXTERNAL WASH UP AREAS.
PRIMARY SPECIALIST CLASSROOMS (FLA / STEM), HEALTH & FITNESS GYM, SPORTS STORE, AMENITIES.
9. KINDY TO MOVE TO REINVENTED L BLOCK PRIMARY SPECIALIST CLASSROOMS
DEMOLISH EXISTING KINDY SHED.
EXISTING J BLOCK REINVENTION & EXTENSION;
KINDY / OSHC, 2x PREP CLASSROOMS, AMENITIES, STORAGE.
FACADE TO BE ARTICULATED TO PROVIDE STREET PRESENCE.
OSHC TO RELOCATE TO J BLOCK.
E BLOCK SPACE TO BECOME SECONDARY STUDENT LOUNGE.
DEMOLISH EXISTING M BLOCK & SHED.
10. EXISTING CARPARK REINVENTION, ROOF INSTALLED, DUAL USE COVERED AREA, C.O.L.A. / CARPARK.
11. REVITALISED COLLEGE VEHICLE & PEDESTRIAN ENTRY / EXIT, NEW COLLEGE FACADE TO PROVIDE STREET PRESENCE, DEDICATED COVERED PICK-UP & DROP-OFF ZONE, ANGLED CARPARKING, COLLEGE SIGNAGE, GATHERING / MEETING SPACE AT BRIDGE.
12. EXISTING 9 JONQUIL CRESCENT REINVENTION;
JUNIOR STAFF LOUNGE, JUNIOR SPECIALIST CLASSROOMS.
13. EXISTING G BLOCK C.O.L.A. REINVENTION;
DEMOLISH RAMP, DOUBLE HEIGHT STUDENT GALLERY / EXHIBITION SPACE, STUDENT SOCIAL C.O.L.A.

NOTE: EXTERNAL WORKS SUCH AS FORECOURTS, GATHERING SPACE, PLAYGROUNDS, CIRCULATION PATHS, COVERED WALKWAYS & GENERAL LANDSCAPING WORKS ARE PROPOSED TO BE CONCURRENT WITH BUILDING STAGED WORKS TO SUPPORT OPERATIONAL CONTINUITY.

JOB:
ACT00

DATE:
10/11/2025

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P +61 7 5532 2044 / ABN 35 071 453 257

MAIL@BURLINGBROWN.COM
BURLINGBROWN.COM

Preliminary
Issue

ISSUE
P6

LEGEND

- EXISTING COVERED LINK
- PROPOSED COVERED LINKS
- ENCLOSED BUILT FORM

THIS PLAN HAS BEEN PRODUCED TO
SUPPORT MASTERPLANNING
DISCUSSIONS AND FOR GUIDANCE ONLY.
VIABILITY OF MASTERPLAN RELIANT OF
DISCUSSIONS AND AGREEMENT WITH
LOCAL AUTHORITY.

JOB:
ACT00

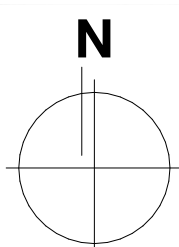
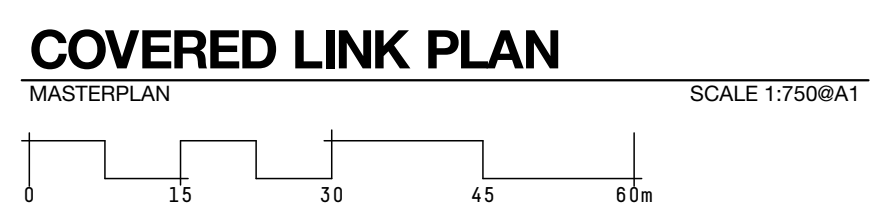
DATE:
10/11/2025

BURLINGBROWN

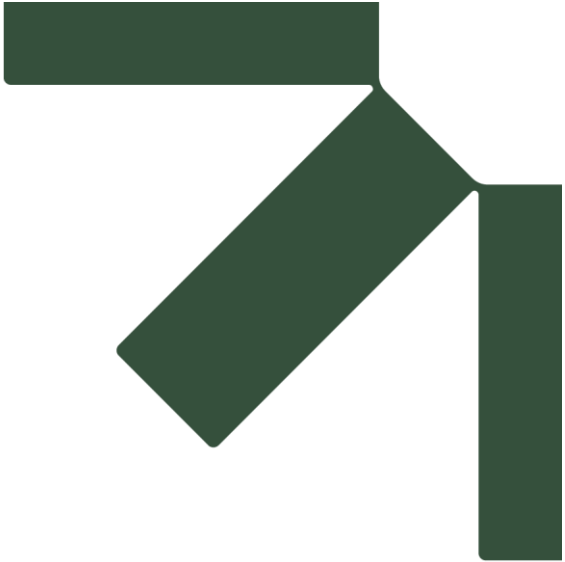
17 SHORT ST SOUTHPORT QLD 4215 AUSTRALIA
PO BOX 930 SOUTHPORT QLD 4215 AUSTRALIA
P +61 7 5532 2044 / ABN 35 071 455 257

MAIL@BURLINGBROWN.COM
BURLINGBROWN.COM

Preliminary
Issue



ANNANDALE CHRISTIAN COLLEGE
MASTERPLAN
LOCATION: 148 _YOLANDA DRIVE_ANNANDALE_QLD_4818 .



Appendix D Traffic counts – Peak hour trip distributions

0262 Annandale MID Annandale Christian College

Noise Impact Assessment

Townsville Christian Education Association Ltd

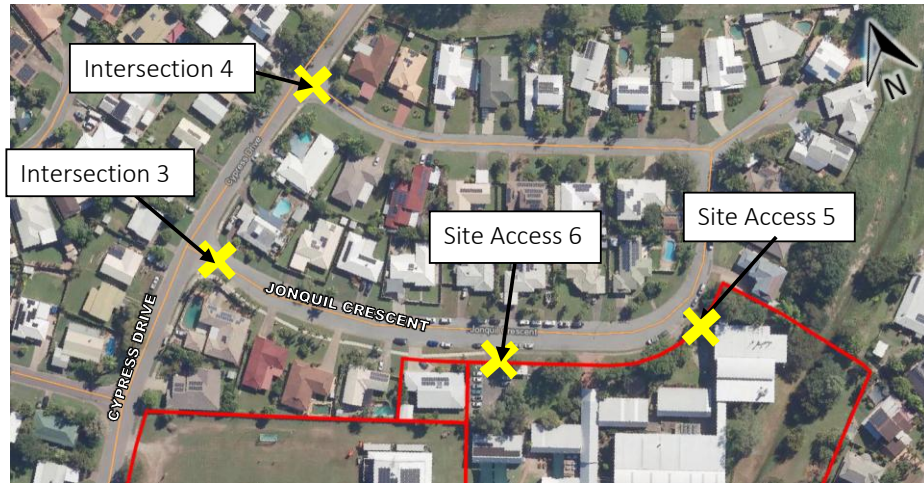
SLR Project No.: 620.041341.00001

15 May 2026

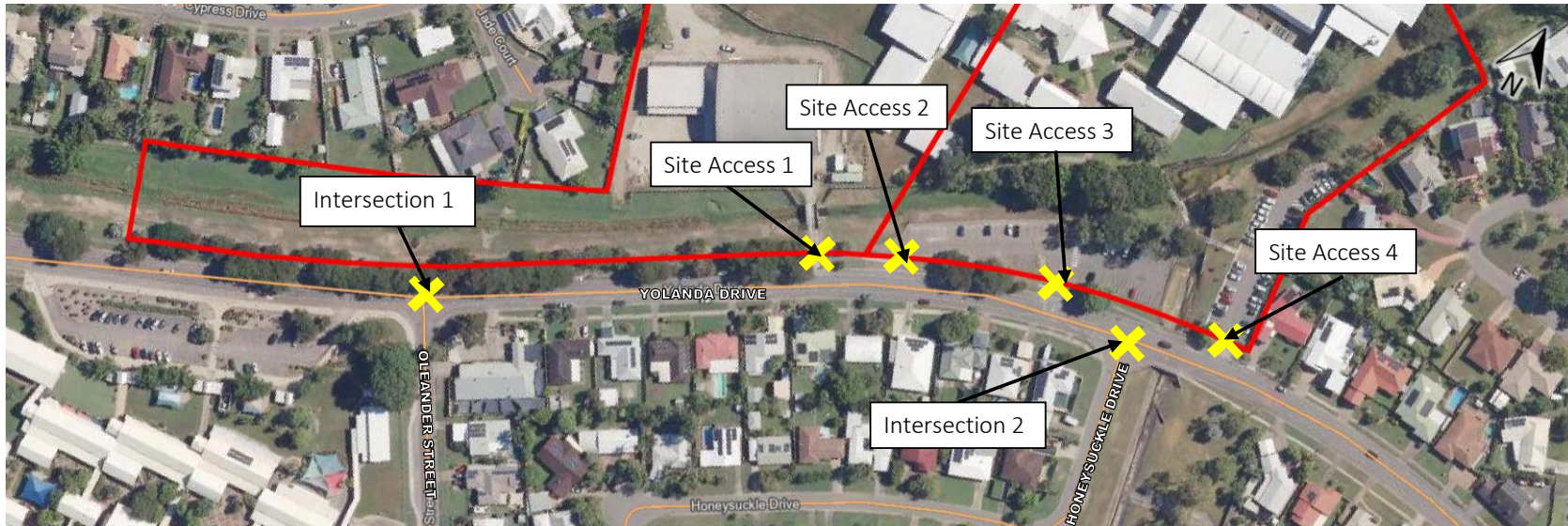


Aerial Image Reference

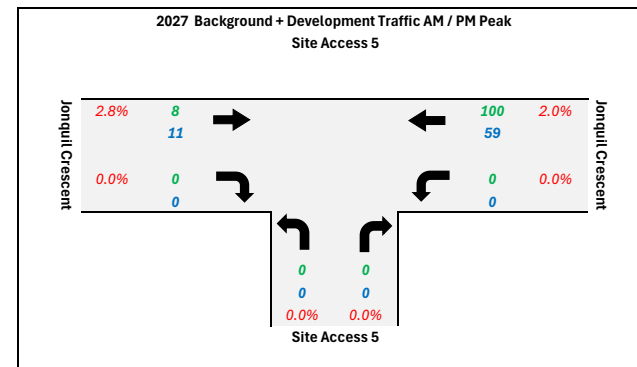
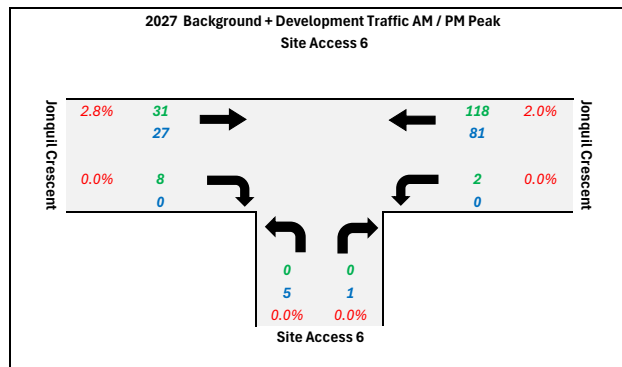
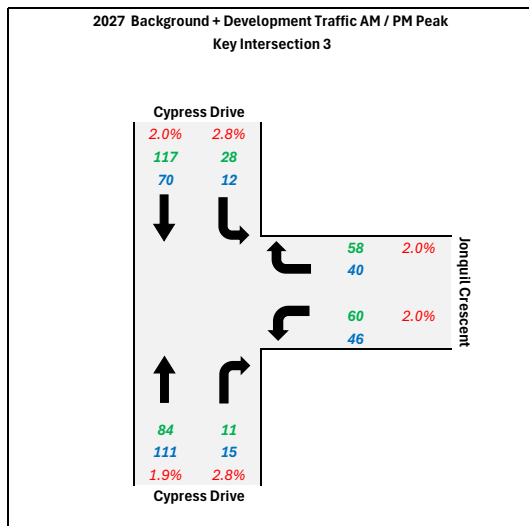
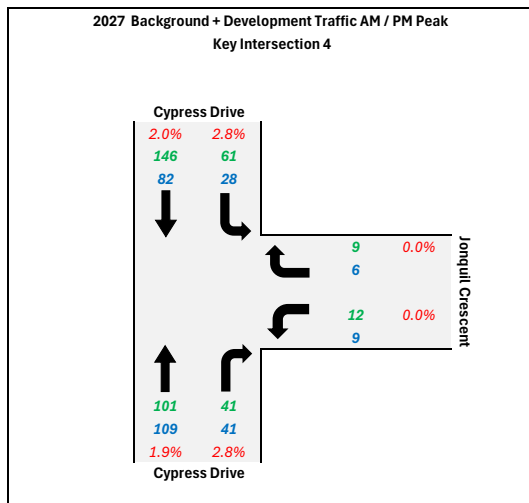
Along Jonquil Crescent



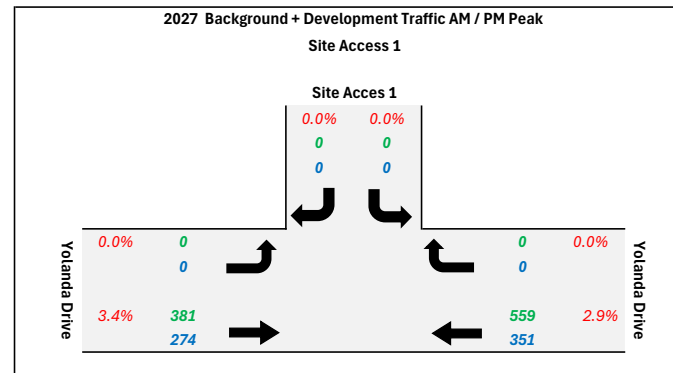
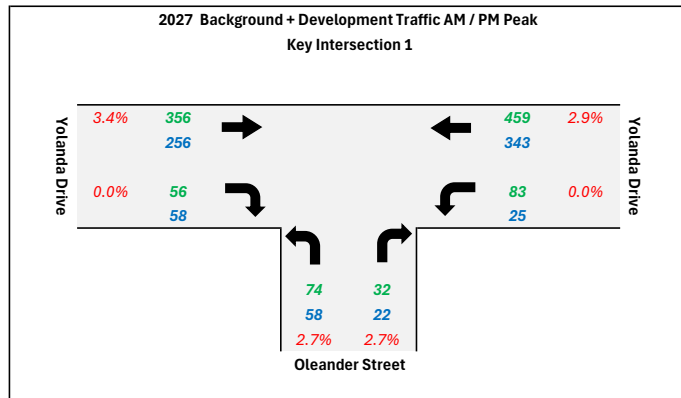
Along Yolanda Drive

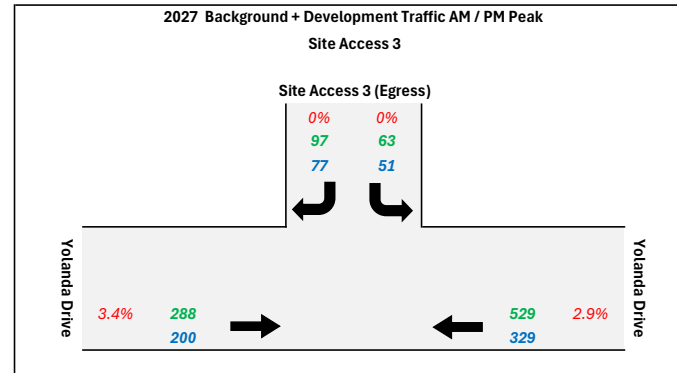
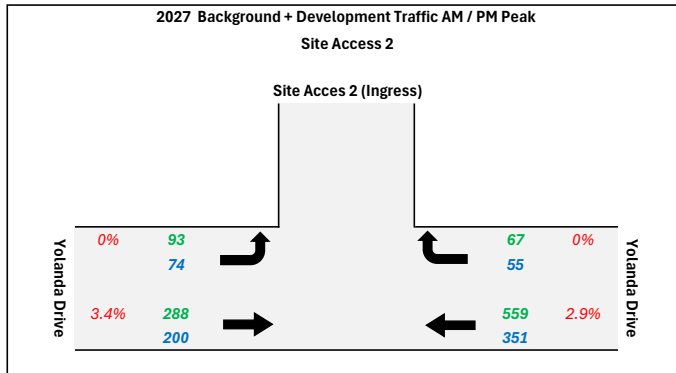


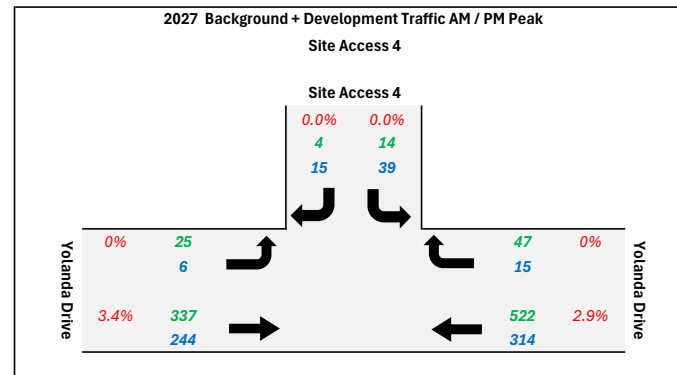
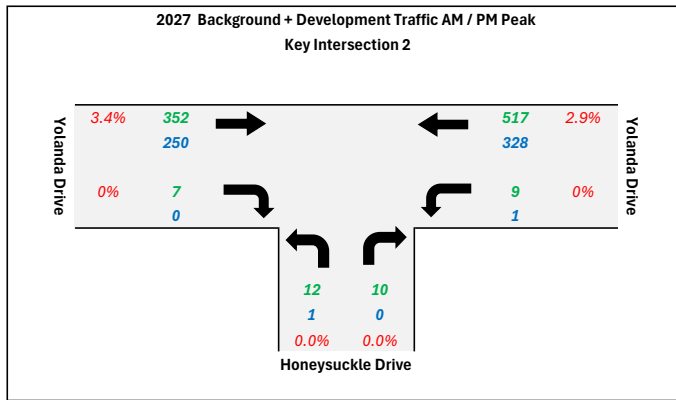
Post Development AM/PM Peak Hour Trip Distribution (2027) - Cypress Drive/ Jonquil Crescent



Post Development AM/PM Peak Hour Trip Distribution (2027) - Yolanda Drive

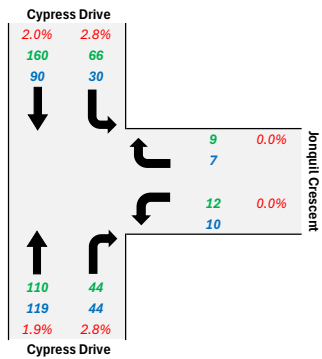




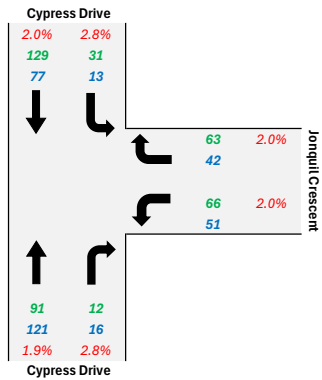


Post Development AM/PM Peak Hour Trip Distribution (2037)

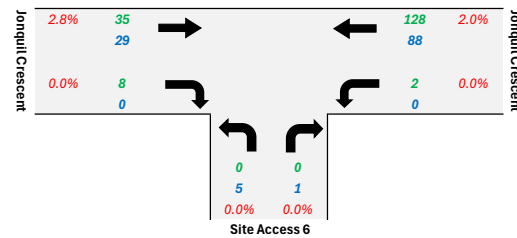
2037 Background + Development Traffic AM / PM Peak
Key Intersection 4



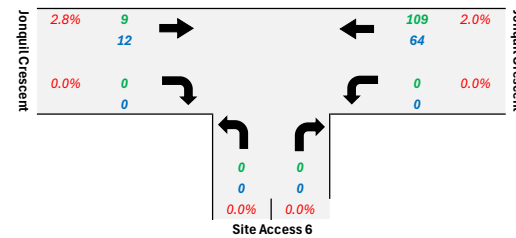
2037 Background + Development Traffic AM / PM Peak
Key Intersection 3



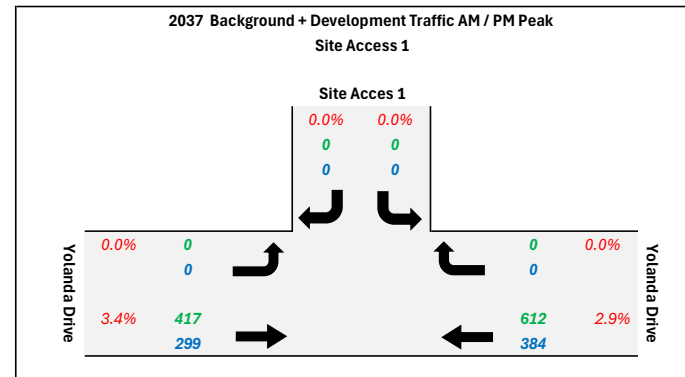
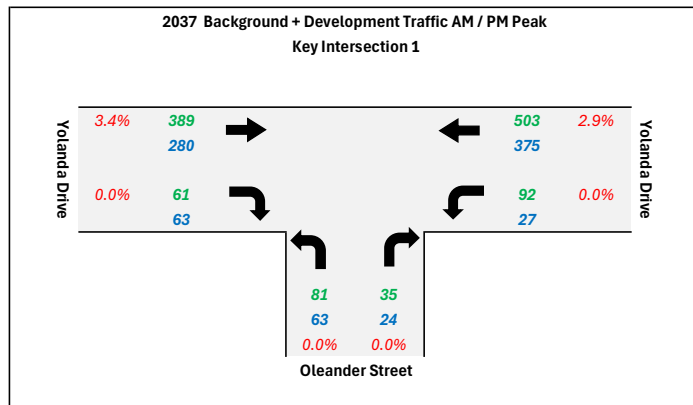
2037 Background + Development Traffic AM / PM Peak
Site Access 6

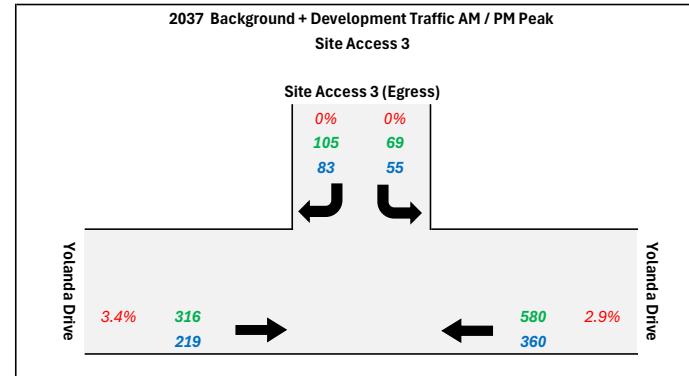
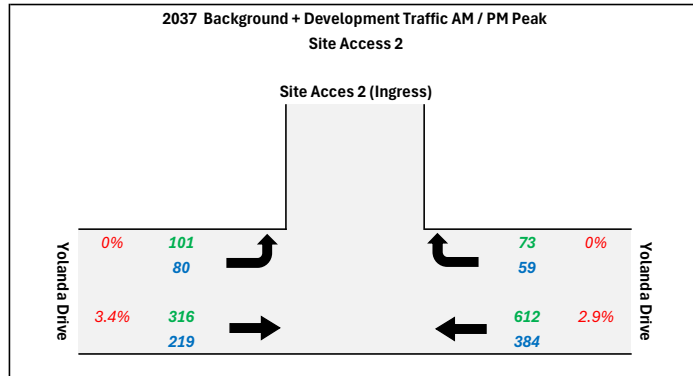


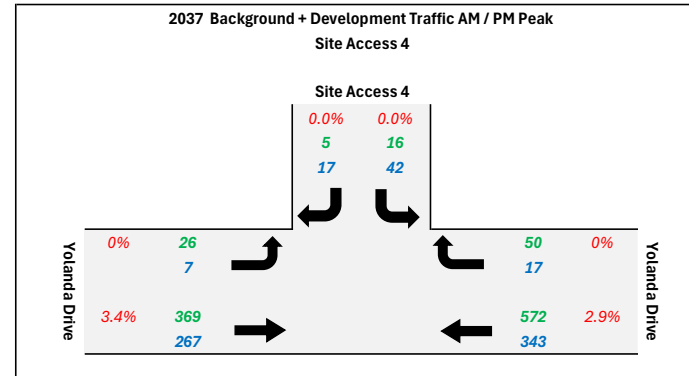
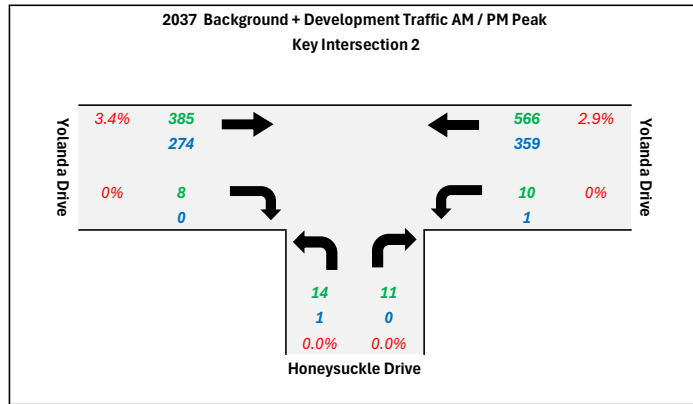
2037 Background + Development Traffic AM / PM Peak
Site Access 5

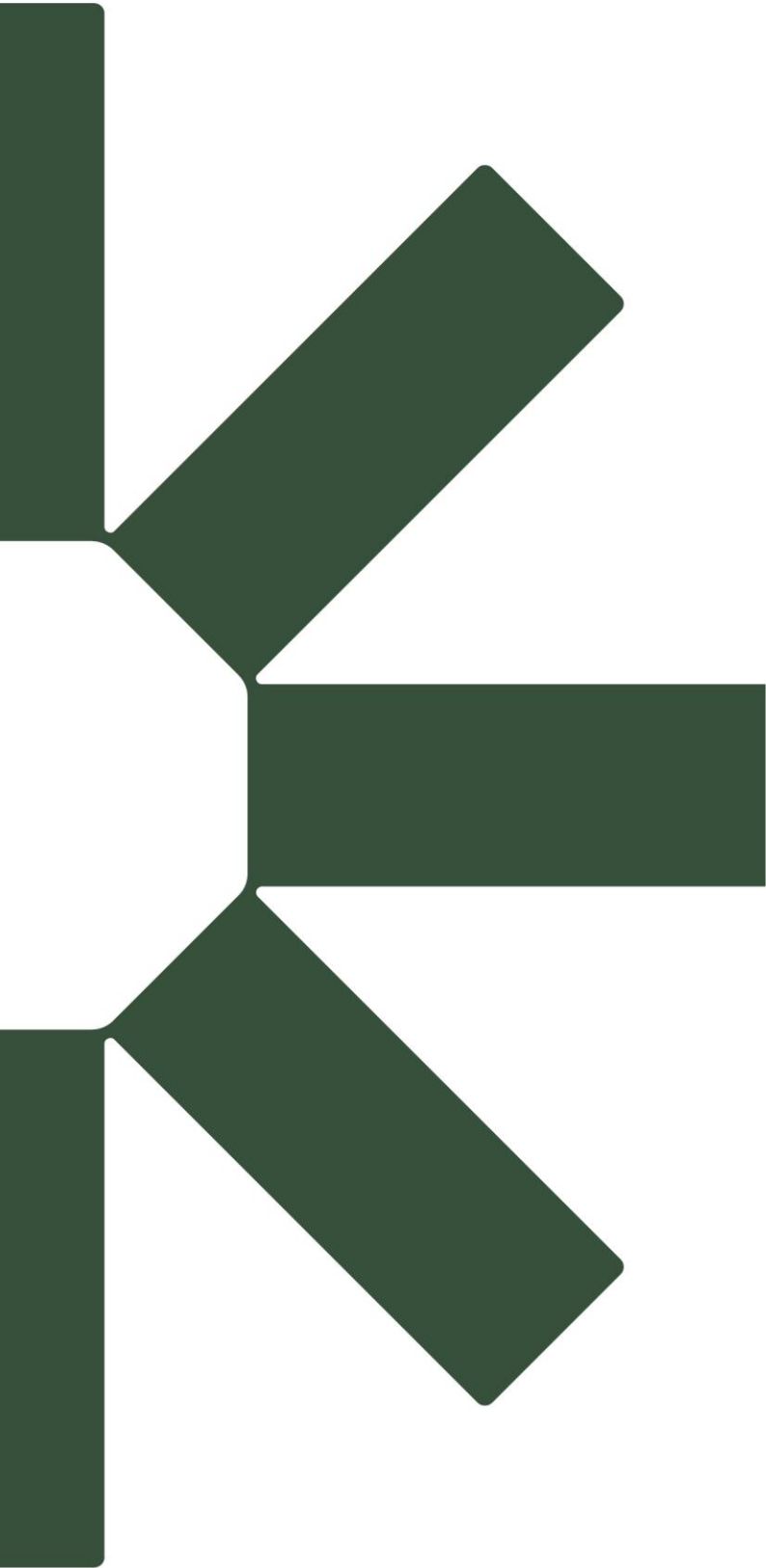


Post Development AM/PM Peak Hour Trip Distribution (2037) - Yolanda Drive









Making Sustainability Happen