



State Significant Development Application
for a proposed Warehouse/Industrial Development
Mamre Road South Precinct
Kemps Creek

ACOUSTIC REPORT



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1. Executive Summary

The following report is in response to a request by the Frasers Property and Altis Property Partners for an environmental noise assessment for a state significant development application for a proposed warehouse/industrial development located at Mamre Road South Precinct, Kemps Creek. The purpose of the assessment is to determine if the proposed development layout is viable and what acoustic measures, if any, are necessary.

The environmental noise assessment was conducted in accordance with Penrith City Council requirements and the NSW Department of Planning and Environment's Secretary's Environmental Assessment Requirements (SEARs) (Application Reference: *SSD 9522*) which requires the following matters to be addressed:

Noise and Vibration – including:

- *A quantitative noise and vibration impact assessment undertaken by a suitably qualified person in accordance with the relevant Environment Protection Authority guidelines and including assessment of nearby sensitive receivers.*
- *Cumulative impacts of other developments*
- *Details of proposed mitigation, management and monitoring measures.*

Section 7 of the report outlines the relevant noise and vibration criteria applicable to the site with Sections 8 and 9 providing assessment of potential impacts at sensitive receivers. The assessment considers the cumulative impact of all stages of the development (currently proposed) to sensitive receivers in the vicinity of site. The review indicates that current stage proposed of the master plan is considered viable with recommendations provided in Section 10 for the 24 hour operation of the site.

2. Introduction

The following report is in response to a request by the Frasers Property and Altis Property Partners for an environmental noise assessment for a State Significant Development Application for a proposed warehouse/industrial development to be located at Mamre Road South Precinct, Kemps Creek. The environmental noise assessment was conducted in accordance with Penrith City Council requirements and the NSW Department of Planning and Environment's *Secretary's Environmental Assessment Requirements* (SEARs). To facilitate the assessment, unattended noise monitoring was conducted in the vicinity of nearby sensitive receivers to establish the criteria for onsite activities.

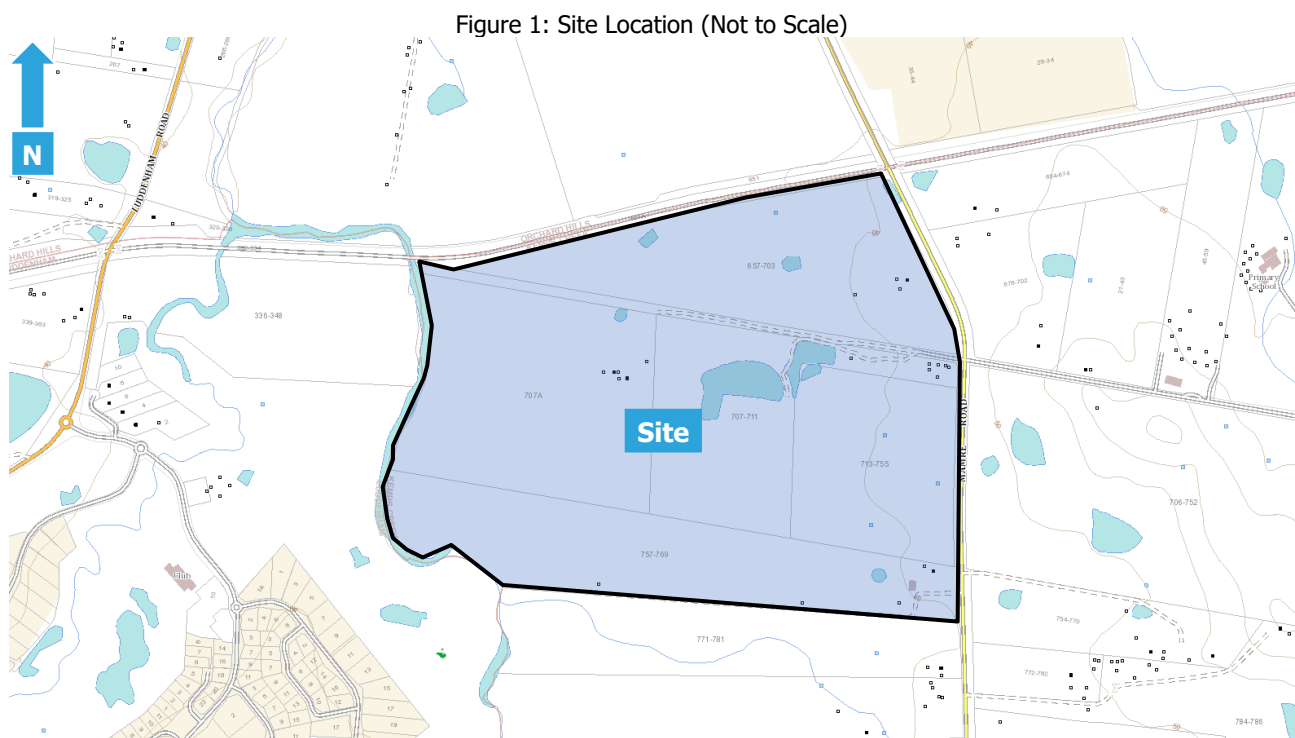
3. Site Description

3.1 Site Location

The site is described by the following:

657-703, 707A, 707-711, 713-755 & 757-769 Mamre Road, Kemps Creek
Lots 34, 1, X, Y & 22 on DP1118173, DP1018318, DP421633 & DP258414

Refer to Figure 1 for site location.



A comprehensive site survey was conducted on the 11th April 2018 which identified the following:

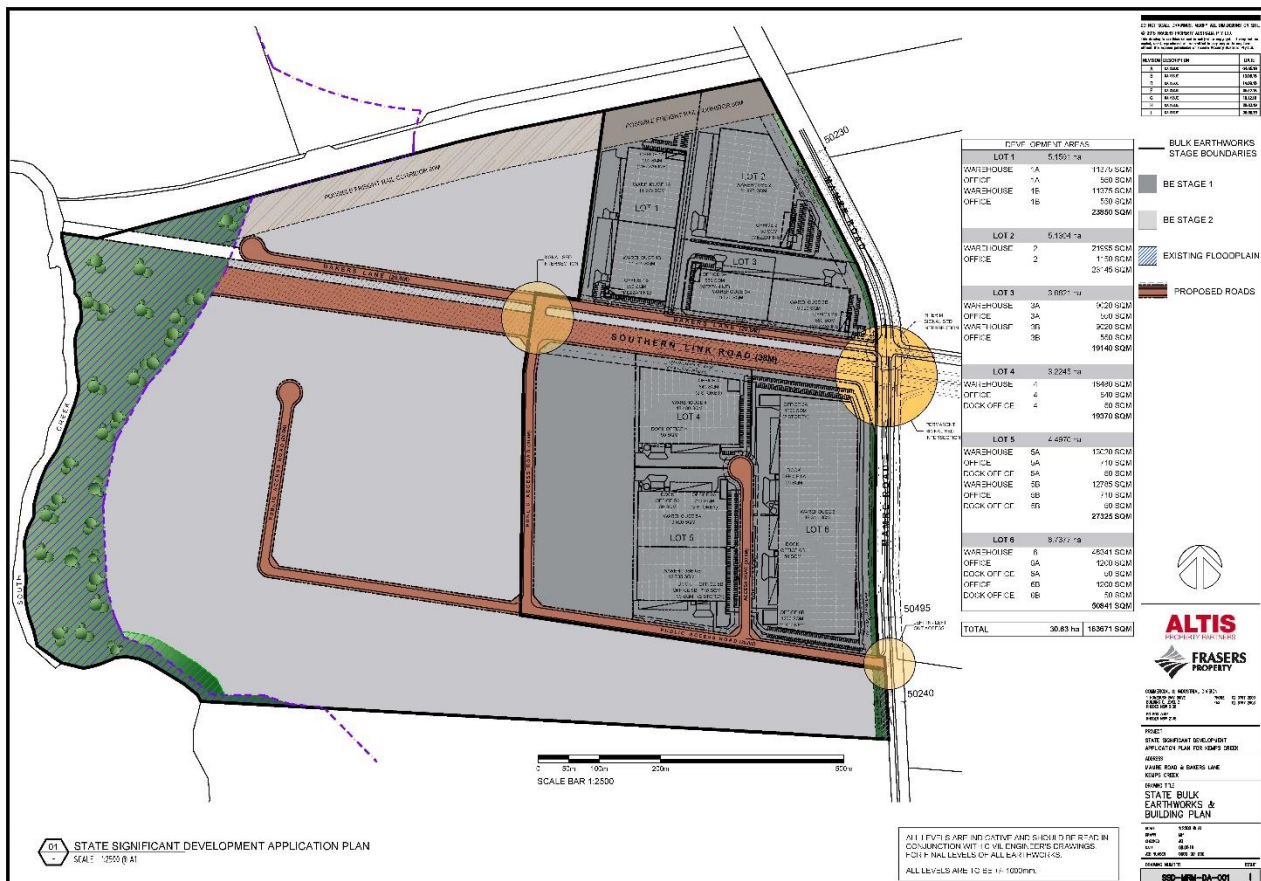
- The site is located in RU2 Rural Landscape as defined in the Penrith Local Environmental Plan (LEP) 2011.
- Single storey residential dwellings currently occupy the site.
- Mamre Road bounds the site to the east separating the development from rural residential land uses, located approximately 165m from the eastern site boundary.
- A single storey rural residential dwelling bounds the site to the south.

- Single storey residential dwellings are located south west of the site in Luddenham.
- Warehouses are currently being constructed adjacent the northern site boundary.

3.2 Proposal

The proposal seeks to construct warehouses/industrial premises with the current master plan for development consisting of the following:

Figure 2: Stage 1 – Site layout



Lot 1

- Total area of 5.1591ha.
- Building area of 23,850m² with two warehouse and dedicated offices.
- Site access via Bakers Lane off Mamre Road.

Lot 2

- Total area of 5.1304ha.
- Building area of 23,145m² with a warehouse and dedicated office.
- Site access via Access Road linked to Mamre Road.

Lot 3

- Total area of 3.8821ha.
- Building area of 19,140m² with two warehouses and dedicated offices.
- Site access via Bakers Lane off Mamre Road.

Lot 4

- Total area of 3.2245ha.
- Building area of 19,370m² with a warehouse and two dedicated offices.
- Site access via Access Road linked to Mamre Road.

Lot 5

- Total area of 4.4970ha.
- Building area of 27,325m² with two warehouses and four dedicated offices.
- Site access via Access Road linked to Mamre Road.

Lot 6

- Total area of 8.7377ha.
- Building area of 50,841m² with a warehouse and four dedicated offices.
- Site access via Access Road linked to Mamre Road.

Assessment of the future masterplan areas of the sites will be conducted during the next development application. Note if the site layouts change, further assessment may be required to determine the viability of the development site for 24 hour operation.

3.3 Acoustic Environment

The surrounding area is primarily affected by road traffic from Mamre Road and potentially noise from existing nearby commercial/industrial activities.

4. Equipment

The following equipment was used to record noise levels:

- Norsonics 140 sound level meter
- Two Rion NL42 Environmental Noise Monitors (SN# 00175548 & SN#01259207))
- Pulsar Model 105 Ltd Sound Calibrator (SN # 57417)

The Environmental Noise Monitors hold current NATA Laboratory Certification and were field calibrated before and after the monitoring period, with no significant drift from the reference signal recorded.

5. Receivers and Noise Monitoring Locations

5.1 Receiver Locations

The nearest sensitive receiver locations were identified as follows;

1. Single storey residential dwellings are located south west of the site at Medinah Avenue, Luddenham.
2. A single storey residential dwelling is located east of the site at 654-674 Mamre Road, Kemps Creek.
3. A single storey residential dwelling is located east of the site at 676-702 Mamre Road, Kemps Creek.
4. A single storey residential dwelling is located east of the site at 706-752 Mamre Road, Kemps Creek.
5. A single storey residential dwelling is located east of the site at 754-770 Mamre Road, Kemps Creek.
6. A single storey residential dwelling is located south of the site at 771-781 Mamre Road, Kemps Creek.
7. Residential dwellings are located north of the site at 579 Mamre Road, Orchard Hills.
- A. Industrial/warehouses are currently being constructed north of the site at Mamre Road, Orchard Hills.

These locations were chosen as being representative of the nearest sensitive receivers to the proposed development. Refer to Figure 3 for these locations.

Figure 3: Receiver and noise monitoring locations



5.2 Unattended Noise Monitoring

Rion NL42 environmental noise monitors were placed at 8 Medinah Avenue, Luddenham and 676-702 Mamre Road, Kemps Creek to measure ambient noise levels. The monitors were located in free field positions with the microphones approximately 1.4 metres above ground surface level. The noise monitors were set to record noise levels between the 11th and 19th April 2018.

Both environmental noise monitors were set to record noise levels in "A" weighting, Fast response using 15 minute statistical intervals. Ambient noise monitoring was conducted in accordance with Australian Standard AS1055:1997 *Acoustics – Description and measurement of environmental noise*. For the unattended noise monitoring locations refer to Figure 3.

Weather conditions were fine for the majority of the monitoring period, with some periods of intermittent wind and rain which had no effect on the measured data.

6. Existing background noise levels

The following tables present the measured existing ambient noise levels from the unattended noise survey. Any periods of inclement weather or extraneous noise are omitted from the measured data prior to determining the overall results.

6.1 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 – Horsley Park

Day	Date	Rainfall (mm)	Wind			
			9am		3pm	
			Speed (km/h)	Direction	Speed (km/h)	Direction
Wednesday	11/04/2018	0	11	N	4	NNE
Thursday	12/04/2018	0	2	NW	15	NW
Friday	13/04/2018	0	11	NNW	15	N
Saturday	14/04/2018	0	19	NNW	31	NW
Sunday	15/04/2018	0.2	24	WNW	20	WNW
Monday	16/04/2018	0	4	N	11	WSW
Tuesday	17/04/2018	0	6	WSW	20	ESE
Wednesday	18/04/2018	0	2	NW	11	E
Thursday	19/04/2018	0	4	WNW	Calm	Calm

6.2 Ambient background noise level

The measured rating background noise levels (RBL) were determined in accordance with the NSW Noise Policy for Industry with levels for the different monitoring locations presented in Table 2.

Table 2: Measured L90 noise levels

Day	Date	Receiver 1			Receivers 2 to 7		
		Background L90 dB(A)			Background L90 dB(A)		
		Day	Evening	Night	Day	Evening	Night
Wednesday	11/04/2018	-	36.1	35.4	-	44.2	38.4
Thursday	12/04/2018	-	32.4	30.4	44.3	47.3	46.9
Friday	13/04/2018	-	33.4	28.0	47.1	46.4	45.4
Saturday	14/04/2018	37.5	33.2	28.4	47.5	45.9	44.1
Sunday	15/04/2018	37.7	28.7	23.6	45.6	37.5	33.5
Monday	16/04/2018	35.0	31.8	24.7	39.9	40.0	33.1
Tuesday	17/04/2018	36.1	30.3	26.8	38.0	36.3	28.8
Wednesday	18/04/2018	36.3	34.8	32.0	41.8	41.6	36.0
RBL		36	33	28	44	43	37

Note Receiver 1 daytime periods on 12th and 13th April 2018 were affected by extraneous noise and were omitted from the measured data.

The night time background level for Receiver 1 is below the minimum RBL as defined in the NSW Noise Policy for Industry (2017), therefore an RBL of 30dBA is applied in accordance with the policy for the night time period.

6.3 Attended Noise Measurements

When the unattended noise monitors were placed at the sensitive receivers, attended noise measurements were attempted of the existing activities in the area. Due to the inaudibility of industrial and commercial activities, unattended monitoring was used to determine the existing noise environment.

7. Noise Criteria

The relevant noise criteria have been determined in consultation with Penrith City Council requirements, Secretary's Environmental Assessment Requirements and the NSW Noise Policy for Industry 2017.

7.1 Penrith City Council

The site is located within Penrith City Council local government area with the land classified as future industrial land. Penrith City Council's Development Control Plan 2014 states the following;

"6.4 Environmental Quality

6.4.1 Noise Pollution

A. Objectives

- a) To establish design criteria for noise emissions from industrial or other employment-generating development;*
- b) To establish acoustic environmental goals for existing and future adjacent residential areas; and*
- c) to establish noise contributions for individual allotments within the employment zones when related to residential boundaries.*

B. Controls

- 1) Any machinery or activity considered to produce noise emissions from a premise shall be adequately sound-proofed so that noise emissions are in accordance with the provisions of the Protection of the Environment Operations Act 1997.*
- 2) The use of mechanical plant and equipment may be restricted in the Northern Area (Figure E6.1). Developers in all areas should ensure through design of their development that no offensive noise is emitted.*
- 3) Where it is considered likely that a development will not create any adverse impact on nearby rural or residential areas, a noise impact statement from a qualified acoustical engineer will be required to be submitted to Council for consideration with the Development Application. A noise impact statement will need to demonstrate that the proposed development will not create any adverse impact.*
- 4) All development shall comply with the requirements of relevant Australian Standards and State Government policies and guidelines relating to Noise.*
- 5) the acoustic criteria adopted by this section will be implemented in the following manner:*

Erection of Buildings

- 1) An acoustic design report shall be required for developments that are likely to generate high noise levels and for development in the area immediately adjoining residential areas. The acoustic design report should refer to the relevant Australian Standards and State Government policies and guidelines relating to Noise.*
- 2) If an acoustic design report is not required at the Development Application stage, conditions will be imposed as part of the development consent which requires compliance with the relevant Australian Standards and State Government policies and guidelines relating to noise. Applicants must have regard to the criteria and demonstrate a standard of acoustic treatment for the building to comply with such criteria*

3) It is essential that potential developers investigate noise amelioration features to be included in building design, which will assist in achieving compliance with Council's acoustic criteria. Having regard to the surrounding topography, it is critical that the roof element of all buildings be acoustically capable of controlling potential breakout noise."

7.2 Secretary's Environmental Assessment Requirements (SEARs)

The Secretary's Environmental Assessment Requirements (SEARs) outline the requirements for the construction and operational use of the proposed development. Section 4.11 of SEARs 2015 states the following;

"Noise and Vibration – Amenity

- 1. The Proponent must assess construction and operational noise vibration guidelines. The assessment must include consideration of impacts to sensitive receivers including small businesses, and include consideration of sleep disturbance and, as relevant, the characteristics of noise and vibration (for example, low frequency noise).*
- 2. The Proponent must demonstrate that blast impacts are capable of complying with the current guidelines, if blasting is required.'*

As a specific criterion is not specified, further reference was made to *Assessing Vibration: A Technical Guide 2006*, the *NSW Noise Policy for Noise*, *NSW Road Noise Policy* and the *NSW Interim Construction Guideline*.

7.3 Assessing Vibration: A Technical Guideline 2006

7.3.1 Types of vibration

There are three types of vibration as classified in the guide;

- Continuous - vibration continues uninterrupted for a defined period (usually throughout daytime and/or night-time). This type of vibration is assessed on the basis of weighted RMS (root mean squared) acceleration values.
- Impulsive - rapid build up to a peak followed by a damped decay that may or may not involve several cycles. The duration is short, typically less than 2 seconds. Impulsive vibration (no more than three occurrences in an assessment period) is assessed on the basis of acceleration values.
- Intermittent - interrupted periods of continuous (e.g. a drill) or repeated periods of impulsive vibration (e.g. a pile driver), or continuous vibration that varies significantly in magnitude. Assessed on the basis of vibration dose values.

7.3.2 Acceptable values for continuous and impulsive vibration (1-80Hz)

The relevant criteria for continuous and impulsive vibration are as follows;

Table 3: Preferred weighted RMS vibration acceleration values

Type	Location	Assessment period	Preferred values m/s ²		Maximum values m/s ²	
			z-axis	x- and y-axes	z-axis	x- and y-axes
Continuous vibration	Critical areas	Day or night time	0.005	0.0036	0.01	0.0072
	Residences	Day time	0.01	0.0071	0.02	0.014
		Night time	0.007	0.005	0.014	0.01
	Offices, schools, educational institutions and places of worship	Day or night time	0.02	0.014	0.04	0.028
	Workshops	Day or night time	0.04	0.029	0.08	0.058
Impulsive vibration	Critical areas	Day or night time	0.005	0.0036	0.01	0.0072
	Residences	Day time	0.3	0.21	0.6	0.42
		Night time	0.1	0.071	0.2	0.14
	Offices, schools, educational institutions and places of worship	Day or night time	0.64	0.46	1.28	0.92
	Workshops	Day or night time	0.64	0.46	1.28	0.92

7.3.3 Acceptable values for intermittent vibration

Intermittent vibration is assessed using the vibration dose value (VDV) root-mean-quad method. VDV accumulates the vibration energy received over the daytime and night-time periods. The vibration dose methodology is as per standard BS 6472–1992.

7.4 Noise Policy for Industry

Assessment of noise in accordance with NSW Noise Policy for Industry (2017) has two main components: intrusiveness and amenity criteria. These are compared to each other (after conversion of amenity noise level to LAeq,15min equivalent level) to determine the overall project noise trigger level.

7.4.1 Intrusiveness noise level

The intrusiveness noise level is based on the LAeq (15 min) associated with commercial activity being less than or equal to the measured LA90 Rating Background Level + 5dB as per section 2.3 of the policy. A modifying factor should also be added where appropriate to allow for tonality, impulsiveness, and intermittency or low frequency effects.

7.4.2 Amenity noise level

The amenity noise level is determined in accordance with Section 2.3 of the policy based on the land use and relevant noise criteria specified in Tables 2.3 and 2.2 respectively.

The NSW Noise Policy for Industry sets out acceptable noise levels for various locations. Under the policy the receivers 1 to 7 would be most likely assessed against the 'rural' criteria and receiver A would be assessed against the 'industrial premises' criteria.

As defined in the policy rural category is an area that is dominated by natural sounds, having little or no road traffic noise and generally characterised by low background noise levels.

7.4.3 Modifying factors

The NSW Noise Policy for Industry includes correction factors such as tonal noise, low-frequency noise, intermittent noise and duration. Where two or more modifying factors are present, the maximum adjustment to a noise source level is 10dBA (excluding duration correction).

7.5 Project noise trigger level

To determine the project trigger noise level, the amenity noise level must first be standardised to and equivalent LAeq 15min in order to compare to the intrusiveness noise level. This is done in accordance with Section 2.2 of the policy as follows;

$$L_{Aeq,15min} = L_{Aeq, period} + 3dB$$

Therefore, based on the measured data presented in Section 6, the project specific noise limits are determined.

7.5.1 Intrusiveness noise criteria

The intrusiveness noise levels are as follows;

Table 4: Intrusiveness noise levels

Time period	Receivers 1	Receivers 2 to 7	Receiver A
	Criteria $L_{eq(15min)}$ dB(A)	Criteria $L_{eq(15min)}$ dB(A)	Criteria $L_{eq(15min)}$ dB(A)
Day (7am-6pm Mon-Sat; 8am-6pm Sun)	41	49	N/A
Evening (6pm-10pm)	38	48	N/A
Night (10pm-7am Sun-Fri, 10pm-8am Sat)	35	42	N/A

*N/A: Intrusive noise criteria does not apply for industrial receivers.

7.5.2 Amenity criteria

Based on Section 2.4 of the policy, the amenity noise levels are as follows;

Table 5: Amenity noise levels

Time period	Receiver 1	Receivers 2 to 7	Receiver A
	Criteria $L_{eq(15min)}$ dB(A)	Criteria $L_{eq(15min)}$ dB(A)	Criteria $L_{eq(15min)}$ dB(A)
Day	48	48	70
Evening	43	43	70
Night	38	38	70

7.5.3 Project specific noise criteria

The project noise trigger level is the lower (that is, the most stringent) value of the intrusiveness and amenity noise levels. Therefore the project noise trigger levels are as follows:

Table 6: Project criteria

Time period	Receiver 1	Receivers 2 to 7	Receiver A
	Criteria $L_{eq}(15min)$ dB(A)	Criteria $L_{eq}(15min)$ dB(A)	Criteria $L_{eq}(15min)$ dB(A)
Day	41	48	70
Evening	38	43	70
Night	35	38	70

7.5.4 Sleep Disturbance

The potential for sleep disturbance from maximum noise level events from premises during the night-time period needs to be considered. Sleep disturbance is considered to be both awakenings and disturbance to sleep stages.

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

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

a detailed maximum noise level event assessment should be undertaken.

7.6 NSW Road Noise Policy 2008

The NSW Road Noise Policy outlines the criteria for any increase in the total traffic noise level at the location due to a proposed project or traffic generating development. As Mamre Road is an arterial road the following criteria applies:

Table 7: Relative increase criteria for residential land uses

Road Category	Type of project/development	Total traffic noise level increase – dB(A)	
		Day (7am to 10pm)	Night (10pm to 7am)
Freeway/arterial/sub-arterial roads and transitways	New road corridor/redevelopment of existing road/land use development with the potential to generate additional traffic on existing road	Existing traffic $L_{Aeq}(15hr) + 12dB$ (external)	Existing traffic $L_{Aeq}(9hr) + 12dB$ (external)

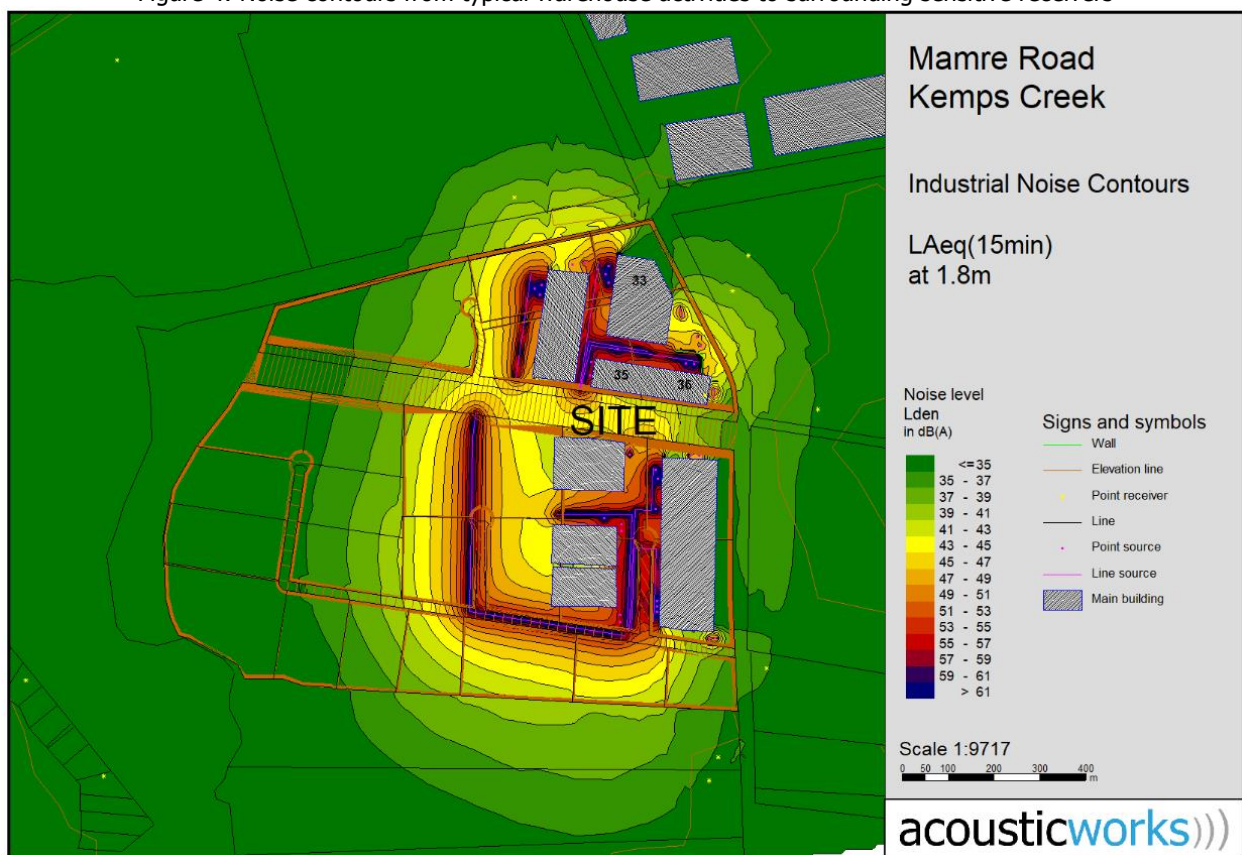
8. Environmental Assessment

8.1 Onsite Activities

As the warehouses are only proposed, noise associated with the proposal was assessed based on previous measurements of similar activities. The calculations assume that the nominated activities are located at a representative point within the development site to each receiver location. Any relevant shielding or building transmission loss is taken into account for these activities.

The 3D SoundPLAN modelling in Figure 4 shows the predicted noise impacts based on typical warehouse activities such as trucks, forklifts, reverse alarms and car park activities. Vehicle movements were based 5 cars and 1 truck per warehouse every 15 minutes over 24 hours. If industrial use or factory production is proposed, additional individual acoustic assessment may be required to ensure that proposed warehouse/industrial building construction will adequately attenuate internal noise sources.

Figure 4: Noise contours from typical warehouse activities to surrounding sensitive receivers



The predicted noise impacts at the receiver locations are as follows:

Table 8: Predicted Noise Impacts

Receiver	Leq(15min) dB(A)	Criteria day/evening/night	Complies (yes/no)
1: Medinah Avenue	28	41/38/35	Yes
2: 654-674 Mamre Road	35	48/43/38	Yes
3: 676-702 Mamre Road	38	48/43/38	Yes
4: 706-752 Mamre Road	32	48/43/38	Yes
5: 754-770 Mamre Road	35	48/43/38	Yes
6: 771-781 Mamre Road	35	48/43/38	Yes

Receiver	$L_{eq(15min)}$ dB(A)	Criteria day/evening/night	Complies (yes/no)
7: 579 Mamre Road	25	48/43/38	Yes
A: Industrial/warehouses (north)	38	70	Yes

Compliance is predicted with the assessment criteria detailed Section 7.5.3 for the 24 hour operation of the site on the condition the recommendations in Section 10 are implemented.

9. Road Traffic Noise

The existing annual average daily traffic volume for Mamre Road is approximately 20,000 vehicles per day. In accordance with the RTA *Guide to Traffic Generating Developments*, the proposed warehouse development is predicted to produce an additional 4,322 vehicle movements per day.

Therefore, based on the available information, the predicted increase in daily $LA_{eq(15hr)}$ for receivers near Mamre Road is calculated to be 0.64dB(A) due to traffic generation by the proposed development, which complies with the criterion of +12dB(A) as outlined in Section 7.6.

10. Recommendations

10.1 Construction Noise & Vibration

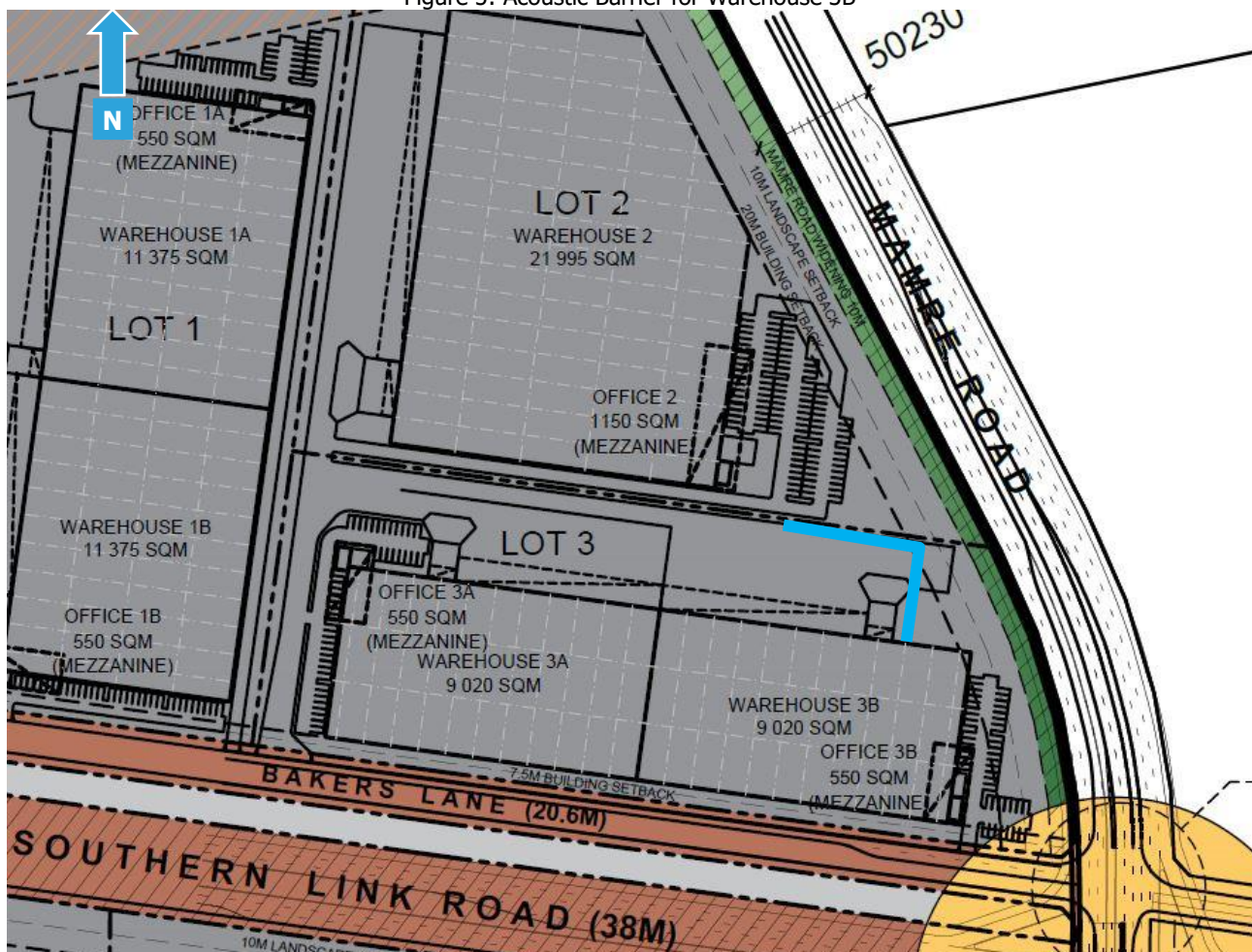
We recommend that a construction noise management plan is updated and submitted to council prior to construction certification, in accordance with the *NSW Interim Construction Guideline*.

10.2 Operational Noise & Vibration

The review indicates that 24 hour operation of the site is viable on the condition the following recommendations are considered:

- Construct an acoustic barrier (approximately 3m high) at the eastern end of the loading dock area for Lot 3 (Warehouse 3B) as shown in Figure 5. The height of the barrier shall be 3m above the finished driveway level and be constructed using lapped timber (minimum 40% overlap), masonry, fibre cement sheet, Hebel, Perspex, plywood, or other material with a minimum surface density of 10kg/m². The barrier shall be free of gaps and holes.

Figure 5: Acoustic Barrier for Warehouse 3B



— 3m acoustic barrier

If industrial use, bars, child care centre or factory production is proposed for any of the warehouses then additional individual acoustic assessments may be required to ensure that proposed warehouse/industrial building construction will adequately attenuate internal noise sources.

10.2.1 Onsite Mechanical Plant

No information regarding mechanical services was available at the time of the assessment. Any new mechanical plant shall be designed to comply with the criteria nominated in section 7 of this report.

Based on the ambient noise levels measured at the nearest sensitive receiver (refer to Section 7) and separation distances, mechanical plants located on the plant deck of each warehouse will require a combined sound power level that does not exceed 75.9dBA for each warehouse. With most development the number of mechanical plant units is predicted to exceed 1, therefore as a guide, Table 9 nominates specific noise levels dependent on the number of units.

Table 9: Mechanical plant maximum sound power level

Number of mechanical plants per warehouse	Maximum Sound Power Level dBA
1	75.9
2	72.9
3	71.4
4	69.9
8	66.9

We recommend that once plant selection are finalised, an assessment by qualified acoustic consultant be conducted prior to installation to determine any requirements for acoustic treatments to mechanical plant.

10.2.2 Vibration

Vibration associated with truck activity is predicted to comply with the relevant NSW guidelines at the nearest sensitive receivers. We recommend that any vibrating equipment used onsite is adequately isolated to prevent vibration issues to nearby receivers or reviewed by a qualified acoustic consultant.

10.2.3 Sleep Disturbance

On the condition the applicable noise criteria outlined in Section 7.5.3 is implemented, then compliance is predicted with the Sleep Disturbance criteria.

10.2.4 NSW Road Noise Policy – Traffic Generation

The traffic generation from the proposed development is predicted to be approximately 4,322 vehicles per day. Based on the existing traffic volumes on Mamre Road, this increase in traffic volume is not predicted to exceed the criteria nominated in Section 7.6.

11. Conclusion

A noise assessment was conducted for a state significant development application for a proposed warehouse/industrial development to be located at Mamre Road South Precinct, Kemps Creek. Based on the results of the investigation, the application for part of the masterplan is considered viable for the 24 hour operation of the site on the condition the recommendations in Section 10 are considered.

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

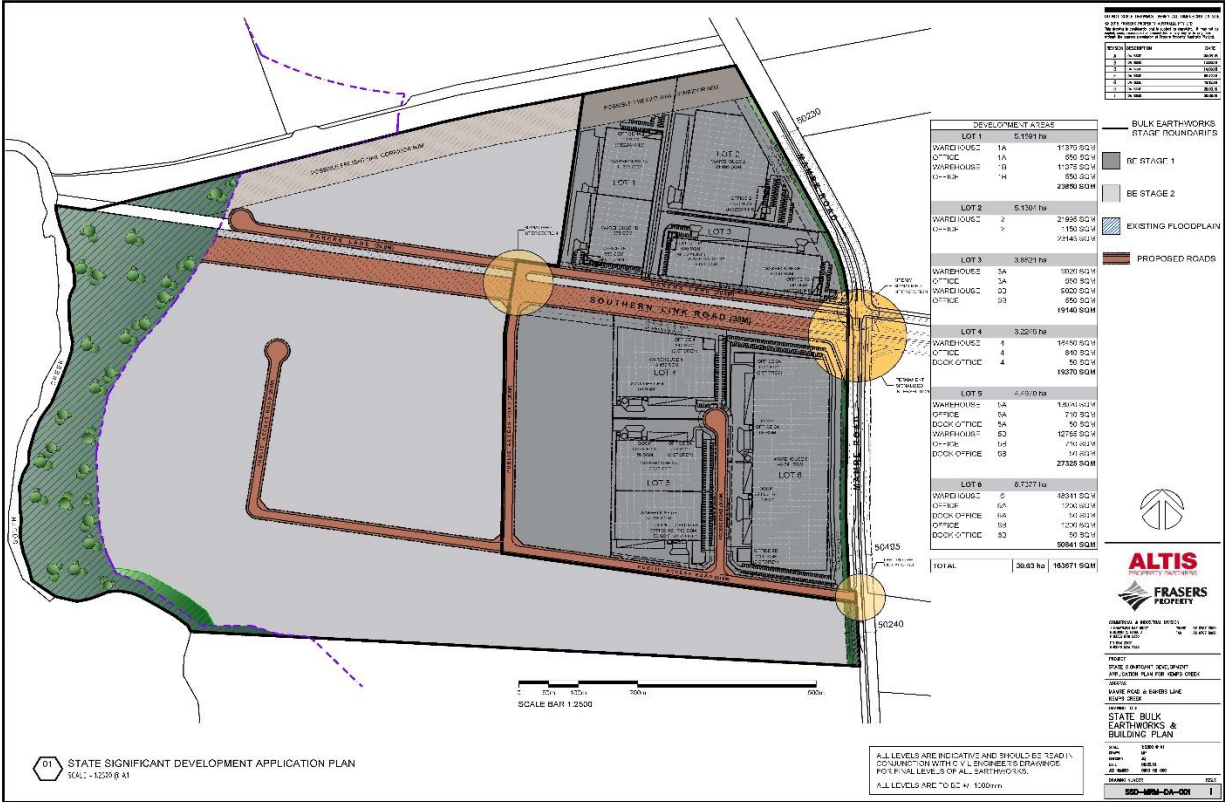
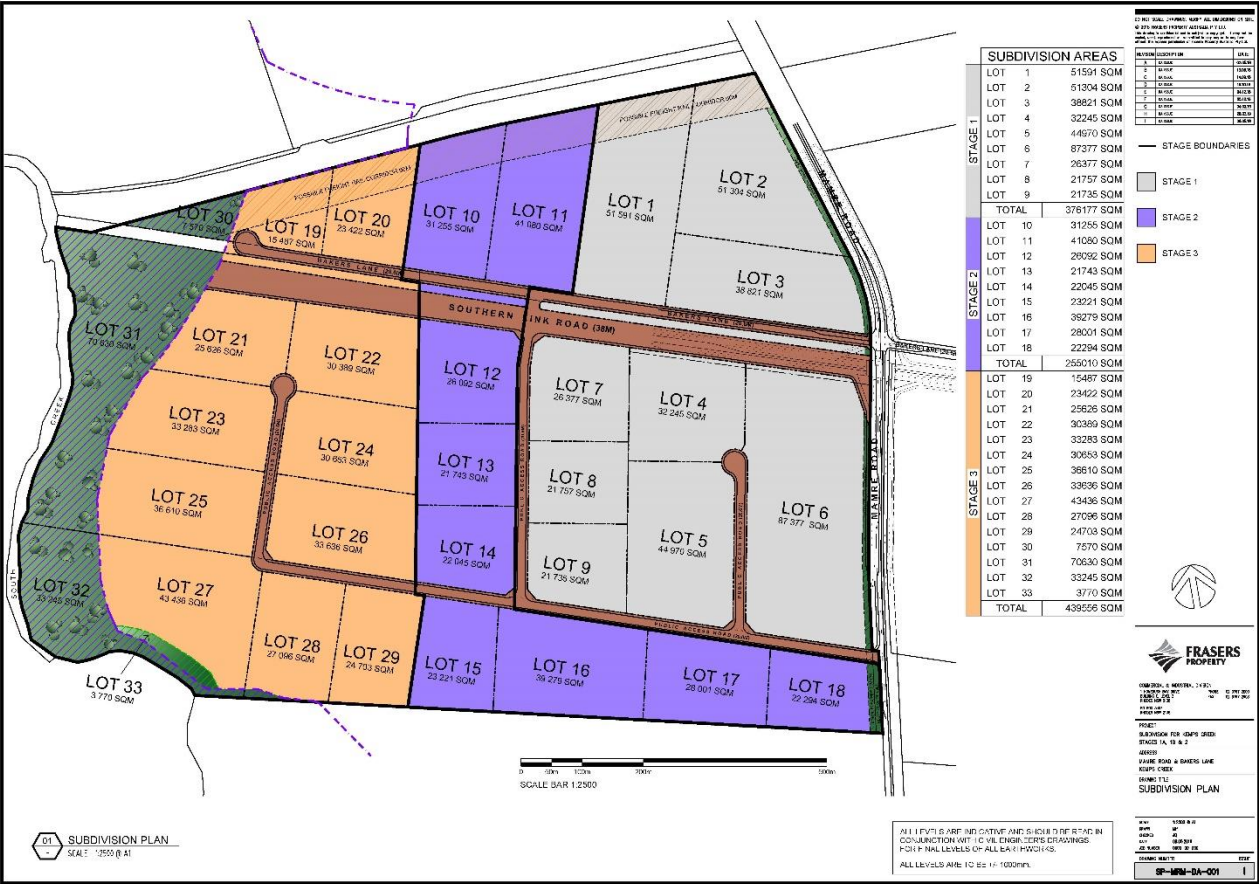
Report Prepared By



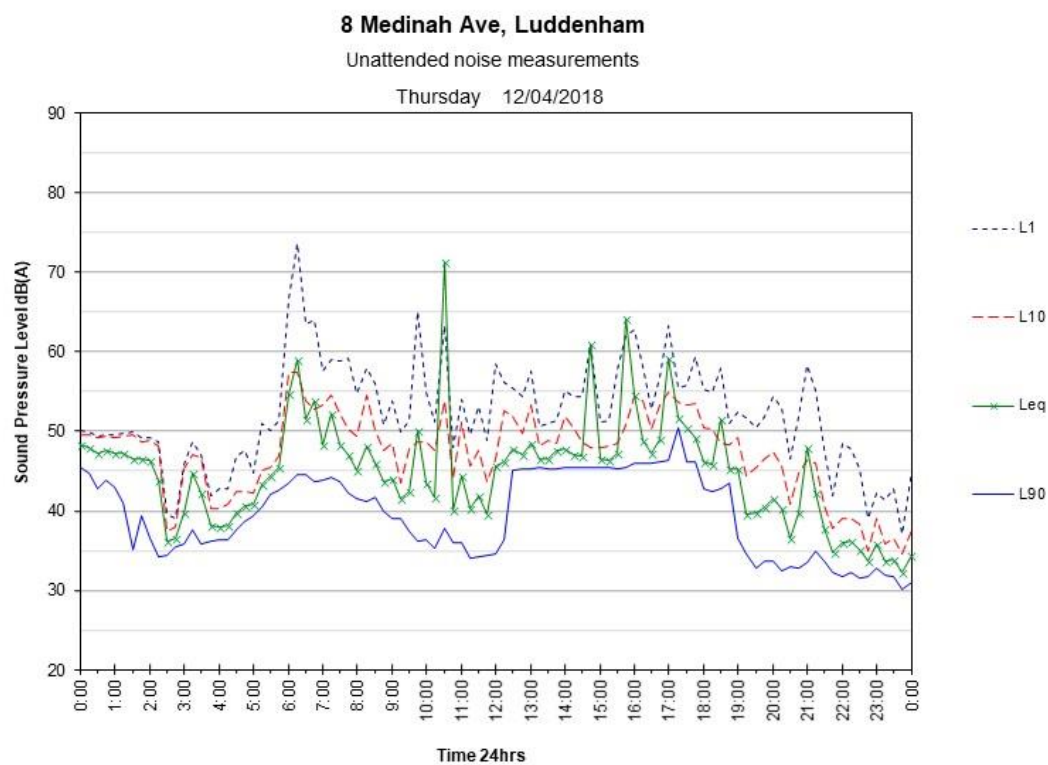
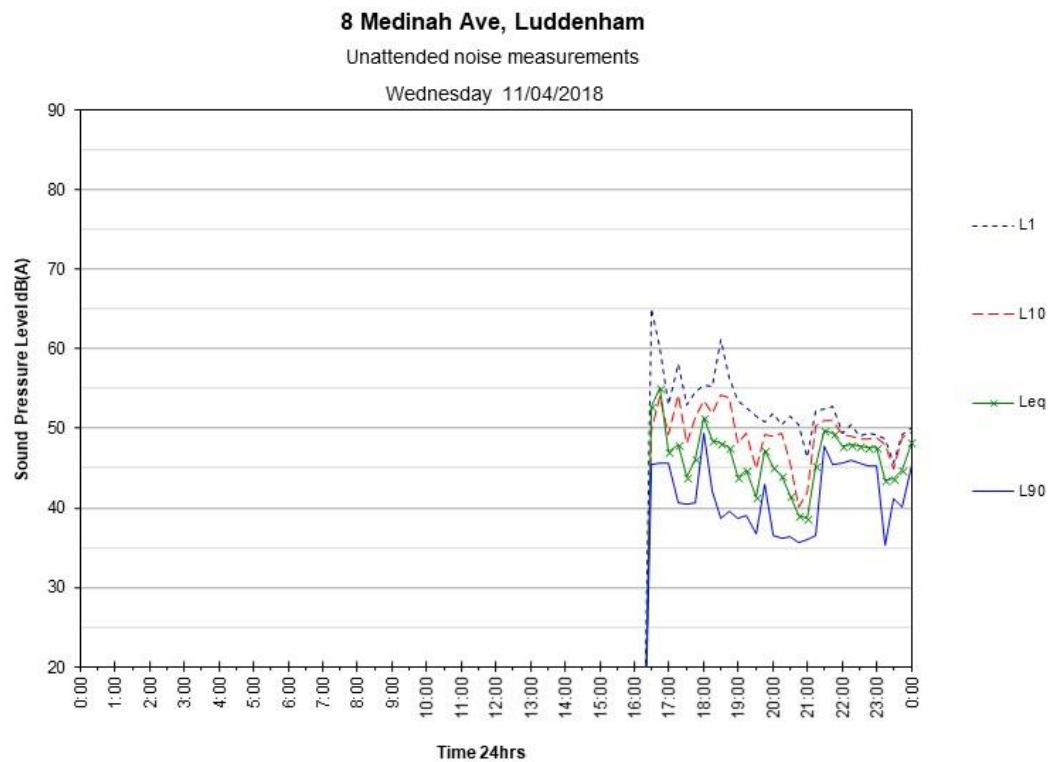
GREG PEARCE B.Eng (Mech)
Director
acousticworks)))

12. Appendices

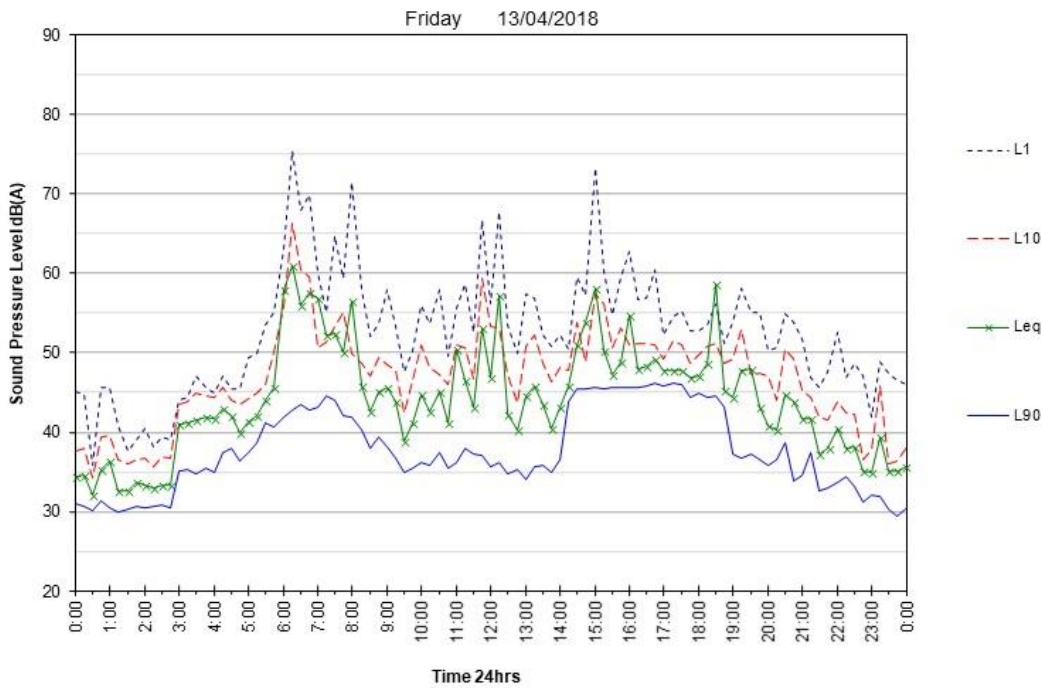
12.1 Development Plans



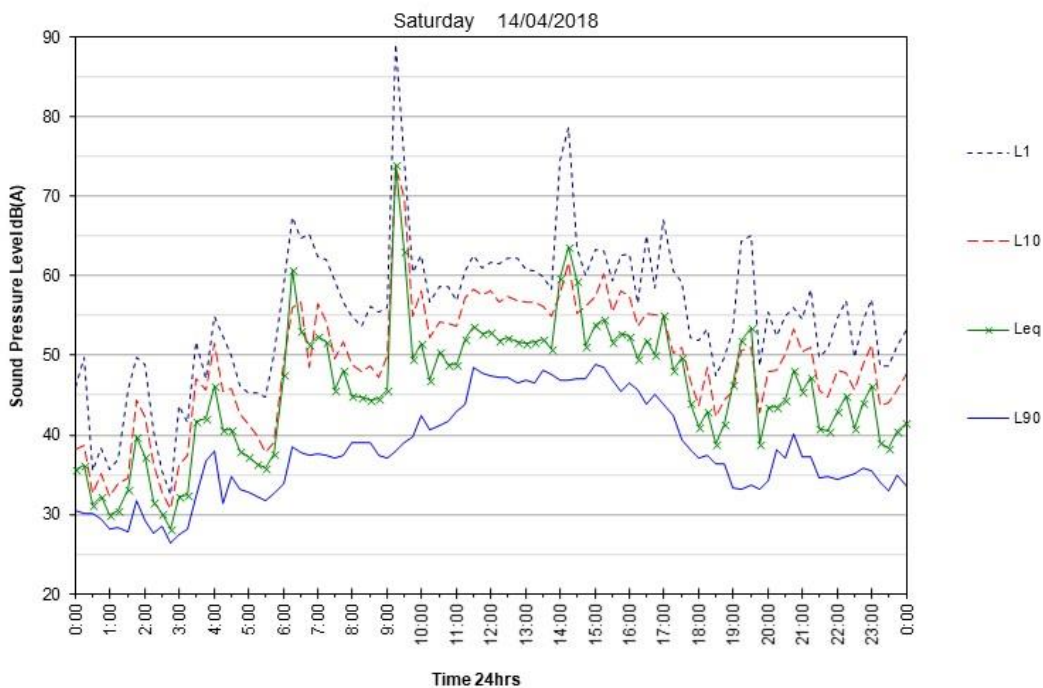
12.2 Noise Monitoring Charts



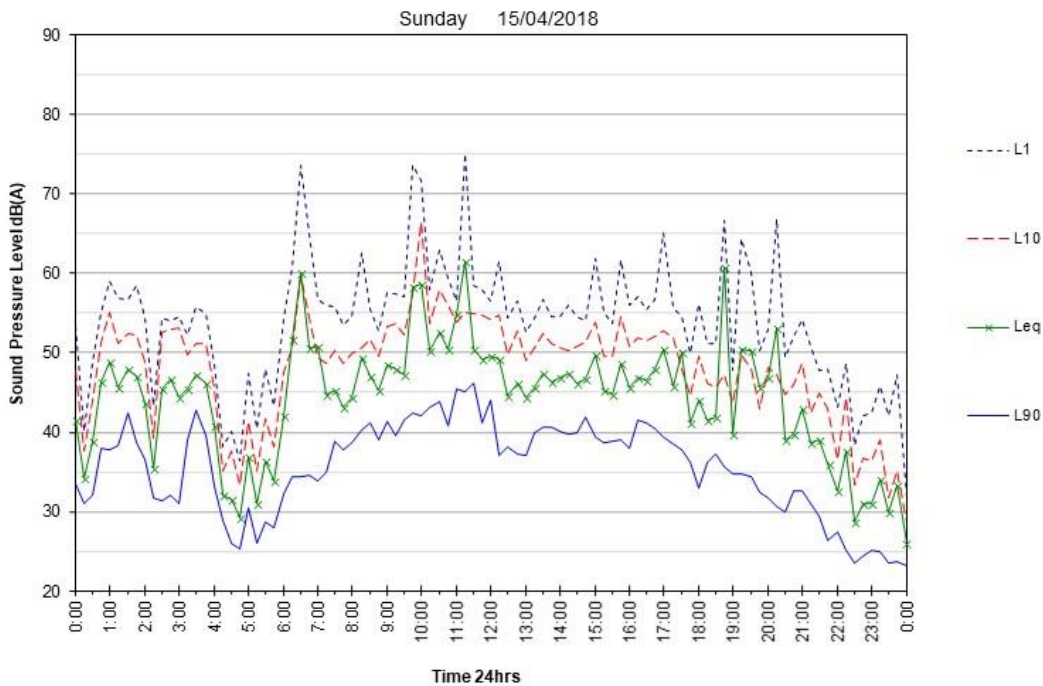
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Unattended noise measurements



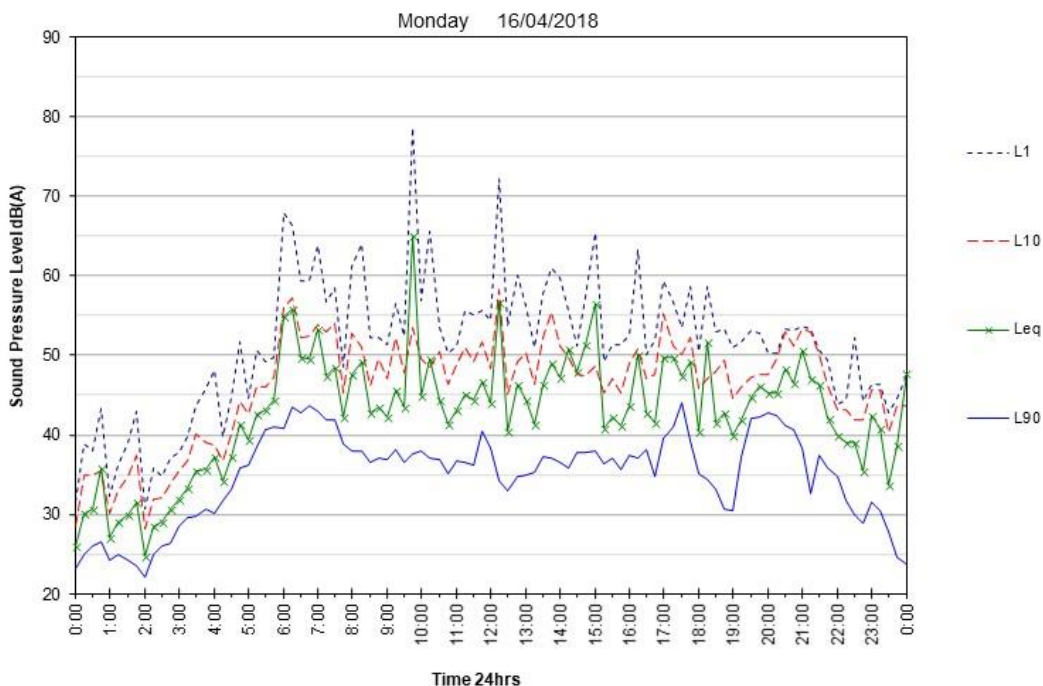
8 Medinah Ave, Luddenham
Unattended noise measurements



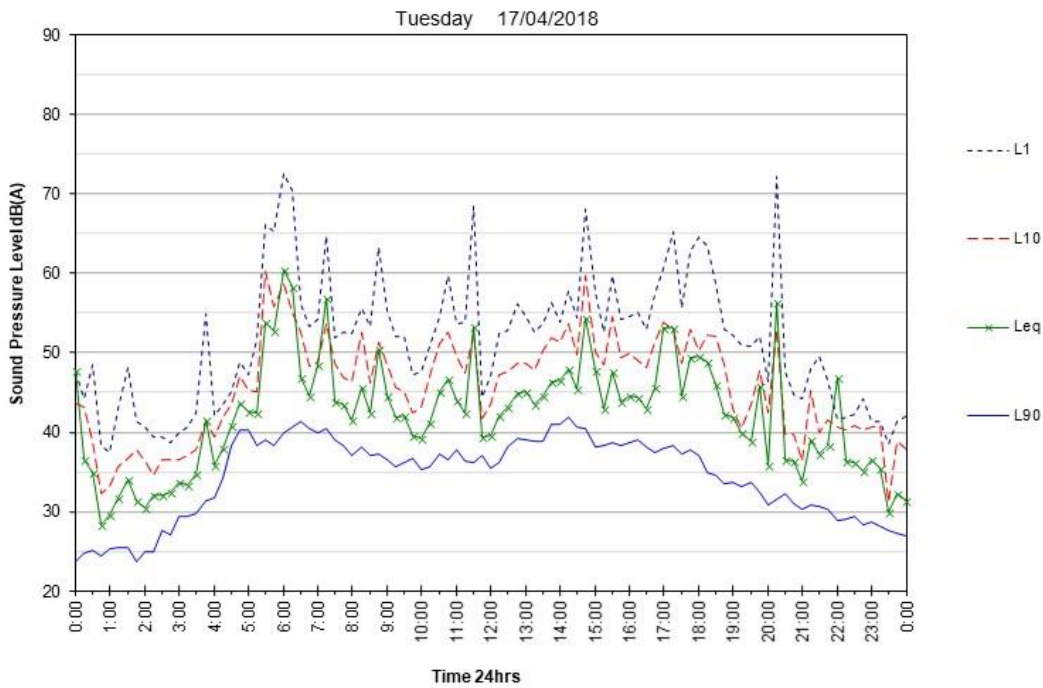
8 Medinah Ave, Luddenham
Unattended noise measurements



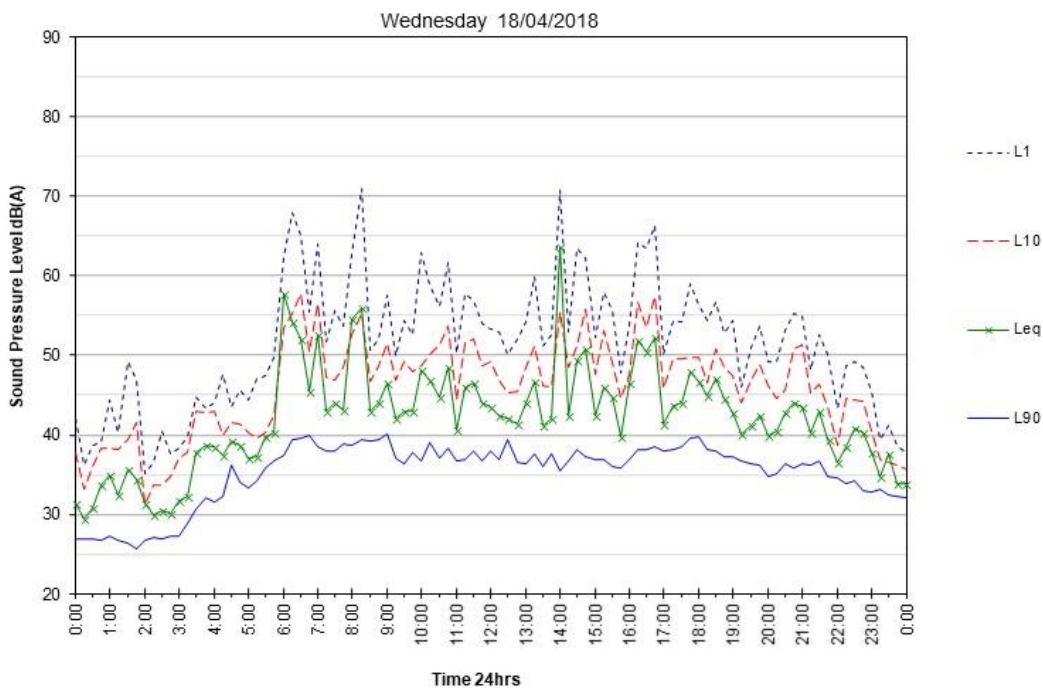
8 Medinah Ave, Luddenham
Unattended noise measurements

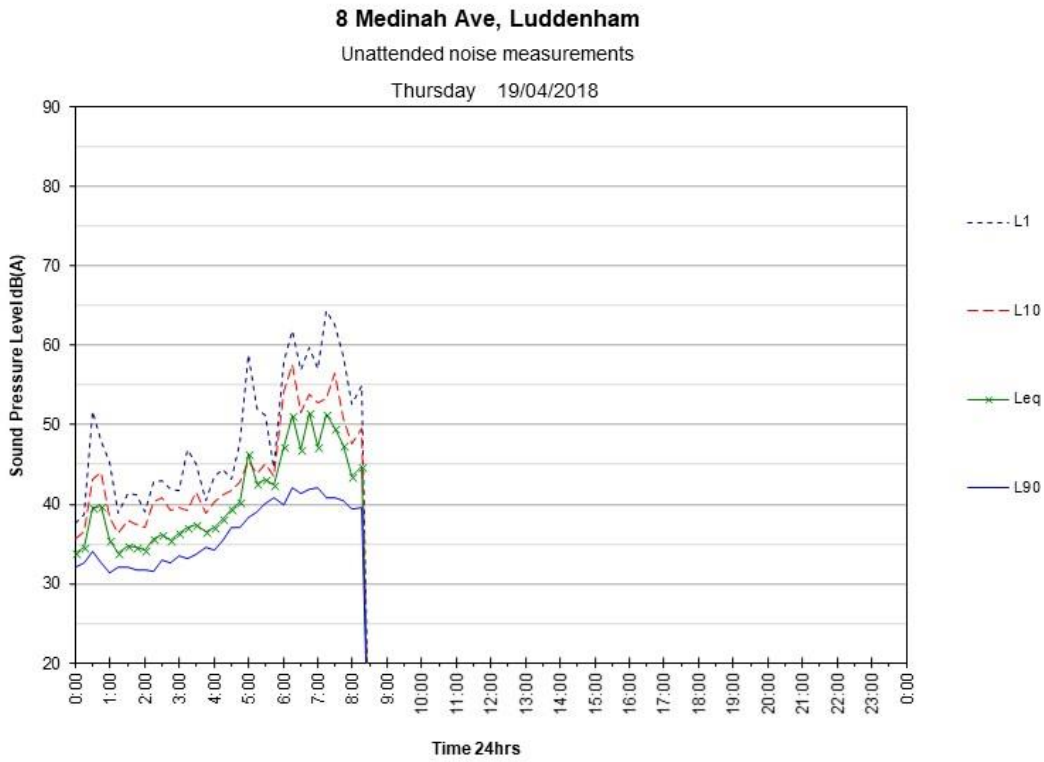


8 Medinah Ave, Luddenham
Unattended noise measurements



8 Medinah Ave, Luddenham
Unattended noise measurements

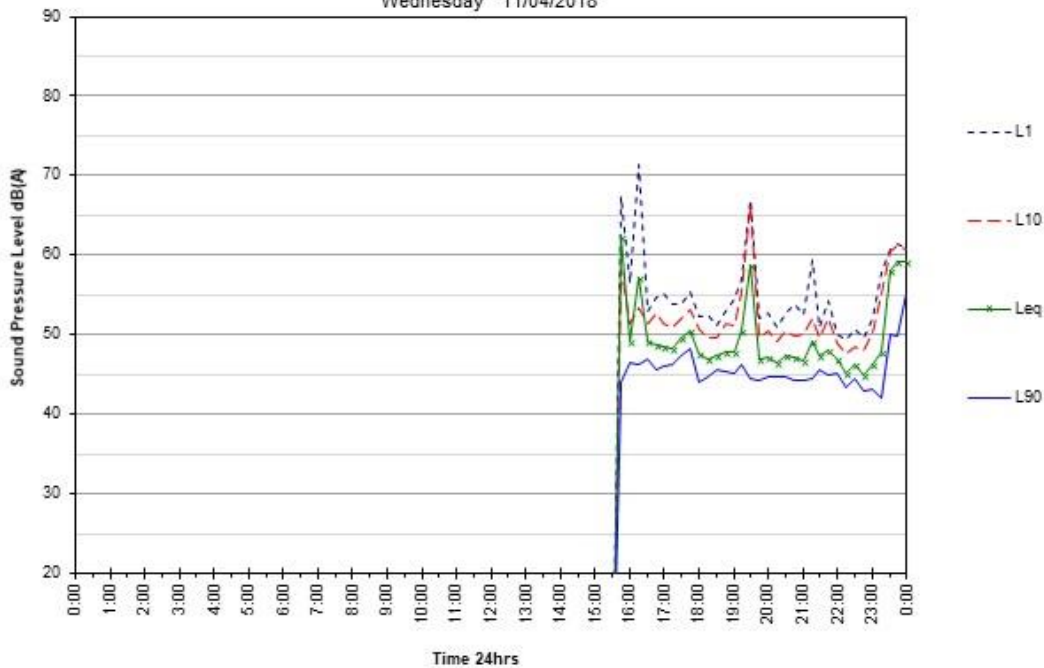




676-702 Mamre Road, Kemps Creek

Unattended noise measurements

Wednesday 11/04/2018



676-702 Mamre Road, Kemps Creek

Unattended noise measurements

Thursday 12/04/2018

