ACOUSTICS AND AIR

60 WALLGROVE ROAD

CONCEPT ACOUSTIC ASSESSMENT

REPORT NO. 09064
VERSION B

WILKINSON MURRAY

60 WALLGROVE ROAD

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NOVEMBER 2009

PREPARED FOR

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1 INTRODUCTION

Wilkinson Murray Pty Ltd has been engaged by Afteron Ltd to assess operational and transportation noise for the Concept Plan of the proposed redevelopment of the quarantine area at 60 Wallgrove Road. Minchinbury NSW.

The purpose of this assessment is to anticipate environmental noise impacts that future development may incur, and suggest mitigation measures, if necessary. Concept approval for the development is sought to ensure a coordinated and environmentally sustainable approach to the development that will provide a level of certainty and provide a framework for future development. The noise assessment consists of:

- Ambient noise measurements at surrounding receivers;
- Establishment of site specific noise criteria using appropriate NSW Government policies;
- Assessment of likely operational noise associated with the development. i.e. noise from indicative industrial buildings and associated fixed and mobile equipment (including; internal equipment, forklifts, loading dock activities, delivery vehicles, etc.) impacting on nearby residential receivers and other properties.
- Review of the potential for adverse impact with transport noise; and
- Establishment of planning principles to mitigate any noise impact.

2 SITE LOCATION AND OPERATION

The site is bounded by the M4 and M7 motorways on the southern and eastern sides of the site respectively. Immediately to the north and west of the site is the Pinegrove Cemetery.

Figure 2-1 shows the indicative site layout.

Figure 2-1 Development Site Layout and Lots

Surrounding residences have been identified as:

- North – Suburban residences to the north are located in Eskdale Street at distance of approximately 270 metres from the northern boundary of the development.
- East – Semi-Rural residences to the east across the M7 Motorway on Pikes Lane at a distance in the order of 310 metres from the eastern boundary of the site. It is understood that these residences are to be resumed in the future as part of the Western Sydney parkland, however these residences have been included for assessment purposes.

Figure 2-2 shows the location of the closest residential receivers relative to the proposed site.

Figure 2-2 Proposed Site Location

The site's main entry point will be from Wallgrove Road. The site is proposed to be subdivided into 25 lots. It is envisaged that the site will be used by office, industrial and warehouse facilities, where operations will be predominately in the day period, however some facilities may operate in the night period especially in the case of any distribution facilities.

3 NOISE MEASUREMENTS

Ambient noise levels were monitored at surrounding residences. In addition operator attended noise measurements were conducted on the Cemetery grounds. The monitoring locations were selected as representative of noise levels of the adjacent residential areas. The noise monitoring locations are presented in Figure 2-2.

Unattended noise logging was conducted between Tuesday, 14 and Tuesday, 21 April 2009 at the following locations:

- Location A – The Northern boundary of the cemetery adjacent to residences on Eskdale Street.
- Location B – The Eastern side of the site across the M7 motorway on Pikes Lane.

The noise monitoring equipment consisted of environmental noise loggers set to A-weighted, fast response, continuously monitoring over 15-minute sampling periods. This equipment is capable of remotely monitoring and storing statistical noise level descriptors for later detailed analysis. The equipment calibration was checked before and after the survey and no significant drift was noted.

- The logger determines L_{A1}, L_{A10}, L_{A90} and L_{Aeq} levels of the ambient noise. L_{A1}, L_{A10} and L_{A90} are the levels exceeded for 1%, 10% and 90% of the sample time respectively (see Appendix A for definitions). The L_{A1} is indicative of maximum noise levels due to individual noise events such as the occasional pass-by of a heavy vehicle. The L_{A90} level is normally taken as the background noise level during the relevant period. Detailed results for monitoring location are shown in graphical form in Appendix B. The graphs show measured values of L_{Aeq}, L_{A90}, L_{A10} and L_{A1} for each 15-minute monitoring period.

Table 3-1 summarises the L_{Aeq} and L_{A90} noise results, for daytime, evening and night time periods as defined in the NSW Department of Environment & Conservation's (DEC) *NSW Industrial Noise Policy (INP)*. The summary values are:

- $L_{Aeq,Period}$ – the overall L_{Aeq} noise level measured over the assessment period; and
- RBL – Rating Background Level is a measure of typical background noise levels which are used in determining noise criteria.

Table 3-1 Summary of Measured Ambient Noise Levels

Noise Logging Site	RBL (dBA)			$L_{Aeq,Period}$ (dBA)		
	Daytime 7am-6pm	Evening 6-10pm	Night Time 10pm-7am	Daytime 7am-6pm	Evening 6-10pm	Night Time 10pm-7am
A – Eskdale Street	49	52	48	56	56	53
B – Pikes Lane	50	54	50	58	58	54

In addition operator attended noise measurements at the North Chapel were measured in the afternoon of the 21 April 2009 whereby typical background noise levels of 58 dBA (L_{A90}) were recorded.

4 ACOUSTIC PERFORMANCE CRITERIA

The following section details the applicable noise criteria based on various guidelines of the Department of Environment, Climate Change and Water (DECCW).

This section of the report discusses noise criteria for the assessment of operational noise which includes:

- Fixed mechanical plant and equipment;
- Truck deliveries and movements;
- Loading dock activities; and,
- Traffic on Surrounding Roads.

The operational noise sources have been assessed in terms of the requirements of the DECCW's *Industrial Noise Policy (INP)* to consider acoustic amenity and intrusiveness. Mechanical plant is likely to operate continuously throughout the daytime and some may also operate at night time.

Sleep disturbance noise criteria, which takes into account short term transient noise events at night, have also been established.

4.1 *Industrial Noise Policy (INP)*

For sources such as the fixed plant associated with the facilities, appropriate noise criteria are specified in the *INP*. The noise criteria depends on whether existing noise levels in an area are close to recommended amenity levels for different types of residential receiver areas (i.e. urban, rural, near existing roads etc).

Where noise levels are currently low, noise levels from the proposed operation are limited by the intrusiveness criterion. In general, the L_{Aeq} noise level from such sources should not exceed the Rating Background Level (RBL) by more than 5dBA.

The amenity criterion sets an upper limit to control the total L_{Aeq} noise level from all industrial sources. In this case, the potentially affected residences to the north are in an area which would be classified as "suburban" whilst those to the east can be classified at "semi rural".

Where noise levels from industrial sources are close to or above the acceptable levels then the amenity criterion, which incorporates a sliding scale to set limits, would apply. The sliding scale prevents the overall noise level exceeding the acceptable level due to the addition of a new noise source. Amenity criterion also needs to consider the possibility of other developments which may affect noise levels.

The residences around the site are also affected by relatively high levels of traffic noise. The INP stipulates that where traffic noise may be high enough to make noise from an industrial source effectively inaudible the amenity criterion for noise from the industrial noise becomes the L_{Aeq}, period (traffic) minus 10 dB. Where applicable this principle has been applied.

Table 4-1 details site specific noise criteria.

Table 4-1 Project Specific Noise Criteria at Residences

Location	Area	Intrusiveness $L_{Aeq,15min}$			Amenity $L_{Aeq,period}$		
		Day	Eve	Night	Day	Eve	Night
A - Eskdale Street Residences	Urban	54	57	53	55	46*	43*
B – Pikes Lane Residences	Semi Rural	55	59	55	48*	48*	44*

Note Daytime 7.00am–6.00pm; Evening 6.00pm–10.00pm; Night time 10.00pm-7.00am

* Based on areas with high traffic noise levels whereby amenity criteria become existing L_{Aeq} – 10 dB.

In addition the INP recommends a noise goal of 50 dBA for areas of passive recreation. This noise goal has been established for the adjacent cemetery during the hours of operation i.e. daytime.

4.2 Sleep Disturbance

Intermittent noises due to activities such as trucks starting and loading dock activities during the night-time period are not directly addressed by the Industrial Noise Policy.

There is no universally accepted criterion governing the likelihood of sleep disturbance. In other words, at the current level of understanding, it is not possible to establish absolute noise level criteria that would correlate to an acceptable level of sleep disturbance (for all or even a majority of people). The DECCW recommends that, in order to minimise the risk of sleep disturbance from the operations during night-time operation that:

- *Sleep disturbance is assessed as the emergence of the $L_{A1(1\ minute)}$ level above the $L_{A90(15\ minute)}$ level at the time. Appropriate screening criteria for sleep disturbance are determined to be an $L_{A1(1\ minute)}$ level 15 dBA above the Rating Background Level (RBL) for the night-time period.*

Based on noise logging sleep disturbance criteria of **63 and 65 dBA** have been established for the Eskdale Street and Pikes Lane residences respectively.

4.3 Traffic Noise Criteria

Traffic associated with the site will travel both North and South on Wallgrove Road and the motorways. This will result in vehicles passing residences on these roads. Currently guidance on the setting of criteria applicable to public roads in NSW is provided by the Environmental Criteria for Road Traffic Noise (ECRTN) (EPA, 1999). Table 1 of this document provides the following guidance.

TYPE OF DEVELOPMENT	CRITERIA - dB(A)		
	DAY (7am-10pm)	NIGHT (10pm-7pm)	WHERE CRITERIA ARE ALREADY EXCEEDED
7. Land use developments with potential to create additional traffic on existing freeways / collector Roads	LAeq,15hr 60	LAeq,9hr 55	Where feasible and reasonable, existing noise levels should be mitigated to meet the noise criteria. Examples of applicable strategies include appropriate location of private access roads; regulating times of use; using clustering; using 'quiet' vehicles; and using barriers and acoustic treatments. In all cases, traffic arising from the development should not lead to an increase in existing noise levels of more than 2 dB.

5 PREDICTED OPERATIONAL NOISE LEVELS AND ASSESSMENT

Noise predictions associated with the likely operation of the proposed facilities on the adjacent residential areas to the north and east of the site have been conducted. The noise modelling was used to assess the potential for noise impact at the nearby surrounding receivers.

As the project is in concept stage exact details of buildings and equipment are not know. However indicative buildings and equipment have been modelled for the day and night periods based on our experience of similar facilities.

Site related noise emissions were modeled using the CONCAWE algorithms implemented in the "Cadna A" acoustic noise prediction software. Factors that are addressed in the noise modeling are:

- Equipment sound level emissions and location;
- Screening effects from buildings;
- Receiver locations;
- Ground topography;
- Noise attenuation due to geometric spreading;
- Ground Absorption;
- Atmospheric absorption; and,
- Meteorological Conditions.

Computation of noise emissions were carried out based on calm meteorological conditions for the day period and for a night period temperature inversion of 3 degree / 100 m has been included.

5.1 Equipment Noise Levels

Table 5-1 presents a summary of the sound power levels utilised in the noise prediction model for the various items of plant and mobile equipment.

Table 5-1 Summary of Sound Power Levels Used for Plant and Mobile Equipment

Item	Operating Condition	Overall L_{Aeq} Sound Power Level (dBA)
Semi – trailer at Dock	Loading/Unloading	87
Petrol Forklift	Lifting, moving	96
Exhaust Fan	Operating	95
Semi-tailer	Driving through yard	104

For the modelling purposes it has been assumed that activities within each lot will be contained within the structure of each building. Typically, such buildings will consist of tilt up slab walls and a metal roof. Therefore the roof fans and yard activities are likely to be the most acoustically significant sources on site.

5.2 Operational Noise

Operational site noise will be mainly associated with truck movements and dock activities along with exhaust fans. These may occur on a 24 hour basis. Accordingly assessments of typical operating scenarios have been conducted. The assessment is based on previous measurements conducted at similar facilities.

5.2.1 Noise Model Scenarios

Noise emanating from the facilities and roof fans was modelled based on an indicative building layout. The modelled noise levels are considered representative of a busy period which would typically occur during the day and night-time periods.

Tables 5-2 presents the operational scenario for day operation used in the noise modelling.

Table 5-2 Daytime Operating Scenario (15 minute period)

Plant/Equipment Type	Number of Items	Description of Modelled Industrial Operations
Semi Trailers at Dock	10	Loading/Unloading each operating for a period of 15 minutes.
Forklift	7	Operating for the entire 15 minute period.
Semi Trailer	10	Trucks entering and leaving the site (2 minutes duration each)
Fans	37	Located on Roofs of Buildings

At night a reduced number of facilities are likely to operate operate. In the night scenario it has been assumed operation will occur on the larger lots on the site. Table 5-3 presents the operational night scenario.

Table 5-3 Night Operating Scenario (15 minute period)

Plant/Equipment Type	Number of Items	Description of Modelled Industrial Operations
Semi Trailer at Dock	6	Loading/Unloading each operating for a period of 3 minutes.
Forklift	4	Operating for the entire 15 minute period.
Semi Trailer	6	Trucks entering and leaving the site (2 minutes duration each)
Fans	20	Located on Roofs of Buildings

5.2.2 Predicted operational noise

The lower of the intrusive and amenity criteria has been adopted based on the assumption that the scenarios continuously occur throughout the day and night periods. As a result, the assessment is based on a worst case scenario.

Table 5-4 presents the predicted noise levels at adjacent residences and the cemetery grounds for daytime operation.

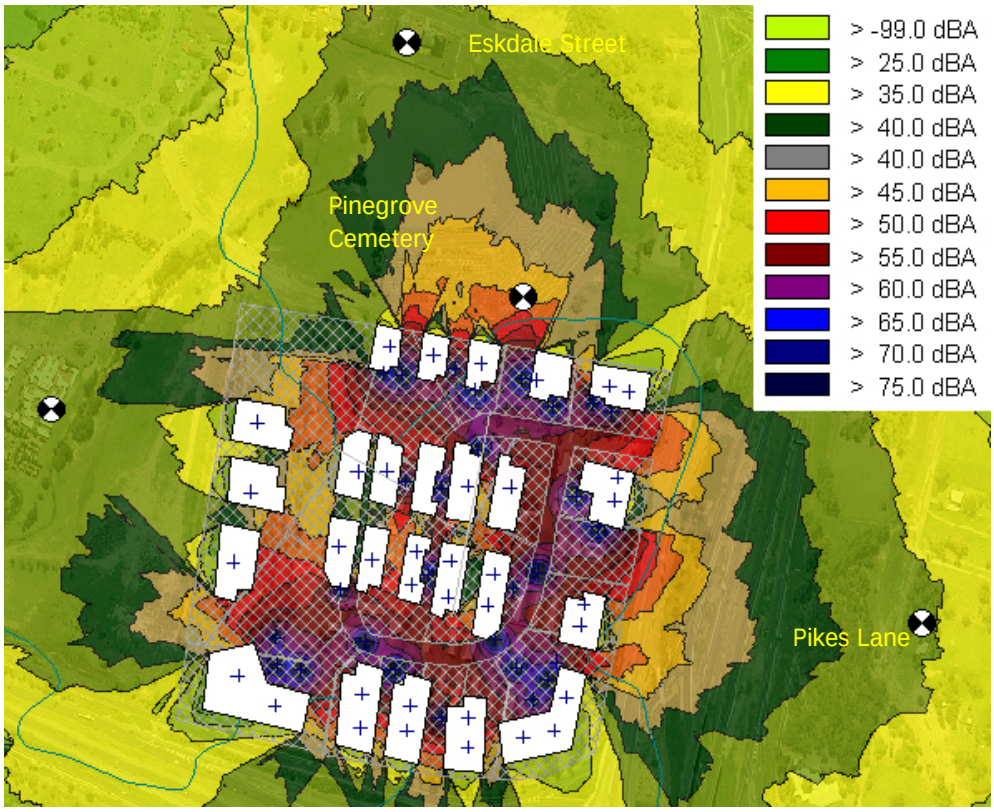
Table 5-4 Predicted Noise Levels at Surrounding Receivers- Daytime Operating Scenario - (dBA).

Receiver	Predicted Noise Level	Noise Goal
Eskdale Street Residences	39	54
Pike Lane Residences	38	48
Cemetery – Oakside Drive	39	50
Cemetery - Melville Drive	48	50

A review of the predicted noise levels indicated that resultant noise levels are likely to be well below noise criteria at residences and the adjacent cemetery.

Figure 5-1 illustrates the noise propagation of the daytime noise scenario

Figure 5.1 Daytime Noise Levels



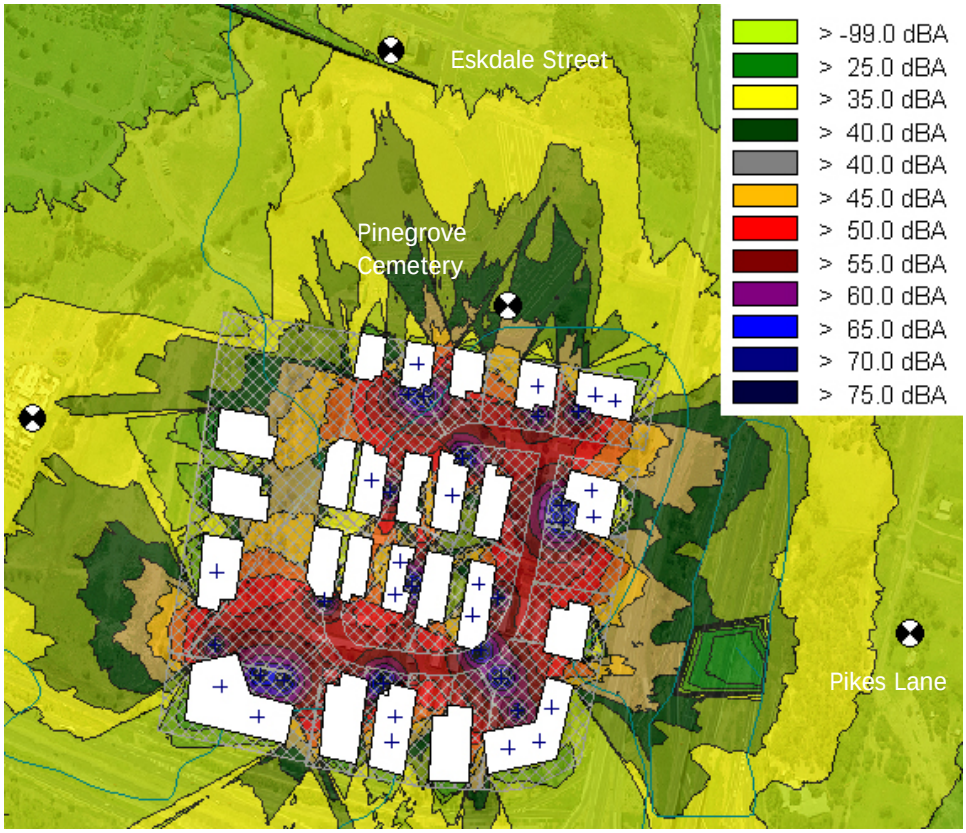
The following Table 5-5 presents the predicted noise levels at adjacent residences for night time operation. In this scenario we have modelled for temperature inversion conditions that are likely to occur on winter nights.

Table 5-5 Predicted Noise Levels at Surrounding Receivers- Night Operating Scenario - dBA

Receiver	Predicted Noise Levels	Noise Goal
Eskdale Street Residences	39	43
Pike Lane Residences	38	44
Cemetery – Oakside Drive	N/A	N/A
Cemetery - Melville Drive	N/A	N/A

A review of the predicted night noise levels indicates that resultant noise levels are likely to be below established noise criteria at residences.

Figure 5.2 Night Noise Levels



5.2.3 Sleep Disturbance Assessment

Based on previous experience of loading dock activities, trucks, trolleys and roller doors tend to produce the highest noise levels. The rumbling and impact noise occur for periods of approximately ten seconds at a time.

Reversing alarm and engine noise occur at the beginning and end of loading dock activities and the entire loading/unloading procedure usually lasts less than half an hour.

Table 5-6 details the loading dock sources that have been considered along with the typical maximum noise levels associated with these activities.

Table 5-6 Typical Loading Dock Activities and Maximum Sound Power Levels -

Noise Source	Sound Power Level dBA
Truck engine	100
Truck along access road	104
Reversing alarm	100 to 110
Roller door	94
Trolley	93

Resultant noise levels at residences at residences have been predicted based on noise associated with reversing alarms positioned on the northern and eastern sides of the site with no buildings between the noise source and receivers. Table 5-7 presents resultant noise levels as follows:

Table 5-7 Predicted Maximum L_{A1} Noise Levels at Residences- dBA

Receiver	L_{A1} Noise Level	
	Calm Condition	Temperature Inversion
Eskdale Street Residences	46	49
Pike Lane Residences	47	50

A review of predicted noise levels indicates that noise levels at residences will be well below the established sleep disturbance noise criteria. Therefore no noise control measures will be required. Further these levels represent the worst case scenario where much of the noise from trucks and loading activities will be shielded by the structures on site.

5.3 Mechanical Services Noise

Mechanical plant associated with the proposed industrial development can have the potential to impact on future nearby residential properties and receivers if not addressed at the planning stage. At this stage of the project, the selection of the type and location of mechanical plant associated with the proposed development is not known.

At the detailed design stage of the project the selected plant noise levels must be assessed with respect to established noise criteria. Should an exceedence be indicated it is envisaged that standard noise control measures will be adopted to ensure that the acoustic amenity of nearby residences is maintained.

Indicative engineering treatment methods that can be adopted are:

- Judicious selection of plant and equipment behind built elements to provide shielding to residences;
- Silencers; and,
- Acoustically lined ductwork.

It is also noted that office areas are likely to be located away from residences towards the central access road and therefore noise associated with air conditioning plant servicing these areas is unlikely to be acoustically significant.

5.4 Industrial Noise Emissions

The proposed facilities may also contain light industry type operations. Based upon previous experience of light to medium warehouse facilities an indicative internal reverberant noise level is typically around 70 dBA.

As the buildings will typically be constructed of tilt up concrete walls with metal roofing with insulation and sarking these constructions will adequately control noise emissions from the buildings on site.

Should activities that generate higher noise levels that those indicated in this assessment then the additional noise control measures may be required. Indicatively these can consist of measures such as:

- Acoustic louvres on openings facing residences,
- Ceilings in Factory Areas,
- Acoustic Lining of Walls; and,
- Judicious Location of plant and Openings.

Locating noise producing factories to the south of the site where these will be increased distance and shielding by other buildings on the development site will ameliorate noise from this industry. These issues can be adequately addressed at the development application stage of individual facilities.

6 TRAFFIC NOISE

Preliminary advice from the traffic consultant '*Transport and Traffic Planning Consultants Pty Ltd'* indicates that the site will generate a maximum traffic of 9,000 vehicles per day (vpd) with about 3 percent being heavy vehicles. This compares to a current AADT on Wallgrove Road of 36,340 vpd.

As the site is in close proximity to the M7 and M4 motorways it is likely that almost all of traffic from the site will access or depart by either of these motorways whereby the noise contribution of any traffic using the Great Western Highway will be acoustically insignificant.

Figure 6.1 illustrates the likely routes that will be used to access the surrounding motorways. It is noted that traffic generated by the site does not pass by any residences between the motorways and the site. Therefore the potential for adverse traffic noise impact at any residences is negligible.

Figure 6.1 Access Routes form the Site to surrounding Motorways.

7 SUMMARY OF FINDINGS AND RECOMMDNEDATIONS

A review of the site and potential operations indicates that, based on the indicative site layout, the potential for adverse noise impact at surrounding receivers is low.

The following planning concepts should be adopted to ensure that no adverse acoustic impact occurs:

- Site Specific Noise Criteria have been established for surroundings receivers. These criteria are considered appropriate for the surrounding areas and are in accordance with DECCW objectives.
- The layout of the site facilitates the containment of noise generated by air conditioning plant, vehicles and loading activities by orientating the lots so that the future buildings are likely to shield any noise generated on site.
- New facilities should orientate openings away from residences and the cemetery.
- Industrial facilities that are likely to generate high internal noise levels should be assessed in detail to determine whether additional treatment of the buildings is required.
- Future developments should be reviewed at Development Application stage to ensure that noise at surrounding residence are consistent with the findings of this report. Where necessary engineering noise controls should be incorporated in the design to mitigate any identified noise impact.
- The design of buildings and driveways should consider minimising the need for reversing of trucks so that the frequency of reversing alarms is reduced.

8 CONCLUSION

Wilkinson Murray Pty Ltd has conducted an acoustic assessment of the concept layout for proposed warehouse / industrial facility at 60 Wallgrove Road, Minchinbury.

The noise assessment was carried out in accordance with NSW DECCW Industrial Noise Policy.

Noise from the site (including; mechanical ventilation, forklifts, loading dock activities, delivery vehicles, etc) having the potential to impact on nearby residential receivers has been assessed based on indicative site layout and operation scenarios with respect to established noise criteria.

The key findings of this assessment are as follows:

Mechanical Noise Emissions

Specific plant selections have not been made at this stage of the project. This issue will be reviewed at the detailed design stage of the project to ensure noise compliance is achieved at surrounding receivers. The site specific noise criteria have been determined based on ambient noise measurements. Where a reduction in plant noise is indicated standard engineering noise controls will be adopted.

It is concluded that with standard engineering treatments to the mechanical plant, the proposed development will not adversely impact on acoustic amenity of surrounding residences.

Industrial Noise

The predicted site industrial noise emissions at residential receivers and the cemetery are indicated to be below the established DECCW criteria. This is based on noise containment achieved based in typical internal noise levels and standard the warehouse construction.

Loading Dock Activities and Outside Activities

Noise from the external areas has been modelled for indicative “worst case” day and night periods. Compliance with established noise criteria is indicated even under adverse weather conditions. The protection of the amenity of surrounding receivers is facilitated by the layout of the development whereby buildings on the site will shield the residences from any noise generated on the site.

In the case of the amenity at the cemetery resultant noise levels are predicted to be below existing traffic noise levels. Therefore no adverse impact at these locations is predicted.

Sleep Disturbance

No sleep disturbance due to night operations is indicated.

Traffic Noise

As the site is in close proximity to the M7 and M4 motorways it is likely that almost all of traffic from the site will access or depart by either of these motorways. The noise contribution any traffic using the Great Western Highway will be acoustically insignificant at surrounding residences

It is noted that traffic generated by the site does not pass by any residences between the motorways and the site. Therefore the potential for adverse traffic noise impact at any residences is considered negligible.

Note

All materials specified by Wilkinson Murray Pty Limited have been selected solely on the basis of acoustic performance. Any other properties of these materials, such as fire rating, chemical properties etc. should be checked with the suppliers or other specialised bodies for fitness for a given purpose.

Quality Assurance

We are committed to and have implemented AS/NZS ISO 9001:2000 “Quality Management Systems – Requirements”. This management system has been externally certified and Licence No. QEC 13457 has been issued.

AAAC

This firm is a member firm of the Association of Australian Acoustical Consultants and the work here reported has been carried out in accordance with the terms of that membership.

Version	Status	Date	Prepared by	Checked by
B	Draft	17 November 2009	Brian Clarke	John Wasserman

APPENDIX A

GLOSSARY OF TERMS

GLOSSARY

Most environments are affected by environmental noise which continuously varies, largely as a result of road traffic. To describe the overall noise environment, a number of noise descriptors have been developed and these involve statistical and other analysis of the varying noise over sampling periods, typically taken as 15 minutes. These descriptors, which are demonstrated in the graph overleaf, are here defined.

Maximum Noise Level (L_{Amax}) – The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.

L_{A1} – The L_{A1} level is the noise level which is exceeded for 1% of the sample period. During the sample period, the noise level is below the L_{A1} level for 99% of the time.

L_{A10} – The L_{A10} level is the noise level which is exceeded for 10% of the sample period. During the sample period, the noise level is below the L_{A10} level for 90% of the time. The L_{A10} is a common noise descriptor for environmental noise and road traffic noise.

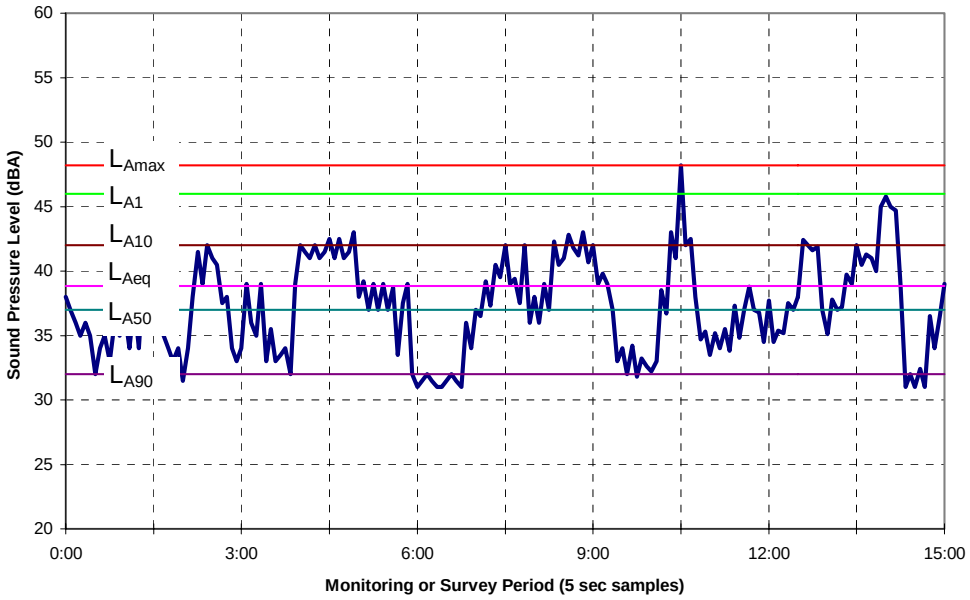
L_{Aeq} – The equivalent continuous sound level (L_{Aeq}) is the energy average of the varying noise over the sample period and is equivalent to the level of a constant noise which contains the same energy as the varying noise environment. This measure is also a common measure of environmental noise and road traffic noise.

L_{A50} – The L_{A50} level is the noise level which is exceeded for 50% of the sample period. During the sample period, the noise level is below the L_{A50} level for 50% of the time.

L_{A90} – The L_{A90} level is the noise level which is exceeded for 90% of the sample period. During the sample period, the noise level is below the L_{A90} level for 10% of the time. This measure is commonly referred to as the background noise level.

ABL – The Assessment Background Level is the single figure background level representing each assessment period (daytime, evening and night time) for each day. It is determined by calculating the 10^{th} percentile (lowest 10^{th} percent) background level (L_{A90}) for each period.

RBL – The Rating Background Level for each period is the median value of the ABL values for the period over all of the days measured. There is therefore an RBL value for each period **–** daytime, evening and night time.

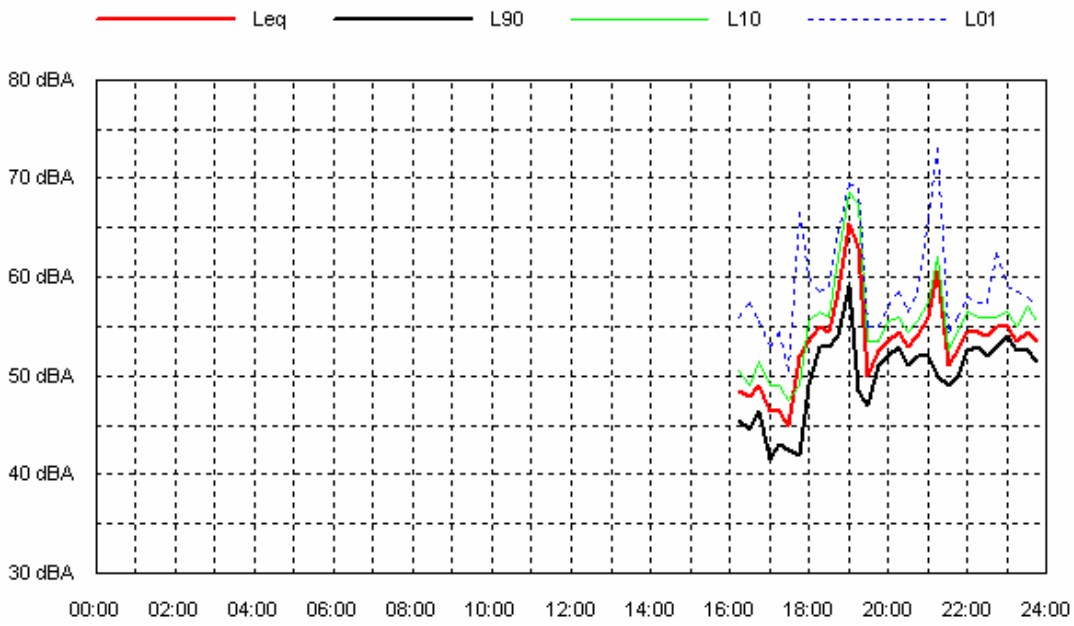

60
55
50
45
40
35
30
25
20
Sound Pressure Level (dBA)
LAmax
LA1
LA10
LAeq
LA50
LA90
0:00
3:00
6:00
9:00
12:00
15:00
Monitoring or Survey Period (5 sec samples)

APPENDIX B

NOISE MEASUREMENT RESULTS

Location: Eskdale Street

Tue 14 Apr 09



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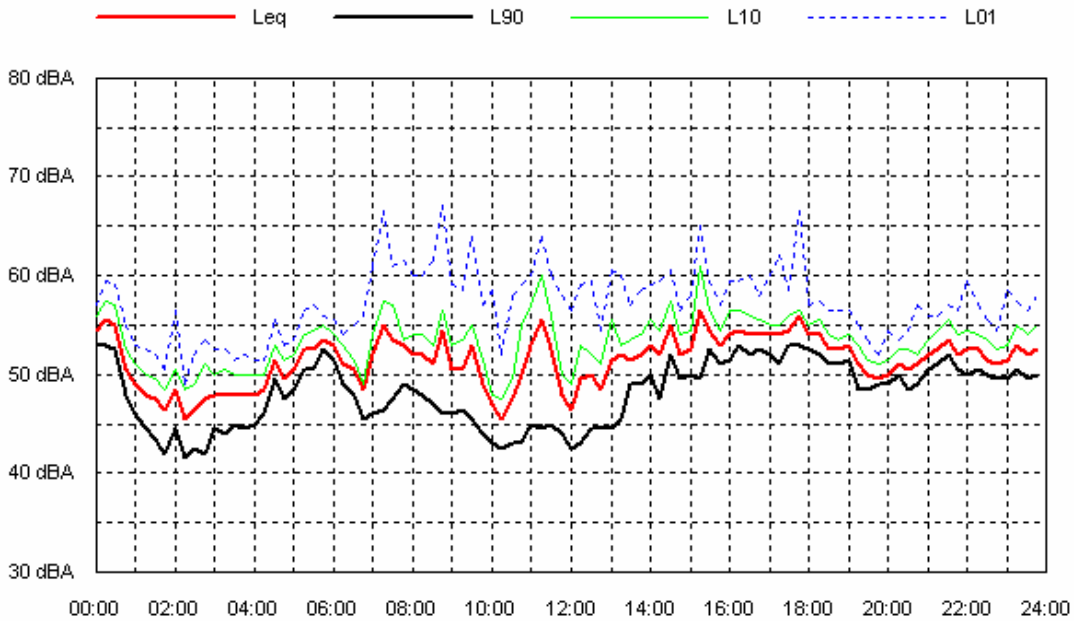

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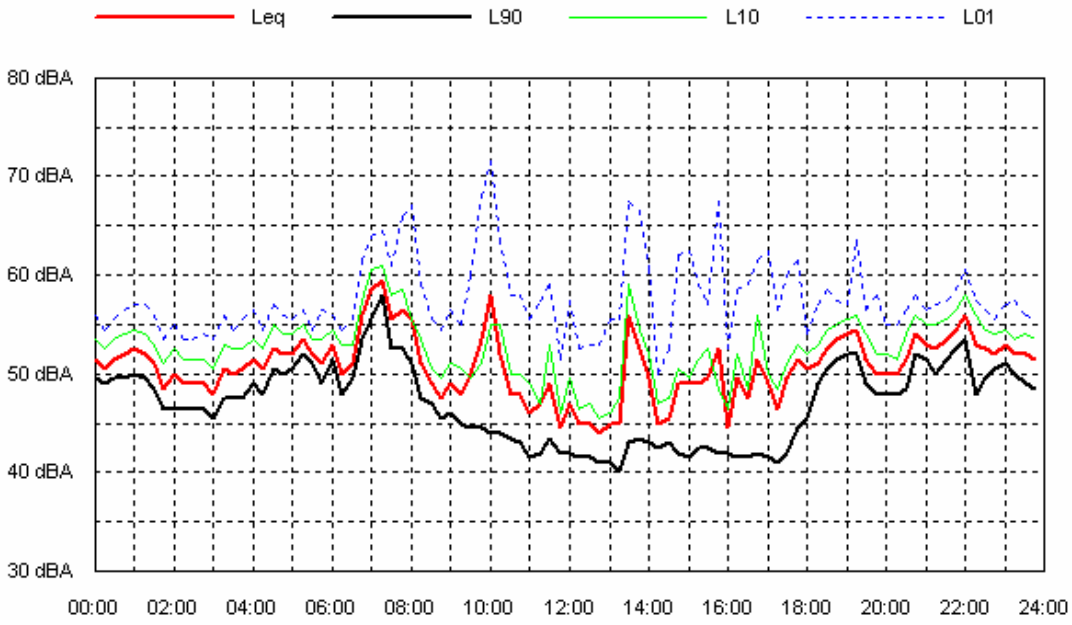

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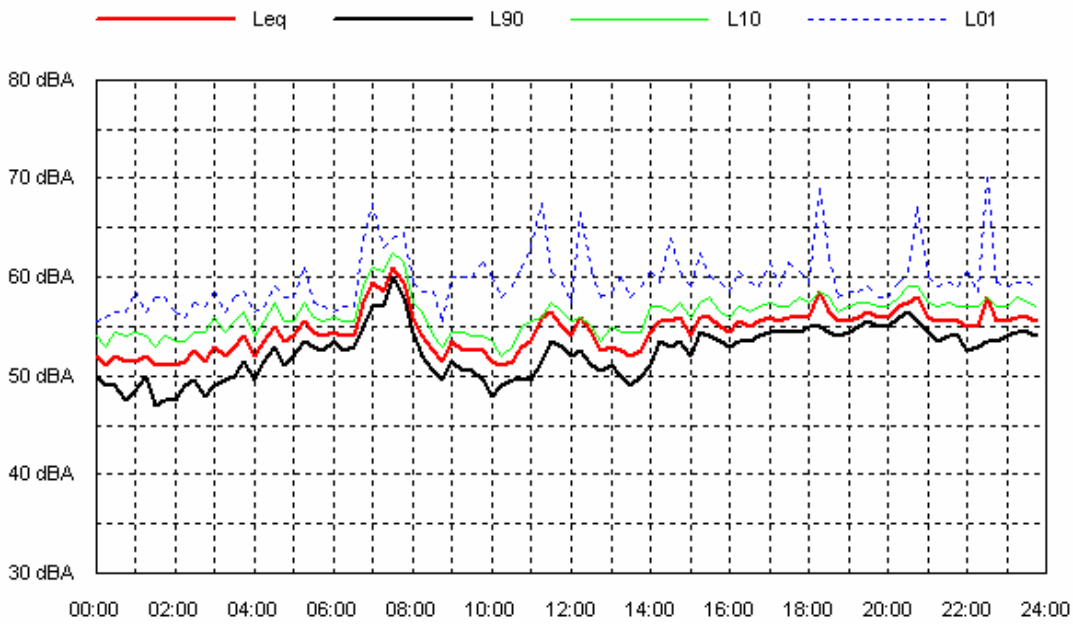

Location: Eskdale Street

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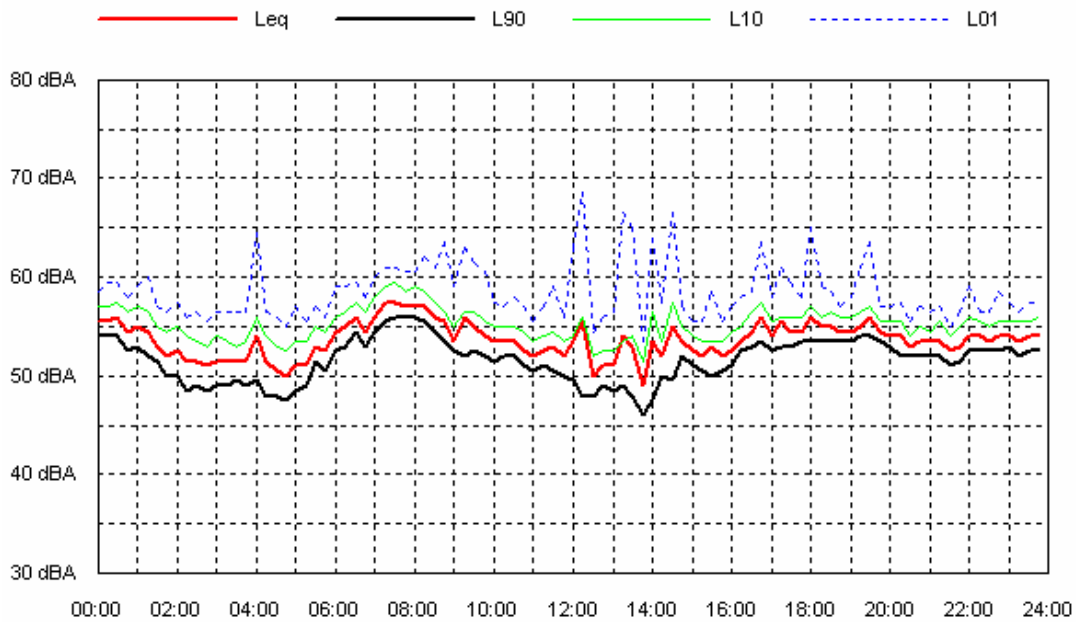

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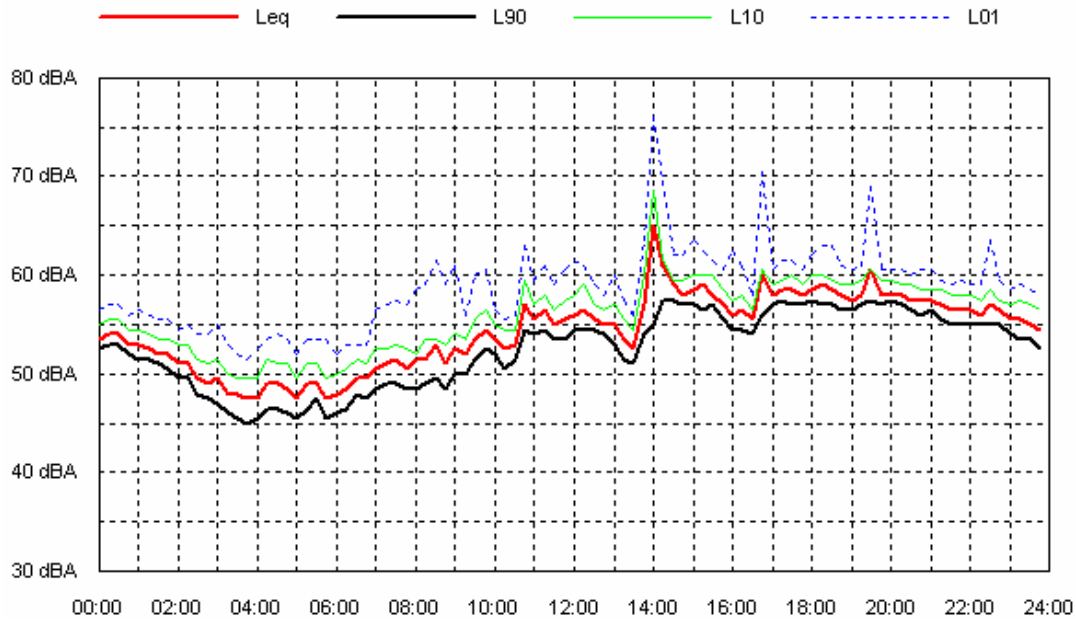

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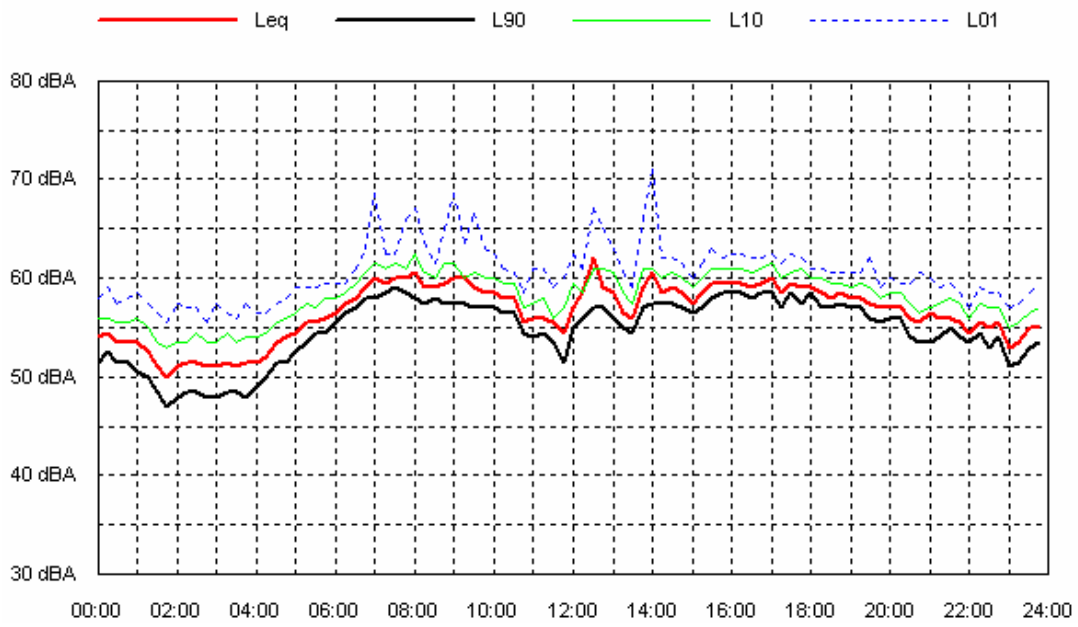

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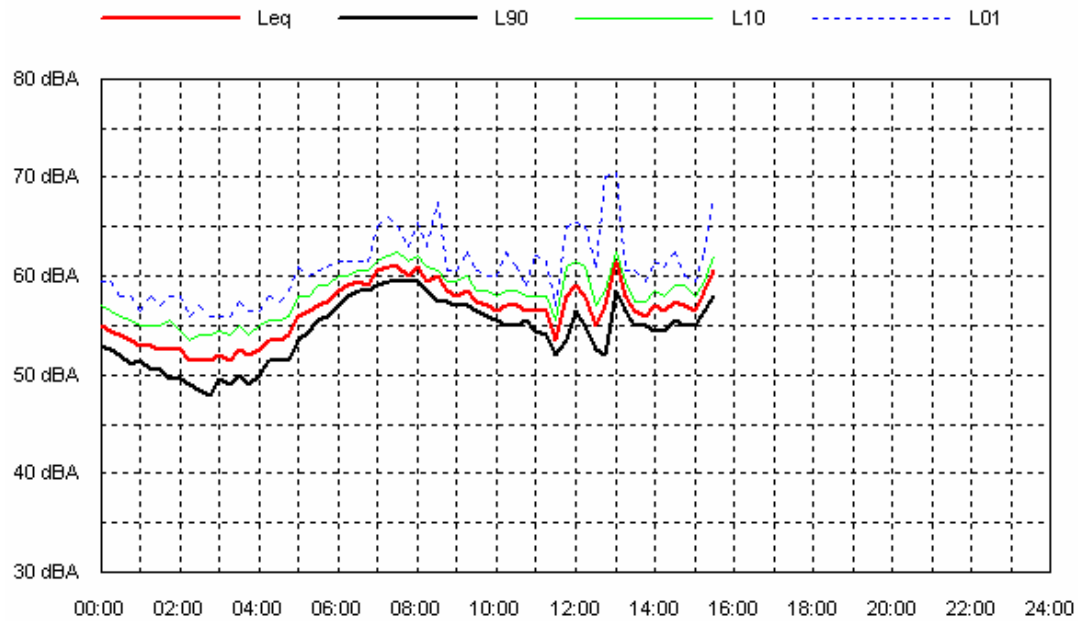
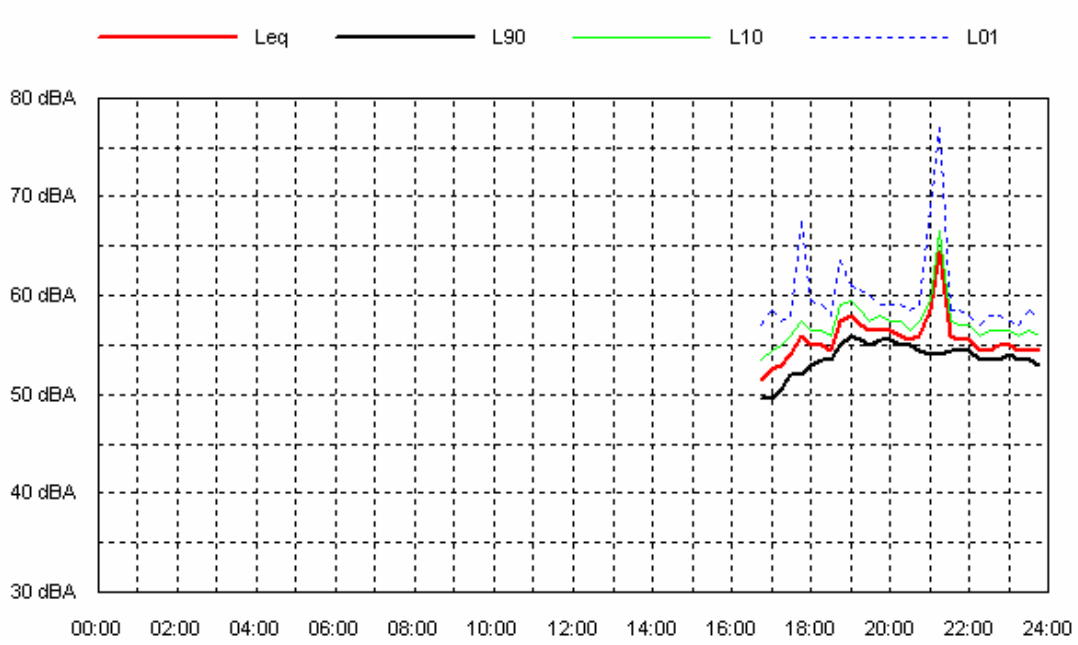
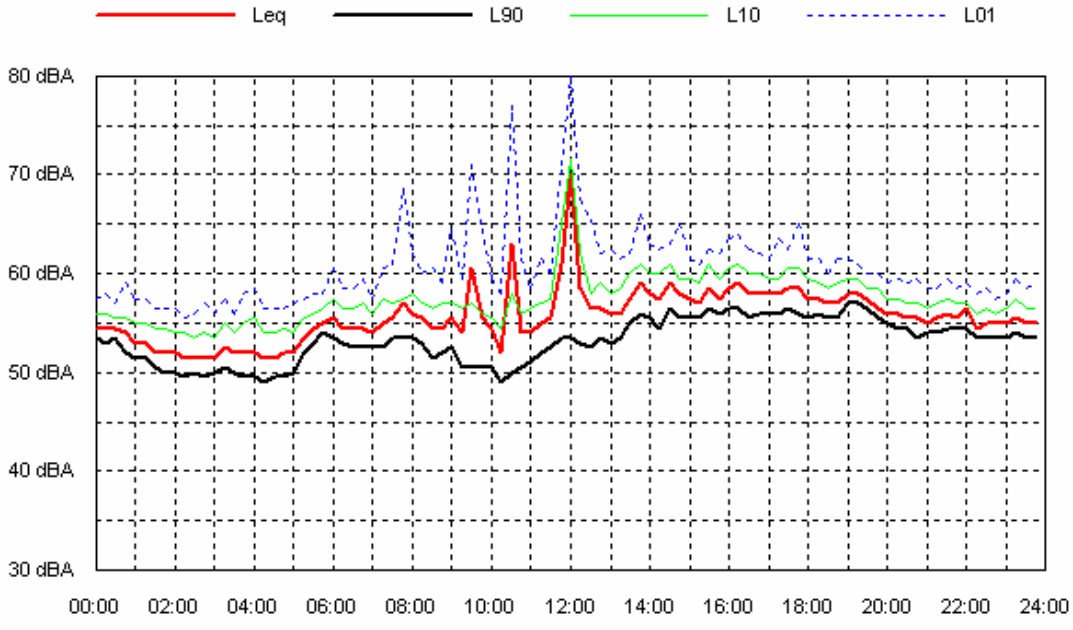


Location: Pikes Lane Residence

Tue 14 Apr 09

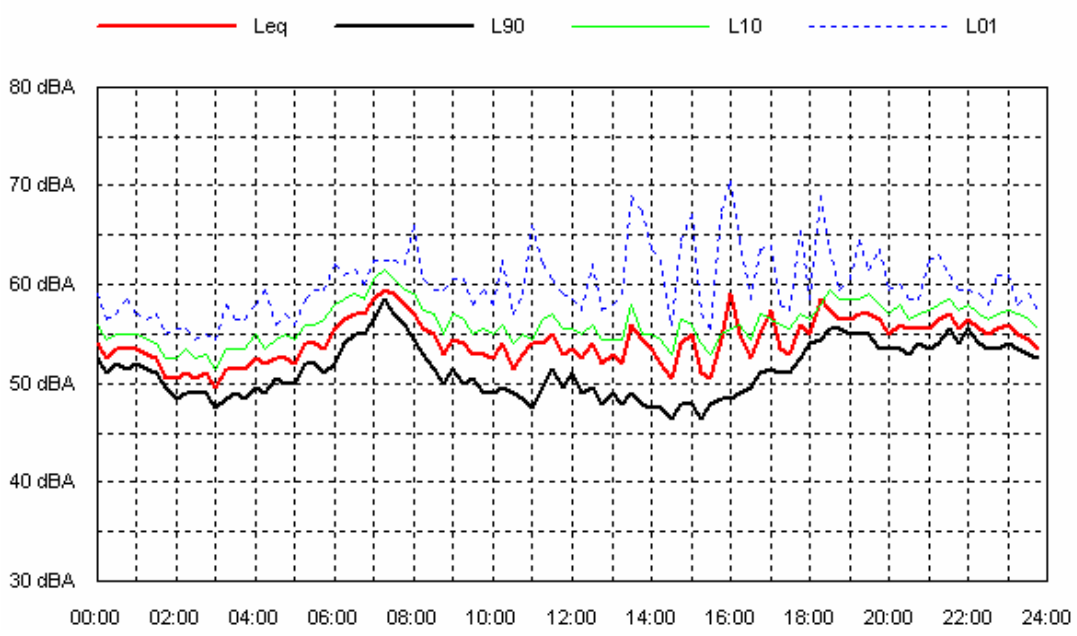


Wed 15 Apr 09

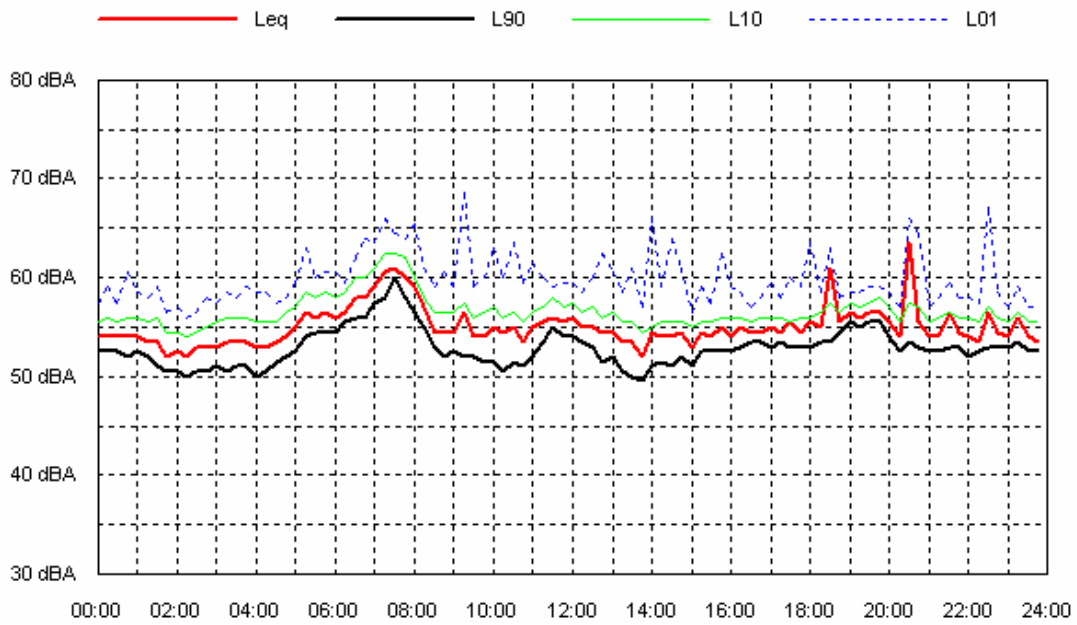


Location: Pikes Lane Residence

Thu 16 Apr 09

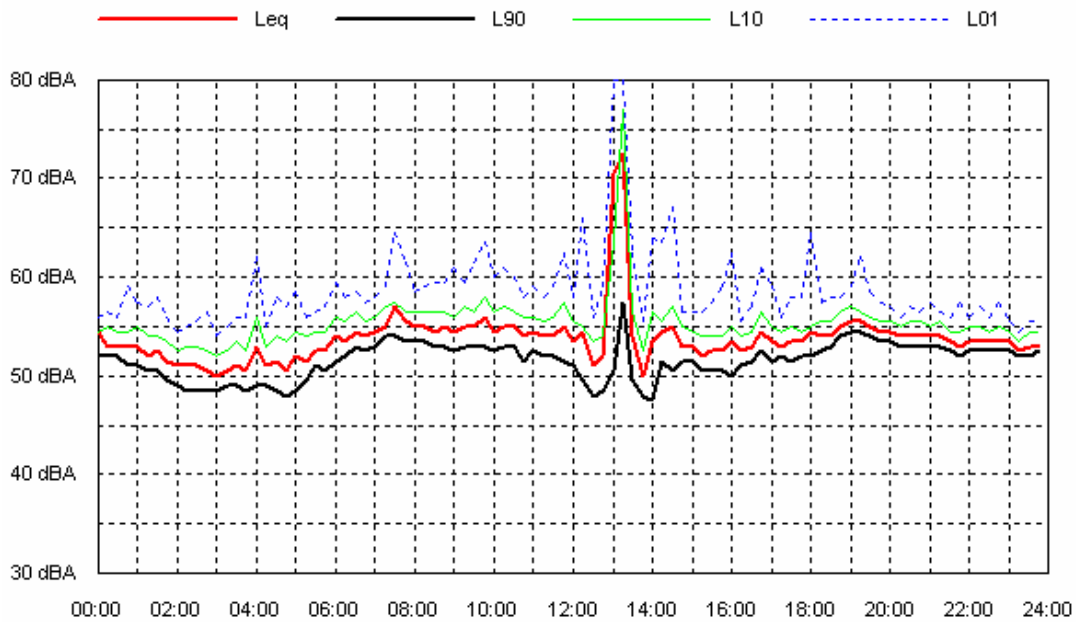


Fri 17 Apr 09

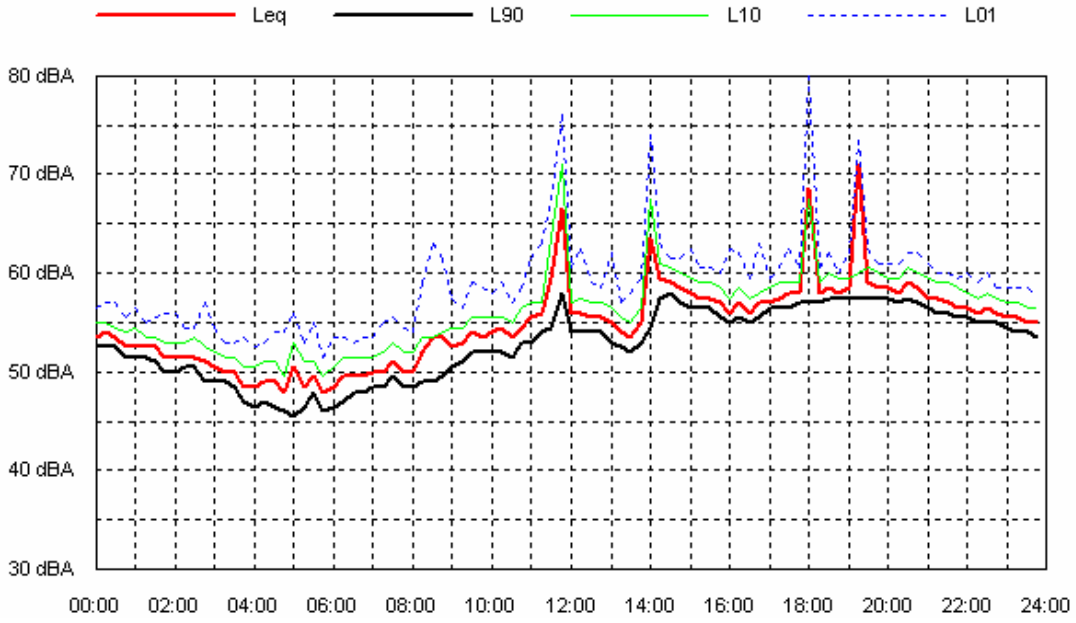


Location: Pikes Lane Residence

Sat 18 Apr 09

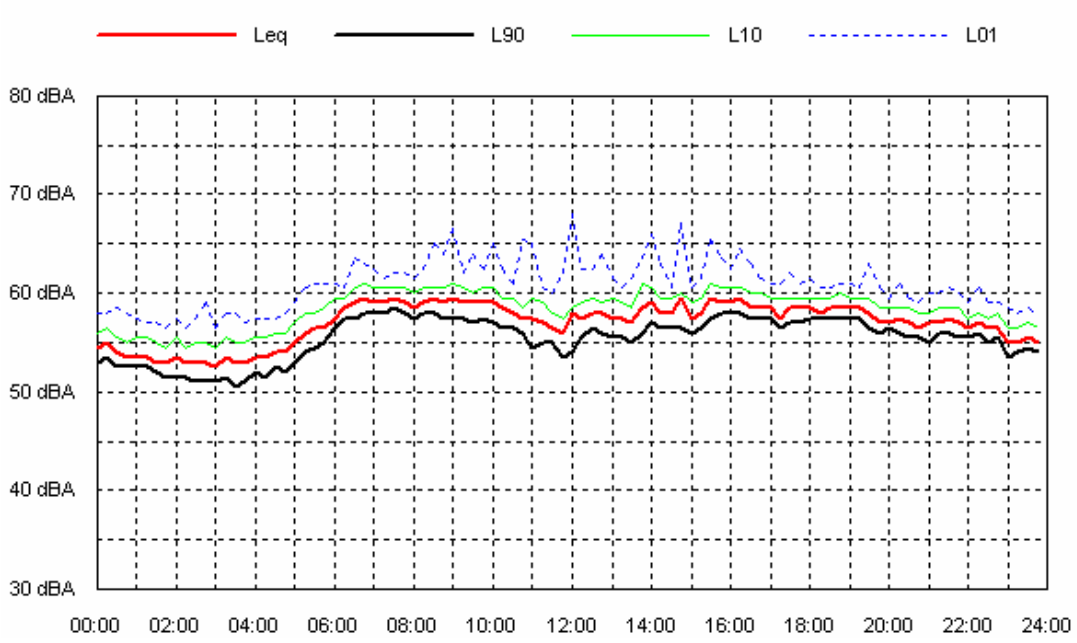


Sun 19 Apr 09



Location: Pikes Lane Residence

Mon 20 Apr 09



Tue 21 Apr 09