

Orora Pty Ltd

B9 Paper Mill – EPL Compliance Quarterly noise monitoring report



25 September 2017

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B9 Paper Mill - EPL Compliance

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Glossary

Acoustic and vibration related terms:

- **Acoustic Spectrum:** A representation of a sound sample (usually short term) of the amount of energy or sound level per frequency.
- **Ambient Noise:** Ambient noise encompasses all sound present in a given environment, being usually a composite of sounds from many sources near and far.
- **dB(A):** A unit of sound measurement which has frequency characteristics weighted so that it approximates the response of the human ear to sound waves
- **Heavy Vehicle:** A truck, transport or other vehicle with a gross vehicle weight above a specified level (for example: over 8 tonnes)
- **L_{A90}:** Is the noise level that is exceeded 90 per cent of the measurement time. This parameter is commonly referred to as the background noise level
- **L_{Aeq}:** Noise level that represents the energy average noise from the source during a specified time period, and is the equivalent continuous sound pressure level for a given period
- **L_{Aeq(15hr)}:** The Leq noise level for the period from 7 am to 10 pm.
- **L_{Aeq(9hr)}:** The Leq noise level for the period from 10 pm to 7 am.
- **NCA:** Noise Catchment Area. Grouping dwellings or receivers together in terms of similar noise environment.
- **Noise barrier:** Generally a wall or an earth mound that obstructs or restricts the passage of sounds waves from a noise source
- **Noise Logger:** A data logging (data and audio in some cases) which records noise. Usually used for unattended noise monitoring of background or ambient noise.
- **NML:** Noise Management Level as detailed in the NSW Interim Construction Noise Guideline. The NML is the noise goal for construction activities.
- **Octave Bands:** Sounds that contain energy over a wide range of frequencies are divided into sections called bands. A common standard division is in 10 octave bands identified by their center frequencies 31.5, 63, 250, 500, 1000, 2000, and 4000 Hz
- **RBL:** Rating Background Level is the overall single figure background level representing each assessment period over the whole monitoring period. The RBL is used for determining the appropriate construction noise criteria.
- **RNP:** Road Noise Policy (OEH, 2011)
- **Sound Level Meter:** An instrument consisting of a microphone, amplifier and data analysis package for quantifying and measuring noise.
- **Sound Power Level (L_w):** Sound power level or acoustic power level is a logarithmic measure of the sound power in comparison to a specified reference level.
- **Sound Pressure Level (SPL or L_p):** The level of noise, usually expressed in dB(A), as measured by a standard sound level meter.

1. Introduction

1.1 Background

ORORA Packaging operates the B9 Paper Mill at its Botany site in Sydney, NSW. The Paper Mill is subject to operational noise conditions set out in the Ministers Conditions of Approval (MCoA) (including subsequent modifications) and the Environment Protection Licence (EPL) No. 1594.

As part of the EPL, there is a requirement to undertake quarterly monitoring at receivers surrounding the site to show compliance with set noise limits. This report covers the July-September 2017 quarter. At the time of preparing this report, the B9 paper machine has been in use for over 4 years and is currently operating at typical production capacity. Traffic currently accesses the site via Botany Road with product trucks and delivery vehicles exiting the site via McCauley Road as per the site traffic plan.

Recent modifications to the site layout include the demolition of the remains of the old B5 building, and construction of a new waste water treatment plant. Also a large warehousing development on the boundary of the site at the corner of McCauley Street and Australia Avenue was completed in 2016. This development has added a significant proportion of acoustic shielding for receivers directly north of the site, reducing noise sources in the south including Orora, Sydney Ports, and traffic on Botany Road.

The B7 paper machine building, scheduled for demolition, was in place during the monitoring.

1.2 Objective

This report addresses operational licence conditions relating to measurements of the quarterly monitoring of the noise environment around the Orora site, ie Condition M6.1 and M6.2 of EPL 1594. These require:

- M6.1 The licensee must undertake noise monitoring at least once every three months to check compliance with the noise limits specified in Condition L4.1.
- M6.2 All monitoring required by this licence must be undertaken in accordance with Australian Standard 2659.1 – 1998: Guide to the use of sound measuring equipment – Portable sound level meters, or any revisions of that standard which may be made by Australian Standards Authority, and the compliance monitoring guidance provided in the NSW Industrial Noise Policy.

1.3 Operational noise limits

Operational noise limits for the new Orora Paper Mill are detailed in condition L4.1 of EPL 1594 and Condition 10 of the MCoA. These have been replicated in **Table 1**.

Table 1 Operational noise limits

ID	Location	Day	Evening	Night	Night
		L _{Aeq,15min} , dB(A)	L _{Aeq,15min} , dB(A)	L _{Aeq,15min} , dB(A)	L _{Amax} , dB(A)
R1	Corner of McCauley Street and Australia Avenue	46	45	43	55
R2	Australia Avenue	45	45	43	55
R3	Murrabin Avenue	46	45	43	55
R4	Partanna Avenue	42	41	41	55
R5	Corner of Partanna Avenue and Moorina Avenue	42	42	39	55
R6	Moorina Avenue	43	43	39	55

2. Existing environment

The site is located within a predominantly industrial area having residential properties located to the north and at the north-eastern boundary, as illustrated in Figure 1. The local noise environment beyond the Orora boundary varies throughout the day depending on the contribution of sources such as high traffic volume and heavy vehicles using Botany Road, aircraft noise, port noise, local businesses on McCauley Road, and local traffic.

Meteorological conditions also play an important role in the propagation of noise due to the site location near the coast. These conditions include strong drainage flows for wind direction and also temperature inversions during the winter months. A trend in seasonal variations of the noise environment is becoming apparent in the long-term monitoring data for the local area.

2.1 Monitoring limitations

Total measured noise levels at monitoring locations are only partly due to Orora site operations. The local noise environment has been a feature of the area for many years. Direct monitoring of Orora noise emissions over this time has demonstrated that specific contribution from Orora cannot be provided with any certainty, mainly due to the contribution of other audible noise sources adjacent to the site.

In the most recent noise monitoring survey, long term monitoring was undertaken over a one-week period at six receiver locations

2.2 Receiver locations

The EPL specifies six locations for quarterly monitoring. These are illustrated in **Figure 1** and described further in **Table 2**.

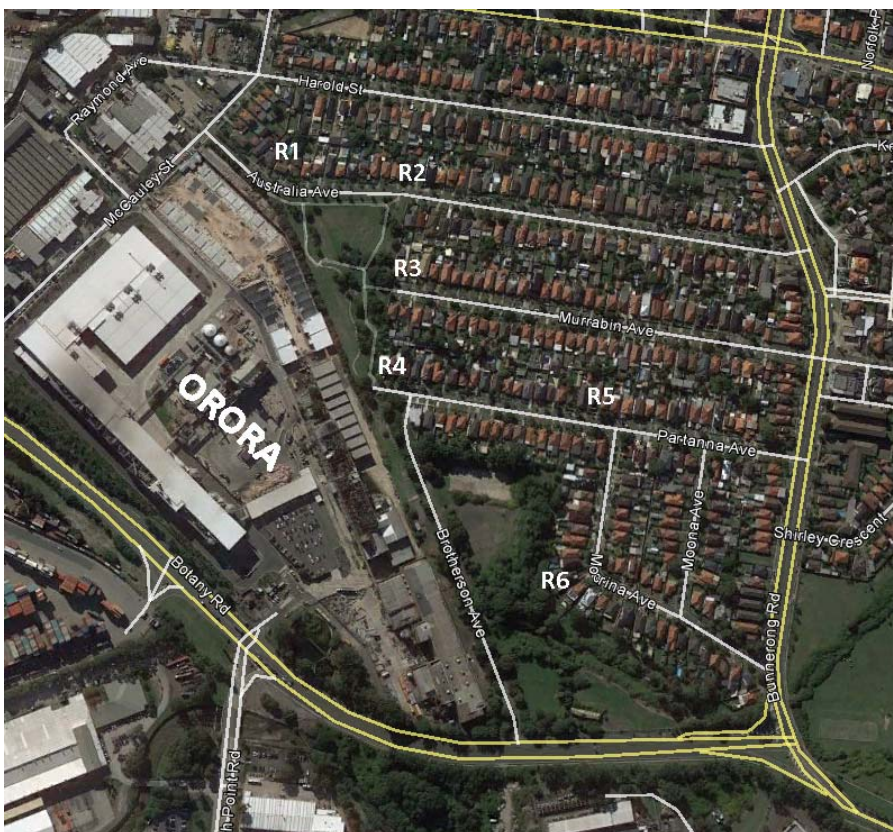


Figure 1 Site location and compliance monitoring locations (Source: Google Maps 2016)

Table 2 Description of monitoring locations

Monitoring location	Description
R1	This location has a large degree of acoustic shielding from local noise sources due to the recent development of a warehousing facility on the corner of McCauley Avenue and Australia Avenue. The noise environment at this location is heavily influenced by traffic on McCauley Street, Perry Street and Beauchamp Road. Local industrial noise from Raymond Avenue is also audible during the day and night time. Some construction work was in progress at the property during the monitoring period.
R2	This receiver is located opposite the bottom apex of the Purcell Park on Australia Avenue. At this location the residents have a clear line of sight to the paper mill. Noise walls have less effectiveness for the residences due to the large separation distances. Noise from port activities also has less shielding from the Orora site. Background noise levels are heavily dominated by road traffic noise from all sources.
R3	The receivers at Partanna Avenue are physically closest to the Orora site but have the benefit of significant shielding of operational activities from the B7 paper machine building and the No. 7 reel store. Road traffic noise contributes to background noise for this receiver. Some construction work was in progress at the property during the monitoring period.
R4	Furthest location from the Orora site, a higher degree of influence from Botany Road, Bunnerong Road and the port. Noise from the Orora site is generally inaudible at this location although significant noise from the Orora site has been observed here during adverse meteorological conditions. Some construction activity was noted at the adjacent property during the monitoring period.
R5	In this location receivers are well shielded from operational noise from the Orora site due to the presence of the redundant No. 7 and No. 8 paper machine buildings. Noise levels at this location are heavily influenced by local bird colonies, port noise, traffic on Botany road and traffic on Bunnerong Road.
R6	In this location receivers are well shielded from operational noise from the Orora site due to the presence of the redundant No. 7 and No. 8 paper machine buildings. Noise levels at this location are heavily influenced by local bird colonies, port noise, traffic on Botany road and traffic on Bunnerong Road.

3. Operational noise monitoring

3.1 Method

Operational noise monitoring for the August monitoring period between 7 and 14 August 2017, using automatic noise loggers deployed at six representative locations.

Monitoring was performed using Acoustic Research Laboratories brand Ngara Type 1 noise loggers, set to A-weighting, fast-response, and recording noise levels continuously over consecutive 24-hour periods at each location.

Weather conditions during the noise survey were obtained from the Automatic Weather Station (AWS) maintained by the Bureau of Meteorology at Sydney Airport. Weather conditions for the monitoring period have been plotted showing daily trends in wind speed which are presented in Figure 2.

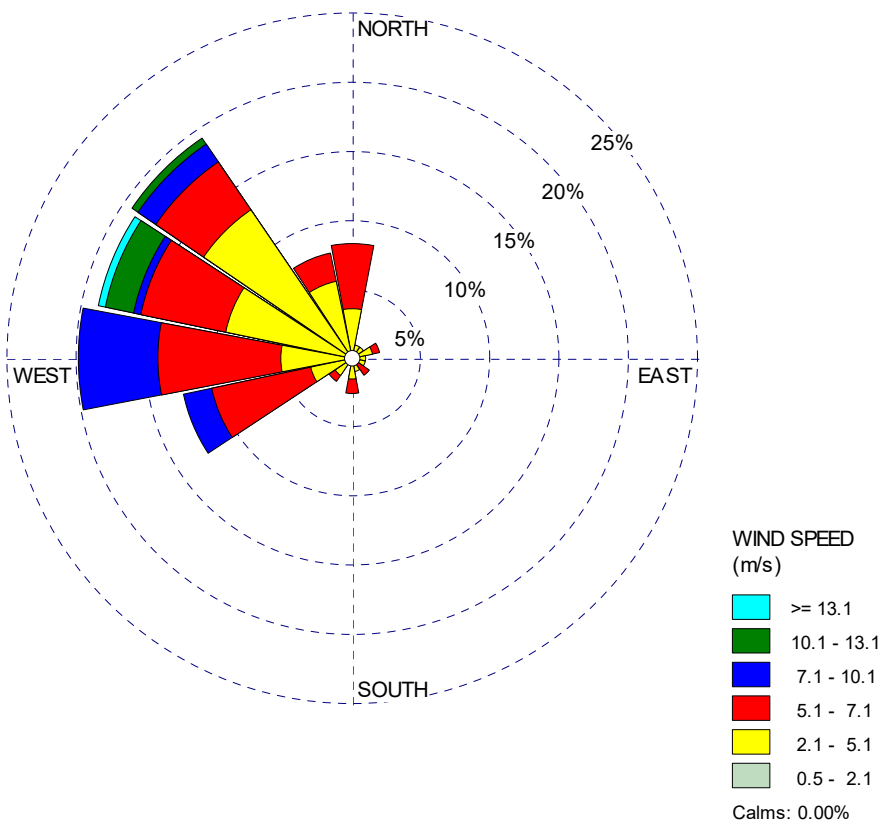


Figure 2 Wind speed and direction during monitoring period (7 August – 14 August 2017, source BoM 2017)

The plotted data indicates that the wind direction during the monitoring period was dominated by winds from the west and north west (about 70% of total measurements). Overall, the average wind speeds were in the range of about 2-5 m/s and accounted for about 85% of total measurements during the monitoring period. Winds above 5 m/s were present for about 10% of the monitoring time.

Wind from the west and north-westerly direction is expected to increase noise levels from the direction of the paper mill for a large proportion of residences. Dwellings to the north of the site would not be expected to be impacted by these meteorological conditions. The balance of wind directions indicates a combination of enhancing and reducing conditions for noise propagation from the paper mill.

3.2 Monitoring results

The results of monitoring survey have been graphed and are shown in Appendix A. The parameters of L_{Aeq} and L_{A90} are used to provide information for comparison against the project criteria and the background noise environment.

The L_{Aeq} noise levels in the area are affected by extraneous noise sources such as traffic as well as being influenced to a degree by loud short-term noise such as birds, aircraft, and local heavy vehicle movements.

General industrial noise sources were audible within the residential areas adjacent to the Orora during the monitoring period. The recent round of monitoring for August 2017 results show levels that are higher than the rest of the year. These results are similar to other July-August periods when temperature inversions can generate higher ambient levels at night.

The Orora site itself has a noise profile consistent with plant and equipment that operate at more or less a steady state and therefore has little variability in noise emissions. This type of noise environment is most appropriately described using the L_{A90} statistical parameter, which has been presented in the results summary to be considered in conjunction with the L_{Aeq} noise level when assessing compliance of the Orora site.

It has previously been shown to be impractical to directly measure the contribution of Orora operational noise emissions when monitoring at nearby receiver locations. Evidence of this fact is provided where the measured L_{Aeq} noise levels are consistently above the EPL criteria, even when the Orora site is not operational.

The most recent round of compliance measurements provides an addition to the historical data collected for multiple round of compliance monitoring. This data includes measurements of the noise environment both with the Orora site operational and without. Table 3 presents the assessment background noise levels and the rating background noise levels from the August 2017 survey as well as the L_{Aeq} , 15 minute for each assessment period.

Observations during the survey period suggest that typical operations within the Orora site were not specifically audible in the general acoustic environment and was not a dominant noise source. The measured L_{Aeq} 15 minute noise levels during the survey are at or above the EPL criteria for day evening and night during all modes of operations of the Orora site.

3.3 Comparison with previous monitoring surveys

An indicator of the contribution of Orora operational noise to existing noise levels may be made using background noise levels measured during both shutdown and operational conditions. During the night time-period, fewer extraneous noise influences are present providing lower overall noise levels in the area. Under these conditions constant noise sources such as Orora operations are more likely to be apparent in the background noise levels measured during this time noting that the emission levels from the site remain relatively constant throughout the day, evening, and night time.

The data in Figure 3-3 and Figure 3-4 provides a chronological progression of the noise data measured during shutdown and normal operations summarised for monitoring from 2012 to present. These results demonstrate the degree of variability in the noise environment at these locations as well as any trends due to seasonal and local influences. The measured data for the most recent monitoring in August 2017 indicates that L_{A90} noise levels were above the L_{Aeq} , 15 minute criteria at all sites, which is an infrequent outcome, and high by historical standards. Although high, the noise levels are similar to other periods around July/August when meteorological conditions are favorable to the propagation of more distant noise sources.

The background noise levels from Figure 3-3 and Figure 3-4 are not directly related to the L_{Aeq} criteria from the EPL; however, they provide an indication of the increase in background environmental noise levels corresponding to the regular noise surveys for the Orora site.

Table 3 Summary of noise monitoring

Time and date*	Profile of Noise Environment - Noise Monitoring Location											
	R1		R2		R3		R4		R5		R6	
	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period
7:00:00 AM to 6:00:00 PM												
Monday 7 August 2017	50.6	73.6	52.4	68.8	51.6	72.9	52.7	73.0	52.7	71.3	50.5	78.1
Tuesday 8 August 2017	49.5	53.8	52.1	53.7	51.5	52.5	51.5	53.5	49.5	55.1	48.2	49.2
Wednesday 9 August 2017	47.9	53.1	50.6	53.3	49.7	51.0	49.9	54.3	47.9	53.7	46.8	49.9
Thursday 10 August 2017	48.0	57.9	50.4	52.9	50.5	51.5	49.1	55.1	49.7	52.7	46.4	49.9
Friday 11 August 2017	48.4	53.9	50.2	54.6	50.2	52.1	50.1	55.4	49.7	53.8	46.7	49.3
Saturday 12 August 2017	47.5	54.0	49.9	56.1	49.8	52.3	49.3	55.6	48.0	53.1	46.6	49.0
Sunday 13 August 2017	45.2	53.4	48.7	53.4	48.1	54.5	48.0	54.1	45.8	53.3	45.9	50.4
Monday 14 August 2017	48.2	54.3	0.0	0.0	50.7	52.1	49.6	55.1	49.0	53.2	45.3	48.5
Tuesday 15 August 2017	49.1	54.9	0.0	0.0	0.0	0.0	49.6	56.3	50.8	55.0	47.3	50.2
Median	48.3	54.1	50.4	53.7	50.3	52.2	49.8	55.2	49.5	53.7	46.7	49.9
6:00:00 PM to 10:00:00 PM												
Monday 7 August 2017	47.0	50.6	49.0	52.1	49.5	51.7	47.6	50.4	48.5	55.7	45.7	47.8
Tuesday 8 August 2017	47.7	50.5	49.7	52.5	49.8	51.4	49.1	50.6	47.7	54.9	47.0	48.8
Wednesday 9 August 2017	45.5	50.3	45.8	50.4	45.7	46.7	44.2	47.8	44.5	47.6	45.3	48.8
Thursday 10 August 2017	47.5	51.2	48.3	52.3	49.3	52.0	45.7	49.4	49.0	51.6	45.6	48.3
Friday 11 August 2017	47.4	50.7	49.7	52.4	49.5	51.3	49.5	51.1	46.4	51.3	46.5	49.2
Saturday 12 August 2017	45.1	49.8	47.9	51.3	48.1	50.3	47.7	50.5	46.0	52.9	44.4	47.3
Sunday 13 August 2017	42.0	49.5	44.7	46.6	44.9	44.1	42.6	44.8	42.9	45.5	42.1	46.3
Monday 14 August 2017	46.3	50.2	0.0	0.0	48.9	51.2	46.2	48.6	48.8	51.1	45.4	48.6
Tuesday 15 August 2017	46.6	50.8	0.0	0.0	0.0	0.0	45.7	49.1	48.9	51.3	46.4	48.1
Median	46.6	50.5	48.3	52.1	49.1	51.3	46.2	49.4	47.7	51.3	45.6	48.3

ORORA – B9 COMPLIANCE NOISE MONITORING

Time and date*	Profile of Noise Environment - Noise Monitoring Location											
	R1		R2		R3		R4		R5		R6	
10:00:00 PM to 7:00:00 AM	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period	L90 (10th Percentile)	Leq - over period
Monday 7 August 2017	47.4	48.8	50.7	51.7	50.0	51.1	48.6	49.7	47.8	52.7	45.8	46.7
Tuesday 8 August 2017	48.2	49.4	51.8	52.6	50.9	51.2	48.4	50.0	48.9	51.8	45.6	47.2
Wednesday 9 August 2017	47.4	48.0	50.1	50.9	50.2	50.1	47.3	48.4	48.7	48.5	44.7	45.3
Thursday 10 August 2017	46.2	47.9	47.4	49.2	48.7	49.5	45.3	47.5	47.6	48.9	44.4	45.0
Friday 11 August 2017	47.2	47.8	49.6	50.4	49.5	49.9	48.7	49.2	47.3	52.9	45.6	46.0
Saturday 12 August 2017	45.1	47.0	49.1	49.9	48.2	49.3	47.3	49.5	45.1	53.6	43.3	44.7
Sunday 13 August 2017	47.5	48.7	49.5	50.0	50.6	50.7	47.5	49.8	48.4	51.1	44.4	44.9
Monday 14 August 2017	48.2	49.5	0.0	0.0	52.0	51.7	48.6	51.3	50.8	51.9	46.6	46.9
Tuesday 15 August 2017	47.4	48.1	0.0	0.0	0.0	0.0	47.6	50.9	44.7	46.5	46.0	47.4
Median	47.4	48.1	49.6	50.4	50.1	50.4	47.6	49.7	47.8	51.8	45.6	46.0

*Shaded areas indicate periods where the site was not operational. – Dashes indicate an equipment fault.

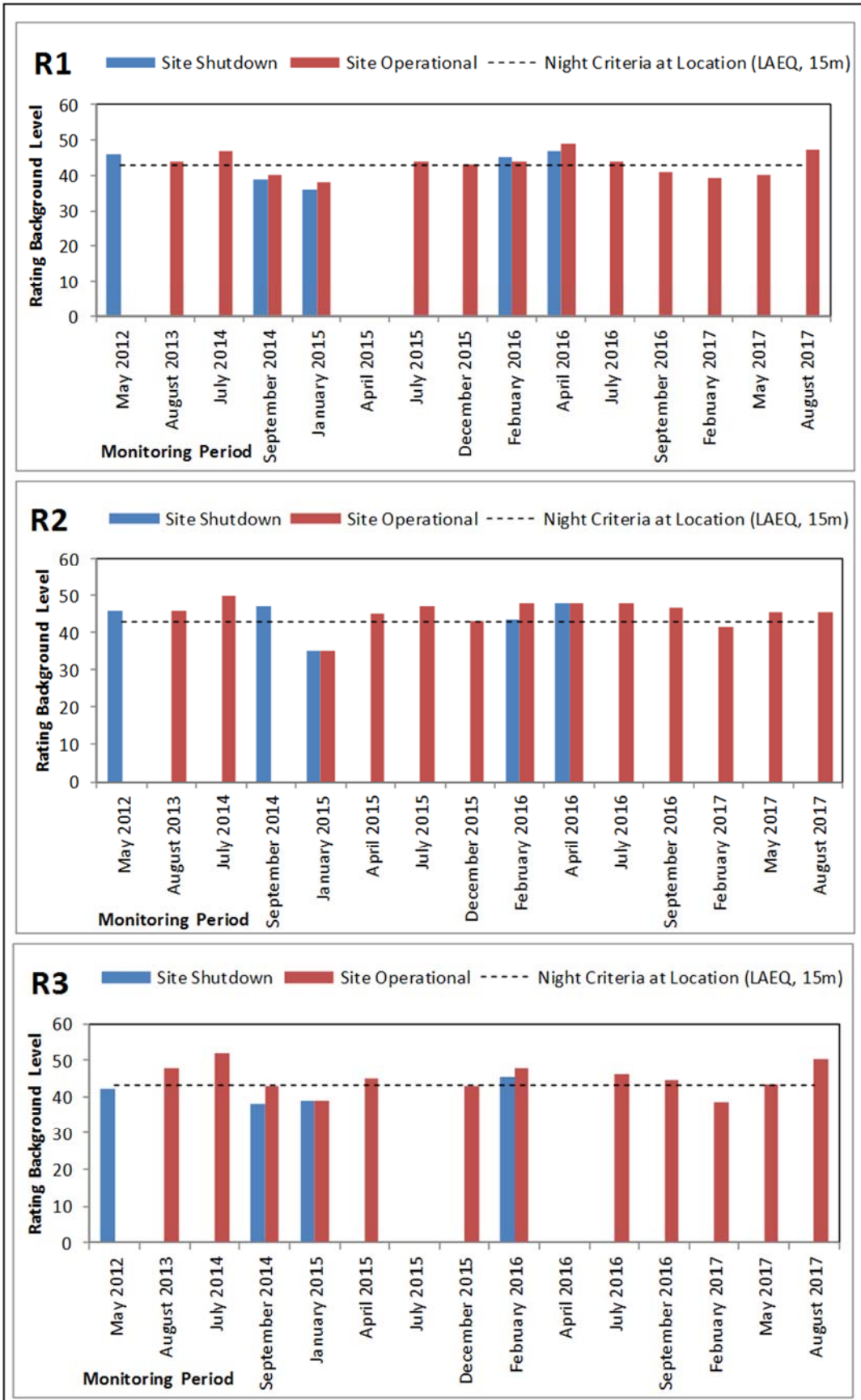


Figure 3-3: Comparison of background noise levels at R1 – R3

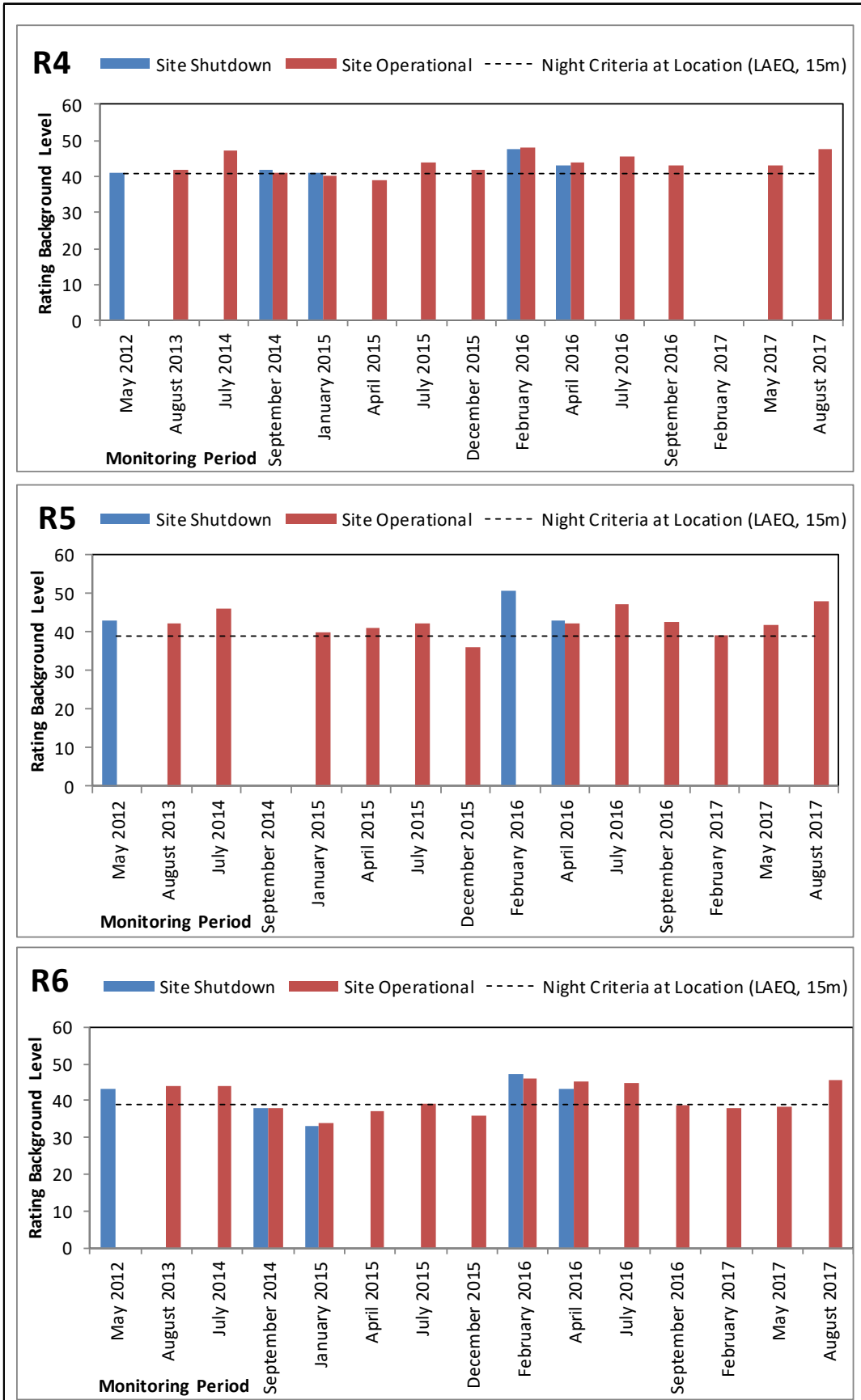


Figure 3-4: Comparison of background noise levels at R4 – R6

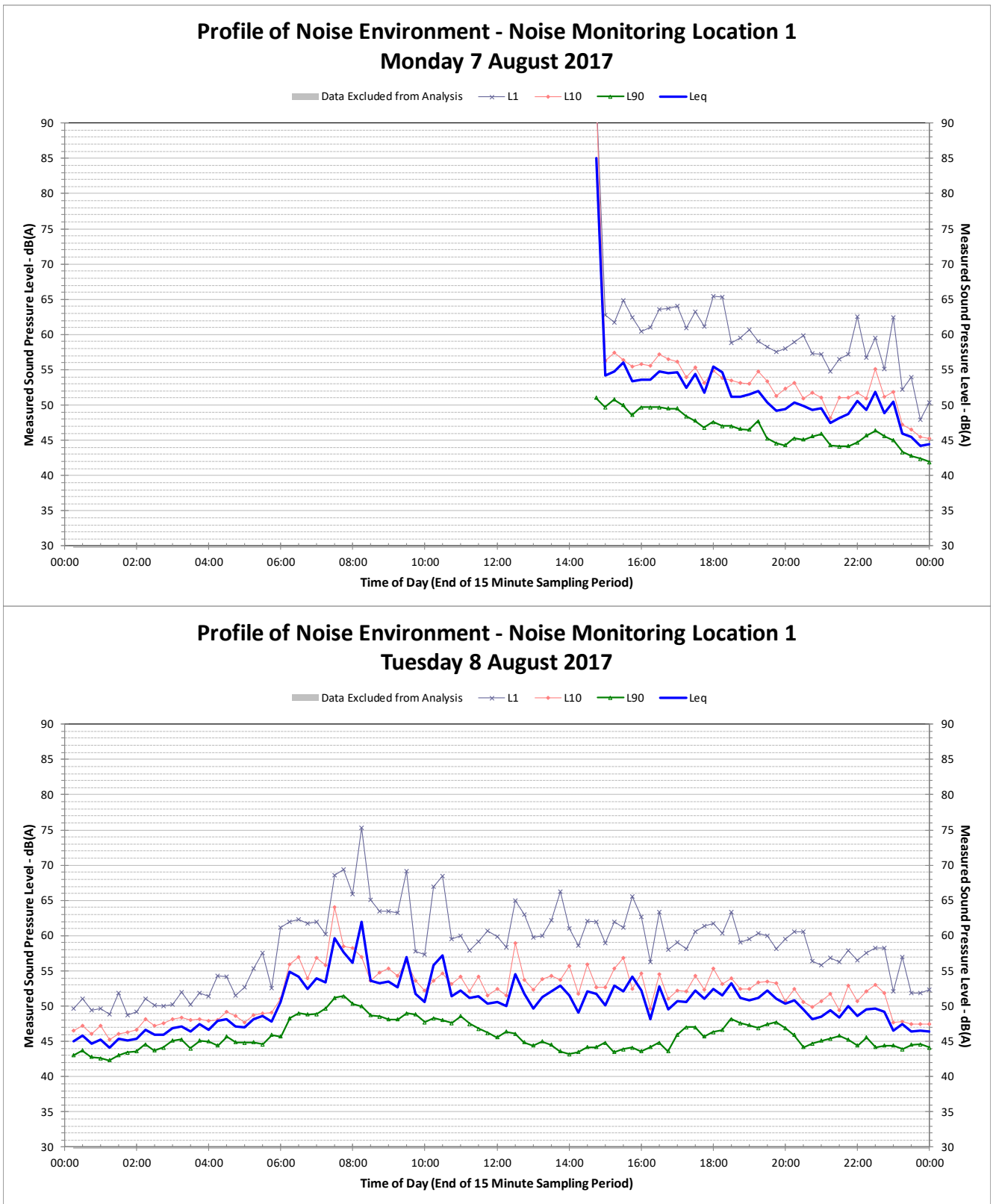
4. Summary

Historically, the Orora B9 Paper Mill quarterly monitoring surveys indicate L_{Aeq} measured noise levels that exceed the EPL criteria for day, evening, and night time whether the site is operational or shut down. The most recent results for the August 2017 monitoring period when the Orora site is operational, indicate that an exceedance of the EPL criteria is apparent at all the representative receiver locations. These exceedances are not directly attributable to the operations of the B9 paper mill.

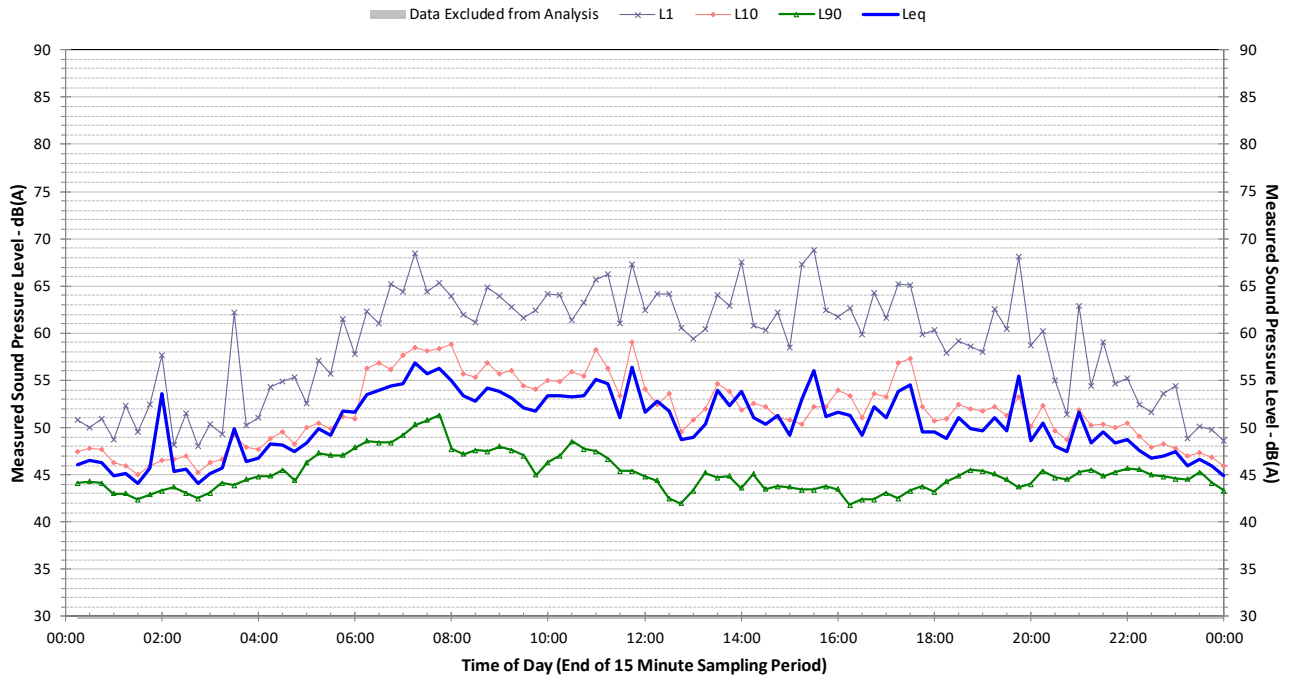
From the August 2017 quarterly monitoring the following conclusions may be drawn.

- The most recent noise monitoring results indicate that the measured L_{A90} noise levels are higher than other times but exhibit similar levels on a seasonal basis.
- The meteorological conditions during the monitoring period were typically favorable to the propagation of noise sources towards residences to the east of and south east of the site, but not generally influencing noise level for residences to the north and north east of the paper mill. Winds typically came from the west and north west directions. These meteorological conditions can also influence noise from other sources such as Botany road and Beauchamp Road to the west.
- The ambient noise environment in the local area is a product of the combined influence of all noise sources within the Port Botany area including the Orora site.
- Overall L_{Aeq} noise levels at receivers at the western end of Australia Avenue have decreased due to the additional shielding from the warehouse development in MaCauley Avenue. Noise levels in this location have been consistently lower since about September 2016.

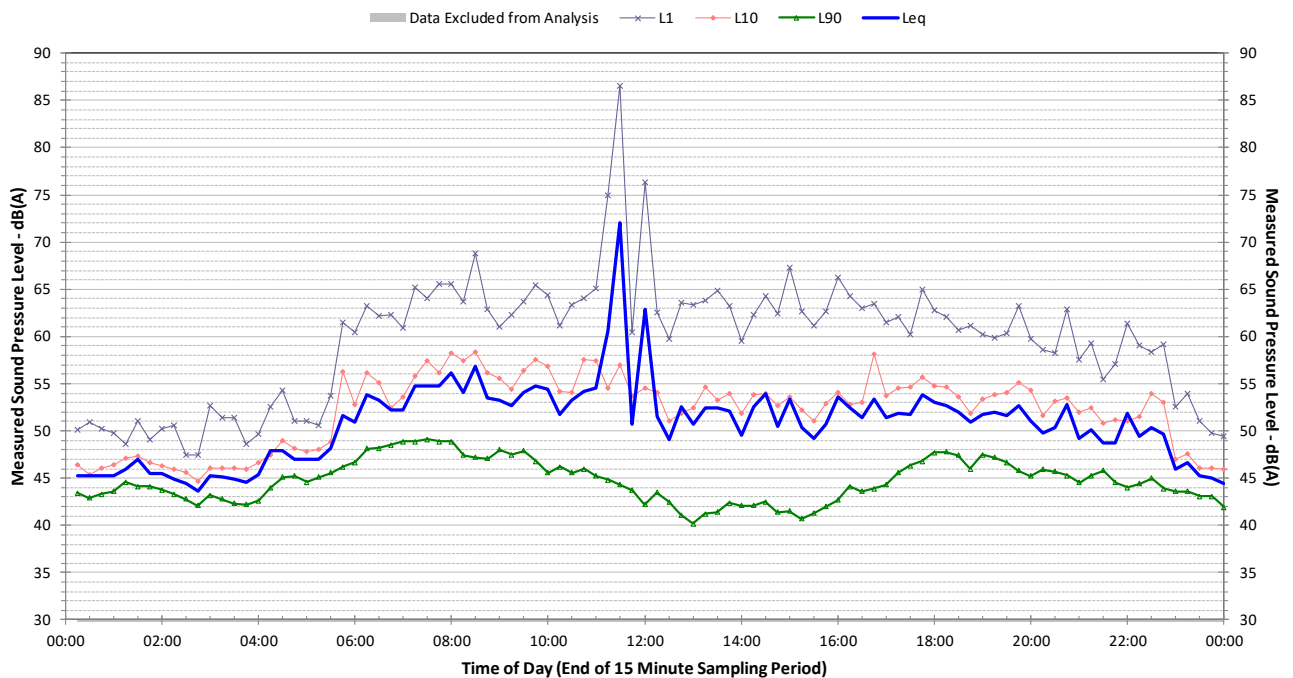
Appendix A. Noise logger graphs



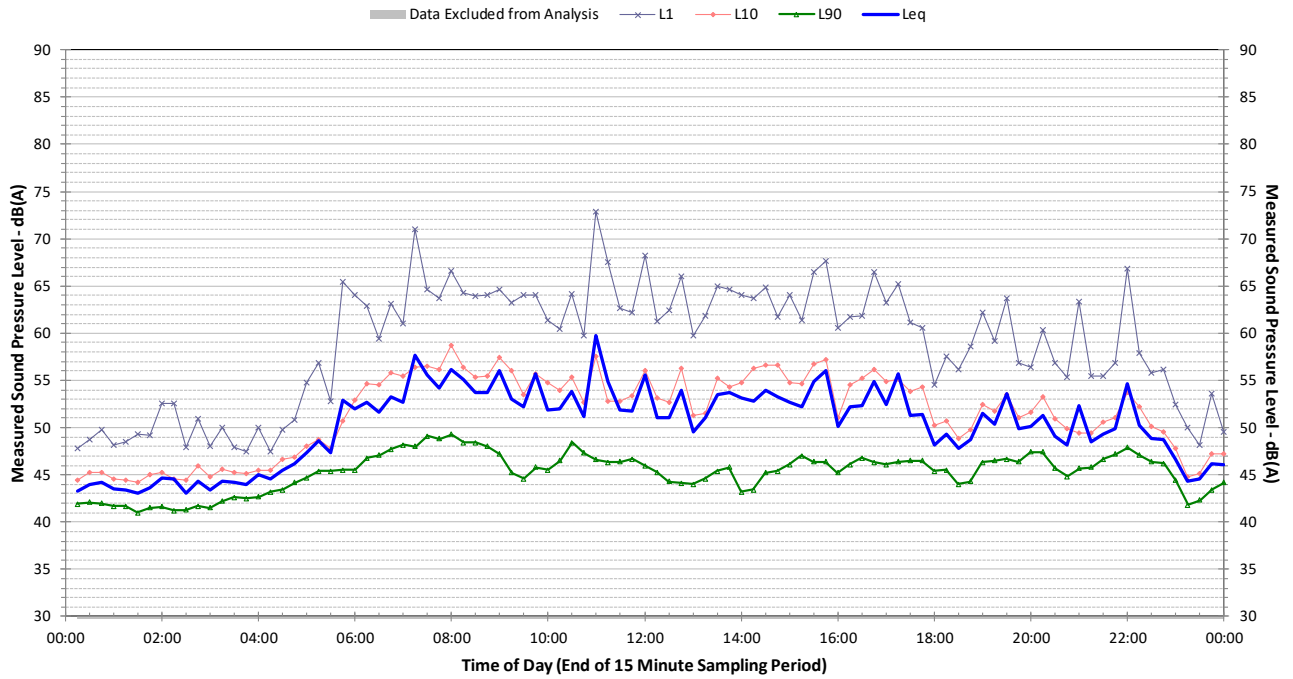
Profile of Noise Environment - Noise Monitoring Location 1 Wednesday 9 August 2017



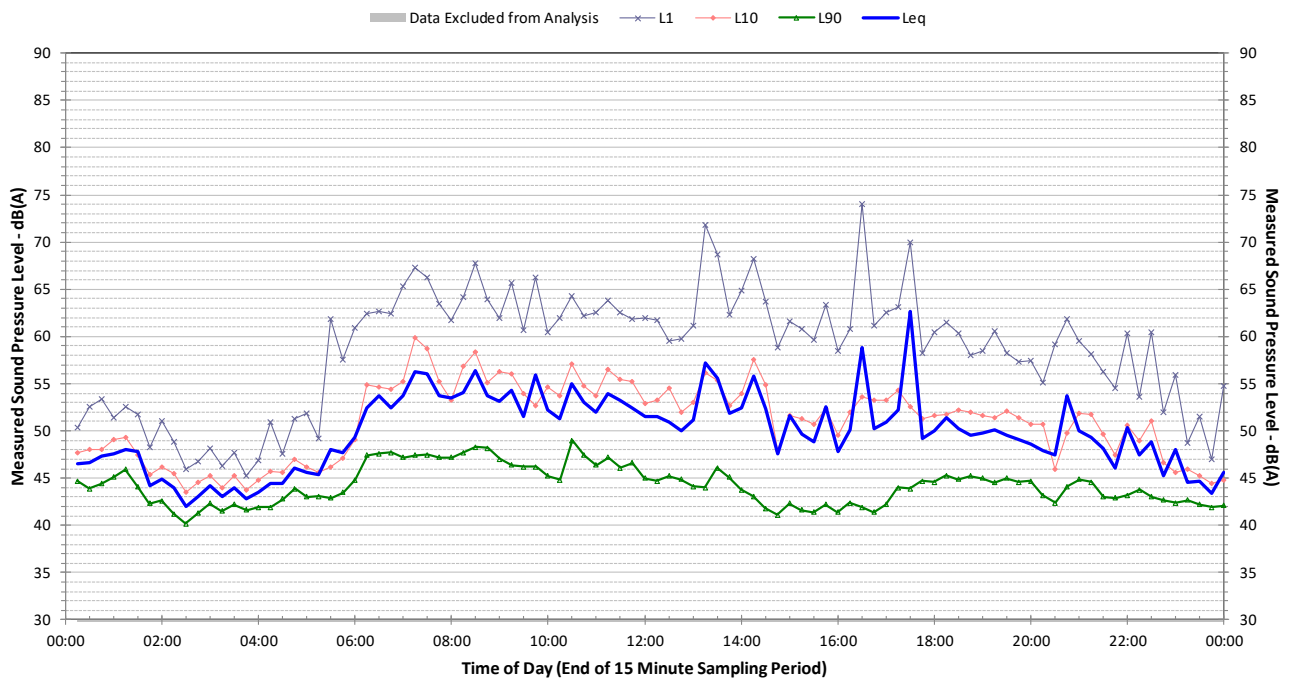
Profile of Noise Environment - Noise Monitoring Location 1 Thursday 10 August 2017



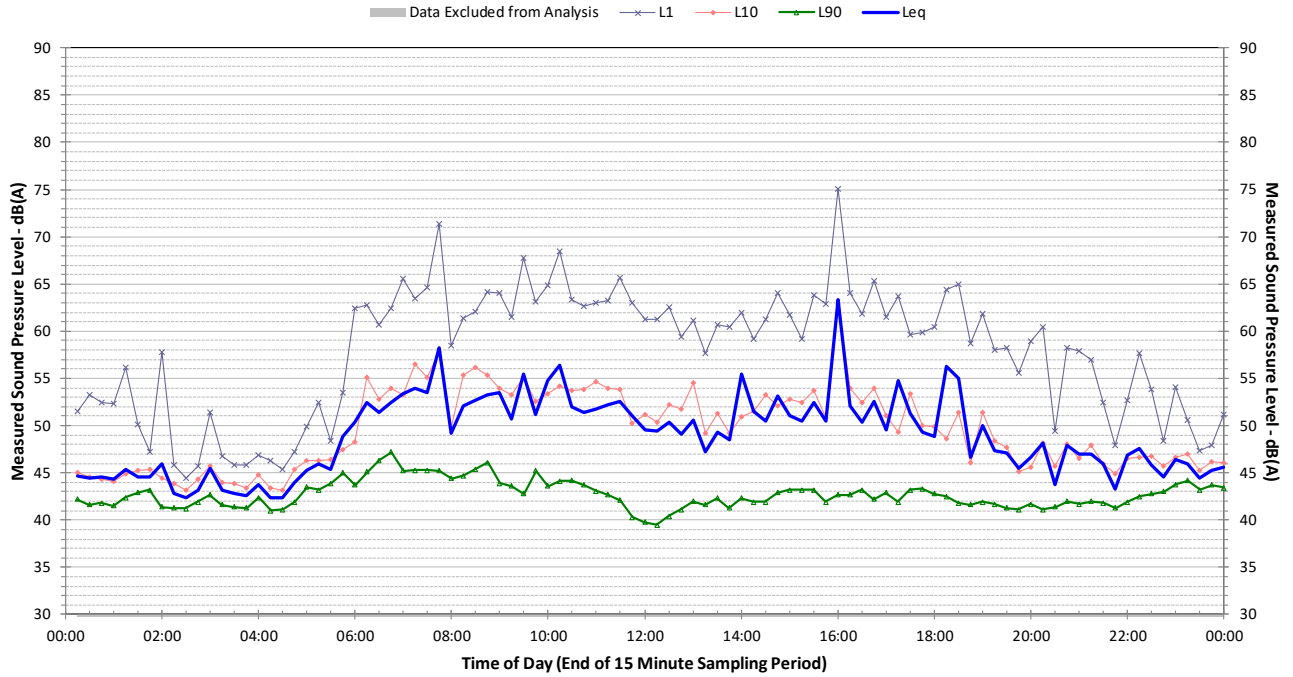
Profile of Noise Environment - Noise Monitoring Location 1 Friday 11 August 2017



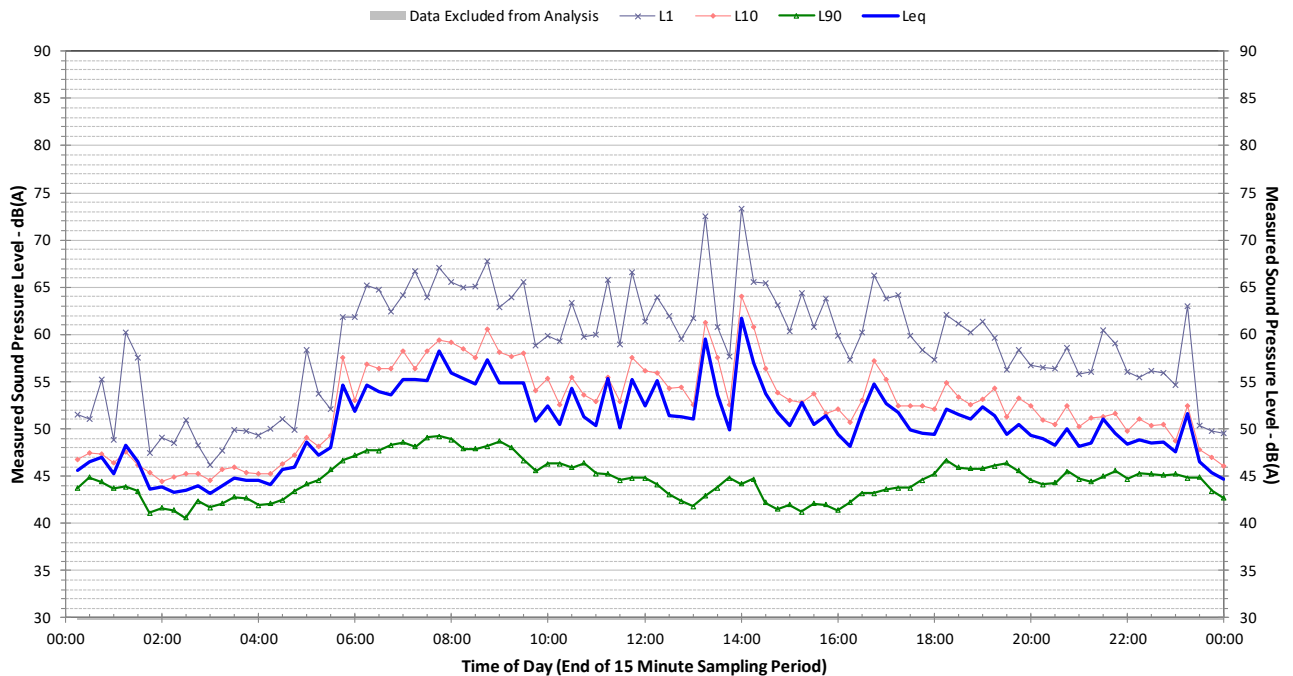
Profile of Noise Environment - Noise Monitoring Location 1 Saturday 12 August 2017



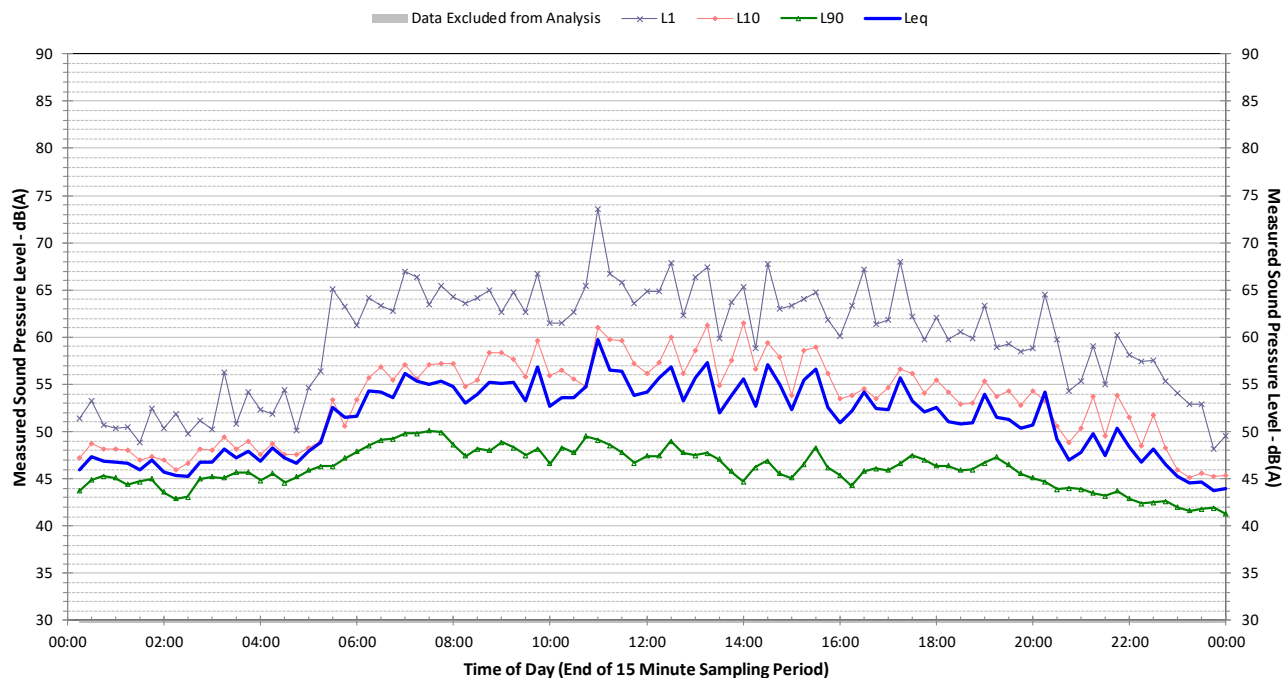
Profile of Noise Environment - Noise Monitoring Location 1 Sunday 13 August 2017



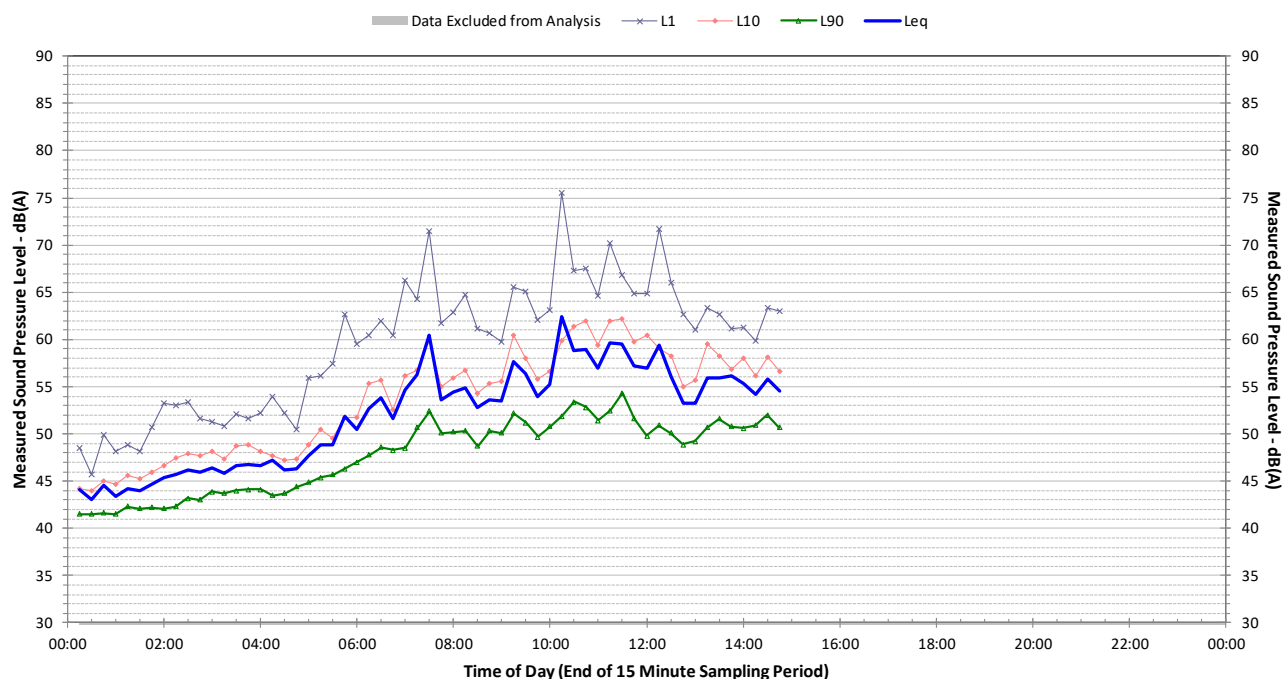
Profile of Noise Environment - Noise Monitoring Location 1 Monday 14 August 2017



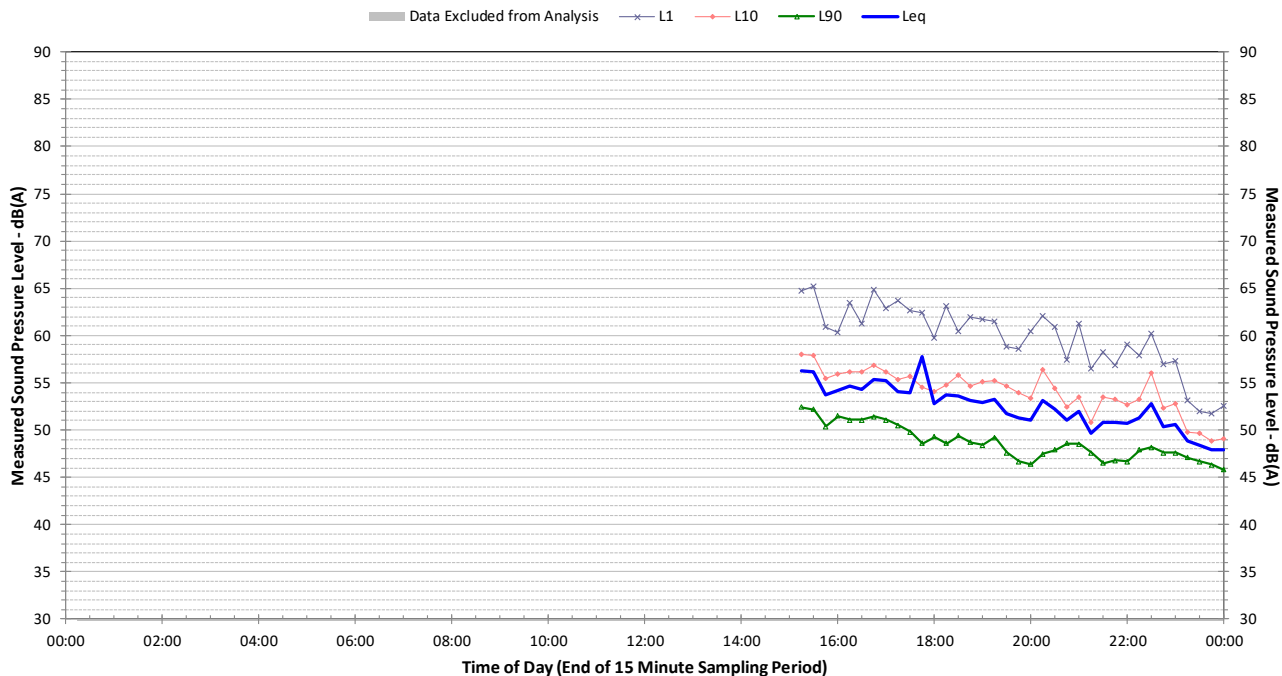
Profile of Noise Environment - Noise Monitoring Location 1 Tuesday 15 August 2017



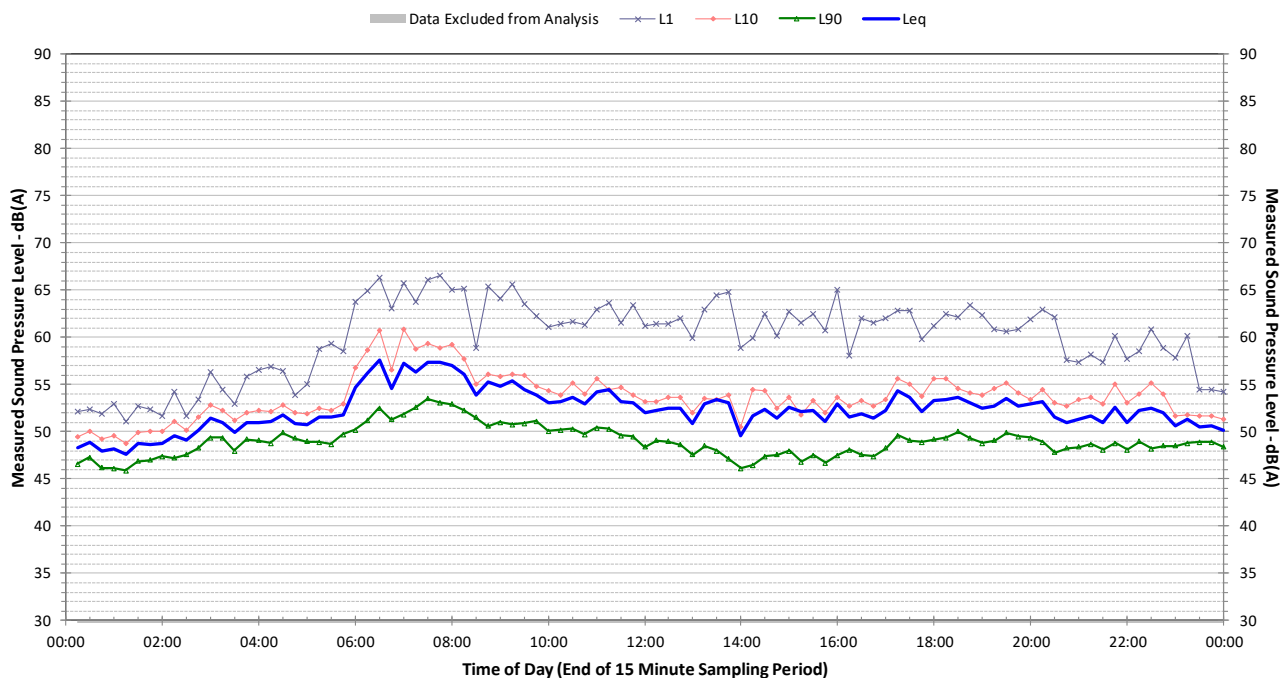
Profile of Noise Environment - Noise Monitoring Location 1 Wednesday 16 August 2017



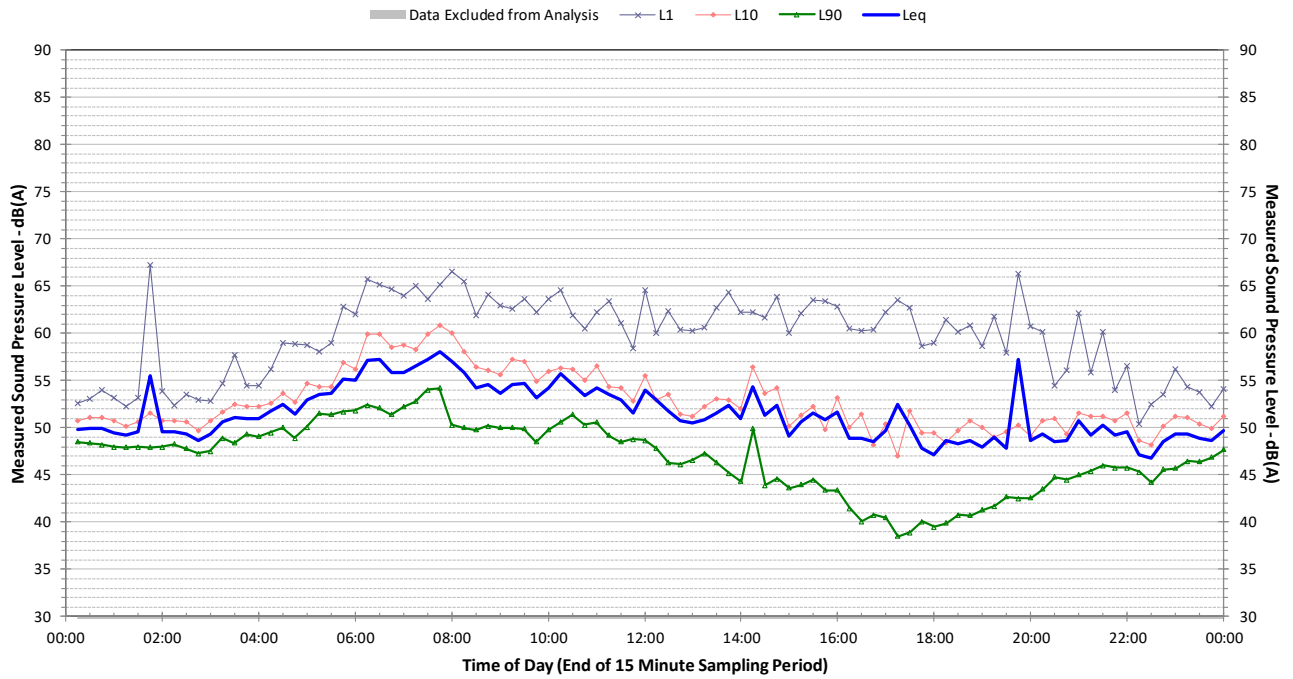
Profile of Noise Environment - Noise Monitoring Location 2 Monday 7 August 2017



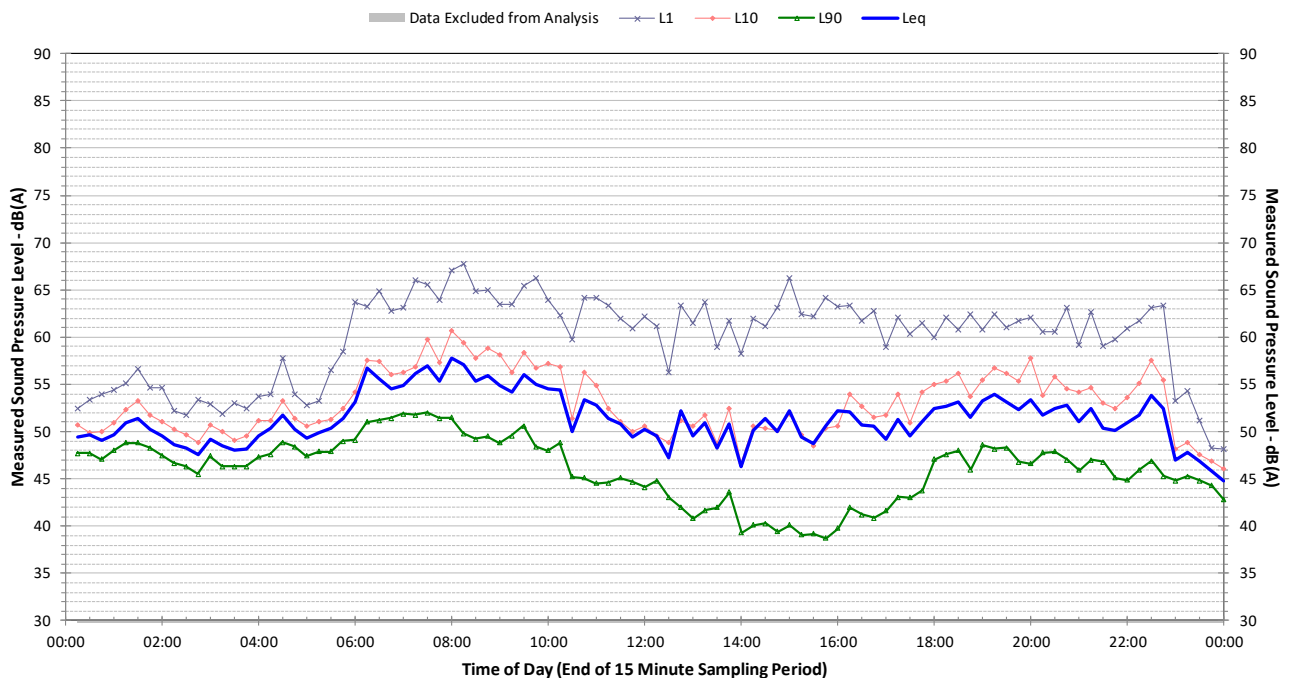
Profile of Noise Environment - Noise Monitoring Location 2 Tuesday 8 August 2017



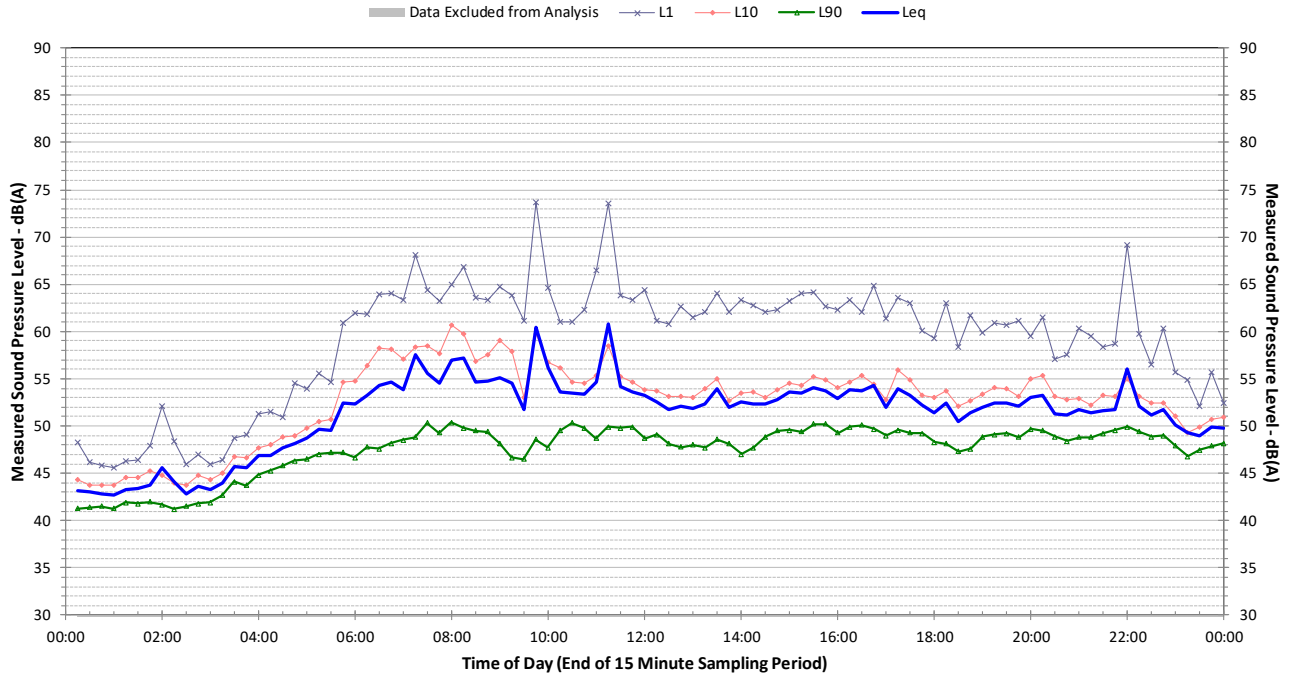
Profile of Noise Environment - Noise Monitoring Location 2 Wednesday 9 August 2017



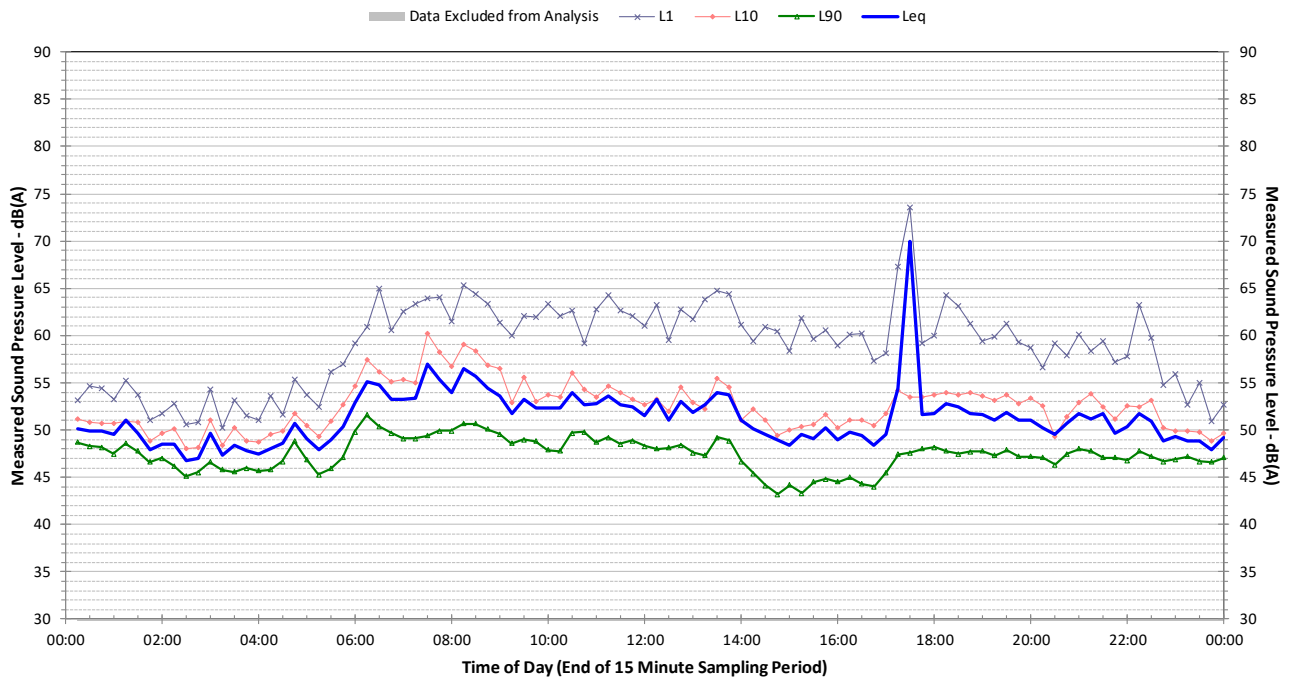
Profile of Noise Environment - Noise Monitoring Location 2 Thursday 10 August 2017



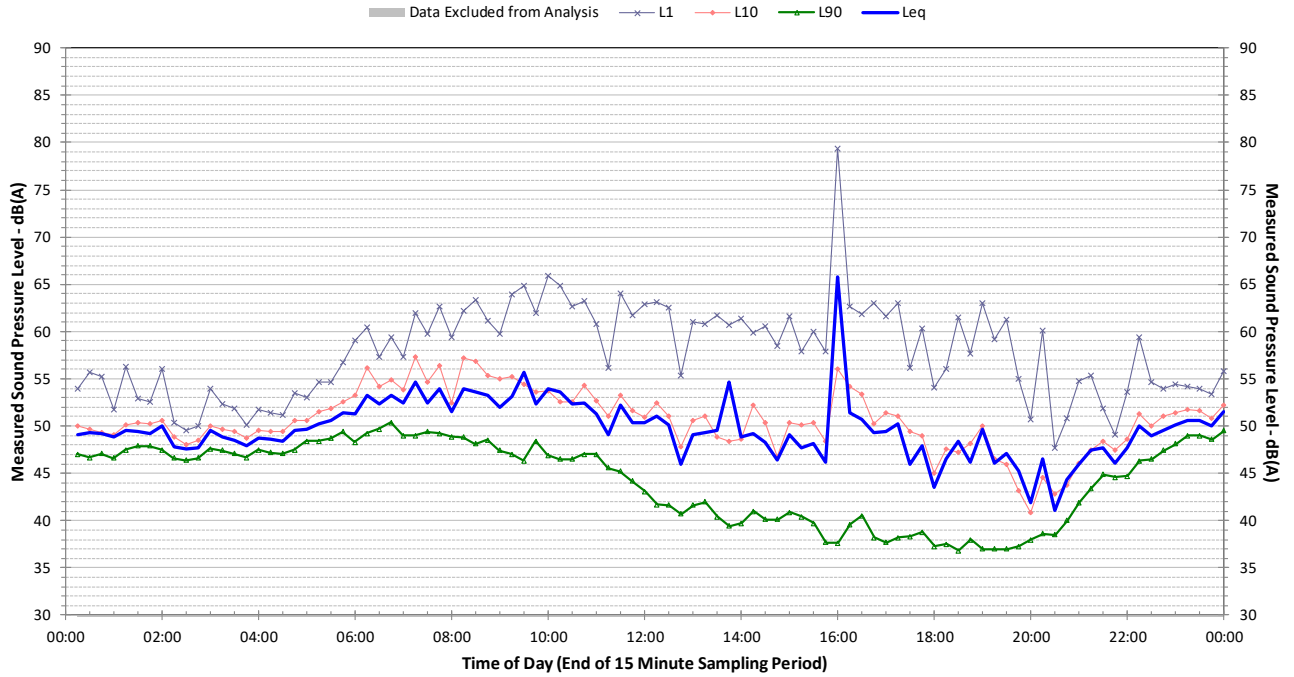
Profile of Noise Environment - Noise Monitoring Location 2 Friday 11 August 2017



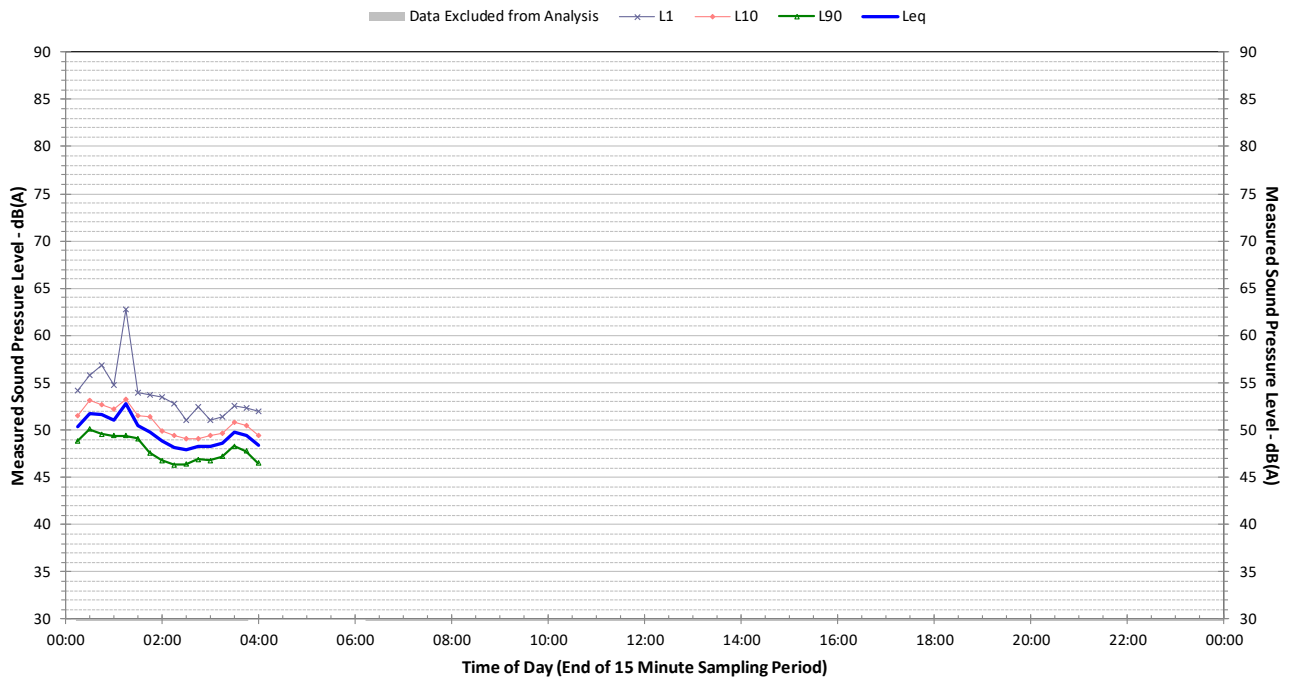
Profile of Noise Environment - Noise Monitoring Location 2 Saturday 12 August 2017



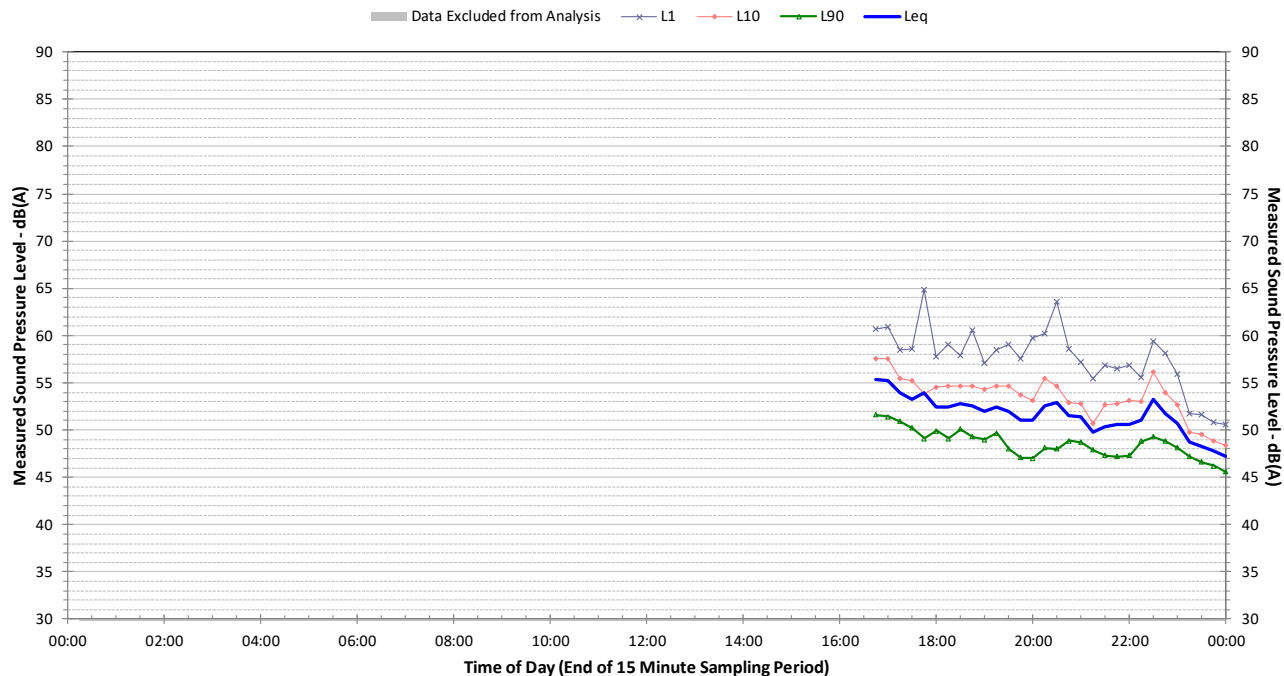
Profile of Noise Environment - Noise Monitoring Location 2 Sunday 13 August 2017



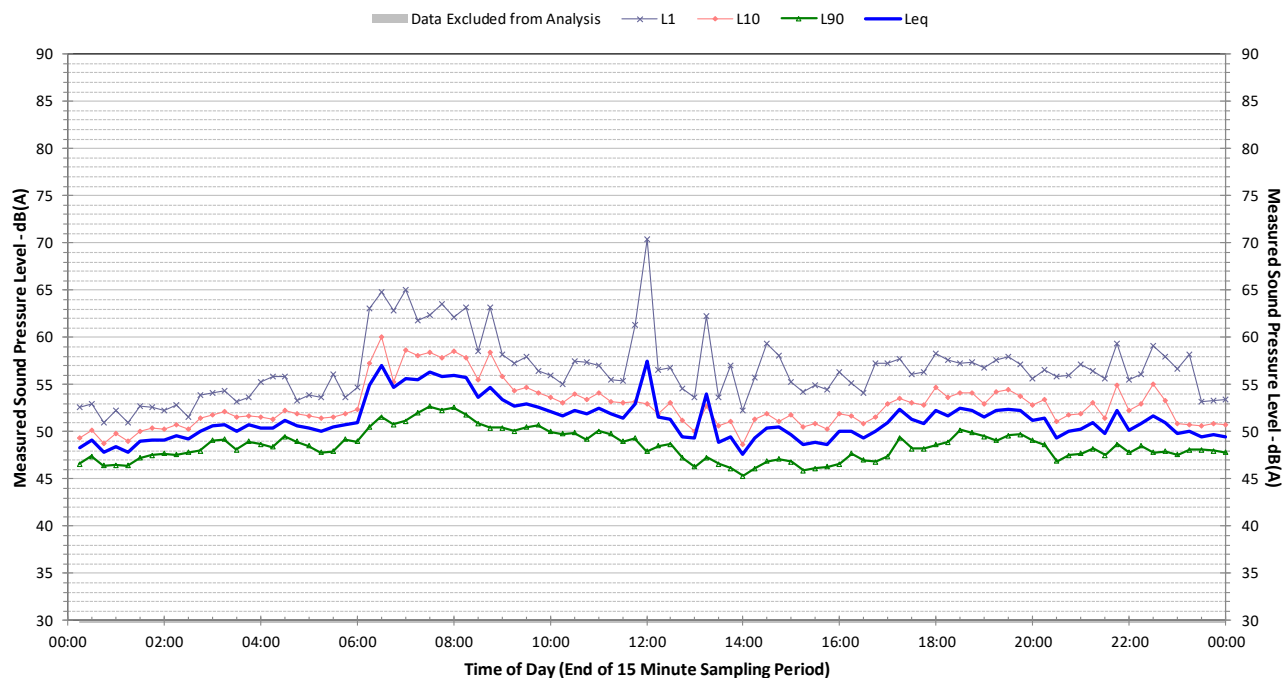
Profile of Noise Environment - Noise Monitoring Location 2 Monday 14 August 2017



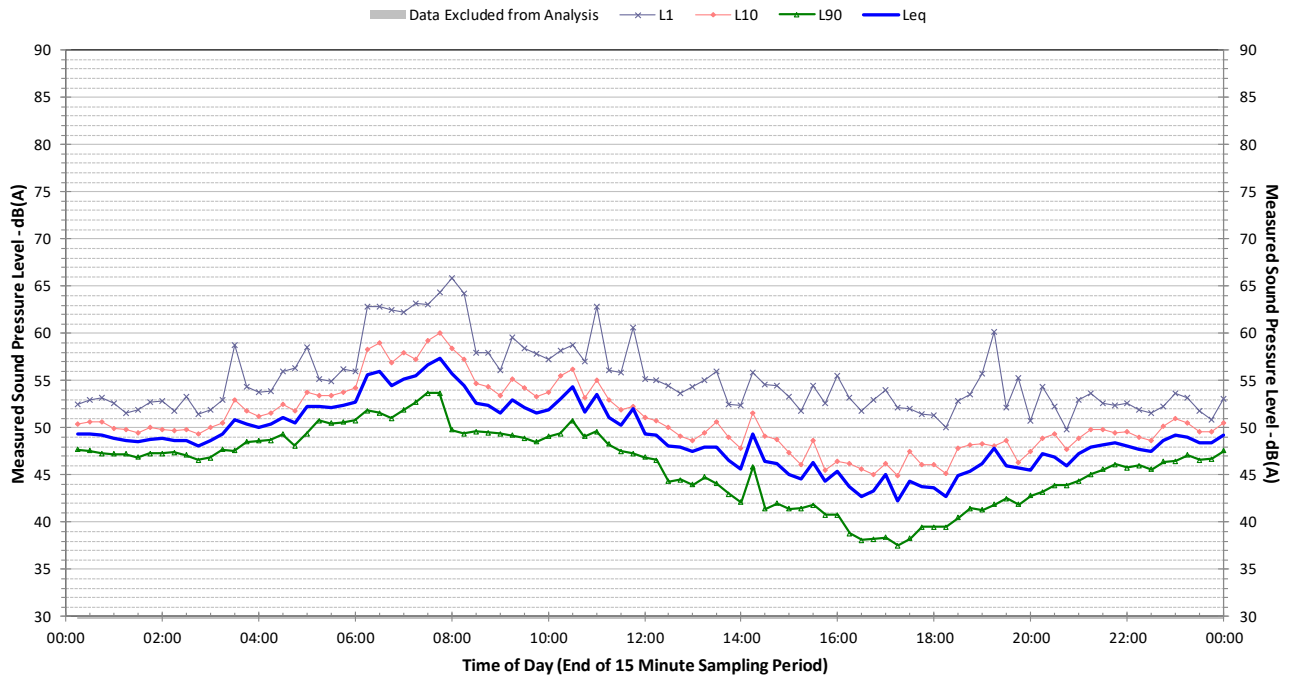
Profile of Noise Environment - Noise Monitoring Location 3 Monday 7 August 2017



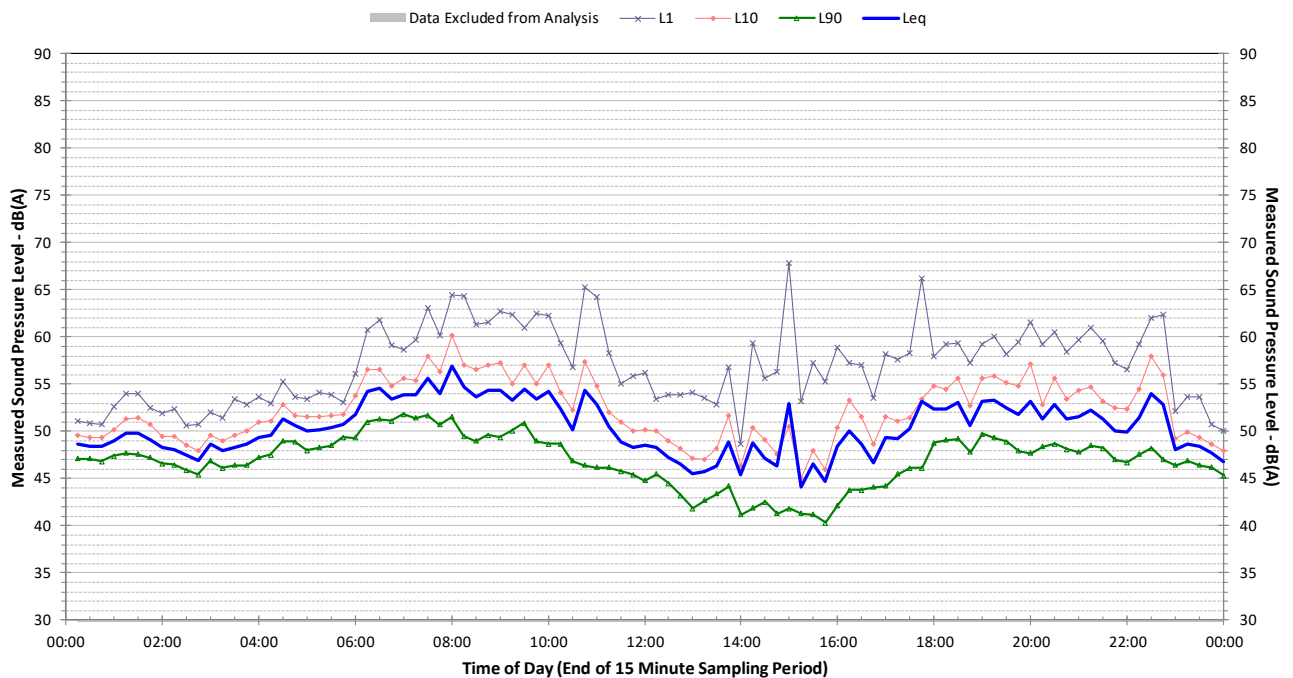
Profile of Noise Environment - Noise Monitoring Location 3 Tuesday 8 August 2017



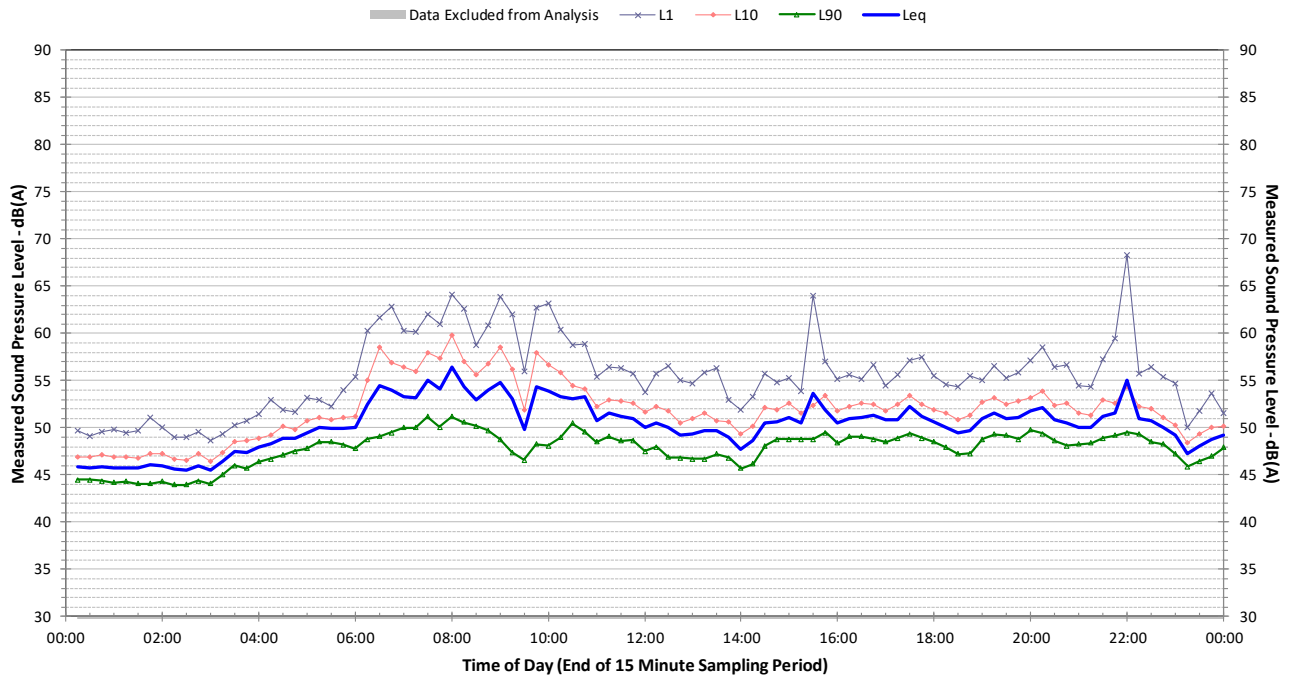
Profile of Noise Environment - Noise Monitoring Location 3 Wednesday 9 August 2017



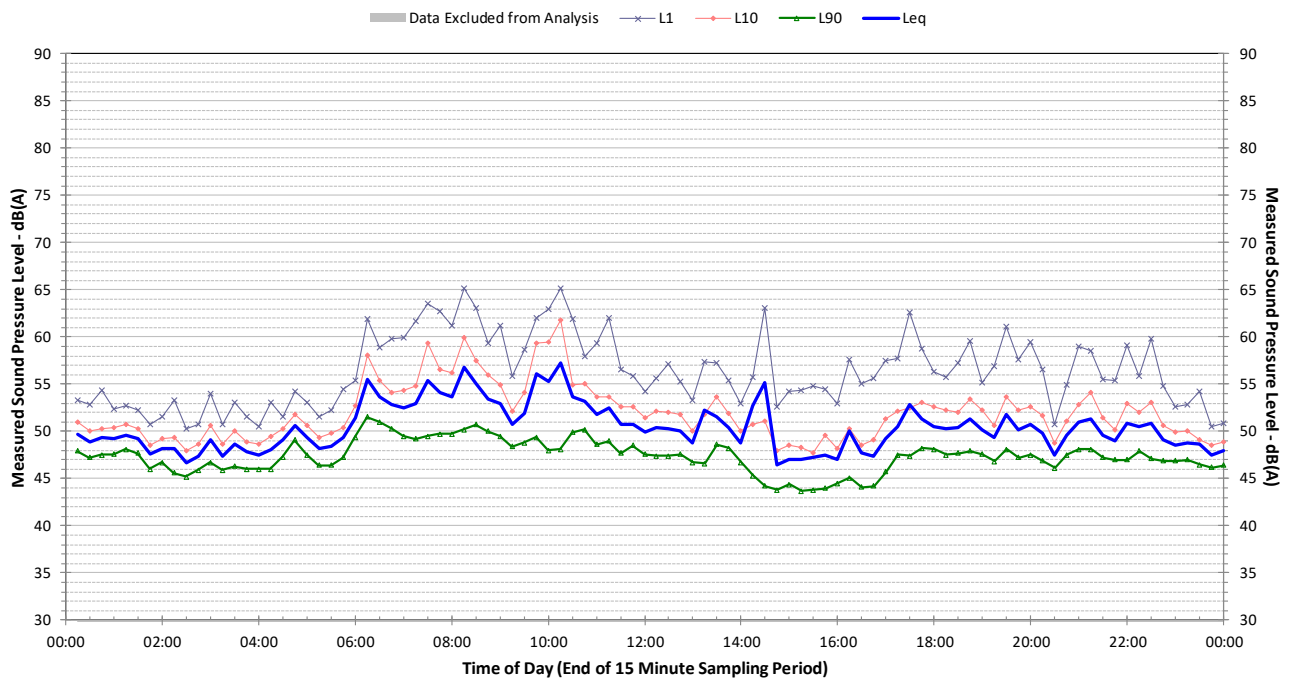
Profile of Noise Environment - Noise Monitoring Location 3 Thursday 10 August 2017



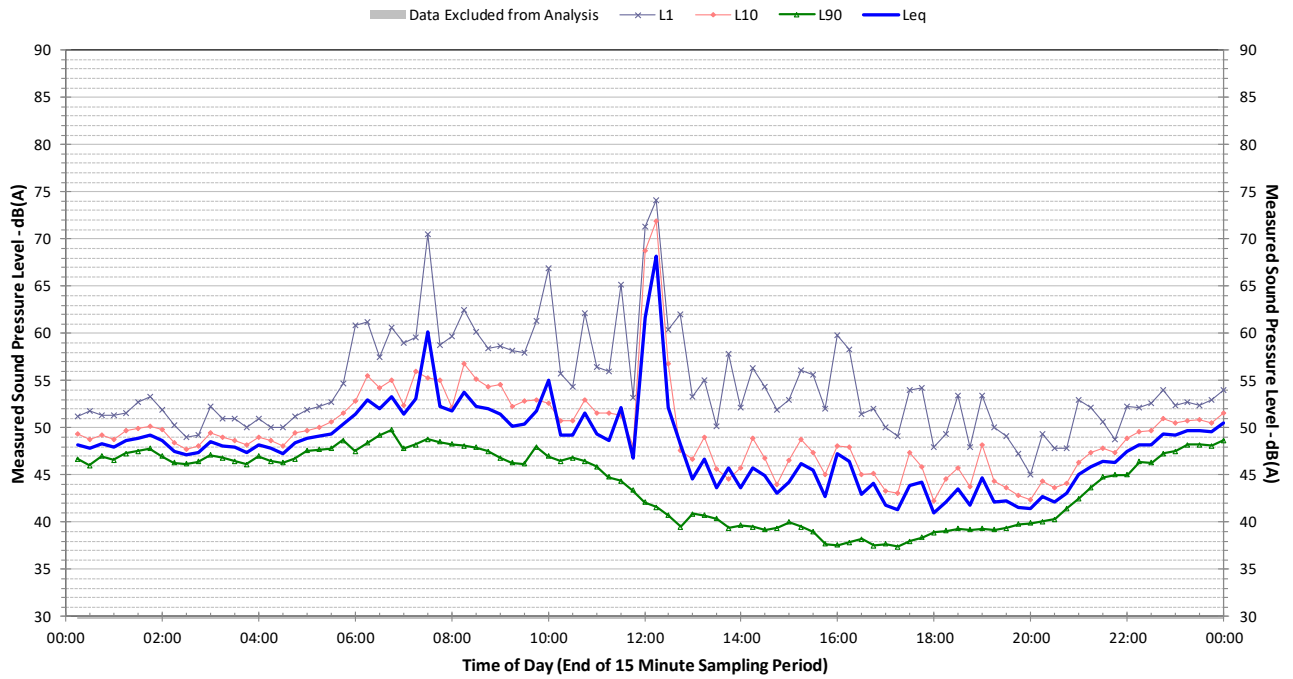
Profile of Noise Environment - Noise Monitoring Location 3 Friday 11 August 2017



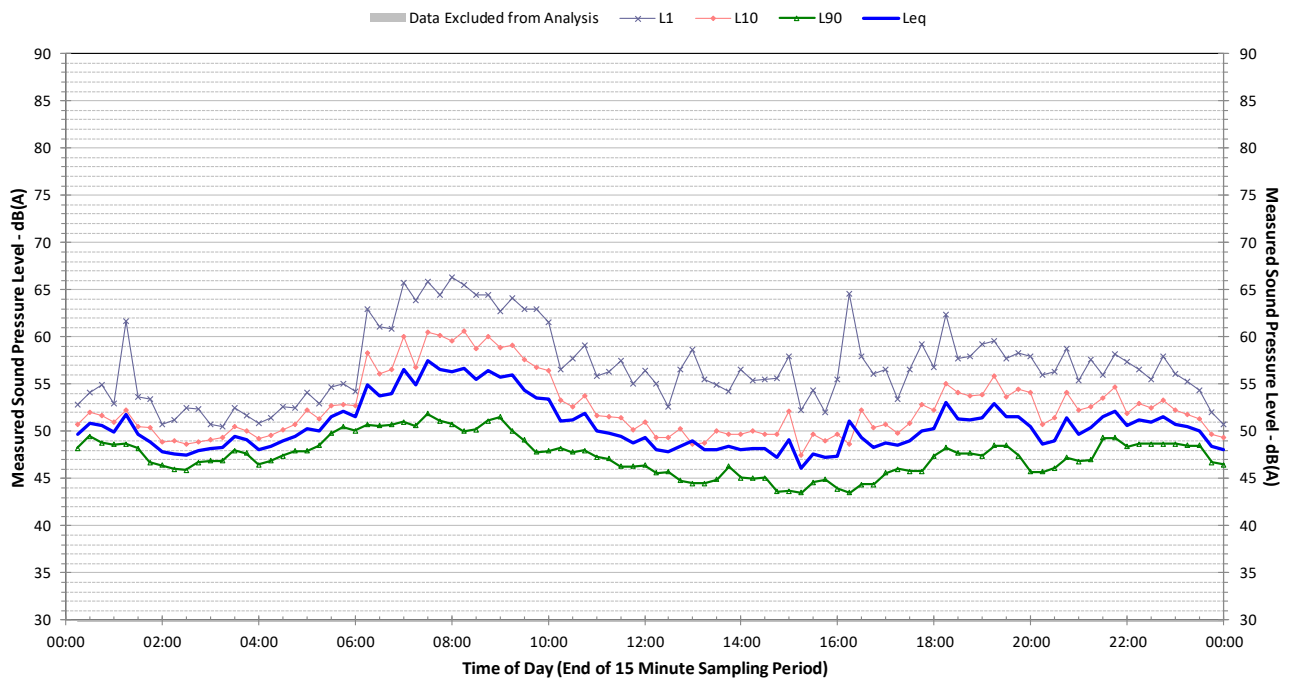
Profile of Noise Environment - Noise Monitoring Location 3 Saturday 12 August 2017



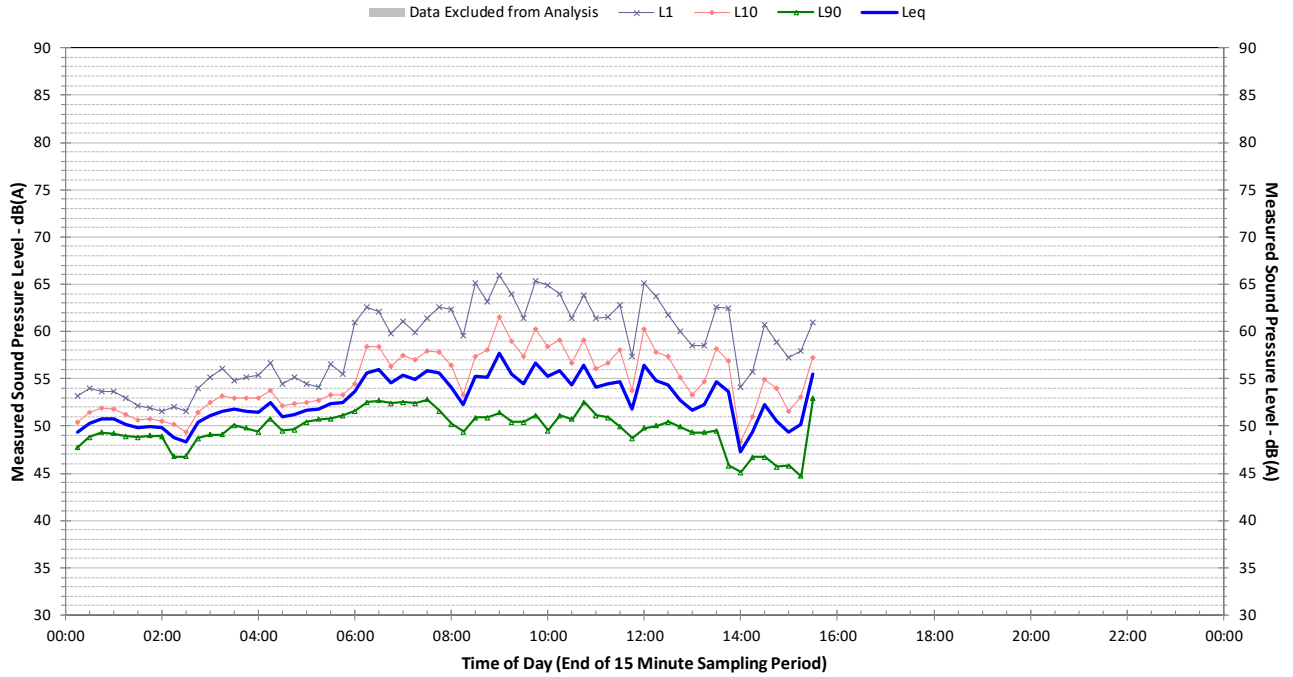
Profile of Noise Environment - Noise Monitoring Location 3 Sunday 13 August 2017



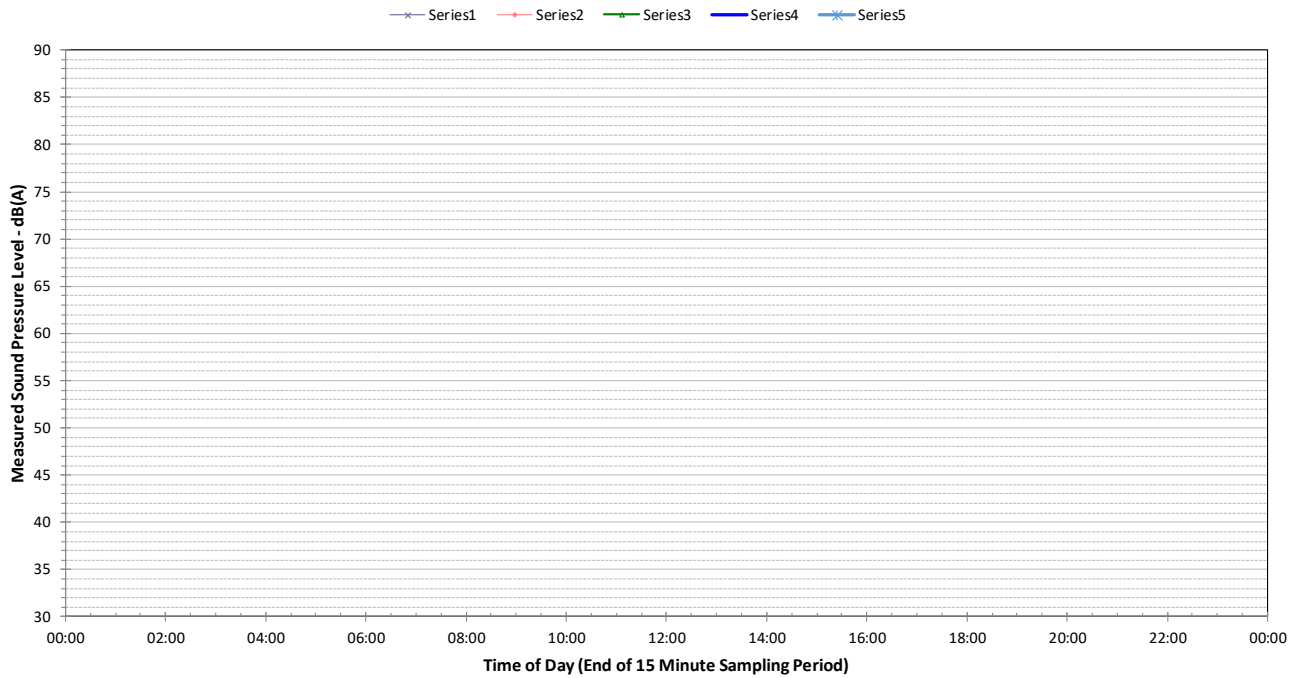
Profile of Noise Environment - Noise Monitoring Location 3 Monday 14 August 2017



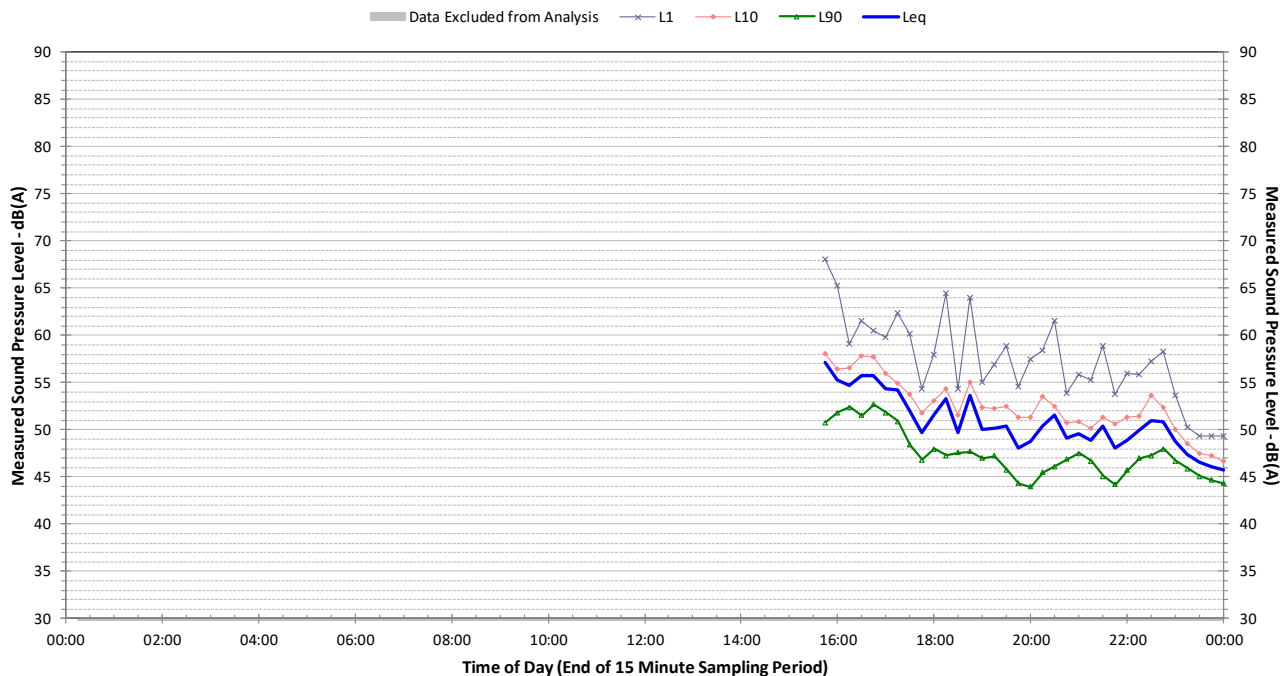
Profile of Noise Environment - Noise Monitoring Location 3 Tuesday 15 August 2017



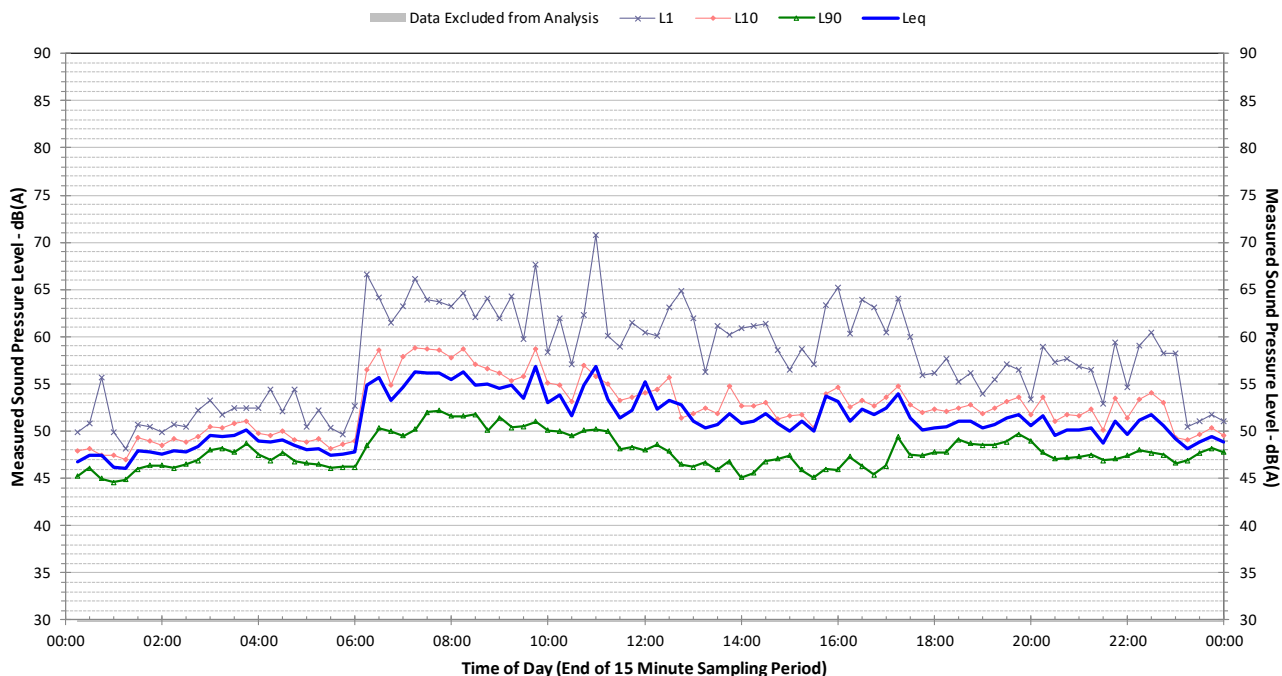
Profile of Noise Environment - Noise Monitoring Location 3 Wednesday 16 August 2017



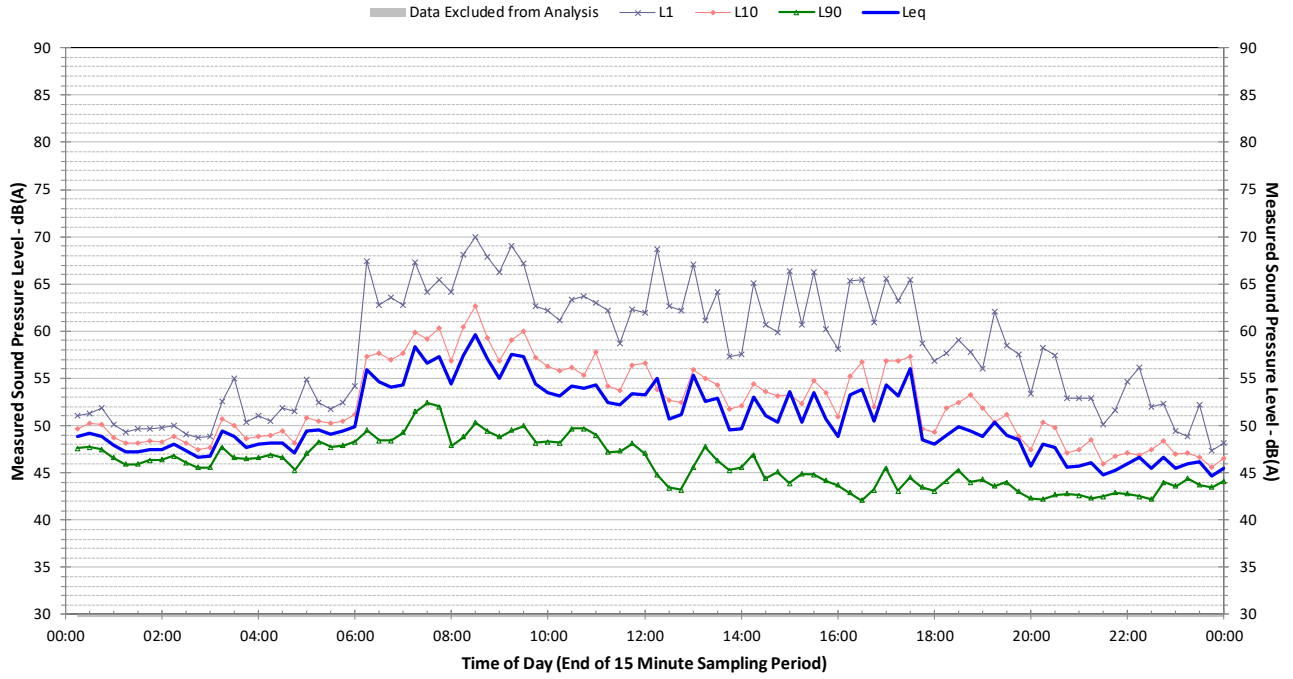
Profile of Noise Environment - Noise Monitoring Location 4 Monday 7 August 2017



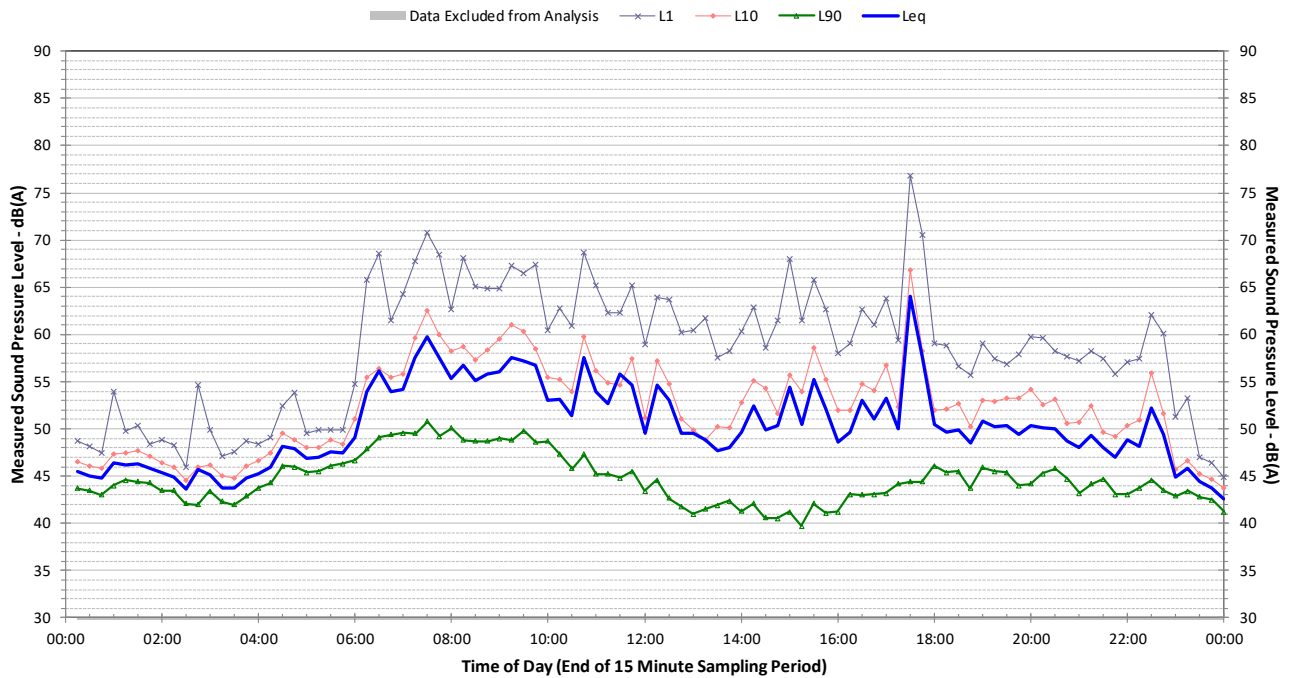
Profile of Noise Environment - Noise Monitoring Location 4 Tuesday 8 August 2017



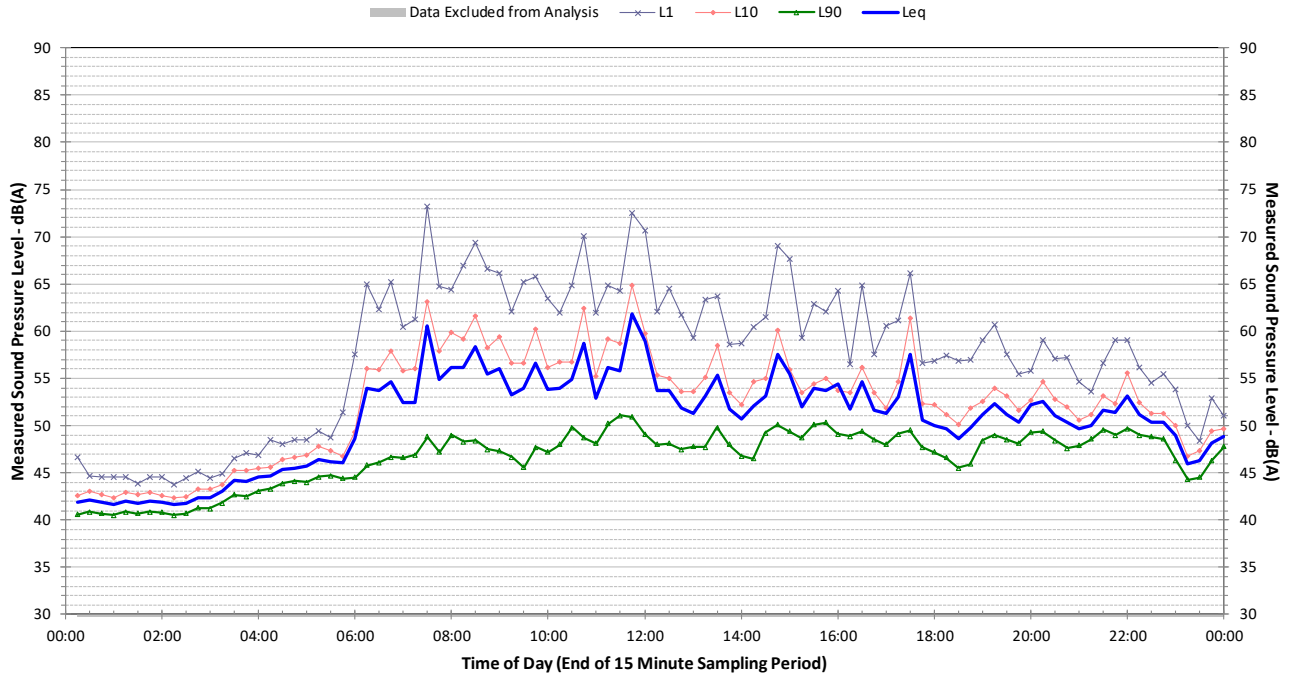
Profile of Noise Environment - Noise Monitoring Location 4 Wednesday 9 August 2017



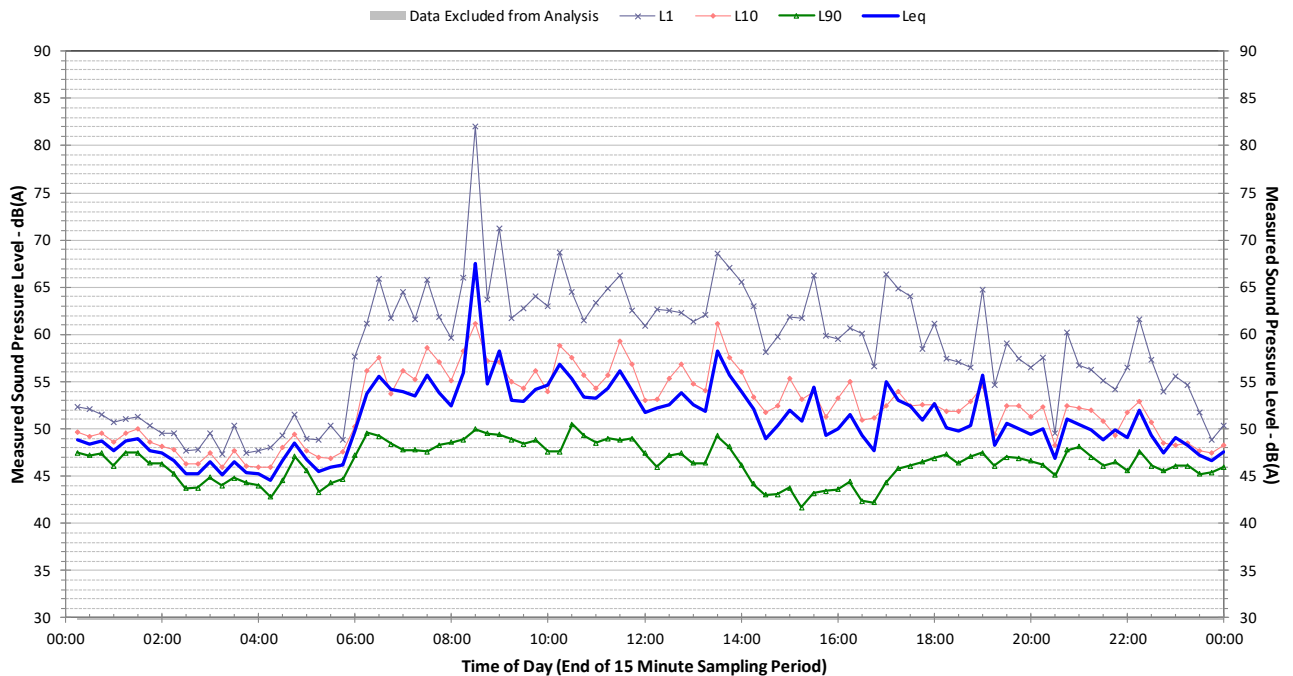
Profile of Noise Environment - Noise Monitoring Location 4 Thursday 10 August 2017



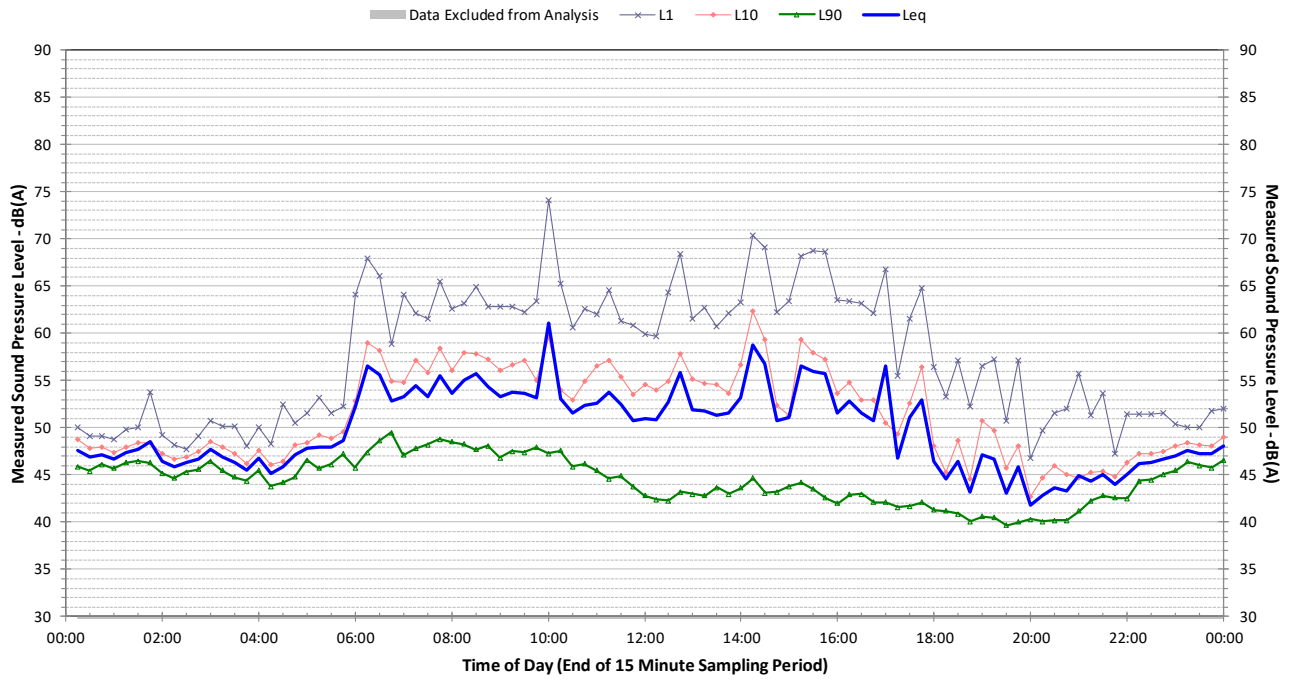
Profile of Noise Environment - Noise Monitoring Location 4 Friday 11 August 2017



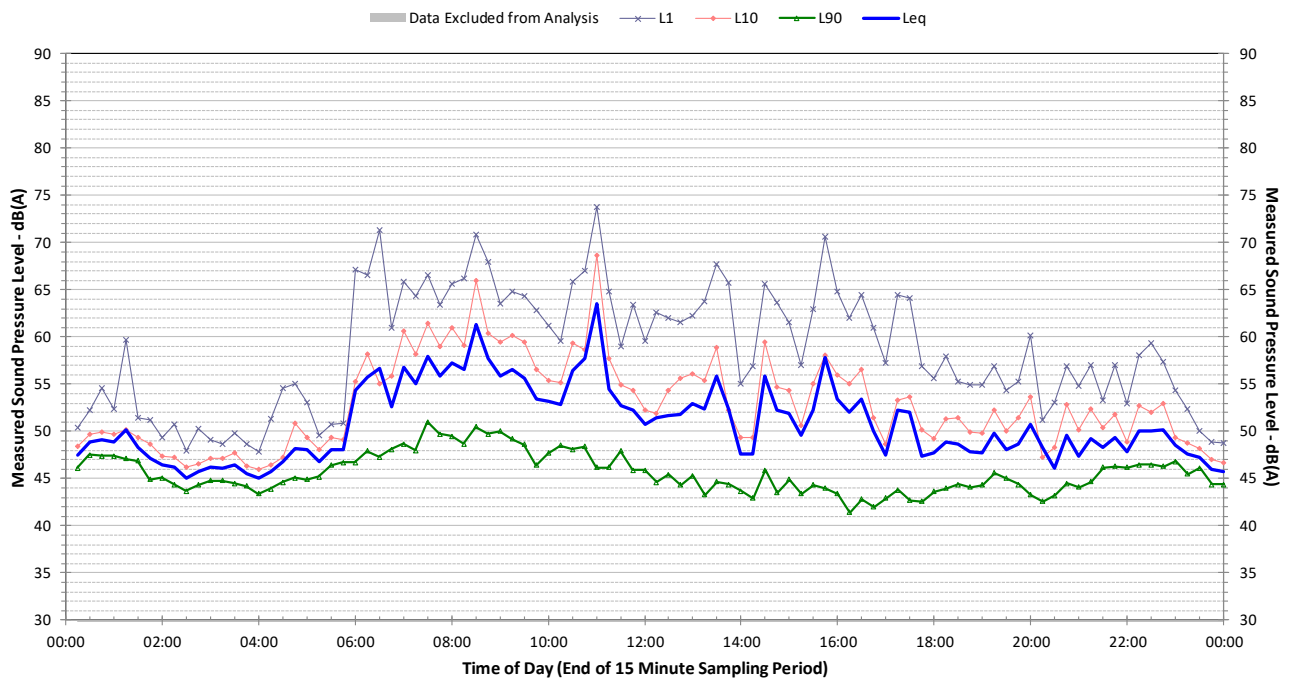
Profile of Noise Environment - Noise Monitoring Location 4 Saturday 12 August 2017



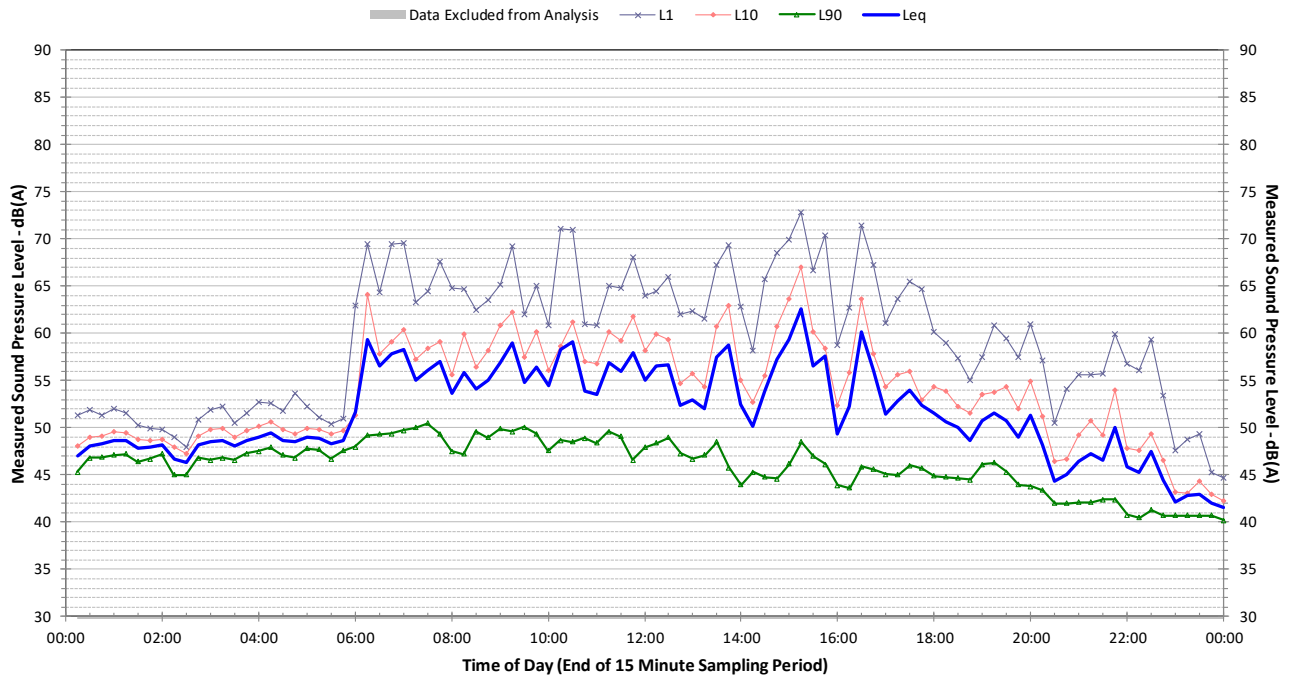
Profile of Noise Environment - Noise Monitoring Location 4 Sunday 13 August 2017



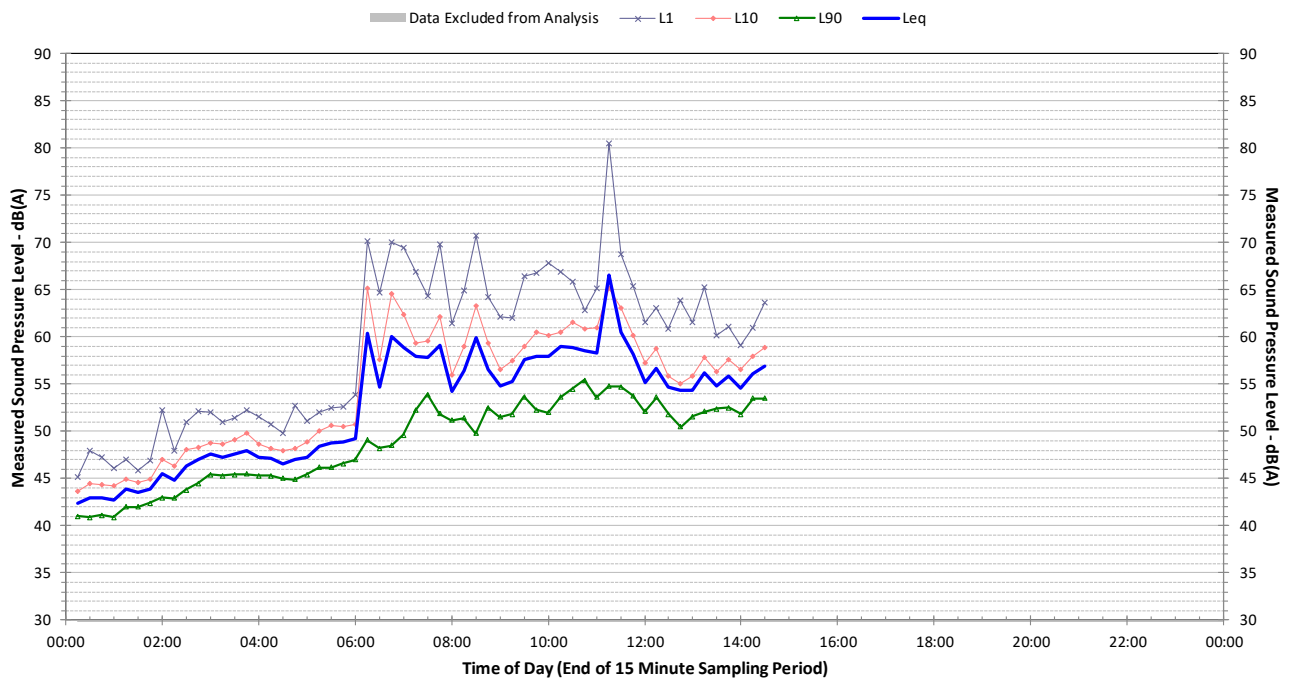
Profile of Noise Environment - Noise Monitoring Location 4 Monday 14 August 2017



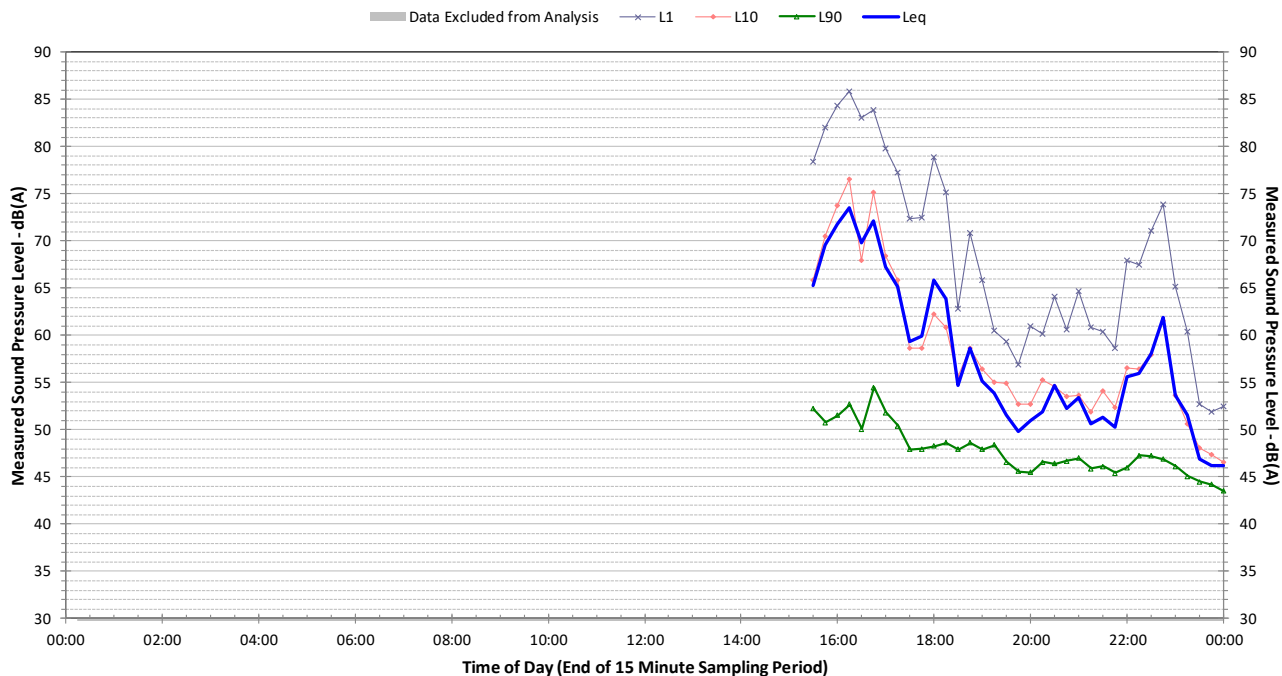
Profile of Noise Environment - Noise Monitoring Location 4 Tuesday 15 August 2017



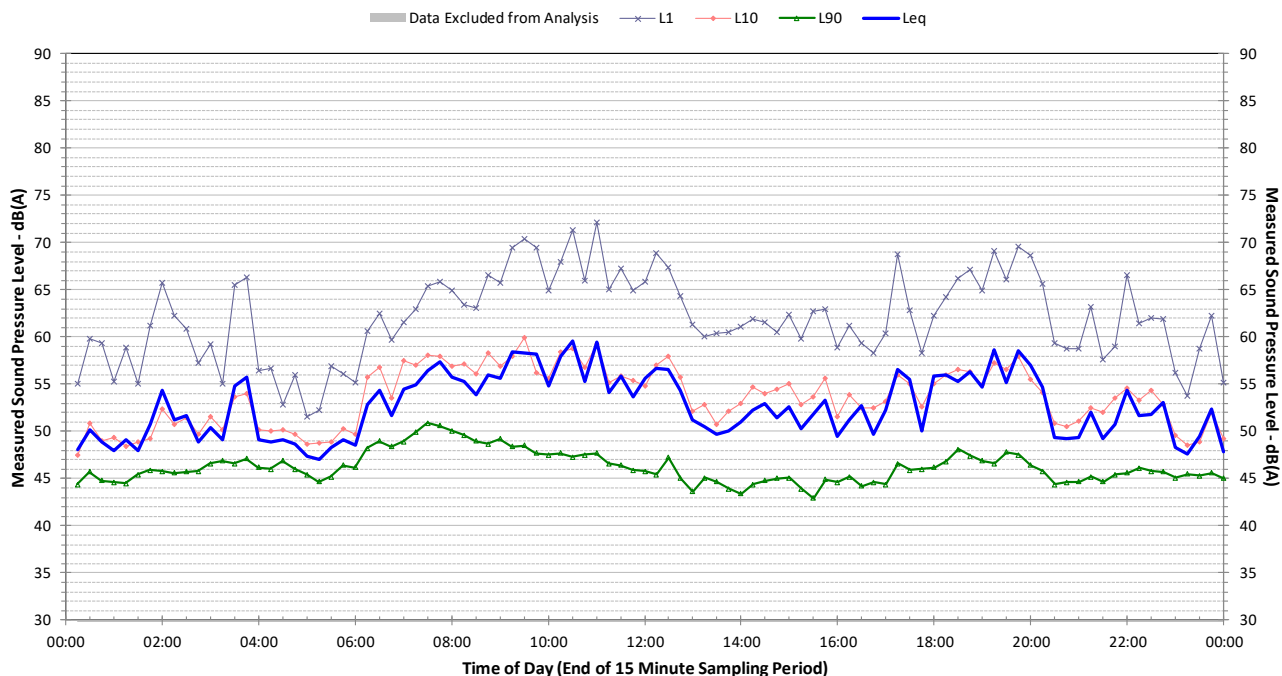
Profile of Noise Environment - Noise Monitoring Location 4 Wednesday 16 August 2017



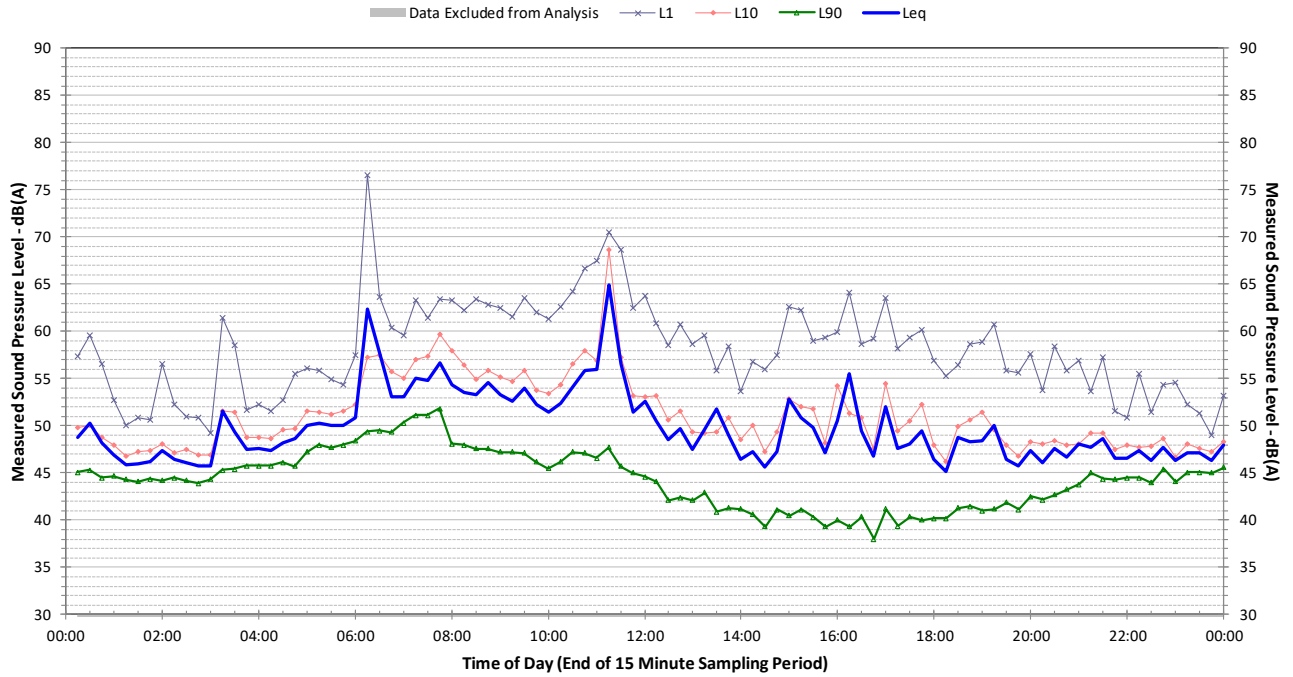
Profile of Noise Environment - Noise Monitoring Location 5 Monday 7 August 2017



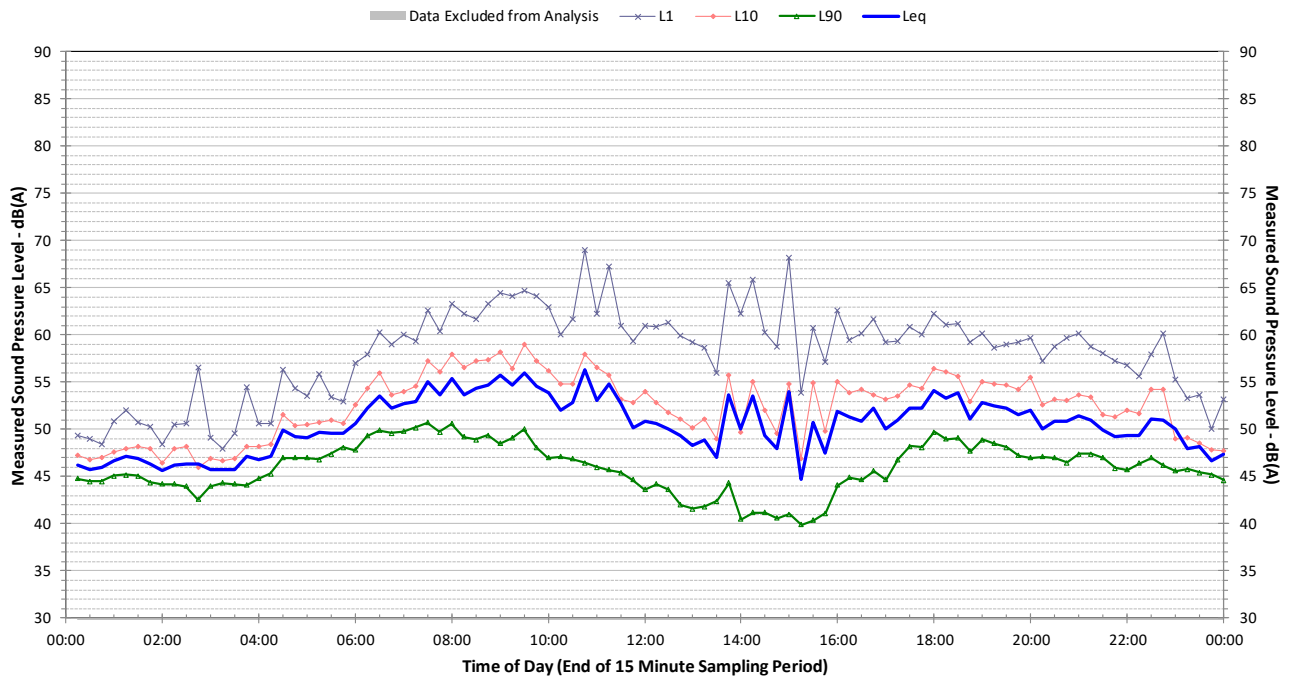
Profile of Noise Environment - Noise Monitoring Location 5 Tuesday 8 August 2017



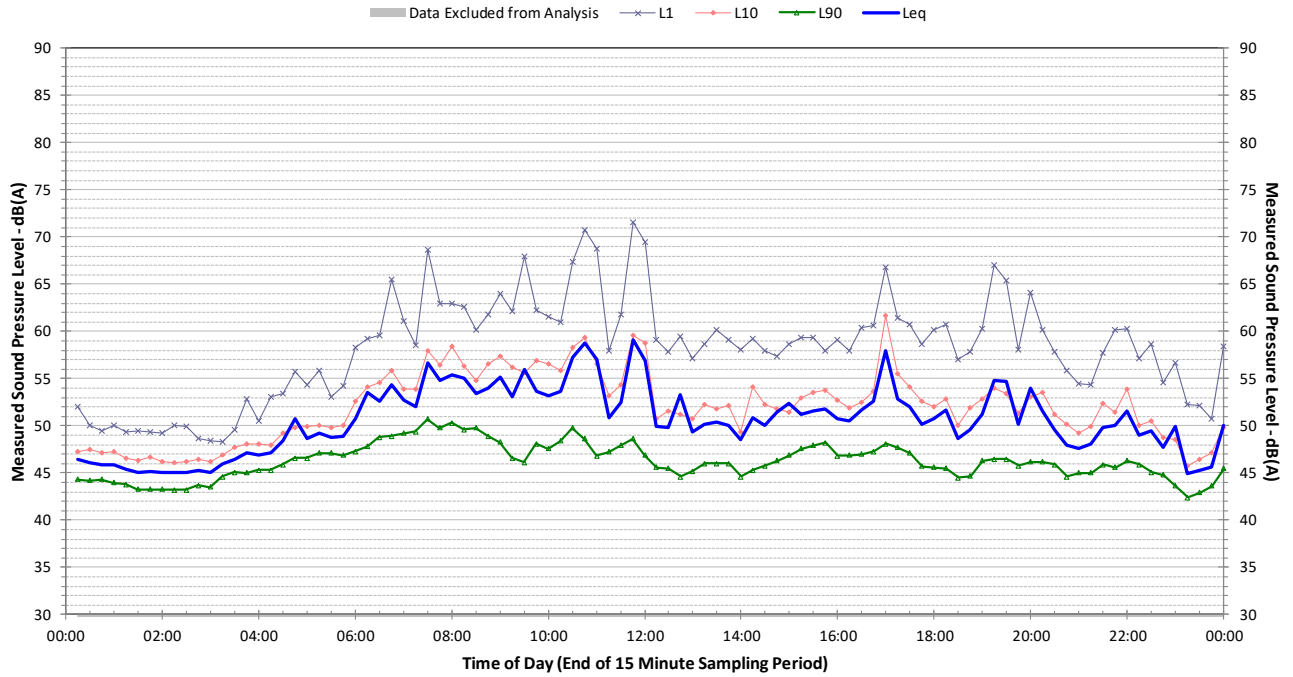
Profile of Noise Environment - Noise Monitoring Location 5 Wednesday 9 August 2017



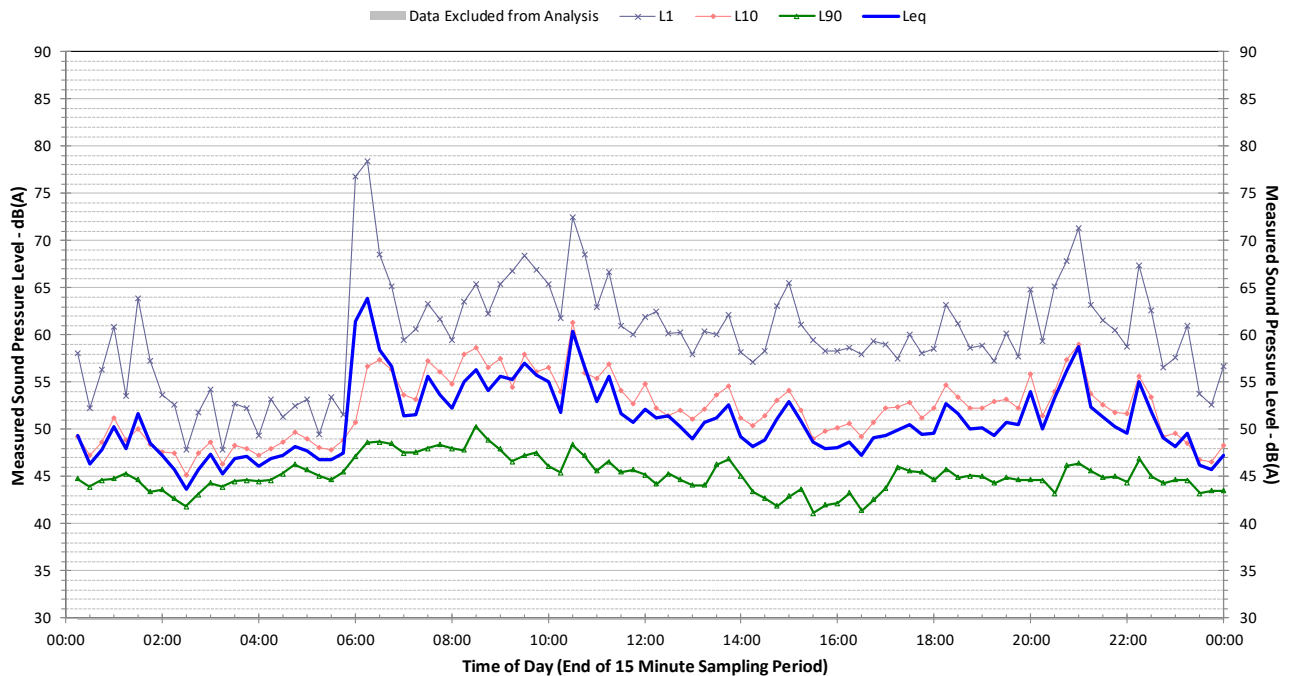
Profile of Noise Environment - Noise Monitoring Location 5 Thursday 10 August 2017



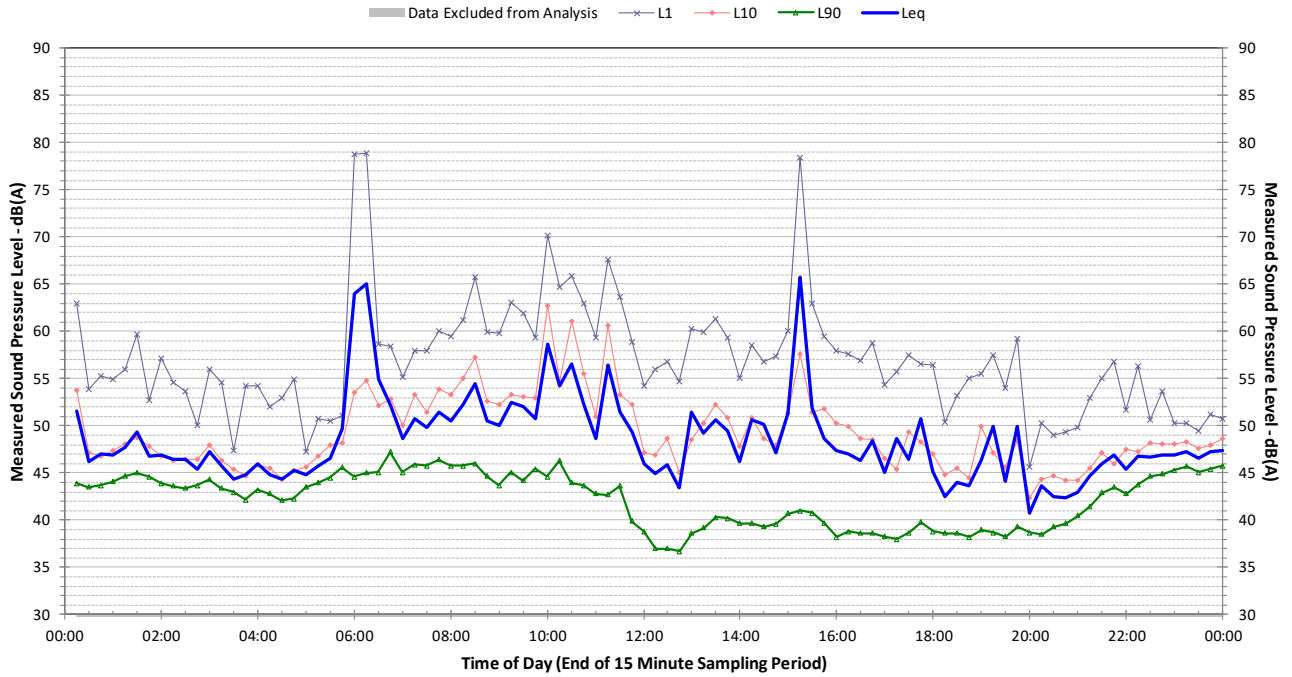
Profile of Noise Environment - Noise Monitoring Location 5 Friday 11 August 2017



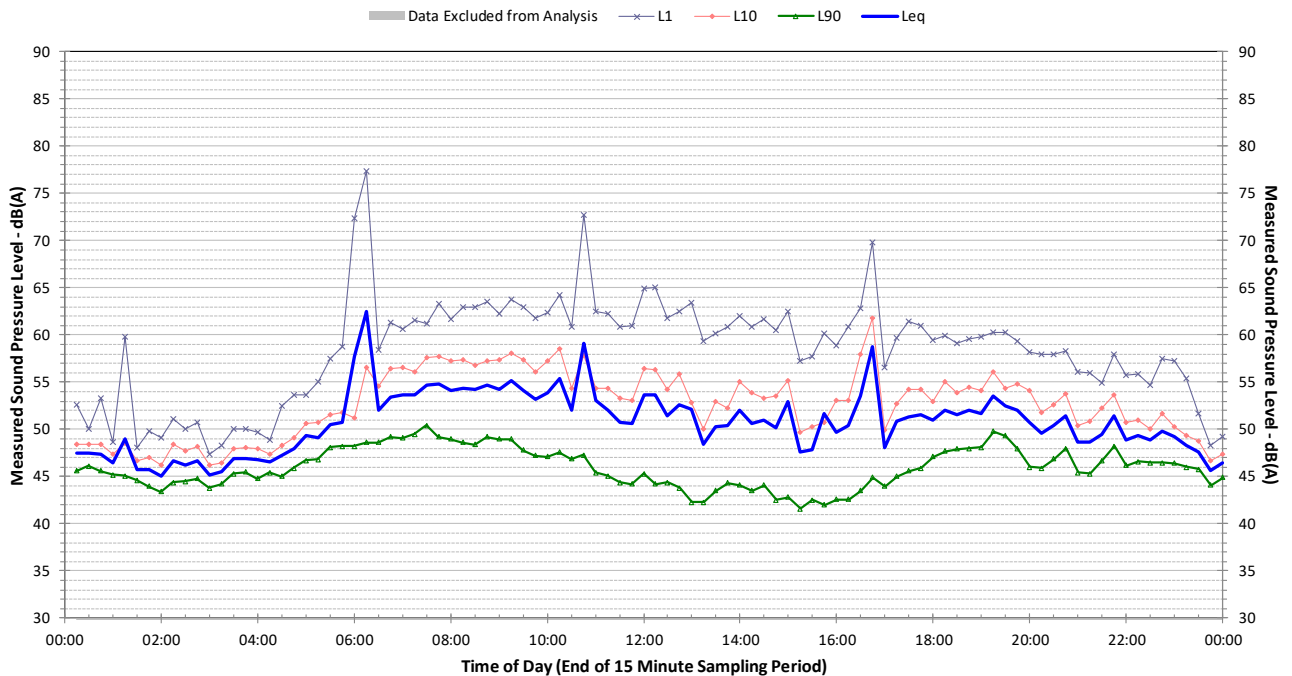
Profile of Noise Environment - Noise Monitoring Location 5 Saturday 12 August 2017



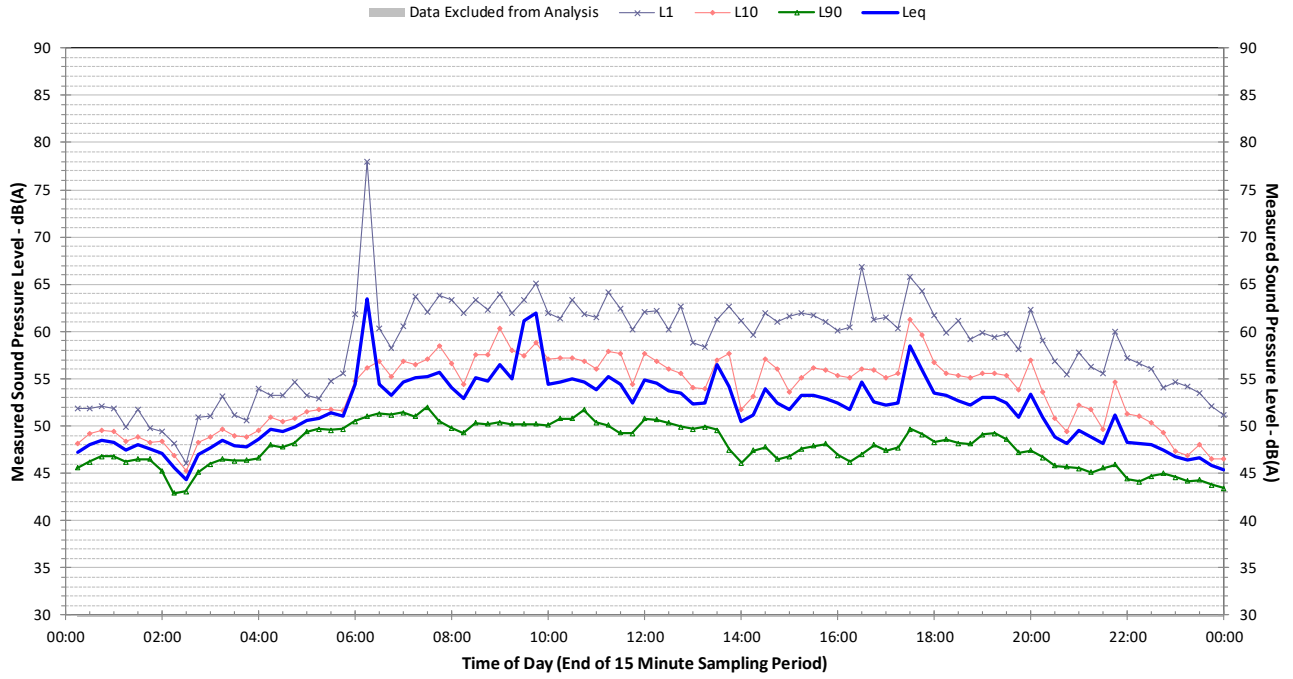
Profile of Noise Environment - Noise Monitoring Location 5 Sunday 13 August 2017



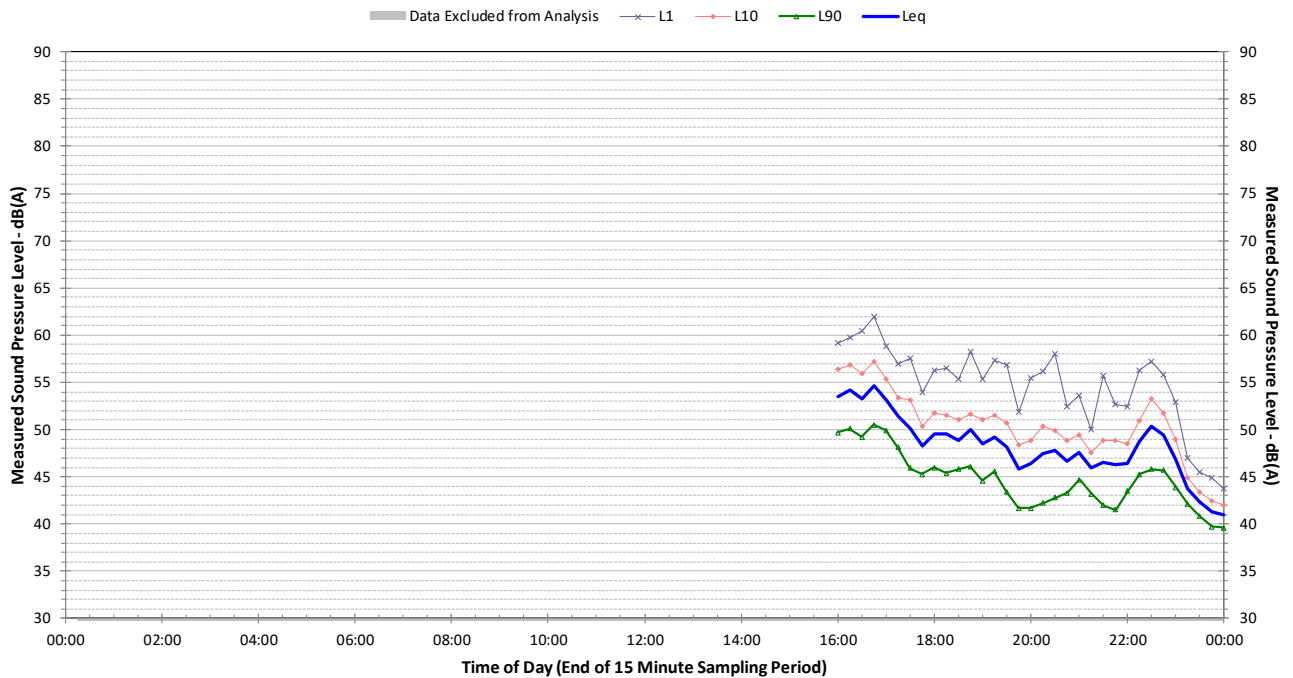
Profile of Noise Environment - Noise Monitoring Location 5 Monday 14 August 2017



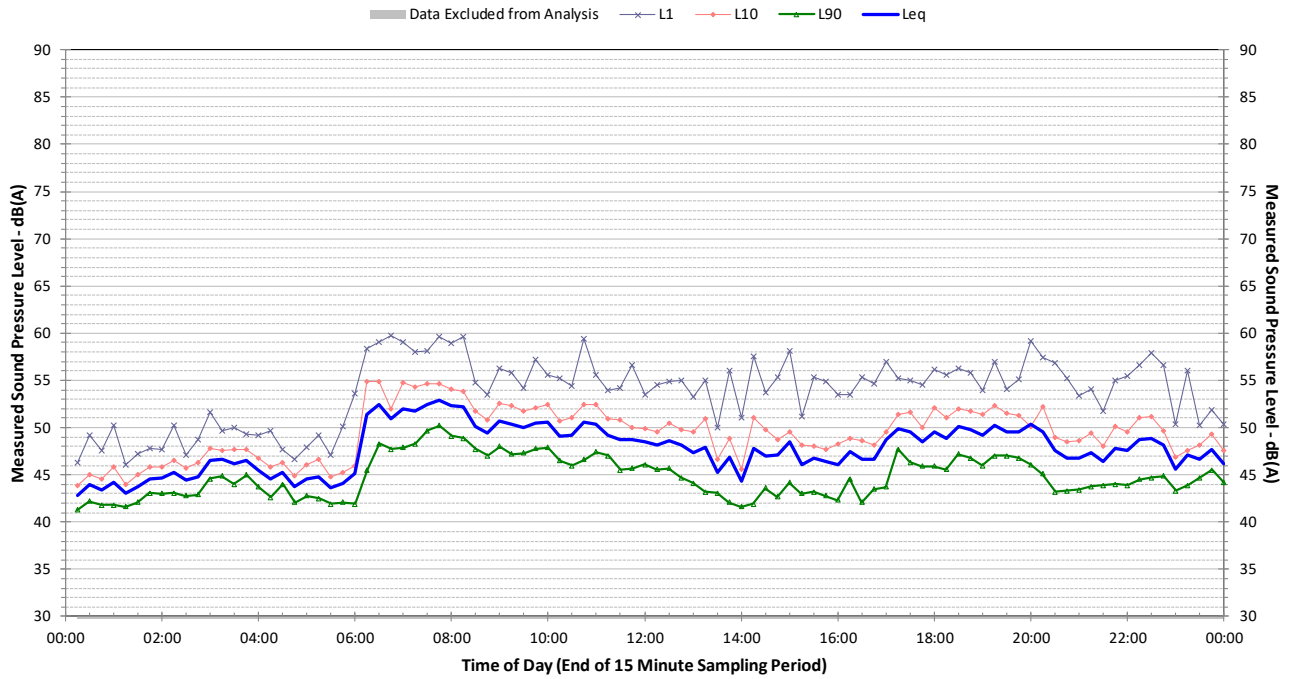
**Profile of Noise Environment - Noise Monitoring Location 5
Tuesday 15 August 2017**



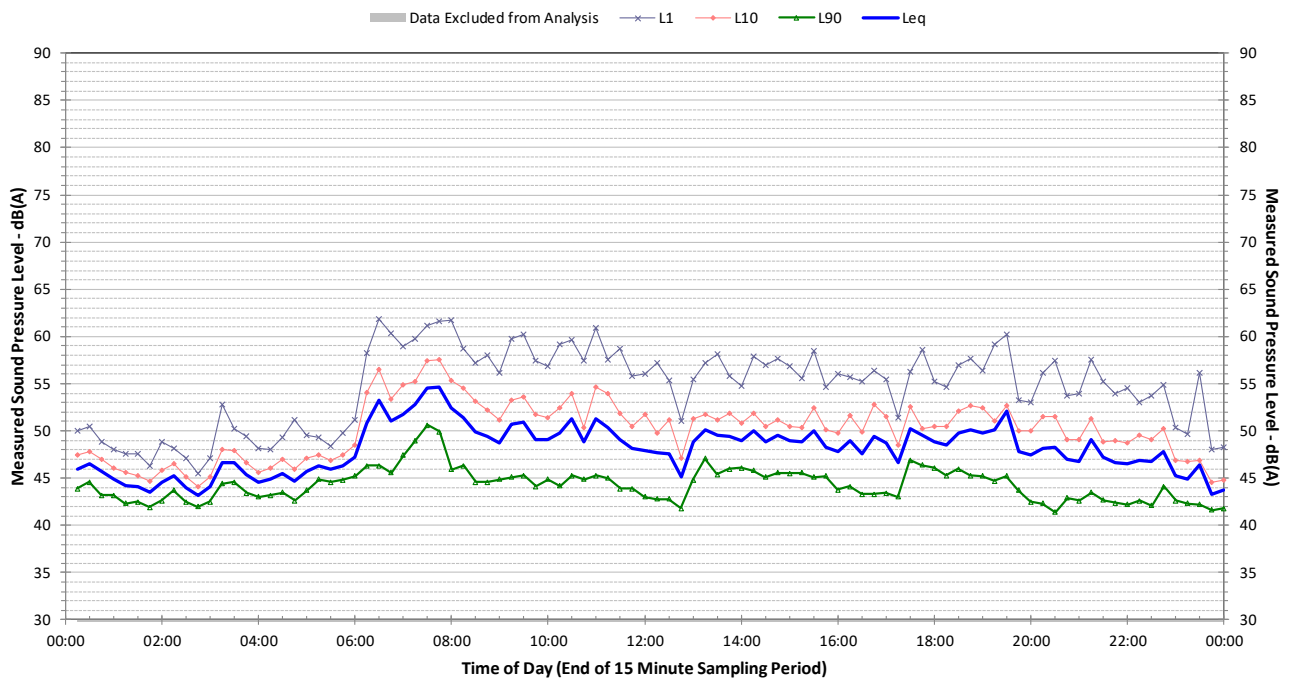
**Profile of Noise Environment - Noise Monitoring Location 6
Monday 7 August 2017**



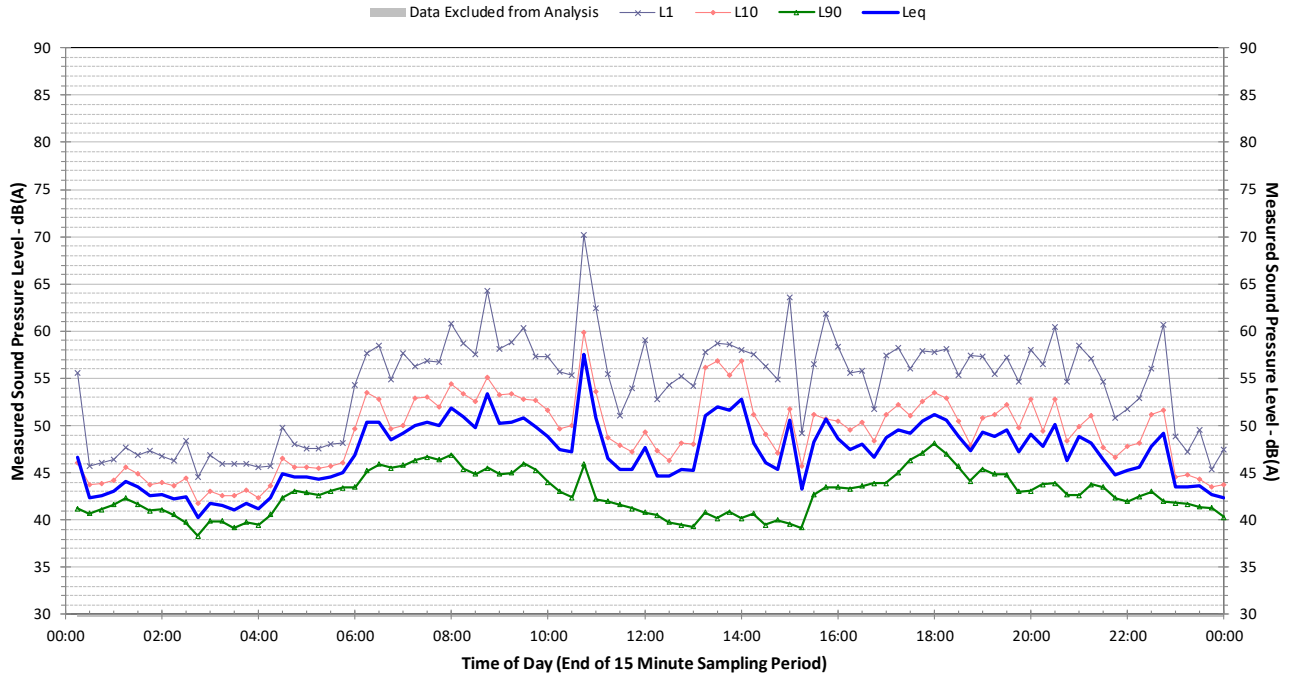
Profile of Noise Environment - Noise Monitoring Location 6 Tuesday 8 August 2017



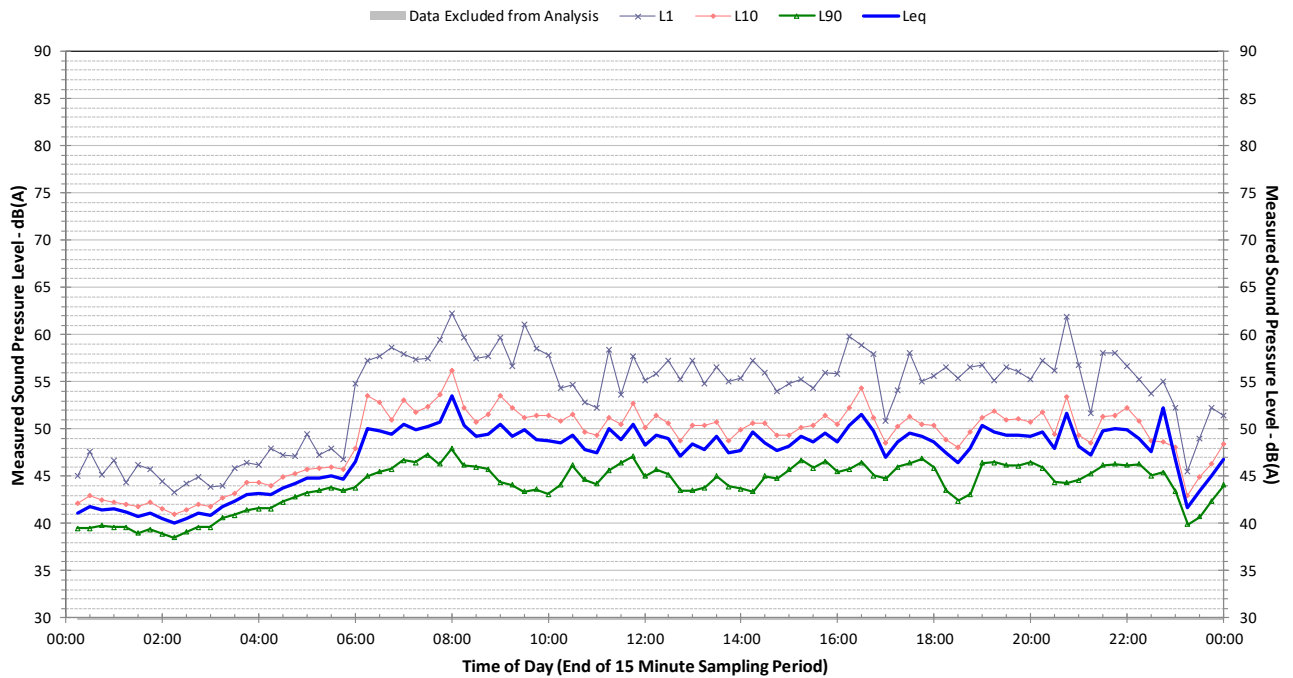
Profile of Noise Environment - Noise Monitoring Location 6 Wednesday 9 August 2017



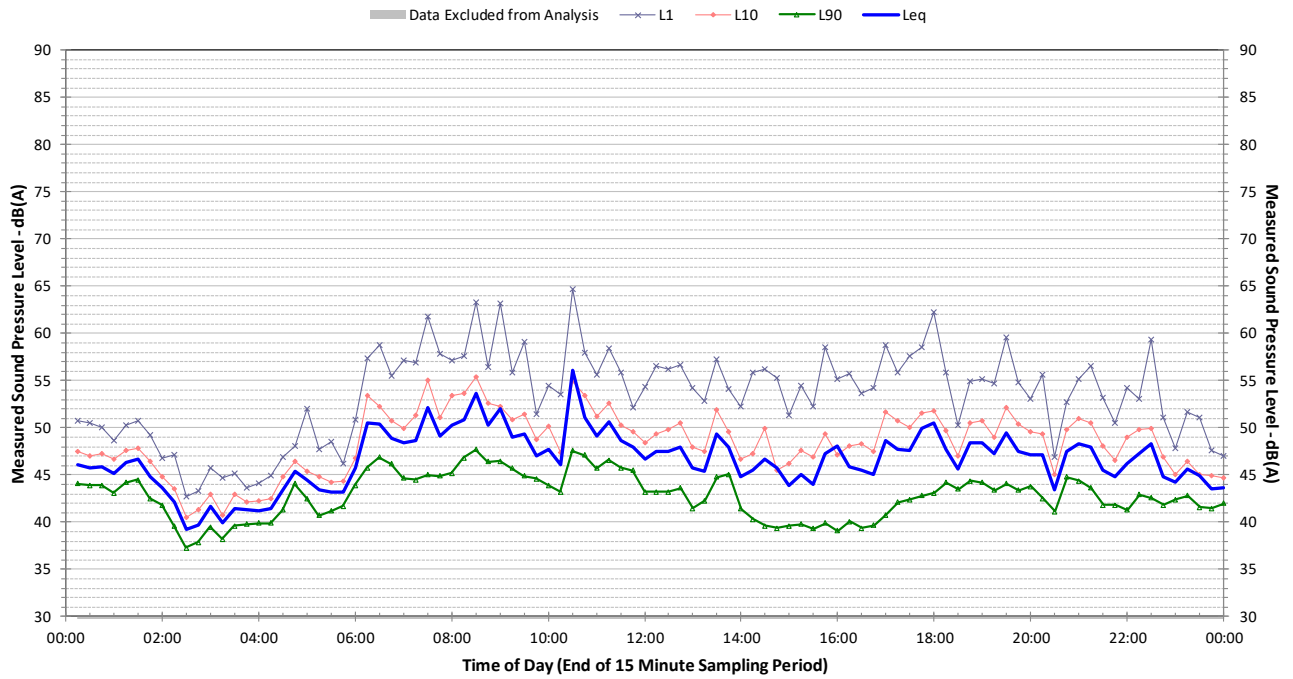
Profile of Noise Environment - Noise Monitoring Location 6 Thursday 10 August 2017



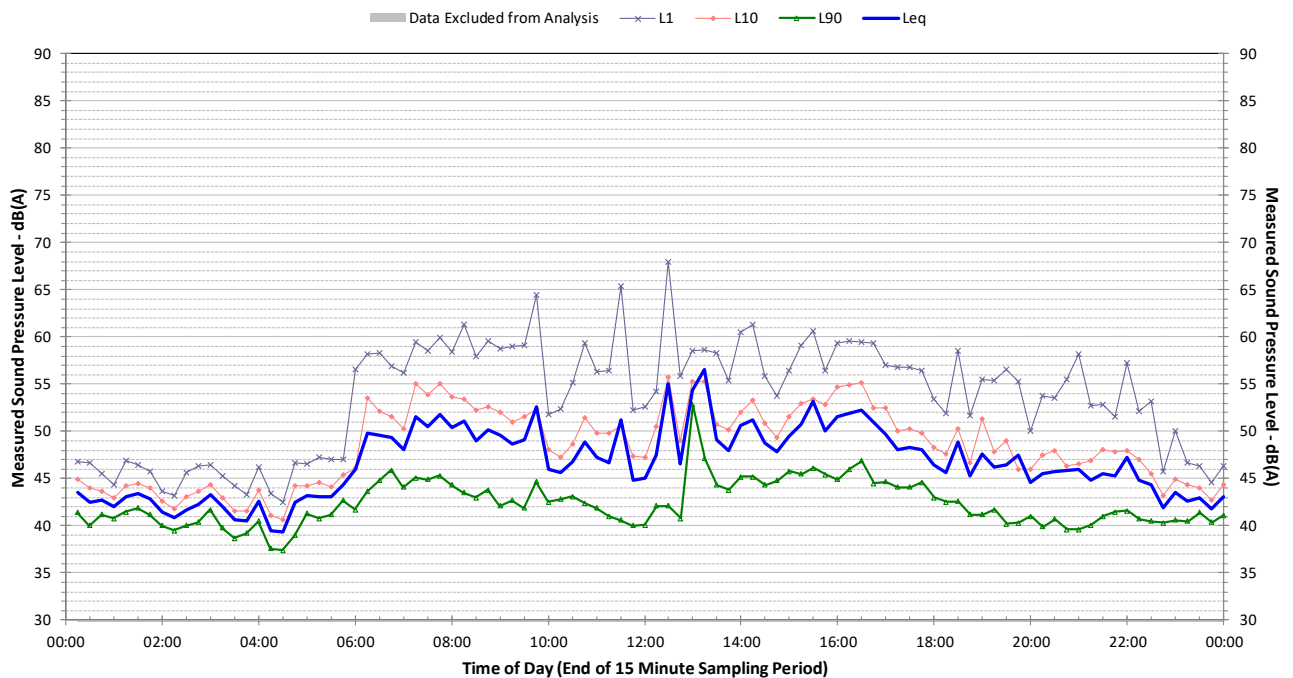
Profile of Noise Environment - Noise Monitoring Location 6 Friday 11 August 2017



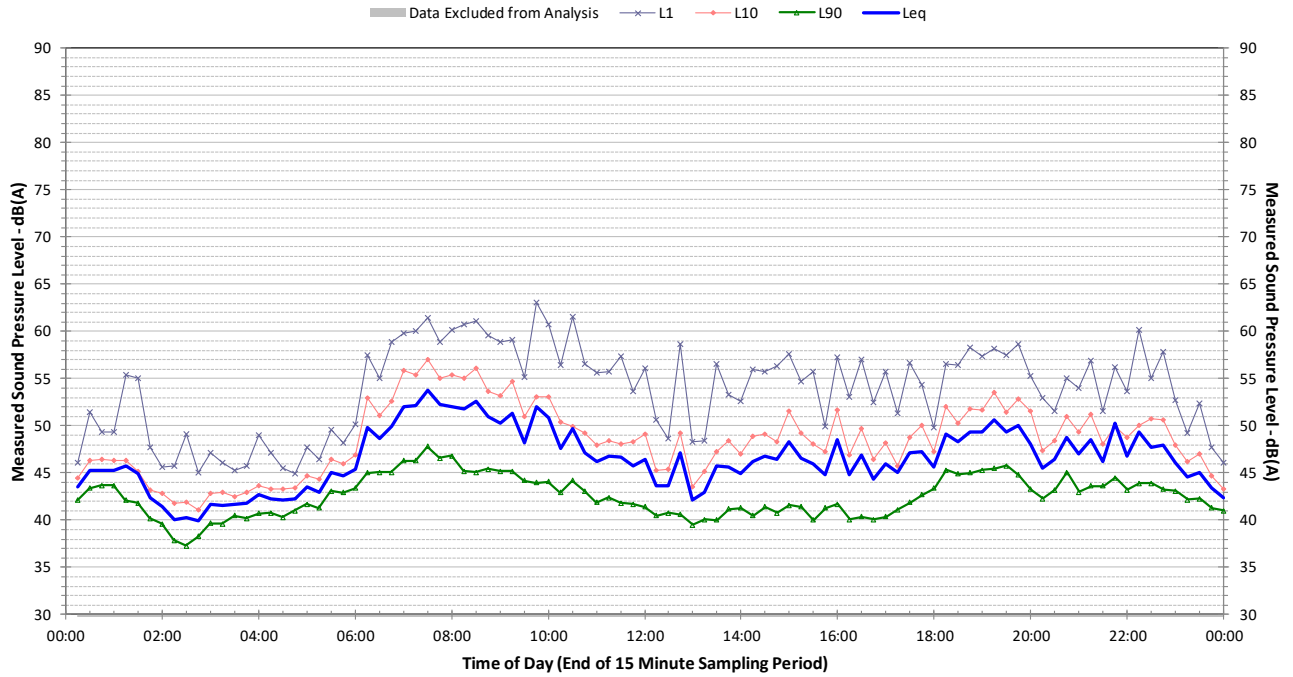
Profile of Noise Environment - Noise Monitoring Location 6 Saturday 12 August 2017



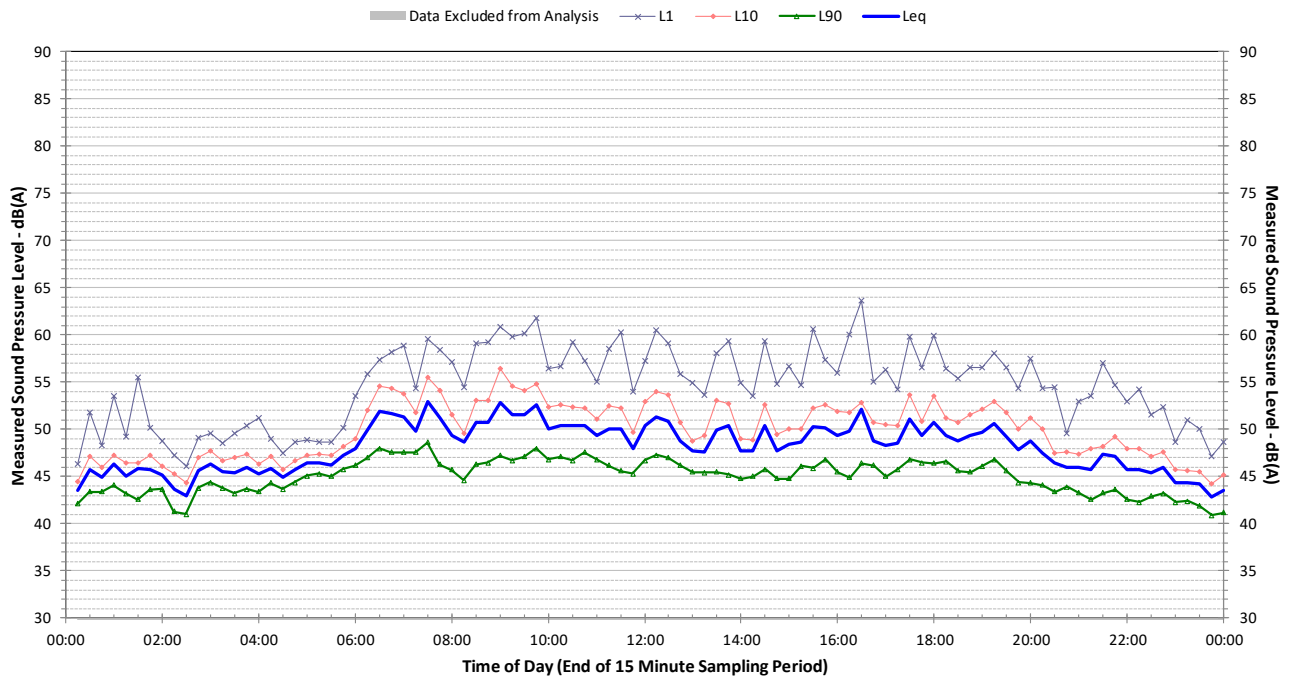
Profile of Noise Environment - Noise Monitoring Location 6 Sunday 13 August 2017



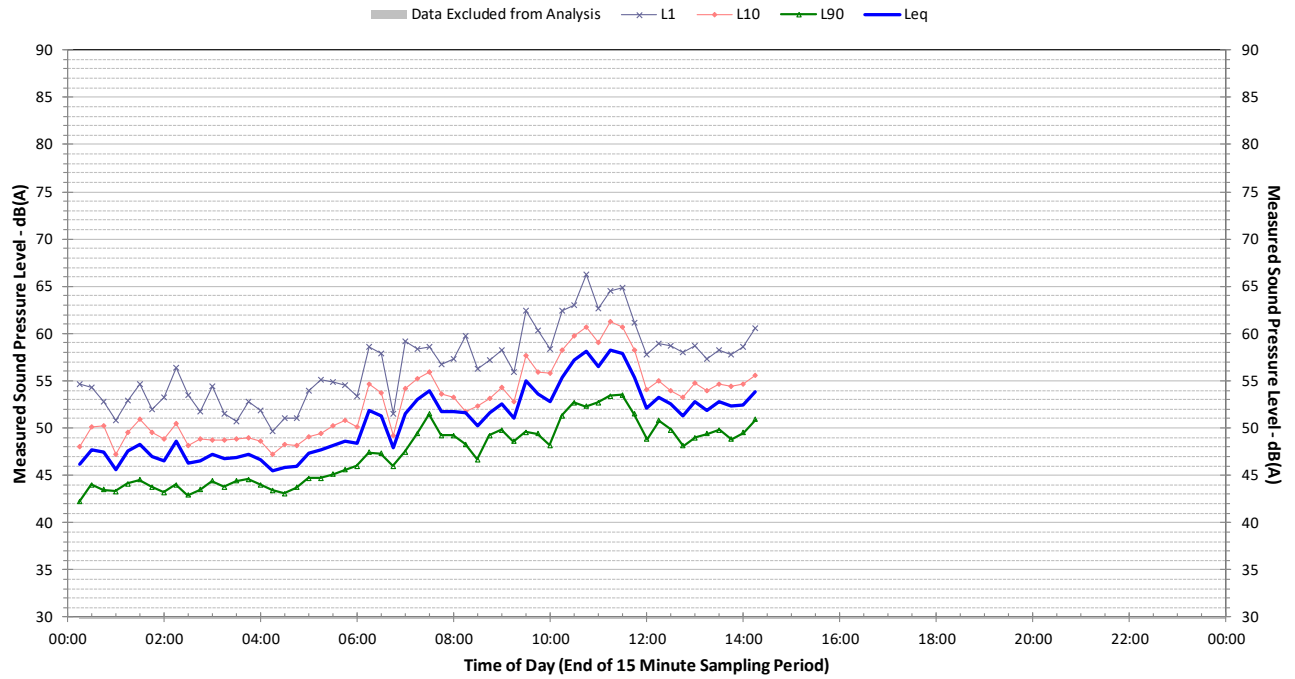
Profile of Noise Environment - Noise Monitoring Location 6 Monday 14 August 2017



Profile of Noise Environment - Noise Monitoring Location 6 Tuesday 15 August 2017



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