

22 April 2022

Ben Crawford  
Independent Cement & Lime Group  
750 Lorimer St, Port Melbourne Victoria 3207

E | [bcrawford@indcem.com.au](mailto:bcrawford@indcem.com.au)

Dear Ben

**Re: Quarterly Environmental Noise Monitoring – Building Product Services,  
Quarter 1 2022**

Umwelt has completed Quarter 1 2022 Environmental Attended Noise Monitoring for Building Product Services (BPS), Kembla Grange to satisfy BPS's Environment Protection Licence (EPL) 20747 requirements.

This report presents the results of noise monitoring carried out on 22 and 23 March 2022. The purpose of attended noise surveys is to quantify and describe the ambient noise environment in the region surrounding BPS and to estimate the BPS contribution to the ambient noise levels. Meteorological conditions present at the time of monitoring and the measured BPS noise levels are compared to criteria outlined in EPL20747.

**Noise monitoring methodology**

The compliance assessment methodology includes the following activities:

- Attended noise monitoring measurements, of fifteen-minute duration, at monitoring locations to measure the ambient noise levels in the surrounding region and to assess the BPS contribution (reported as an LAeq, 15 minute measurement) to the measured noise levels.
- Comparison of the BPS LAeq, 15 minute contribution with the relevant EPL LAeq, 15 minute noise criteria to assess compliance of BPS operations.
- Comparison of the BPS LAF,Max night-time attended noise monitoring results with the night-time LAF,Max criteria outlined in the EPL.

Attended noise monitoring for BPS was conducted in accordance with the NSW Environment Protection Authority (EPA) Noise Policy for Industry (NPfI, 2017), guidelines and the Australian Standard *AS1055:2018, Acoustics – Description and Measurement of Environmental Noise*.

During the attended monitoring sessions, noise measurements were taken with a SVAN 958A Precision Integrating Sound Level Meter (Serial Number 59838) which was calibrated on-site using a Type SV-36, Svantek Sound Level Calibrators (Serial Number 90124). The noise meter was run using three measurement profiles, Z Weighting (linear), C Weighting and A Weighting and records A-weighted 1/3 octave noise levels at 10<sup>th</sup> of a second intervals over a 15-minute measurement period.

During the attended monitoring sessions the operator maintained a log of noise-related events that occurred and contributed to the ambient noise environment. Particular attention and note was made for contributions associated with BPS operations.

Attended noise monitoring data and results recorded include:

- the LAeq,15minute, LA10,15minute and LA90,15minute noise levels of the ambient acoustic environment for each 15-minute measurement period
- the recorded A-weighted 1/3 octave noise levels at 10<sup>th</sup> of a second intervals over each 15-minute measurement period
- the results of a 1000 Hz low pass filter at 10<sup>th</sup> of a second intervals over each 15-minute measurement period
- an assessment of the maximum LA1,1minute noise level recorded over each 15-minute measurement period
- operator comments regarding any extraneous noise sources contributing to the ambient noise levels.

The October 2021 version of EPL 20747 identifies three noise monitoring locations, which are shown in **Figure 1**. EPL 20747 calls for monitoring to be carried out during the day, evening and night period as defined in the Noise Policy for Industry for a minimum of two (2) of the residential locations and one (1) near-field location.

The noise criteria at NML1, NML2 and NML3 are described in **Table 1**.

**Table 1 – Noise Criteria, dBA**

Time of day		Parameter	Noise Level
Day	7 am-6 pm Monday -Saturday	LAeq(15minute)	46
	8 am-6 pm Sunday & Public Holidays)		
Evening	6 pm – 10 pm	LAeq(15minute)	43
Night	10 pm to commencement of day period	LAeq(15minute)	40
		LAFmax	52

Source: EPL 20747



**Figure 1** Location figure showing the BPS site and noise monitoring locations

The noise criteria in **Table 1** apply under the following meteorological conditions:

- Day – Stability categories A, B, C, D with wind speeds up to and including 3m/s at 10m above ground level.
- Evening – Stability categories A, B, C, D with wind speeds up to and including 3m/s at 10m above ground level.
- Night – Stability categories A, B, C, D with wind speeds up to and including 3m/s at 10m above ground level; or
- Stability Category E and F with wind speeds up to and including 2m/s at 10m above ground level.

For those meteorological conditions not referred to above the noise limits include a plus 5dB allowance.

### Identification of suitable meteorological conditions

Umwelt aims to conduct compliance monitoring during meteorological conditions where criteria will apply. Publicly available weather forecasts, such as Weatherzone and the Bureau of Meteorology's (BOM's) synoptic charts and Meteye forecasts are reviewed and periods of low wind speeds and no rain are selected for monitoring. It is noted that inversion conditions can occur during periods of low wind speeds. Therefore, preferentially targeting calm periods may inadvertently result in the monitoring being undertaken during inversion conditions. During strong inversion conditions, the noise criteria includes a 5 dB allowance and the value of the noise monitoring process is potentially diminished. The 5 dB allowance also applies to periods when the wind speed exceeds those nominated above (as per EPL 20747).

Additionally, local radars may be checked immediately prior to monitoring to confirm the absence of rain or storms during summer months. Based on the prevailing meteorological conditions over 22 and 23 March 2022 the monitoring was conducted at NM1 and NM2 as well as an additional near-field location.

Meteorological conditions during monitoring were determined from meteorological data obtained from the EPA Kembla Grange Air Quality Monitoring Station (Station ID 526). Averaged data was available in one hour intervals. Stability categories present during monitoring were determined using the method from Fact Sheet D of the NPfI using the sigma theta data to estimate the Pasquill-Gifford stability category, as outlined in Section D1 of the NPfI, as specified in EPL 20747.

The Quarter 1 2022 attended noise monitoring results in **Table 2** and **Table 3** for NML1 and NML2 respectively include:

- the noise criteria for each monitoring location (for the period when the measurement was taken)
- the estimated noise contribution from BPS
- whether the meteorological conditions include a plus 5dB allowance
- whether BPS is complying with the noise criteria at the time of monitoring.

Further details on the operator comments regarding any extraneous noise sources contributing to the ambient noise levels during the evening and nighttime monitoring period can be found in **Appendix A** for NML1 and in **Appendix B** for NML2 as notated run charts.

The meteorological conditions present during each measurement interval are presented in **Table 4**.

Calibration certificates for the sound and vibration analyser and sound level calibrator used are provided in **Appendix C**.

**Table 2 Quarter 1 2022 Attended Noise Monitoring Results – NML1 Orana Parade**

Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Day	22/3/22 14:31	54	57	46	< 40	-	-	5 dB	Yes	BPS was not specifically audible. The acoustic environment included traffic on the Princes Highway, general industrial noise and wind in the foliage.
Day	22/3/22 14:57	55	65	46	< 42	-	-	5 dB	Yes	BPS was not specifically audible. The acoustic environment was dominated by a brick saw at a construction site. The acoustic environment also included traffic on the highway, a passing train and wind in the foliage. A cement truck unloading at BPS was inaudible.
Day	22/3/22 15:15	54	58	46	< 40	-	-	5 dB	Yes	BPS was not specifically audible. The acoustic environment included traffic on the highway and a plane overhead.
Day	23/3/22 8:26	57	61	46	< 45	-	-	0 dB	Yes	The BPS plant was not specifically audible, but the drying plant was audible at times at approximately 45 dBA during lulls in traffic movements. The acoustic environment included traffic on the highway, insects and wind in the foliage. The front-end loader working at BPS was inaudible.
Day	23/3/22 8:41	58	61	46	< 45	-	-	0 dB	Yes	The BPS plant was not specifically audible but the drying plant was audible at times at approximately 45 dBA during lulls in traffic movements. The acoustic environment included traffic on the highway, insects and a plane overhead.

Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Day	23/3/22 8:56	57	61	46	< 45	-	-	0 dB	Yes	The BPS plant was not specifically audible but the drying plant was audible at times at approximately 45 dBA during lulls in traffic movements. The acoustic environment was dominated by a brick saw at a construction site. The acoustic environment also included traffic on the highway, other industrial noise, a train insects and wind in the foliage. The front-end loader working at BPS was inaudible.
Evening	22/3/22 20:09	59	71	43	42	-	-	0 dB	Yes	The BPS dust collector fan was audible at 380 Hz and the drying plant was audible in the background during lulls in traffic movements. The acoustic environment included traffic on the highway, insect noise, a train passing and local traffic
Evening	22/3/22 20:09	59	71	43	43	-	-	0 dB	Yes	BPS was audible in the 160 to 400 Hz range during lulls in traffic movements. The acoustic environment included traffic on the highway, varying levels of insect noise and local traffic.
Night	23/3/22 5:01	50	54	40	40	52	52 Single event from FEL bucket impact	0 dB	Yes	The BPS drying plant was audible in the background during lulls in traffic movements in the 160 to 400 Hz. The acoustic environment included traffic on the highway, insects and a train passing. The front-end loader working at BPS was just audible.

Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Night	23/3/22 5:16	52	56	40	40	52	< 50	0 dB	yes	The BPS drying plant was audible in the background during lulls in traffic movements. The acoustic environment included traffic on the highway, insects, other industrial activities and a train passing.
Night	23/3/22 5:31	55	58	40	< 42	52	< 50	0 dB	Yes	BPS was just audible with the increasing road traffic noise from the Princes Highway dominated the acoustic environment. The acoustic environment also included a road sweeper, insects and a plane overhead.
Night	23/3/22 5:46	55	59	40	< 42	52	< 50	0 dB	Yes	BPS was just audible with the increasing road traffic noise from the Princes Highway dominated the acoustic environment.

**Notes:**

1. Assessed by the operator during the monitoring session. Exceedances of EPL limits are shown in bold.
2. Meteorological conditions under which the noise criteria apply are defined in EPL20747 condition L2.3(a).
3. See **Table 4** for specific meteorological data during the monitoring period.
4. For those meteorological conditions not referred to in EPL20747 condition L2.3(a), the noise limits that apply are the noise limits in condition L2.1 plus 5dB.



**Table 3 Quarter 1 2022 Attended Noise Monitoring Results – NML2 Farmborough Road**

Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Day	23/3/22 16:00	48	51	46	< 40	-	-	+ 5 dB	Yes	BPS was not audible. The acoustic environment included traffic on the Princes Highway and freeway, local traffic, a passing train, a plane overhead and wind in the foliage.
Day	23/3/22 16:18	48	50	46	< 40	-	-	+ 5 dB	Yes	BPS was mostly inaudible with the dust collector fan just audible during lulls in traffic movements. The acoustic environment included traffic on the highway and freeway, other industrial noise, insects and birds.
Day	23/3/22 16:33	48	50	46	< 40	-	-	+ 5 dB	Yes	BPS was not audible. The acoustic environment included traffic on the highway and freeway, a passing train, insects and birds.
Day	23/3/22 16:48	47	50	46	40	-	-	+ 5 dB	Yes	BPS was mostly inaudible with the drying plant audible at approximately 42 to 43 dBA during lulls in traffic movements. The acoustic environment also included traffic on the highway and freeway, a plane overhead, local traffic and birds. The front-end loader working at BPS was inaudible.
Day	23/3/22 17:03	48	55	46	40	-	-	+ 5 dB	Yes	BPS was mostly inaudible with the drying plant audible at approximately 38 to 41 dBA during lulls in traffic movements. The acoustic environment also included traffic on the highway and freeway, a passing train, local traffic, insects and birds.



Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Day	23/3/22 17:18	48	50	46	40	-	-	+ 5 dB	Yes	The BPS drying plant audible at approximately 40 dBA during. The acoustic environment also included traffic on the highway and freeway, other industrial noises, a plane overhead, local traffic, insects and birds.
Evening	23/3/22 18:07	51	52	43	42	-	-	+ 5 dB	Yes	BPS was audible with the dust collector fan just audible during lulls in traffic movements and the drying plant audible at approximately 40 to 42 dBA during lulls in traffic movements. The acoustic environment also included traffic on the highway and freeway, domestic sources, local traffic, insects and birds.
Evening	23/3/22 18:22	50	52	43	40	-	-	+ 5 dB	Yes	BPS was mostly inaudible with the drying plant audible at approximately 38 to 41 dBA during lulls in traffic movements. The acoustic environment also included traffic on the highway and freeway, domestic sources, a passing train, local traffic, insects and birds. The front-end loader working at BPS was just audible.
Night	23/3/22 6:08	49	55	40	40	52	< 50 from FEL bucket loading	0 dB	Yes	BPS was audible in the background at approximately 38 to 40 dBA during lulls in traffic movements. The acoustic environment also included local traffic, traffic on the highway and freeway. The front-end loader working at BPS was inaudible.

Period	Start Date and Time of 15 min period	Ambient Noise Levels		Estimated <sup>1</sup> BPS Contribution and Criteria, dB(A)						Comments
		LA90, 15min	LAeq, 15min	EPL criteria LAeq, 15min	BPS LAeq,15min <sup>1</sup>	EPL criteria LAFmax	BPS LAFmax <sup>1</sup>	Met <sup>2,3,4</sup> Allowance (0dB/+5dB)	BPS Complies (Yes/No)	
Night	23/3/22 6:23	53	57	40	40	52	< 50	0 dB	Yes	BPS was just audible in the background at approximately 38 to 40 dBA during lulls in traffic movements. The acoustic environment also included traffic on the highway and freeway, local traffic and birds.
Night	23/3/22 6:38	53	57	40	40	52	< 50	0 dB	Yes	BPS was mostly inaudible in due to the increase in traffic noise. BPS was estimated at 40 dBA as the plant was just audible lulls in traffic movements. The acoustic environment included traffic on the highway and freeway, local traffic and birds.
Night	23/3/22 6:53	53	58	40	Not audible	52	Not audible	0 dB	Yes	BPS was mostly inaudible in due to the increase in traffic noise from the freeway. The acoustic environment included traffic on the highway and freeway, local traffic and birds.

**Notes:**

1. Assessed by the operator during the monitoring session. Exceedances of EPL limits are shown in bold.
2. Meteorological conditions under which the noise criteria apply are defined in EPL20747 condition L2.3(a).
3. See **Table 4** for specific meteorological data during the monitoring period.
4. For those meteorological conditions not referred to in EPL20747 condition L2.3(a), the noise limits that apply are the noise limits in condition L2.1 plus 5dB.

**Table 4 Meteorological Conditions During Attended Monitoring**

EPL Id	Start Date and Time of 15 min period	Meteorological Assessment during Monitoring Period <sup>1,2</sup>				Includes Meteorological Allowance <sup>4</sup> (0dB/+5dB)
		Rain (mm)	Avg. Wind Speed @ Mic. <sup>3</sup> (m/s)	Avg. Wind Speed @ 10m (m/s)	Atmospheric Stability Category (ASC)	
NML1	22/3/22 14:31	0	< 5	5.7	D	+ 5 dB
NML1	22/3/22 14:57	0	< 5	5.7	D	+ 5 dB
NML1	22/3/22 15:15	0	< 5	5.5	C	+ 5 dB
NML1	23/3/22 8:26	0	< 5	2.3	A	0 dB
NML1	23/3/22 8:41	0	< 5	2.3	A	0 dB
NML1	23/3/22 8:56	0	< 5	2.3	A	0 dB
NML1	22/3/22 20:09	0	< 5	0.4	F	0 dB
NML1	22/3/22 20:09	0	< 5	0.4	F	0 dB
NML1	23/3/22 5:01	0	< 5	1.8	F	0 dB
NML1	23/3/22 5:16	0	< 5	1.8	F	0 dB
NML1	23/3/22 5:31	0	< 5	1.8	F	0 dB
NML1	23/3/22 5:46	0	< 5	1.8	F	0 dB
NML2	23/3/22 16:00	0	< 5	4.1	C	+ 5 dB
NML2	23/3/22 16:18	0	< 5	4.1	C	+ 5 dB
NML2	23/3/22 16:33	0	< 5	4.1	C	+ 5 dB
NML2	23/3/22 16:48	0	< 5	4.1	C	+ 5 dB
NML2	23/3/22 17:03	0	< 5	4.2	C	+ 5 dB
NML2	23/3/22 17:18	0	< 5	4.2	C	+ 5 dB
NML2	23/3/22 18:07	0	< 5	2.5	F	+ 5 dB
NML2	23/3/22 18:22	0	< 5	2.5	F	+ 5 dB
NML2	23/3/22 6:08	0	< 5	1.2	F	0 dB
NML2	23/3/22 6:23	0	< 5	1.2	F	0 dB
NML2	23/3/22 6:38	0	< 5	1.2	F	0 dB
NML2	23/3/22 6:53	0	< 5	1.2	F	0 dB

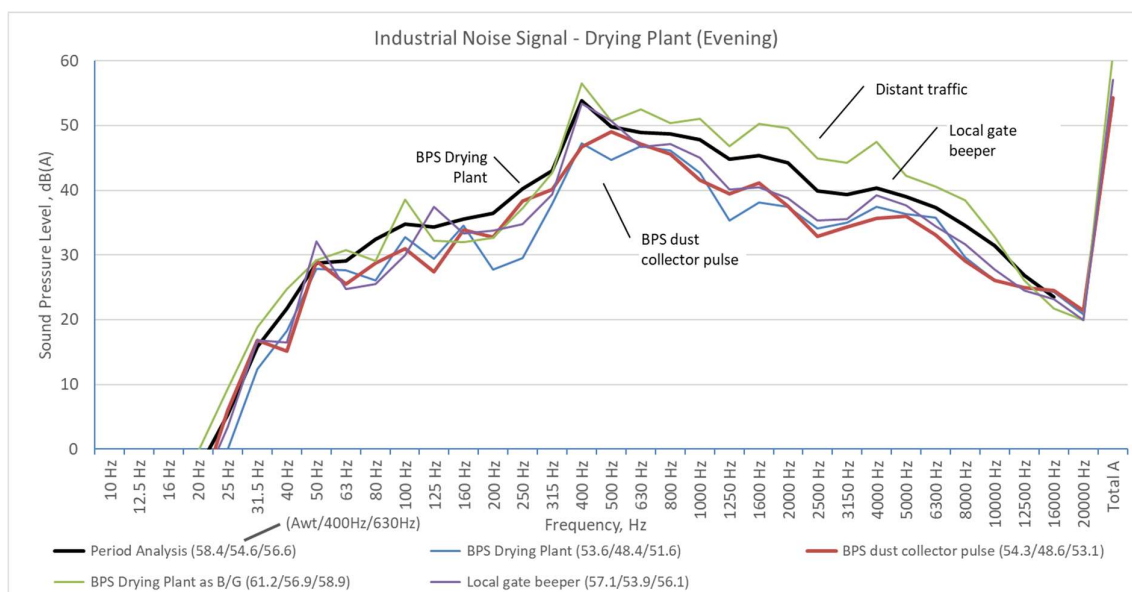
**Notes:**

1. Assessed by the operator during the monitoring session. Exceedances of EPL limits are shown in bold.
2. Meteorological conditions under which the noise criteria apply are defined in EPL20747 condition L2.3(a).
3. Wind speed at microphone height was determined by the operator.
4. For those meteorological conditions not referred to in EPL20747 condition L2.3(a), the noise limits that apply are the noise limits in condition L2.1 plus 5dB.

## Near-field Monitoring

Near-field monitoring was conducted during the evening period to investigate the performance of the dust collector fan, dust collector pulse system and drying plant. It was noted during the attended monitoring that drying plant was occasionally audible in the background during lulls in the road traffic noise from the Princes Highway.

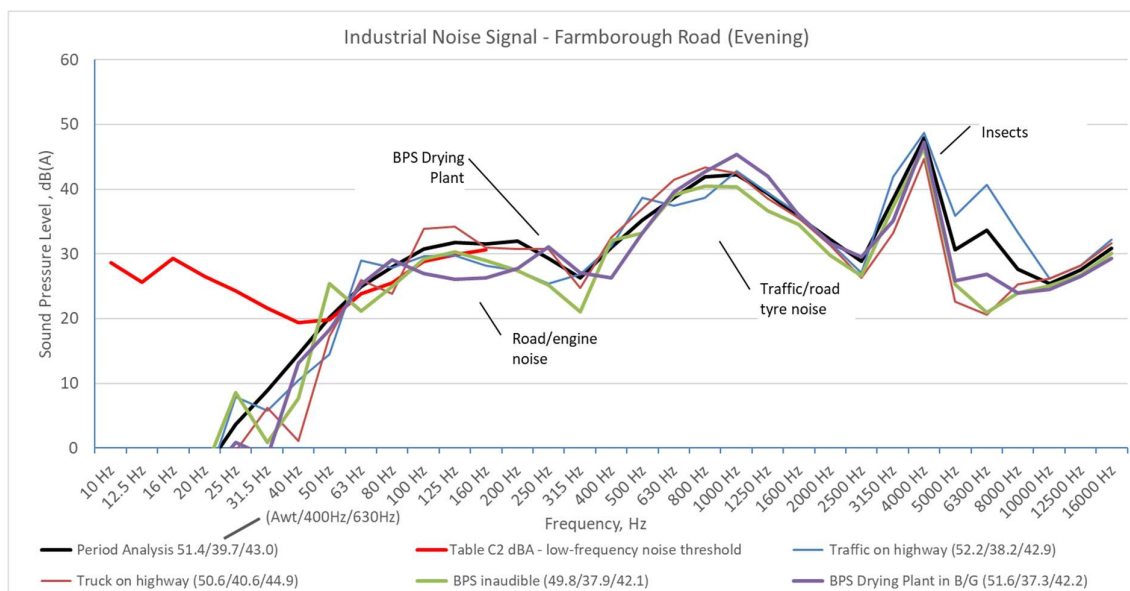
To investigate the contribution of the drying plant to the acoustic environment at NML2 monitoring was conducted at a near-field monitoring location at the rear of 275 Princes Highway to quantify the drying plant acoustic signal. **Figure 2** shows the one-third octave noise levels of the acoustic environment that includes local and distant traffic, the BPS dust collector fan and pulse system and the BPS drying plant.



**Figure 2 – One-third octave noise levels monitored at a near-field location**

An inspection of the drying plant revealed the plant had loose heat protection covers that

**Figure 3** shows an estimate of the contribution of the BPS drying plant the one-third octave noise levels at NML2 (Farmborough Road) during lulls in road traffic noise.



**Figure 3 - One-third octave noise levels at NML1**

The results in **Figure 3** show an estimate of the BPS drying plant's contribution to the acoustic environment at NML2. The difference in the measured source C- to A-weighted sound pressure levels of the acoustic environment is less than 10 dB and the BPS drying plant does not trigger the one-third octave low-frequency noise thresholds in Table C2 of Fact Sheet C in the NPfI.

The BPS drying plant does not attract a modifying penalty but it does, in its current condition, contribute to the acoustic environment at NML2 (Farmborough Road).

## **Statement of Compliance**

The results of the Quarter 1 2022 noise monitoring program have been assessed against the EPL20747 noise criteria and the meteorological conditions identified in the license for BPS.

The Quarter 1 2022 attended noise monitoring results show that BPS was compliant with the BPS EPL20747 noise criteria for LAeq,15minute and LA1,1minute noise levels for all monitoring locations.

## **Recommendations**

The attended noise monitoring identified one aspects of the operation that warranted further attention. This is as follows:

1. Maintenance of the drying plant heat shields.

## **Observations**

The following observation was made during the attended noise monitoring:

1. The upgrade of the front-end loader exhaust system has reduced the audibility of loader at the monitoring locations.

We trust this information meets with your current requirements. Please do not hesitate to contact the undersigned on 1300 793 267 should you require clarification or further details of the noise monitoring parameters recorded during this monitoring round.

Yours sincerely

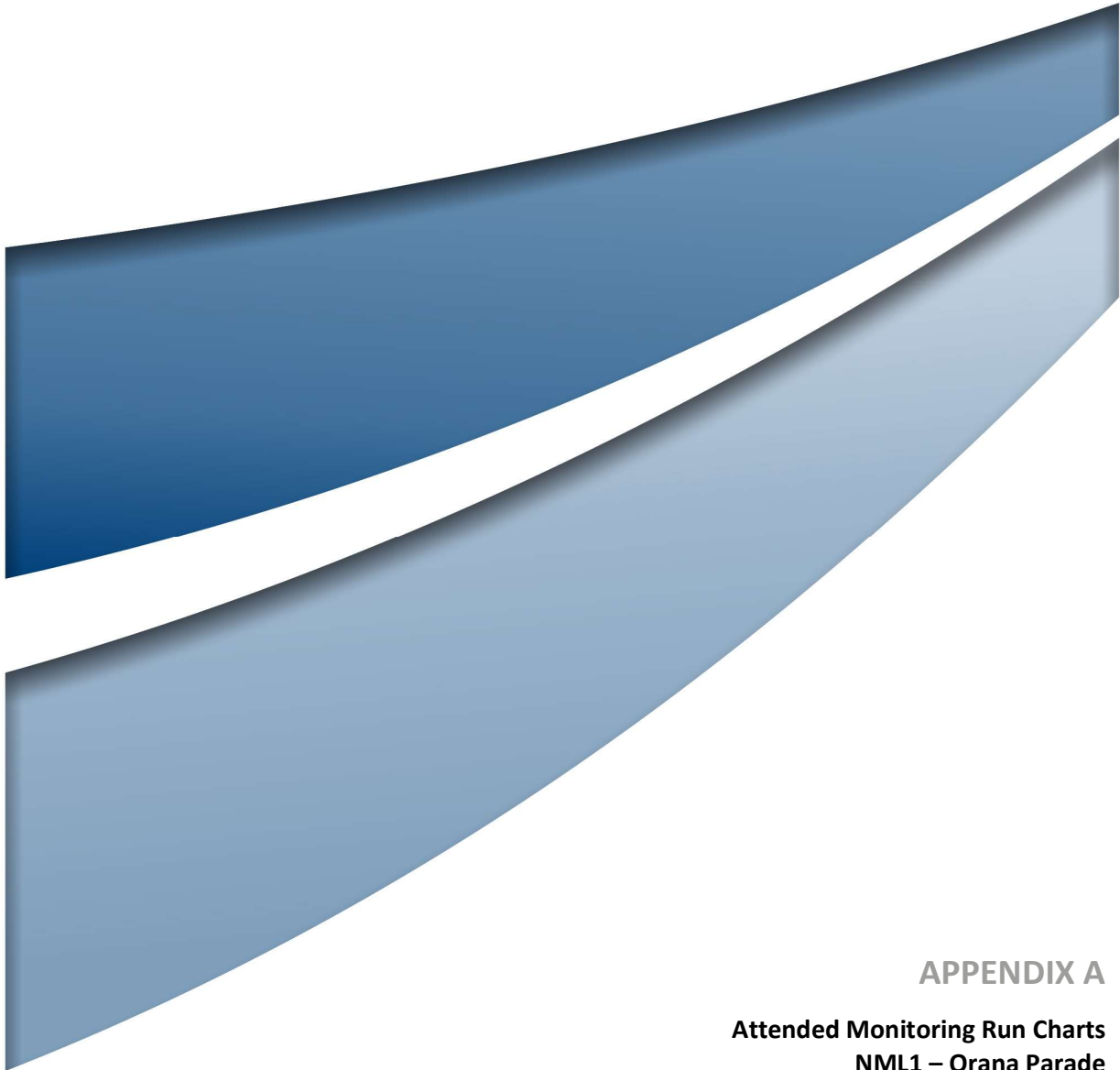
A handwritten signature in black ink, appearing to read 'Tim Procter', is positioned above the printed name.

**Tim Procter**

Practice Lead – Acoustic Environment

E | [tprocter@umwelt.com.au](mailto:tprocter@umwelt.com.au)

M | 0438 007 971

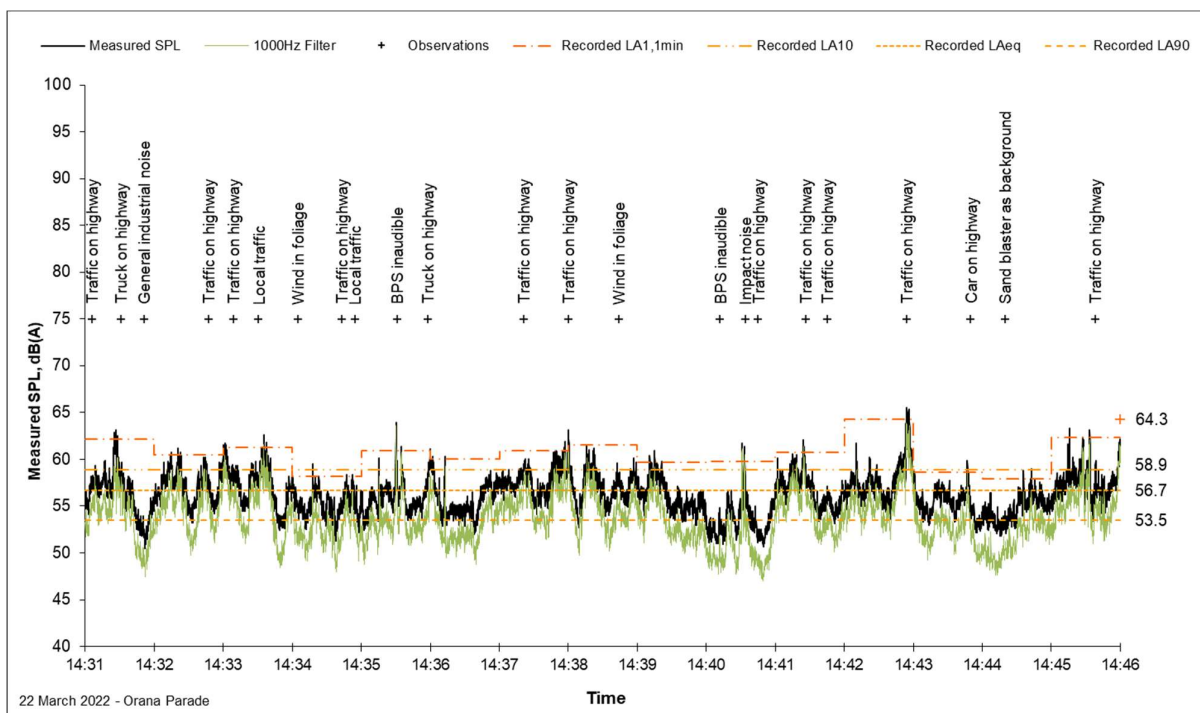


## APPENDIX A

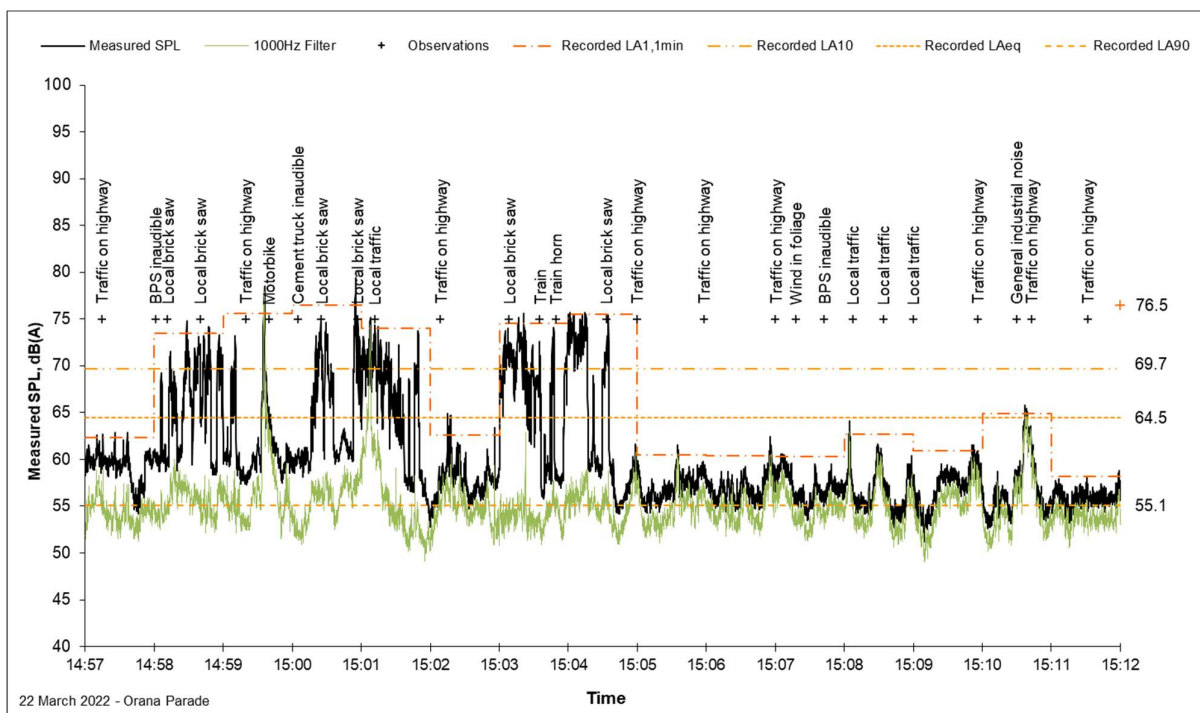
**Attended Monitoring Run Charts  
NML1 – Orana Parade**



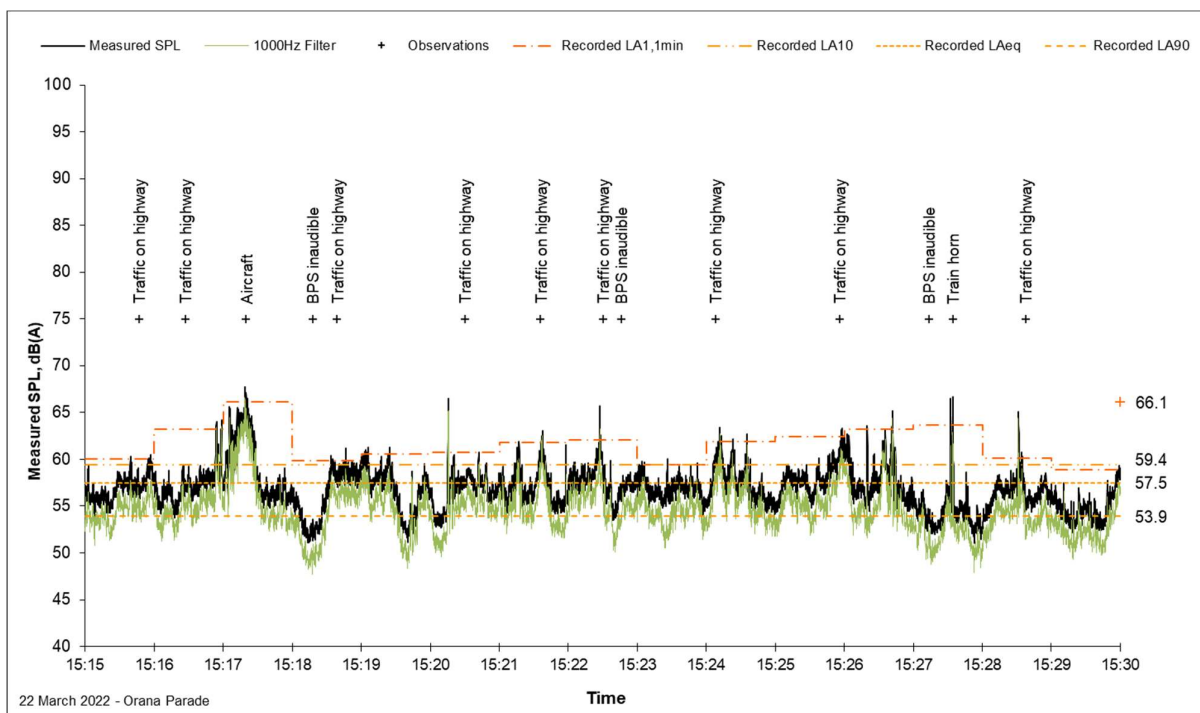
## Day Monitoring Results for NML1, Orana Parade



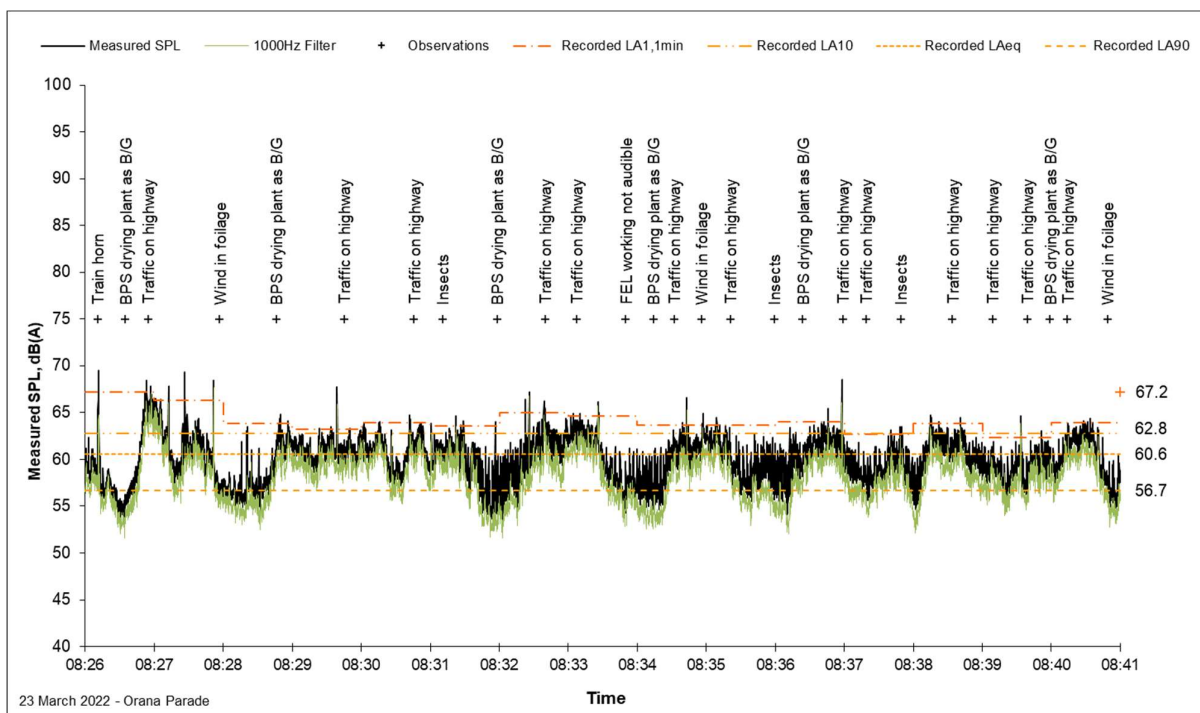
## Day Monitoring Results for NML1, Orana Parade



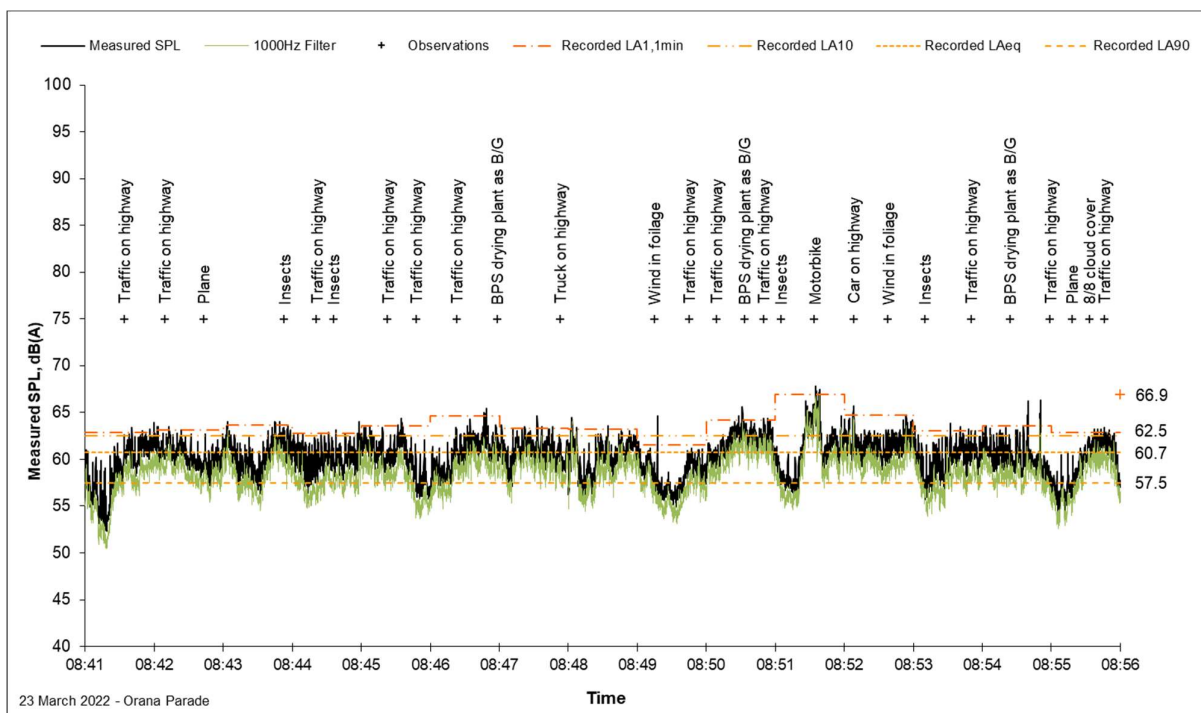
## Day Monitoring Results for NML1, Orana Parade



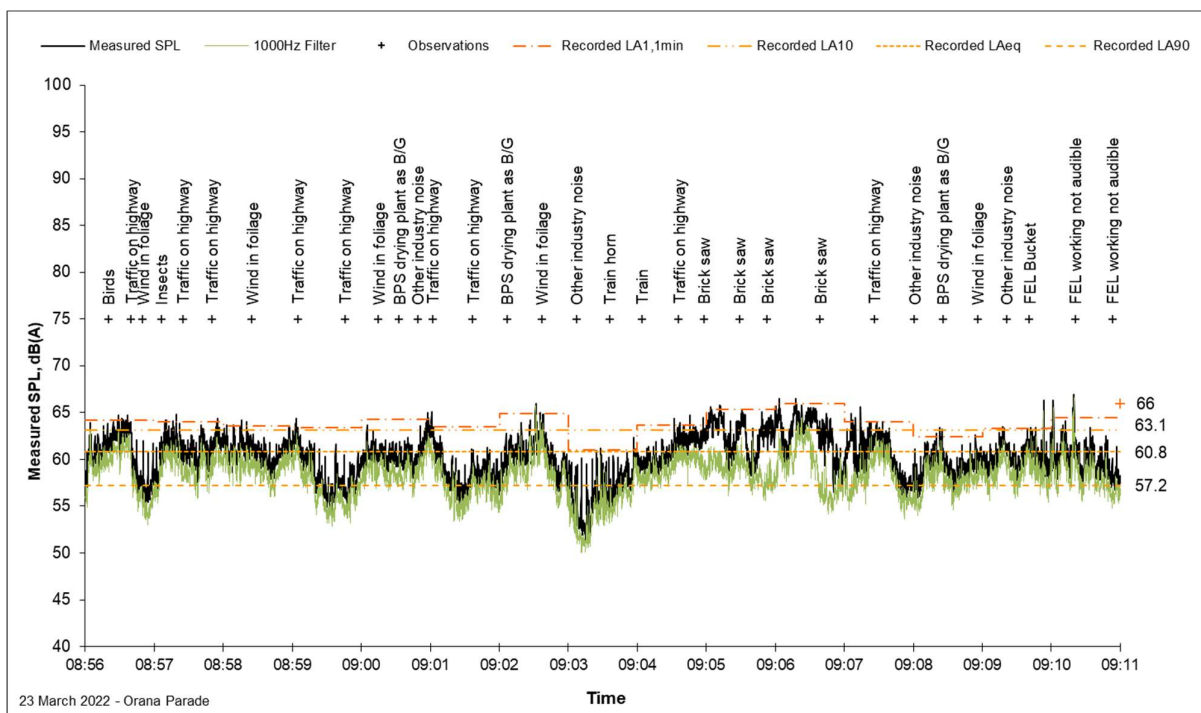
## Day Monitoring Results for NML1, Orana Parade



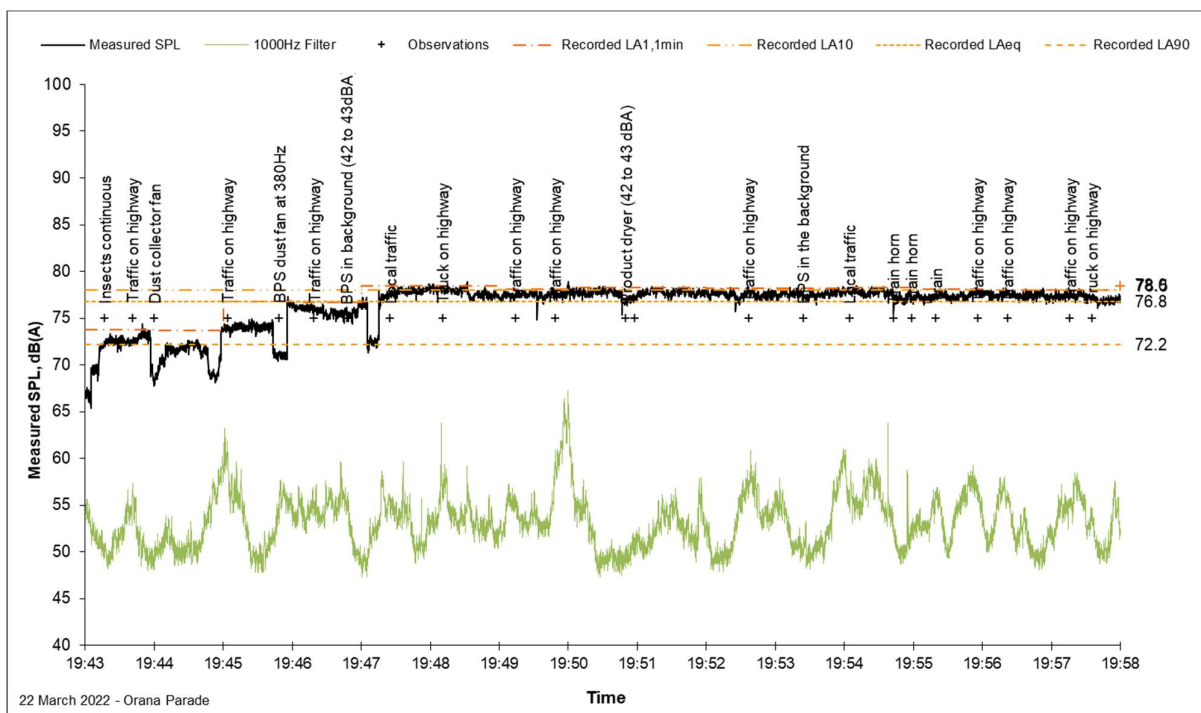
## Day Monitoring Results for NML1, Orana Parade



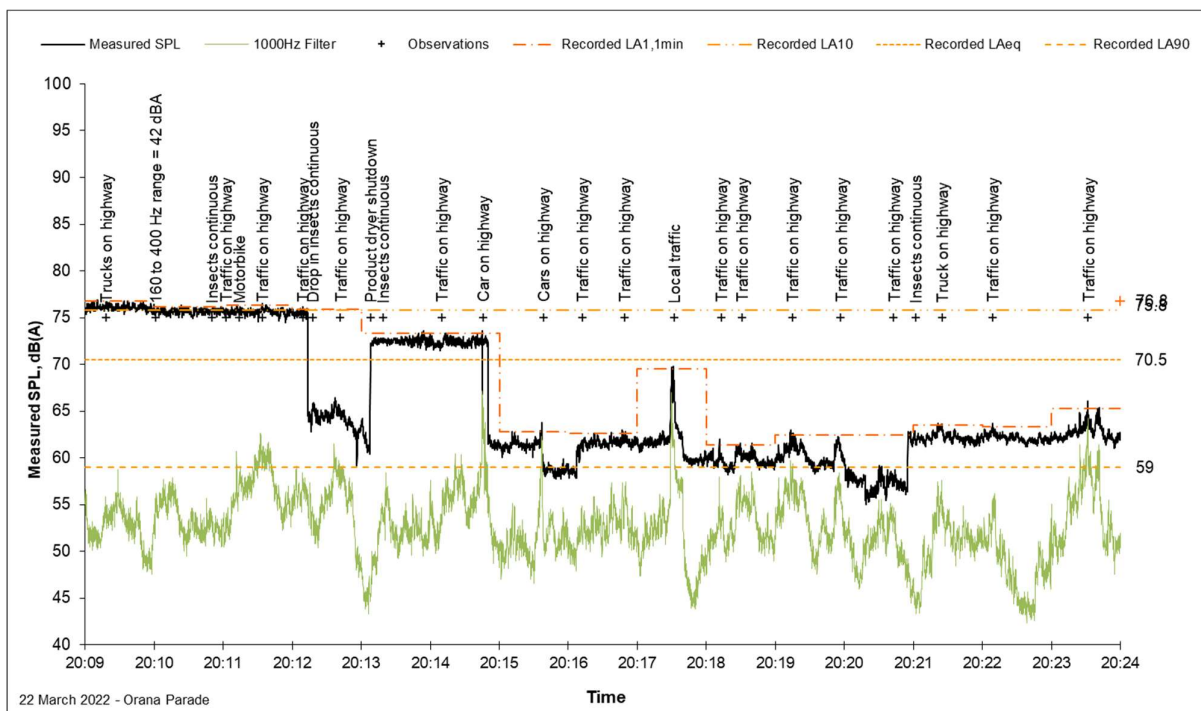
## Day Monitoring Results for NML1, Orana Parade



## Evening Monitoring Results for NML1, Orana Parade

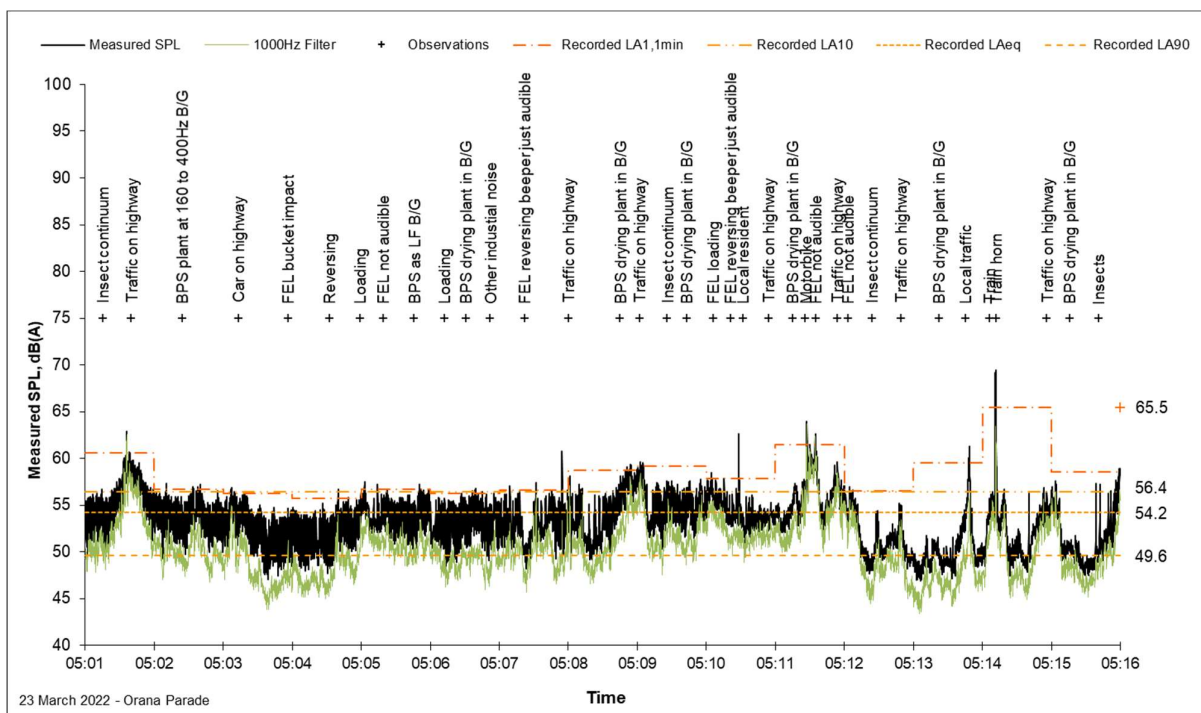


## Evening Monitoring Results for NML1, Orana Parade

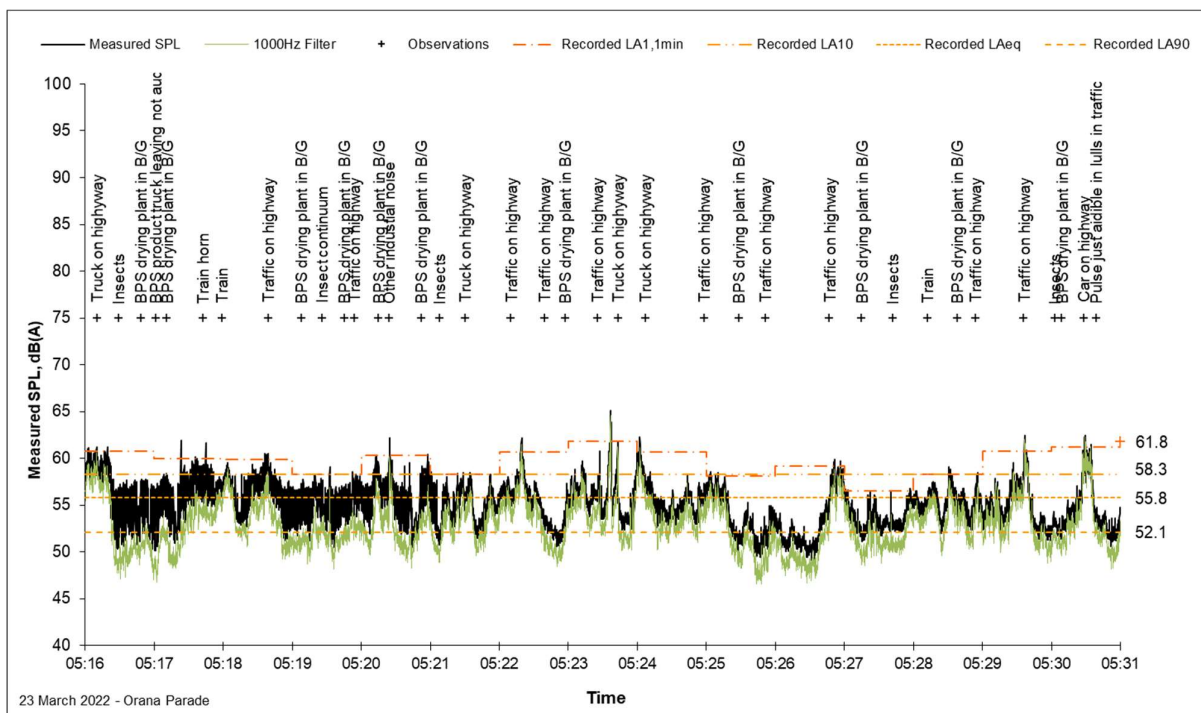




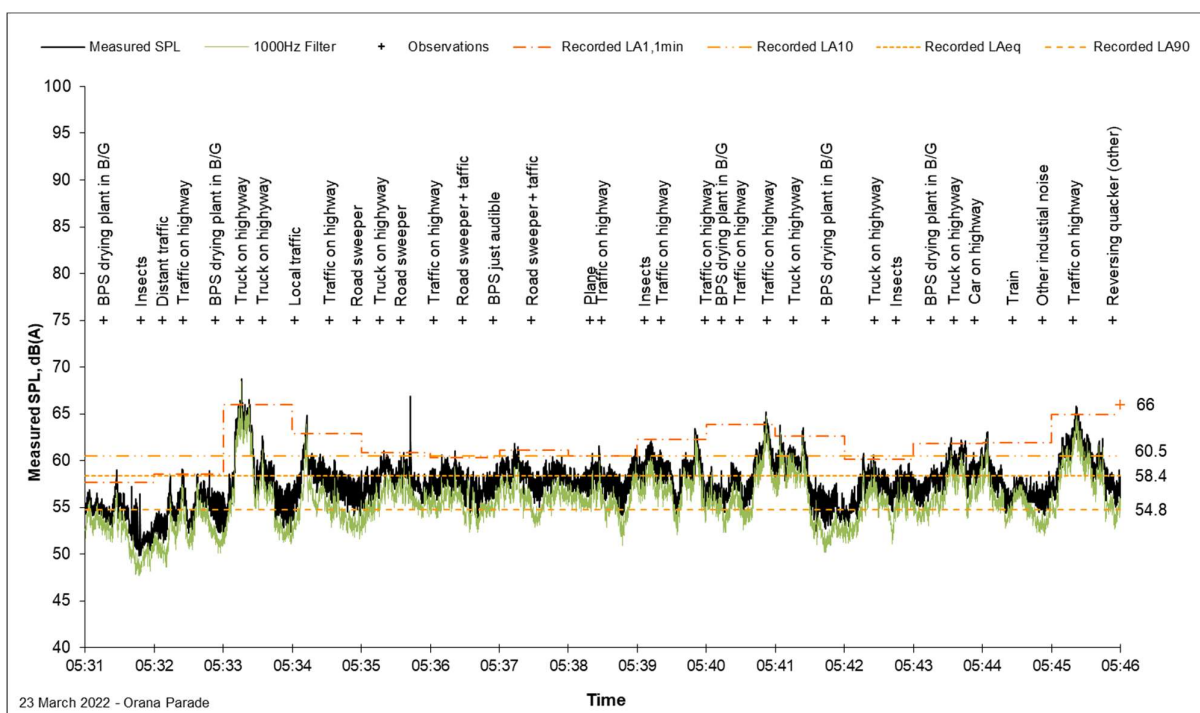
## Night Monitoring Results for NML1, Orana Parade



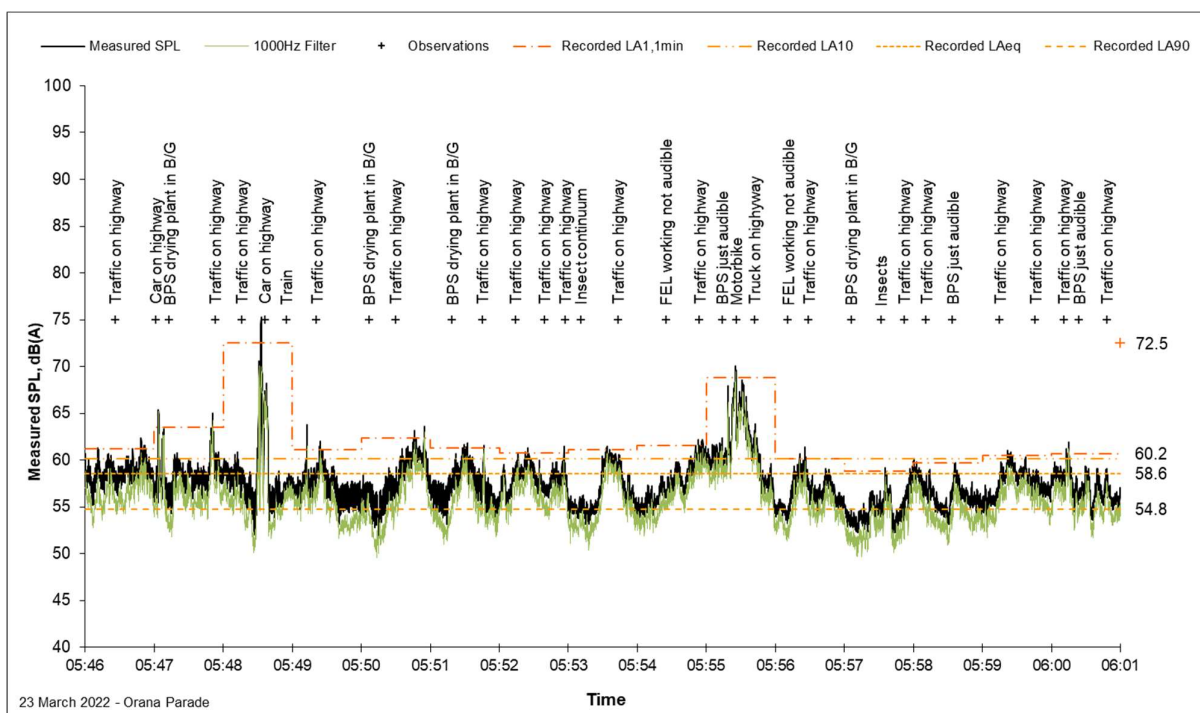
## Night Monitoring Results for NML1, Orana Parade



## Night Monitoring Results for NML1, Orana Parade



## Night Monitoring Results for NML1, Orana Parade



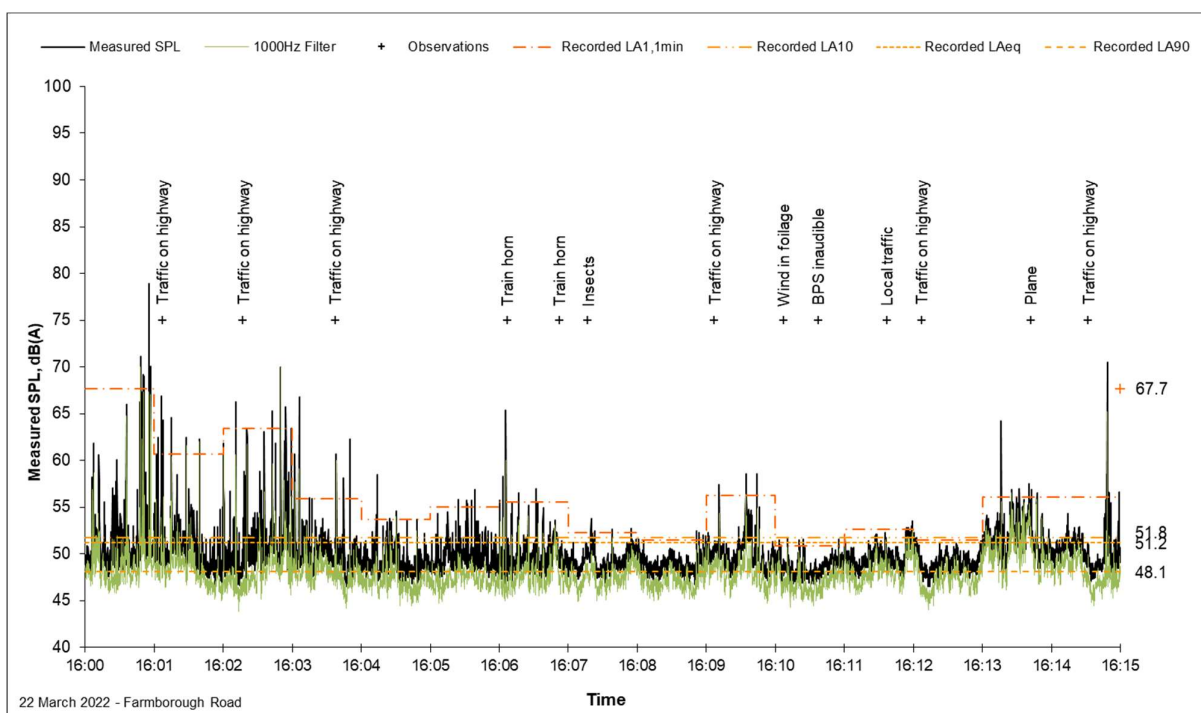


## APPENDIX B

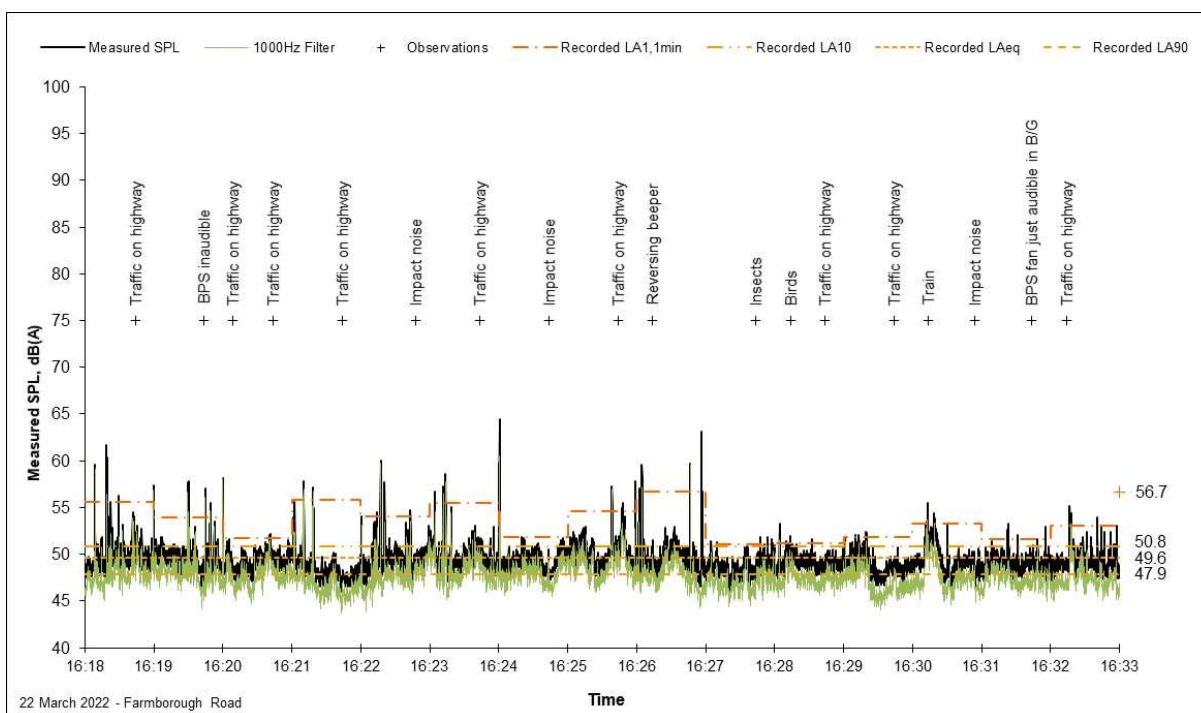
**Attended Monitoring Run Charts  
NML2 – Farmborough Road**



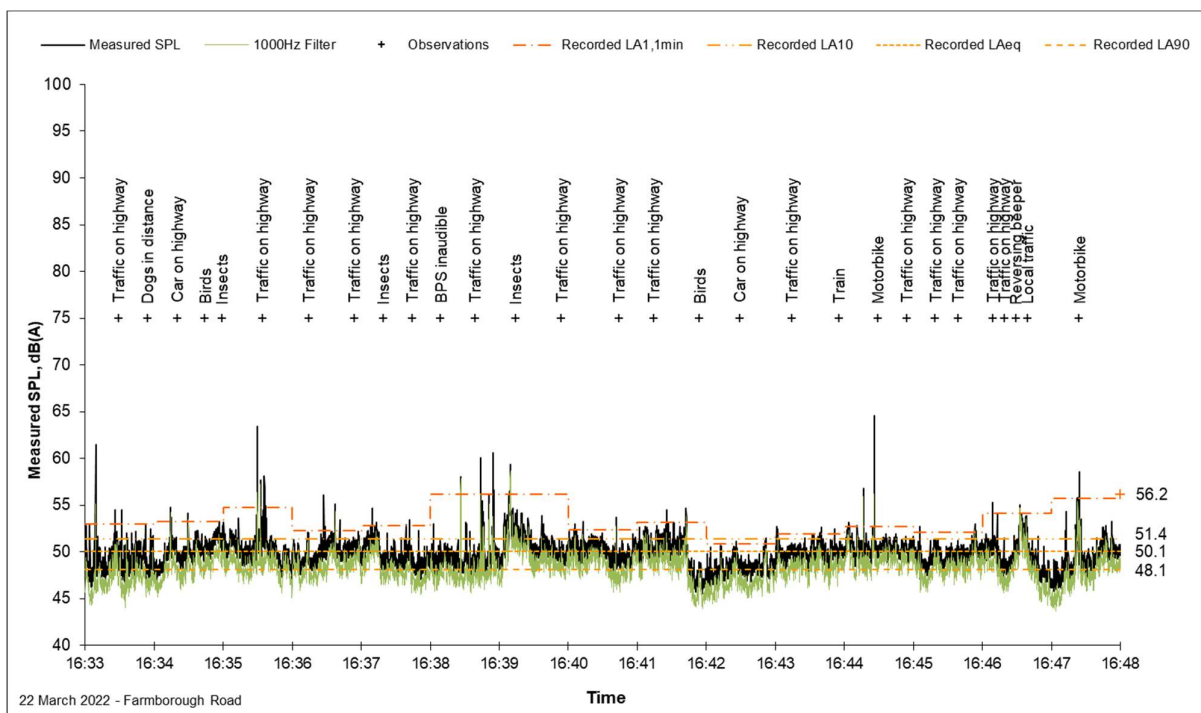
## Day Monitoring Results for NML2, Farmborough Road



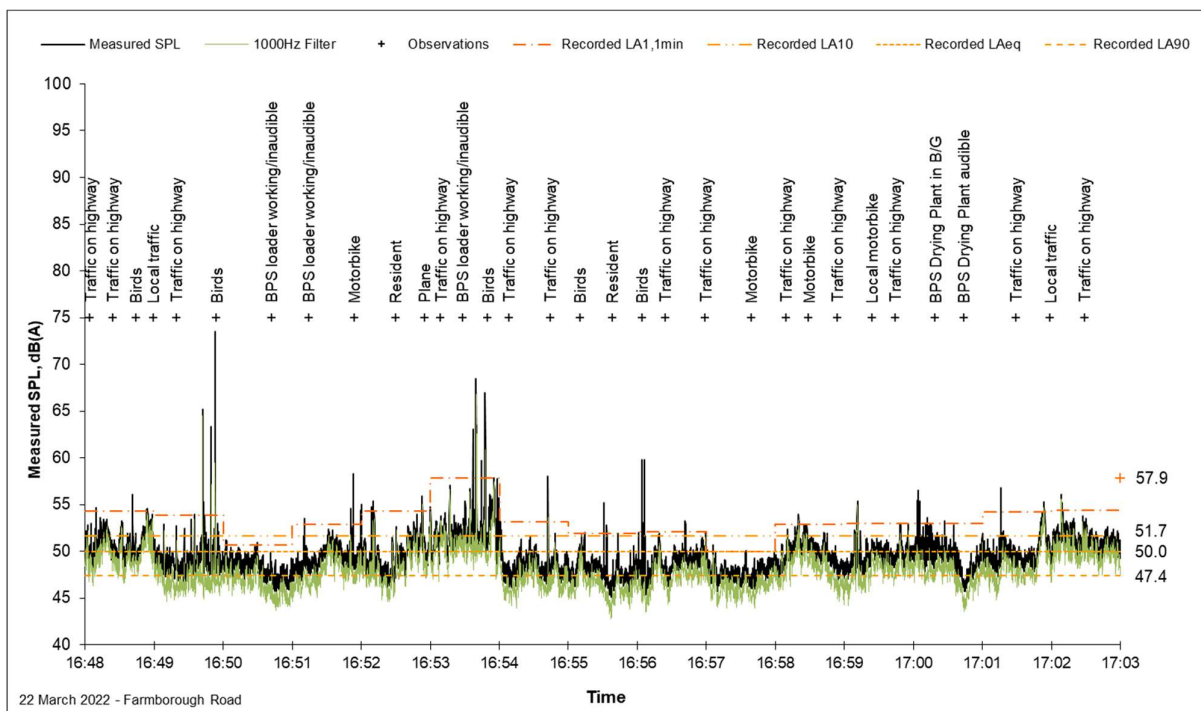
## Day Monitoring Results for NML2, Farmborough Road



## Day Monitoring Results for NML2, Farmborough Road

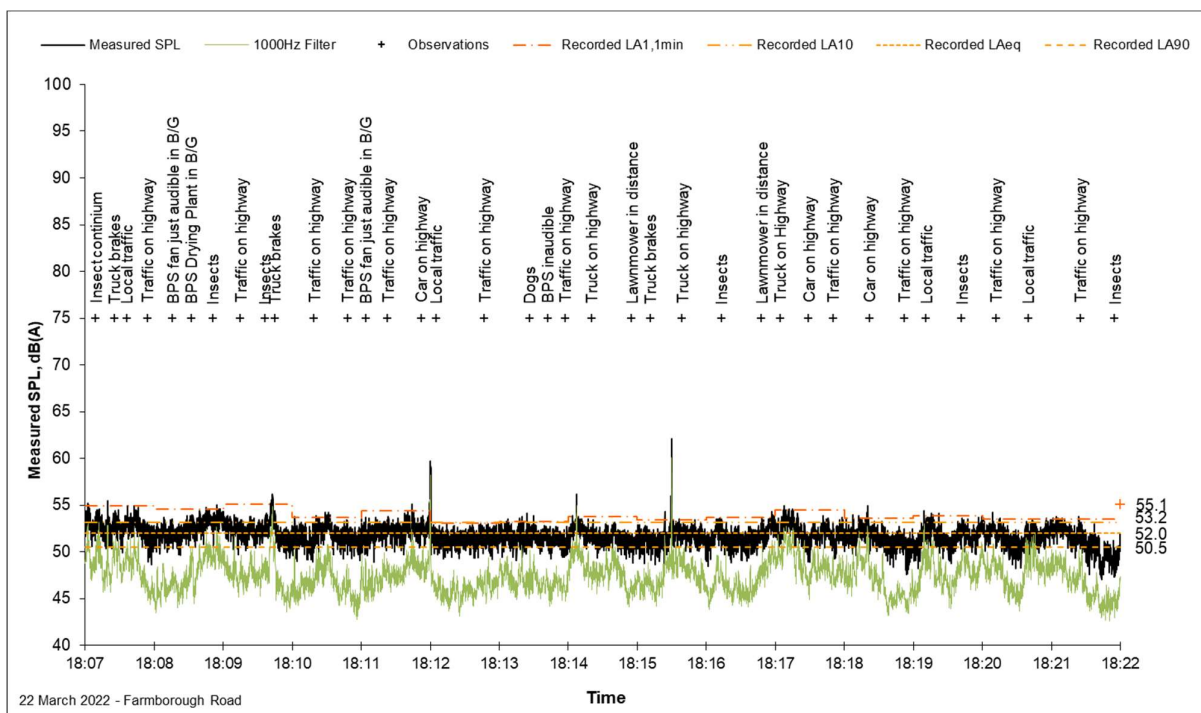


## Day Monitoring Results for NML2, Farmborough Road

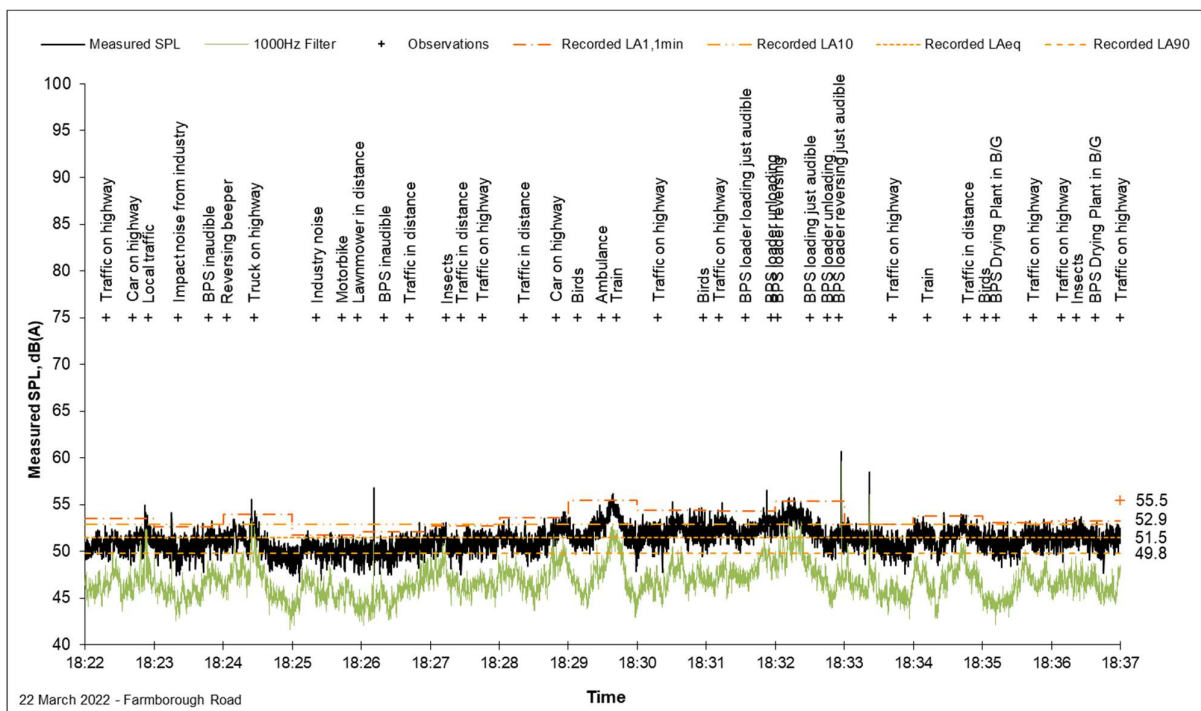




## Evening Monitoring Results for NML2, Farmborough Road

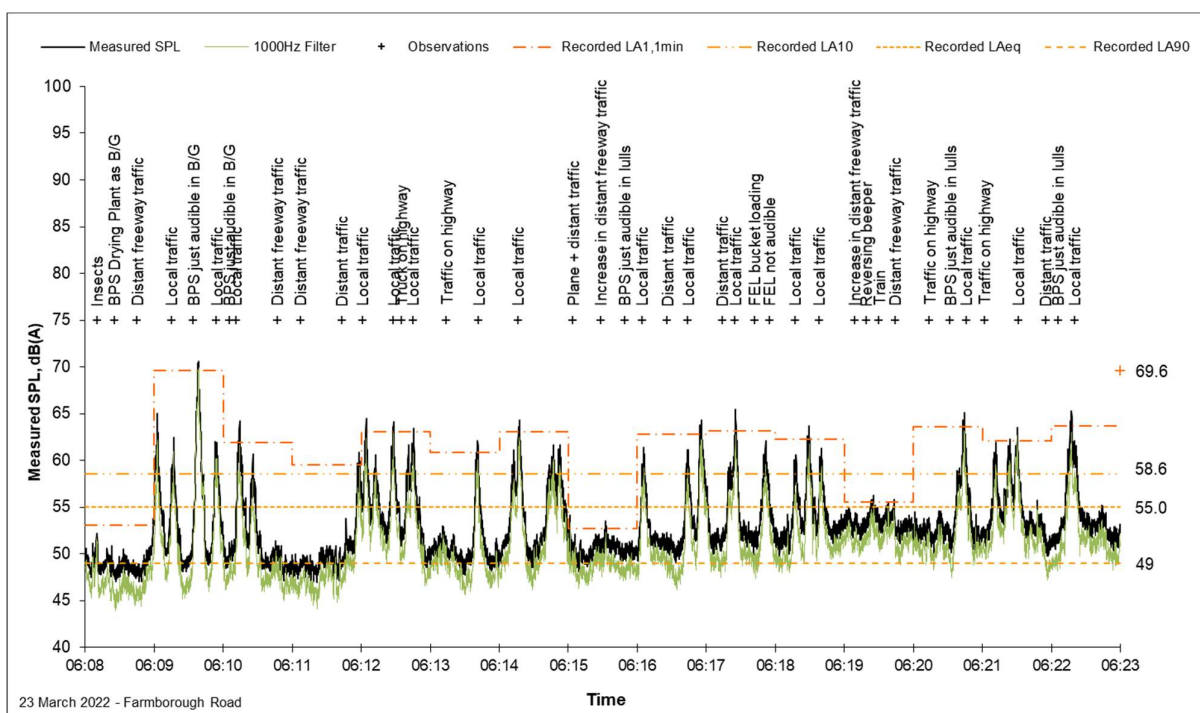


## Evening Monitoring Results for NML2, Farmborough Road

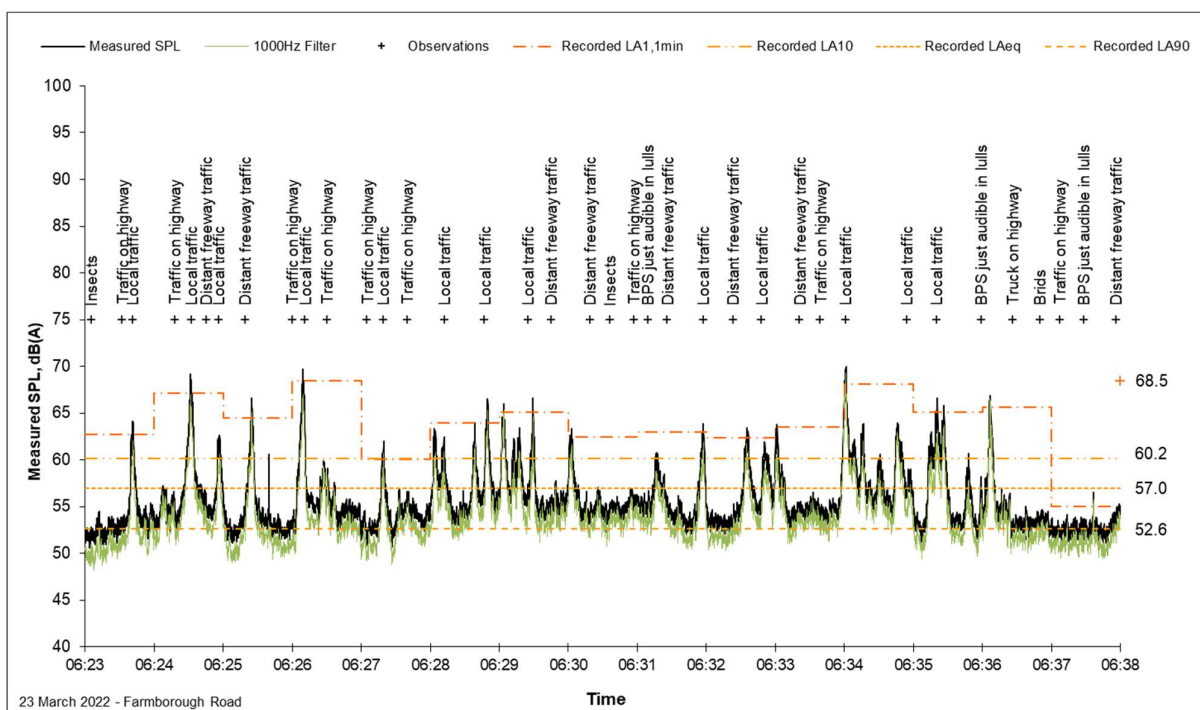




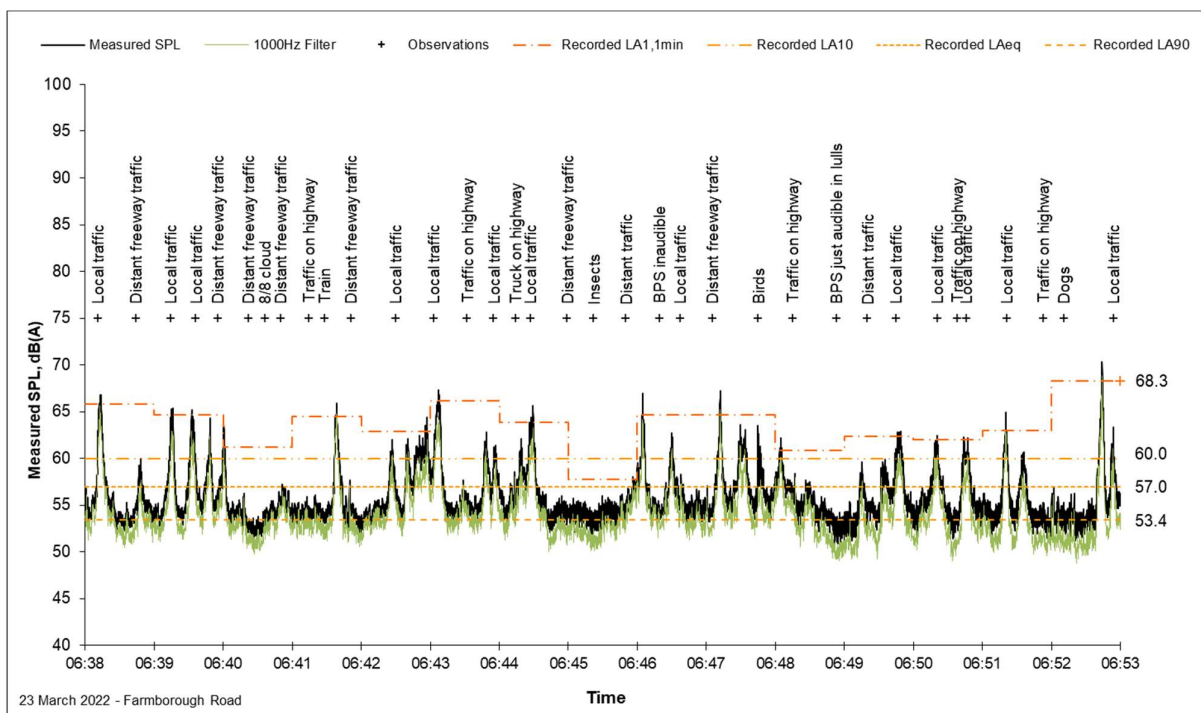
## Night Monitoring Results for NML2, Farmborough Road



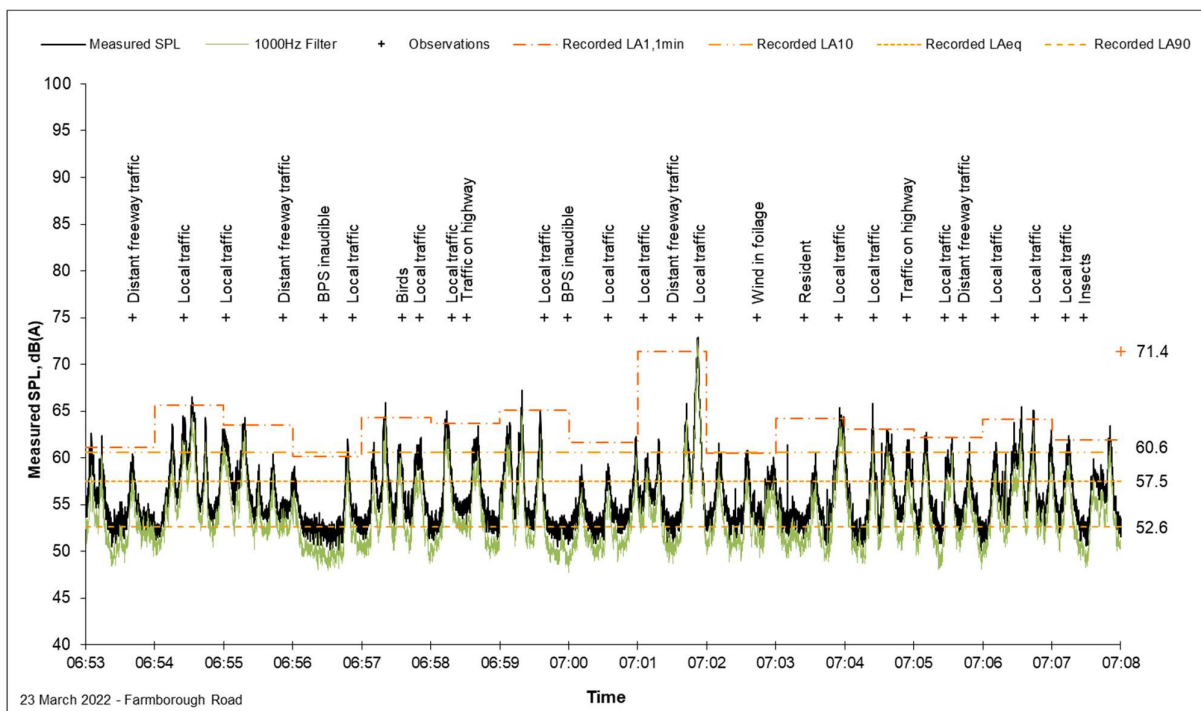
## Night Monitoring Results for NML2, Farmborough Road



## Night Monitoring Results for NML2, Farmborough Road



## Night Monitoring Results for NML2, Farmborough Road





**APPENDIX C**  
**Calibration Certificates**



# CERTIFICATE OF CALIBRATION

CERTIFICATE No.: **SLM 27549 & FILT 5954**

**Equipment Description:** Sound & Vibration Analyser

**Manufacturer:** Svantek

**Model No:** SVAN-958A    **Serial No:** 59838

**Microphone Type:** 7052E    **Serial No:** 71104

**Preamplifier Type:** SV12L    **Serial No:** 73585

**Filter Type:** 1/3 Octave    **Serial No:** 59838

**Comments:** All tests passed for class 1.  
(See over for details)

**Owner:** Umwelt (Australia) Pty Ltd  
75 York Street  
Teralba, NSW 2284

**Ambient Pressure:** 1003 hPa  $\pm 1.5$  hPa

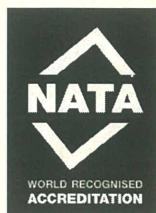
**Temperature:** 22 °C  $\pm 2^\circ$  C    **Relative Humidity:** 51%  $\pm 5\%$

**Date of Calibration:** 10/08/2020    **Issue Date:** 12/08/2020

**Acu-Vib Test Procedure:** AVP10 (SLM) & AVP06 (Filters)

**CHECKED BY:** *AKB*    **AUTHORISED SIGNATURE:** *Jack Kieft*

Accredited for compliance with ISO/IEC 17025 - Calibration  
The results of the tests, calibration and/or measurements included in this document are traceable to  
Australian/national standards.



Accredited Lab. No. 9262  
Acoustic and Vibration  
Measurements



**HEAD OFFICE**  
Unit 14, 22 Hudson Ave. Castle Hill NSW 2154  
Tel: (02) 96808133    Fax: (02) 96808233  
Mobile: 0413 809806  
web site: [www.acu-vib.com.au](http://www.acu-vib.com.au)



**CERTIFICATE No.: SLM 27549 & FILT 5954**

The performance characteristics listed below were tested. The tests are based on the relevant clauses of IEC 61672-3:2013

<b>Tests Performed:</b>	<i>Clause</i>	<i>Result</i>
<i>Absolute Calibration</i>	10	Pass
<i>Acoustical Frequency Weighting</i>	12	Pass
<i>Self Generated Noise</i>	11.1	Observed
<i>Electrical Noise</i>	11.2	Observed
<i>Long Term Stability</i>	15	Pass
<i>Electrical Frequency Weightings</i>	13	Pass
<i>Frequency and Time Weightings</i>	14	Pass
<i>Reference Level Linearity</i>	16	Pass
<i>Range Level Linearity</i>	17	Pass
<i>Toneburst</i>	18	Pass
<i>Peak C Sound Level</i>	19	Pass
<i>Overload Indicator</i>	20	Pass
<i>High Level Stability</i>	21	Pass

**Statement of Compliance:** The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent organization responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2013, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2013, the sound level meter submitted for testing conforms to the class 1 requirements of IEC61672-1:2013.

**This Sound Level Meter included an Octave Filter Set. Tests were based on IEC 1260: 1995 and AS/NZS 4476 - 1997 and were conducted to test the following performance characteristics:**

1. Relative attenuation clause 5.3

A full technical report is available if required.

**Date of Calibration:** 10/08/2020      **Issue Date:** 12/08/2020

Accredited for compliance with ISO/IEC 17025 - Calibration  
The results of the tests, calibration and/or measurements included in this document are traceable to Australian/national standards.