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Atkins Acoustics and Associates Pty Ltd.
Consulting Acoustical & Vibration Engineers

ORICA AUSTRALIA PTY LTD.
KOORAGANG ISLAND
ENVIRONMENTAL NOISE AUDIT
JUNE 2024

54.6719.R14:GA/DT/2024

Rev 01

Prepared for: Orica Australia Pty Ltd
75 Greenleaf Road
KOORAGANG ISLAND NSW 2304

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P.O. Box 432
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June 2024

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1.0 INTRODUCTION

Atkins Acoustics was retained by Orica Australia Pty Ltd *(Orica)* to conduct an environmental noise audit for their Kooragang Island plant. The audit included attended and unattended measurements at Stockton and on Kooragang Island during May/June 2024.

The report presents results and findings of the audit, an assessment of operational noise from the site including plant associated with the expansion of the ammonium nitrate plant *(the Project)* and the implementation of noise mitigation to existing plant. Works undertaken as part of the first phase of the *Orica* expansion are described in Environmental Noise Audit Report dated November 2012, include;

- a new Ammonia Plant Process air compressor:
- cooling tower cells and pumps to service the Ammonia Plant;
- steam power generator 183L; and
- de-commissioning two (2) process air compressors (102J and 122J).

In addition to the above uprate works, *Orica* implemented a site noise reduction program *(SNRP).* Details of those works are summarised in the *Atkins Acoustics* Environmental Noise Audit report dated March 2013. Site improvement works implemented during 2020 included the decommissioning of the off-site boiler, commissioning of a new site boiler and relocation of the CO_2 vent with an inline discharge attenuator.

2.0 OVERVIEW

To control industrial noise exposure for the Stockton residential area, the NSW Department of Planning *(Department)* concluded that any additional noise emitted from *the Project* must achieve a noise contribution at least 10dBA below the agreed existing levels determined prior to the proposed uprate works.

Initially noise audit monitoring locations were selected to provide for reliable site access to install instrumentation and security. The locations identified as R4 and R6 due to access arrangements and instrumentation security were relocated from the riverside to roadside positions. Similarly, due to access restrictions monitoring location R1 (294 Fullerton Street) was changed to 284 Fullerton Street, R2 (218 Fullerton Street) changed to 220 Fullerton Street and R3 186 (Fullerton Street) changed to 184 Fullerton Street. Resulting from new onsite construction works, R6 was relocated approximately 50 metres south of the previous location.

2.1 Compliance Noise Monitoring

For the assessment of noise emitted from *Orica,* six (6) reference assessment locations *(Figure 1)* were selected. The locations are referenced in the *Orica* Noise Management Plan *(NMP)*, three (3) located at Stockton and three (3) on Kooragang Island.

- R1 - 284 Fullerton Street, Stockton.
- R2 - 220 Fullerton Street, Stockton.
- R3 – 184 Fullerton Street, Stockton.
- R4 - Roadside (south) site boundary opposite Ammonium Nitrate Area
- R5 - Riverside (central) water testing station opposite Administration Building.
- R6 - Roadside (north) east site boundary opposite the Ammonia Plant.

Figure 1. Compliance Noise Monitoring Locations

2.2. Competence Statement

Atkins Acoustics is a member firm of the Association of Australasian Acoustical Consultants (AAAC). Site attended audits and analysis were conducted by a staff member of Atkins Acoustics with tertiary qualifications and experience in the discipline of acoustics and a 'Member' of the Australian Acoustical Society (AAS)

3.0 STATUTORY REQUIREMENTS

The following *Project* noise assessment requirements are referenced in Schedule 3 'Specific Environmental Conditions' of the *Department* Project Approval (as modified) dated 1 December 2009.

Noise Limits

30. The Proponent shall ensure that noise levels from the operation of the Project are at least 10dB(A) below noise levels from the Initial Operations as specified by conditions 31 and 32.

    Note: Ammonia flaring events are excluded from the noise limits and levels referred to in conditions 30 and 31.

Initial Operations - Noise Verification Program

31. Prior to the commencement of construction, the Proponent shall prepare and implement an Initial Operations Noise Verification Program to the satisfaction of the Secretary. The Program shall:
    a) be undertaken by a suitably qualified and experienced person;
    b) identify future reference points that will be used to demonstrate compliance;
    c) collect new or review existing data, and report on the seasonal background levels for the noise catchment; and
    d) confirm the noise levels from the Initial Operations.

    Note: Some construction activities may occur under the Project Approval provided that such activity are not undertaken during the monitoring period or that the Proponent can demonstrate that the activity would not contribute to the background noise level, to the satisfaction of the Secretary.

Noise and Vibration Management Plan

32. The Proponent shall prepare and implement a Noise and Vibration Management Plan for the Project to the satisfaction of the Secretary. The Plan shall:

    a) be prepared by a suitably qualified and experienced expert whose appointment has been agreed to in writing by the Secretary;
    b) be approved by the Secretary (see Conditions 49A and 49B for scope and timing and Condition 49C for management plan requirements);
    c) demonstrate how noise levels from the Project would be managed to ensure noise levels would be 10dB(A) below noise levels from the Proponent's Initial Operations (see Conditions 30 and 31);
    d) include a detailed monitoring program for reporting on ongoing compliance. The monitoring program shall:
        - outline the proposed receiver sites at Stockton and sites on Kooragang Island that would be monitored;
        - include both attended and unattended noise monitoring;
        - verify that actual noise levels from the Project are consistent with the predictions made in the EA;
        - verify that noise levels from the Project are 10dB(A) below the noise levels identified in Condition 31 for the Proponent's Initial Operations;
    e) provide details of any complaints received in the preceding year relating to noise generated by the Project, and action taken to respond to those complaints;
    f) detail procedures for implementing additional reasonable and feasible noise mitigation measures for the Project in response to exceedance of limits and/or noise complaints;
    g) be updated annually, unless otherwise agreed to by the Secretary; and

h) describe the measures that will be implemented to prevent and minimise potential adverse noise and vibration impacts from the Project, including:
- reasonable and feasible measures being employed on the Project site;
- plant and equipment being maintained to ensure that it is in good order;
- how potential noise and vibration impacts will be minimised and managed; and
- identification of the likely nature and timing of Project-related activities and works that could generate potential elevated noise emissions and a description of the mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval and the EPL,

This Annual Noise Audit is undertaken in accordance with the Noise Management Plan (as current at the time) and addresses the relevant requirements of Condition 32 as shown in the Compliance register in Table 1 below. For completeness the compliance status of the "Noise Verification Program" (completed in 2011) against Condition 31 is also documented:

Table 1, Compliance Register – Noise Conditions

Consent Condition	Relevant Document and Section	Compliance
Noise limits **Condition 30:** The Proponent shall ensure that noise levels from the operation of the Project are at least 10dB(A) below noise levels from Initial Operations as specified by conditions 31 & 32 below. *Note: Ammonia flaring events are excluded from the noise limits and levels referred to in conditions 30 and 31.*	Criteria noted in Section 3.0 of Annual Noise Audit and Table 1 and Section 6.0 of Noise and Vibration Management Plan (NMP)	Compliant
Initial Operations – Noise Verification Program **Condition 31:** Prior to the commencement of construction the Proponent shall prepare and implement an Existing Operations Noise Verification Program to the satisfaction of the Secretary. The Program shall:	The Noise Verification Assessment prepared by Atkins acoustic and Associates Pty. Ltd (41.6521.R1:GA/DESKTOP/2011 Rev 02) was submitted to DPHI in May 2011.	Compliant and closed
(a) be undertaken by a suitably qualified and experienced person;	Atkins Acoustic and Associates Pty. Ltd. prepared the report	Compliant and closed – Suitably qualified consultant used

Consent Condition	Relevant Document and Section	Compliance
(b) identify future reference points that will be used to demonstrate compliance;	Figure 2 of the 2011 Noise Verification Assessment identifies the original compliance noise monitoring locations. Section 3.0, 4.0 and Figure 1 of the NMP and Figure 1 of the Annual Noise Audit discuss and identify the current Compliance Noise Monitoring locations used.	Compliant and closed
(c) collect new or review existing data, and report on the seasonal background levels for the noise catchment; and	Section 5.3 of the 2011 Noise Verification Assessment reviewed seasonal weather effects.	Compliant and closed
(d) confirm the noise levels from the Initial Operations. *Note: Some construction activities may occur under the Project Approval provided that such activity is not undertaken during the monitoring period or that the Proponent can demonstrate that the activity would not contribute to the background noise level, to the satisfaction of the Secretary.*	Baseline noise assessment levels were documented in Table 6 of the 2011 Noise Verification Assessment.	Compliant and closed
Noise and Vibration Management Plan **Condition 32:** 32. The Proponent shall prepare and implement a Noise and Vibration Management Plan for the Project to the satisfaction of the Secretary. The Plan shall:	The previous Noise Management Plan (September 2021 NMP) was most recently approved on 11 October 2023 ref. MP08_0129-PA-31.	Compliant

Consent Condition	Relevant Document and Section	Compliance
a) be prepared by a suitably qualified and experienced expert whose appointment has been agreed to in writing by the Secretary;	Competence Statement provided in Section 2.2 of the Annual Noise Audit and Section 7 of the NMP.	Compliant
b) be approved by the Secretary (see Conditions 49A and 49B for scope and timing and Condition 49C for management plan requirements);	The Noise Management Plan was most recently approved on 11 October 2023 ref. MP08_0129-PA-31 (September 2021 NMP). This revision of the NMP (June 2024) will also be submitted for approval.	Compliant
c) demonstrate how noise levels from the Project would be managed to ensure noise levels would be 10dB(A) below noise levels from the Proponent's Initial Operations (see Conditions 30 and 31);	Refer top Section 5 of the NMP	Compliant
d) include a detailed monitoring program for reporting on ongoing compliance. The monitoring program shall: • outline the proposed receiver sites at Stockton and sites on Kooragang Island that would be monitored; • include both attended and unattended noise monitoring; • verify that actual noise levels from the Project are consistent with the predictions made in the EA; • verify that noise levels from the Project are 10dB(A) below the noise levels identified in Condition 31 for the Proponent's Initial Operations;	Refer to Section 6 of the NMP Assessment of noise trends undertaken in Section 5.2.9 of Annual Noise Audit and in Section 7.1.2 of AEMR	Compliant
e) provide details of any complaints received in the preceding year relating to noise generated by the Project, and action taken to respond to those complaints;	Refer to Section 6.5 of NMP. Refer to Section 5.2.6 and Attachment 2 of the Annual Noise Audit.	Compliant

Consent Condition	Relevant Document and Section	Compliance
f) detail procedures for implementing additional reasonable and feasible noise mitigation measures for the Project in response to exceedance of limits and/or noise complaints;	Refer to Section 6.3, 6.4, 6.5 and 7.0 of NMP	Compliant
g) be updated annually, unless otherwise agreed to by the Secretary; and	As noted in Section 8.4 and approved on 11 October 2023 ref. MP08_0129-PA-31 (September 2021 NMP). *"The NMP will be reviewed periodically or as directed by the Secretary of the Department. The review will reflect changes to site operating conditions and assessment guidelines.* *As required or directed by the Secretary of the Department, the NMP will be updated and actions undertaken to improve the effectiveness of monitoring and follow-up investigations and management practices."*	Compliant
h) describe the measures that will be implemented to prevent and minimise potential adverse noise and vibration impacts from the Project, including: • reasonable and feasible measures being employed on the Project site; • plant and equipment being maintained to ensure that it is in good order; • how potential noise and vibration impacts will be minimised and managed; and • identification of the likely nature and timing of Project-related activities and works that could generate potential elevated noise emissions and a description of the mitigation measures that will be implemented to ensure compliance with the relevant conditions of this approval and the EPL.	Refer to Section 5.2, 5.3, 5.4, 5.5 of the NMP	Compliant

4.0 PROJECT SPECIFIC NOISE CRITERIA

Night-time attended audits reported for the monitoring locations on Kooragang Island (2011) confirmed noise from *Orica* was steady state with minimal influence from other industrial sources. At the reference monitoring locations, it was reported there was minimal variation between the measured L_{A90} and L_{Aeq} levels.

Referring to the *Departments* Conditions for assessing noise trends and compliance status, operational noise resulting from *the Project* should be at least 10dBA below levels from *Orica's* existing plant. *Table 2* presents a summary of the baseline background levels and the Project noise criteria.

Table 2, Project Noise Criteria

dBA re: 20 x 10^{-6} Pa

Reference Assessment Location	Baseline Background Sound Pressure Levels	Project Noise Criteria dBA
Assessment Location R4	62	52
Assessment Location R5	57	47
Assessment Location R6	56	46

4.1 Stockton Noise Criteria

Modelling reported for *the Project* (Atkins Acoustics Feb '09) predicted noise levels would satisfy *the Project* criteria. *Table 4* - presents a summary of noise levels predicted for the Stockton reference residential assessment locations from the existing plant and *the Project* for calm weather conditions.

Table 4 - Predicted Pre Uprate and Project Noise Contributions

dBA re: 20 x 10^{-6} Pa

Reference Assessment Location	Predicted Sound Pressure Levels dBA	
	Pre-Uprate Noise Levels	Uprated Plant Contributions
Assessment Location R1	50	37
Assessment Location R2	53	41
Assessment Location R3	51	39

5.0 RESULTS AND ASSESSMENT

For the assessment of noise from *the Project* and compliance status, it was recognised that demonstration of compliance would be difficult to confirm by direct measurement alone due to the variability of ambient background levels and contributions being greater than 10dB below the pre-uprate level. Therefore, to assess compliance with *the Project* noise criteria in accordance with the *NMP,* it was proposed to:

- Update the site noise model following the commencement of operation of *the Project* to determine contributions from *the Project*; and
- undertake attended and unattended monitoring at the reference locations to assess changes in ambient background levels and noise trends.

5.1 Noise Model Updating

Modelling reported in the *Kooragang Island Noise Assessment (Report Number 39.6357.R1:GACD03 Rev 3, Atkins Acoustics, 2009)* was updated to determine predicted noise contributions from *the Project*.

Table 6 presents a summary of the predicted pre-uprate noise contributions and levels from *the Project* (phase one). Compliance with *the Project* Approval Conditions was to be assessed against the pre-uprate noise levels.

Table 6. Predicted Baseline and Project Noise Contributions

LAeq re: 20 x 10^{-6} Pa

Operating Plant Conditions	Predicted Sound Pressure Level dBA					
	R1	R2	R3	R4	R5	R6
Pre Uprate	50.4	52.1	49.9	66.3	62.6	59.1
Uprate Plant (Phase one) Ammonia Plant Compressor and 183L Generator	19.7	22.3	21.1	23.5	32.9	41.7

5.2 Site Attended Noise Audit (May 2024)

For noise compliance purposes attended audit measurements were undertaken on Thursday night 30 May 2024. The noise measurements were conducted in accordance with procedures referenced in Australian Standard AS1055-1997 *''Acoustics - Description and Measurement of Environmental Noise'* and the *Noise Policy for Industry* (EPA 2017).

5.2.1 Measurement Instrumentation

Instrumentation for the attended and unattended noise monitoring comprised Class 1 Svantek 949 and Svantek 957 Sound Level Meters. The instruments manufactured prior 2019 meet AS/NZS IEC 61672.1:2013 *Electroacoustics: sound level meter specifications* standards.

Instrumentation reference calibration levels were checked with a portable Bruel & Kjaer calibrator before and after the audit measurements to verify that the variation remained within ±0.5dB. The calibrator manufactured prior before 2017 meets AS/NZS IEC 60942:2017 *Electroacoustics: sound calibrators*). standards

Copies of the meter calibration certificates are available on request.

5.2.2 Noise Descriptors

Instrumentation was set for measurement time interval of 15 minutes and 'fast' (F) time weighting.

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The noise descriptors for the purpose of the measurements included the following:

- equivalent A-weighted continuous sound level ($L_{Aeq,T}$)
- maximum A-weighted sound pressure level ($L_{AFmax,\ T}$)
- A-weighted sound pressure level exceeded for 90% of the measurement time ($L_{AF90,\ T}$)
- A-weighted sound pressure level exceeded for 10% of the measurement time ($L_{AF10,T}$).

5.2.3 Meteorological Observations

Prevailing weather conditions during noise monitoring were extracted from data reported for Newcastle Nobby Signal Station (Lat:-32.92, Lon: 151.80, Height: 33.0m). During the attended noise audit, meteorological conditions were clear sky, air temperature 16^0C, light north to north-north-west wind <2m/sec and relative humidity 75%.

5.2.4 Measurement Locations

Resulting from onsite construction works reference measurement location R6 was relocated to the site boundary and approximately fifty (50) metres south.

5.2.5 Site Operating Conditions

During the attended night audit and unattended measurements *Orica's* site operations were reported as normal.

5.2.6 Review of Complaints Reports

Orica's Senior Specialist - Environment confirmed one (1) noise complaint was reported during the twelve (12) months from June '23 and '24 and investigated by staff. The reported noise complaint (21 June '23) related to a back-end trip on the Ammonia Plant caused by a valve failure. This failure required the ammonia plant to vent to maintain safe operation, causing the short-term elevated noise levels. Given the plant shutdown occurred as designed, no specific correction actions were possible to prevent recurrence. No contact details were provided by the complainant to provide feedback on the cause.

5.2.7 Site Attended Noise Measurement Results

presents a summary of attended noise measurements and observations. During the Thursday night audit ambient background L_{A90} levels at Stockton were influenced by Orica and local intermittent road traffic.

Attended audits on Kooragang Island confirmed noise from *Orica* was steady state. The measurements confirmed *Orica* related maximum (L_{Amax}) levels were not observed to cause exceedances greater than 5dBA above the L_{Aeq} levels.

Orica noise sources identified at the Stockton/Kooragang Island reference monitoring locations during attended audit included:

- Ammonia Plant - low frequency noise, quench valves and steam venting;
- General operational noise NAP and AN Plants;
- NAP 1 steam venting; and
- NAP galley steam pipe hammer.

Table 5. Attended Noise Measurement Results/Observations

Location	Sound Pressure Level dBA						Comment
	L_{Amax}	L_{A1}	L_{A10}	L_{A50}	L_{A90}	L_{Aeq}	
R1-284 Fullerton Street	53.0	52.6	51.5	50.3	49.3	50.4	Ammonia plant; Ammonia plant Converter valves; Steam pipe hammer, General Orica plant; Intermittent passing road traffic.
R2-220 Fullerton Street	58.6	56.1	54.4	53.3	52.2	53.4	Ammonia plant; Ammonia plant Converter valves; Orica plant general; NAP 1 steam pipe hammer Intermittent road traffic.
R3-184 Fullerton Street	55.7	55.2	54.6	53.4	52.4	53.5	General Orica plant; Ammonia plant Converter valves; Steam pipe hammer NAP 1 L_{Amax} 54/5, NAP 1 steam vent; Intermittent passing road traffic.
R4-Roadside (South)	66.7	64.2	61.3	60.2	59.2	60.4	Orica plant general; NAP steam pipe hammer L_{Amax} 64/5dBA; NA 1 steam vent.
R5-Riverside (Central)	61.5	60.5	59.3	58.3	57.2	58.3	NAP 1 steam vent LAmax 60/1dBA; Ammonia plant; Converter valves (4KHz- 10KHz); NAP cooling towers.
R6-Roadside (North)	62.7	62.8	61.9	61.5	61.0	61.5	Ammonia Plant; Converter valves (4KHz-10KHz); Orica plant general.

5.2.8 Unattended Noise Measurement Results

Table 8 presents a summary of the measured L_{A90} and L_{Aeq} levels from Thursday 30 May to Thursday 6 June '24. *Attachment 1* presents a summary of the measurement results in graphical form. Prevailing meteorological conditions during the audit included extended rain periods. Noise measurements during these periods in accordance with *NPfI* procedures were removed from the results. Prevailing winds reported for the nighttime assessment hours (10.00pm to 7.00am) were less than 5m/sec.

Table 8. Summary of Rating Background (RBL) and Ambient Levels

(Thursday 30 May - Thursday 6 June 2024)
dBA re: 20 × 10^{-6} Pa

Measurement Location	Ambient Sound Pressure Levels DBA					
	RBL			Ambient Levels $L_{Aeq, period}$		
	Day	Evening	Night	Day	Evening	Night
R1. 284 Fullerton Road (Residential)						
RBL	46.4	48.1	48.9			
Logarithmic Average L_{Aeq}				62.3	58.7	56.7
R2. 220 Fullerton Road (Residential)						
RBL	49.7	49.0	47.8			
Logarithmic Average L_{Aeq}				60.7	57.6	55.1
R3. 184 Fullerton Road (Residential)						
RBL	49.9	49.5	48.1			
Logarithmic Average L_{Aeq}				62.5	58.4	56.6
R4. Greenleaf Road Roadside Boundary (South)						
RBL	58.7	59.2	59.5			
Logarithmic Average L_{Aeq}				61.7	61.5	61.9
R5. Greenleaf Road Riverside Pump Station (Centre)						
RBL	53.8	54.9	56.1			
Logarithmic Average L_{Aeq}				56.2	55.4	56.2
R6. Greenleaf Road Road Site Boundary Carpark (North)						
RBL	58.2	60.1	61.2			
Logarithmic Average L_{Aeq}				62.9	62.9	64.4

Notes: Daytime: 7.00am to 6.00pm Monday to Saturday, 8.00am to 6.00pm Sunday and Public Holidays.
Evening: 6.00pm to 10.00pm.
Night: 10.00pm to 7.00am Monday to Saturday, 10.00pm to 8.00am Sunday and Public Holidays.

5.2.9 Assessment of Noise Trends

For assessing noise trends associated with *Orica*, the *NMP* recommends that future noise monitoring on Kooragang Island (R4, R5 and R6) be considered. Baseline RBL's established for the Kooragang Island monitoring locations are referenced in *Atkins Acoustic (September 2012).*

The results summarised in *Table 9* demonstrate the night-time RBL at R4 (59.5) is marginally (0.1dB) higher than the long-term median level of 59.4, for R5 the RBL (56.1dB) is 0.3dB higher than the long-term medium of 55.8dB and for R6 the RBL (61.2) is 1.7dB lower than the long-term medium of 62.9dB

Table 9. Baseline RBL Noise Trends

Reference Measurement Location	Ambient Background RBL's dBA		
	Range	Median	June 2024
R4 - Roadside (South)	54.2 to 63.0	59.4	59.5
R5 - Riverside (Central)	49.3 to 60.7	55.8	56.1
R6 - Roadside (North)	59.4 to 65.4	62.9	61.2

6.0 SUMMARY

Atkins Acoustics was retained by *Orica* to conduct an environmental noise audit for the Kooragang Island plant. The audit included attended and unattended measurements at Stockton and on Kooragang Island during May/June 2024.

Resulting from onsite construction works reference measurement location R6 was relocated to the site boundary, approximately fifty (50) metres south of the previous monitoring location.

Orica's Senior Specialist - Environment confirmed one (1) noise complaint was reported during the twelve (12) months from June '23 to June '24 and investigated by staff. The reported noise complaint (21 June '23) related to the Ammonia Plant.

Prevailing weather conditions during noise monitoring were extracted from data reported for Newcastle Nobby Signal Station (Lat:-32.92, Lon: 151.80, Height: 33.0m). During the attended night noise audit, meteorological conditions were clear sky, air temperature 16^0C, light north to north-north-west wind <2m/sec and relative humidity 75%.

Orica noise sources identified at the Stockton/Kooragang Island reference monitoring locations during attended audit, included:

- Ammonia Plant - low frequency noise, quench valves and steam venting;
- General operational noise NAP and AN Plants;
- NAP 1 steam venting; and
- NAP gallery steam pipe hammer.

The measurement results summarised in *Table 9* demonstrate the nighttime RBL at R4 (60.1) is marginally (0.6dB) higher than the long-term median level of 59.4; for R5 (56.1dB) the level is 0.3dB higher than the long-term medium of 55.8dB, and for R6 (63.3) the level 0.3dB higher than the long-term medium of 63.0dB

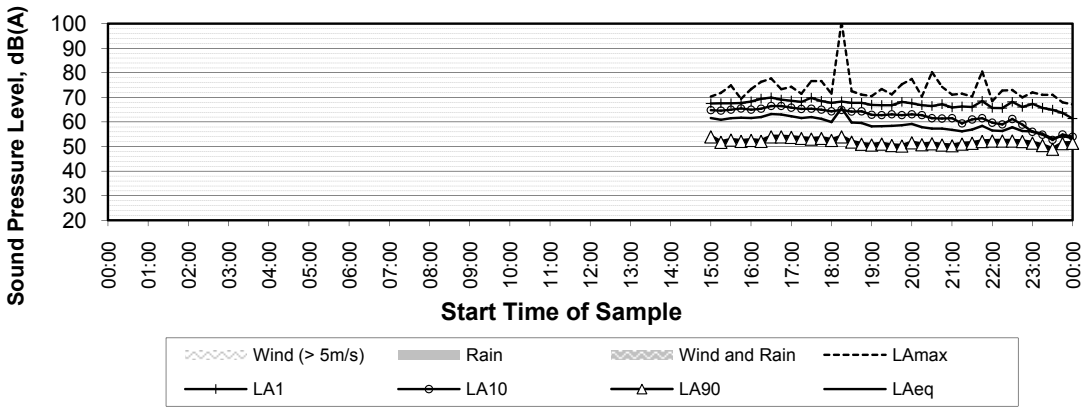
The findings from the June 2024 audit demonstrate noise contributions from *the Project* satisfied the project noise criteria *(Table 6)*.

Attended night audits confirmed that *Orica* related maximum (L_{Amax}) levels were not observed to cause exceedances greater than 5dBA above the measured L_{Aeq} levels at the referenced residential monitoring locations.

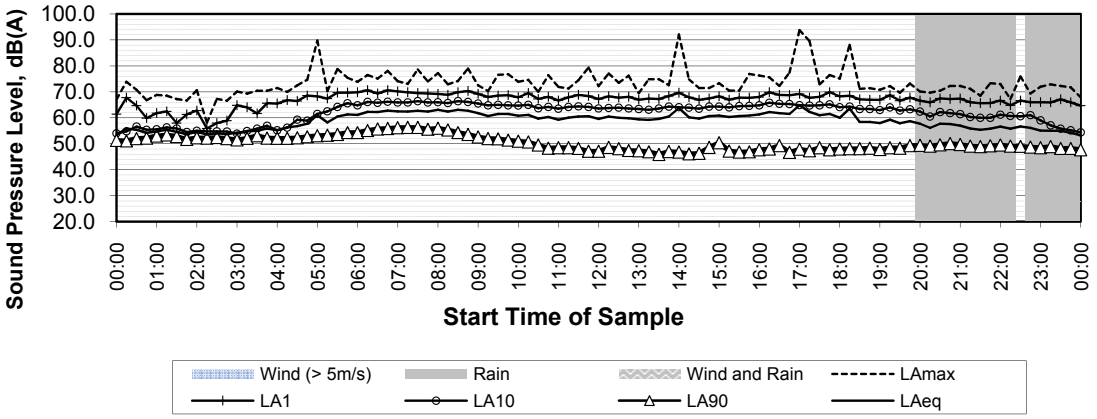
ATTACHMENT 1. AMBIENT SOUND PRESSURE LEVEL MEASUREMENT RESULTS

Ambient Sound Pressure Levels

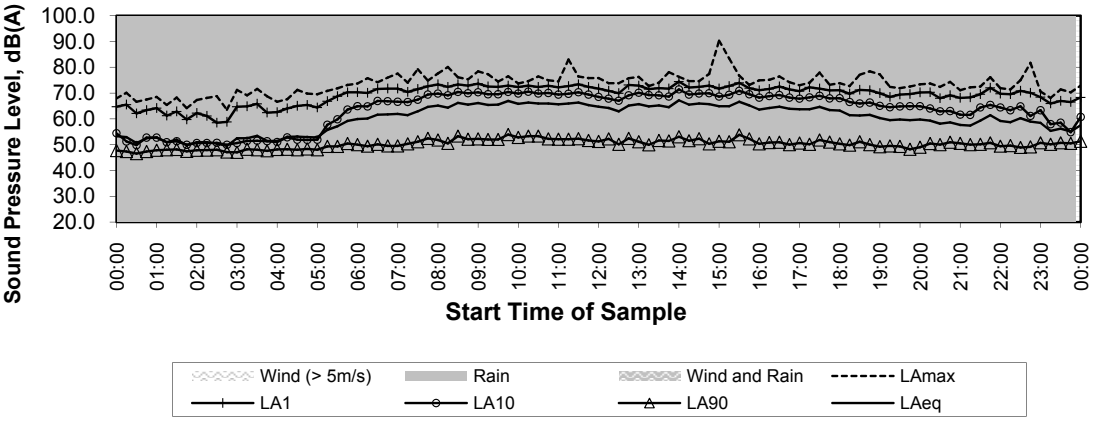
Thursday, 30 May 2024



Friday, 31 May 2024



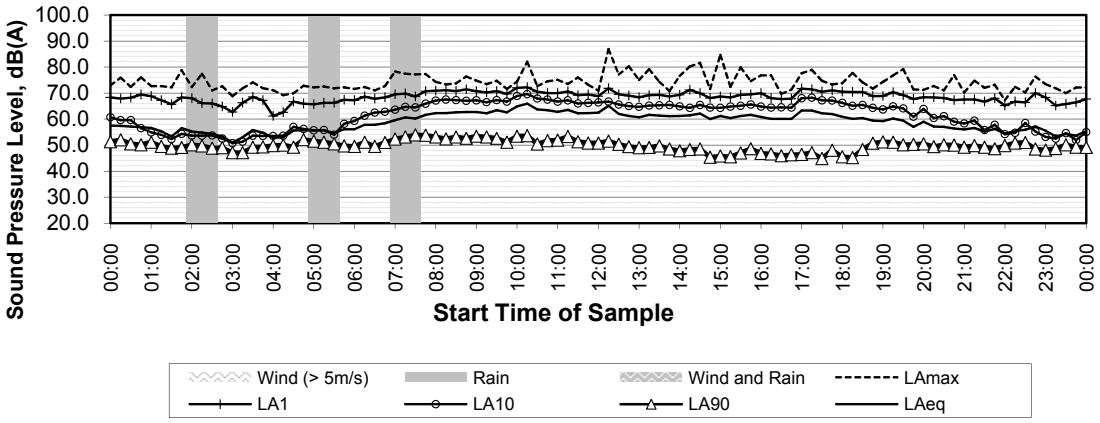
Saturday, 1 June 2024



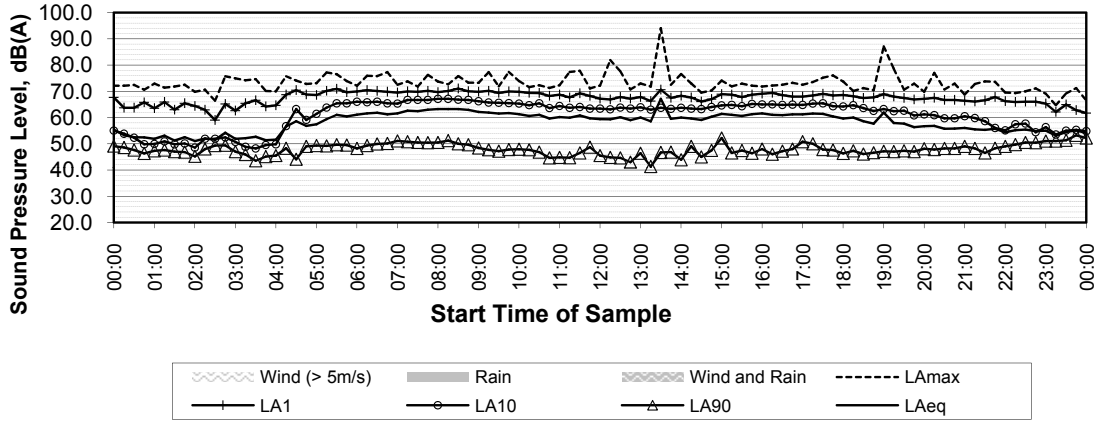
Reference Measurement M1
284 Fullerton Road

Ambient Sound Pressure Levels

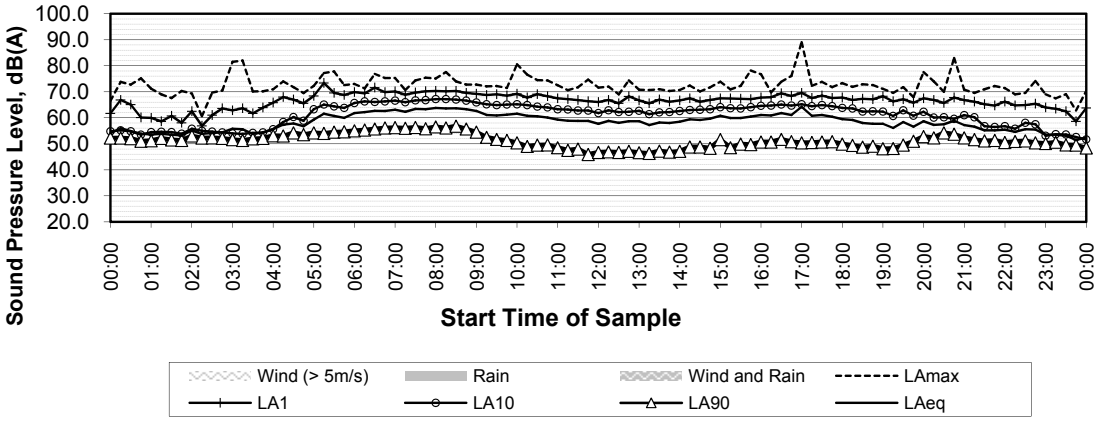
Sunday, 2 June 2024



Monday, 3 June 2024



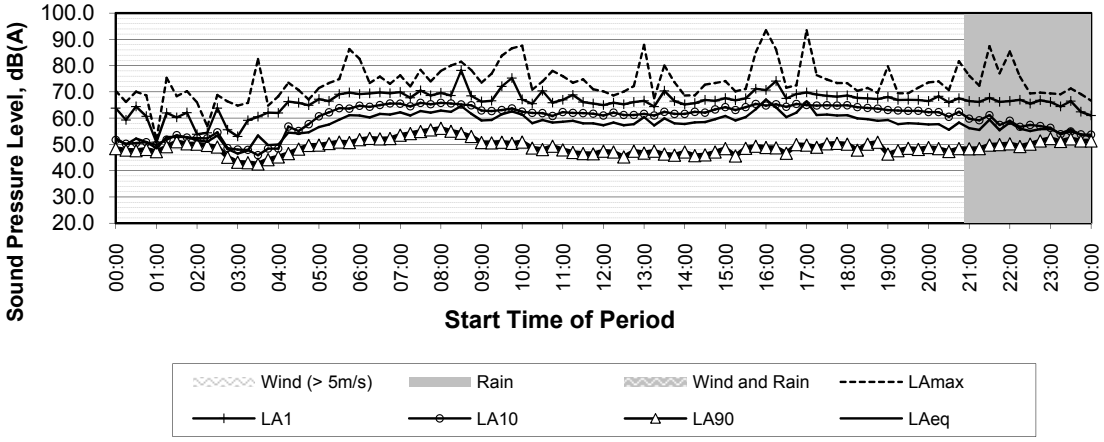
Tuesday, 4 June 2024



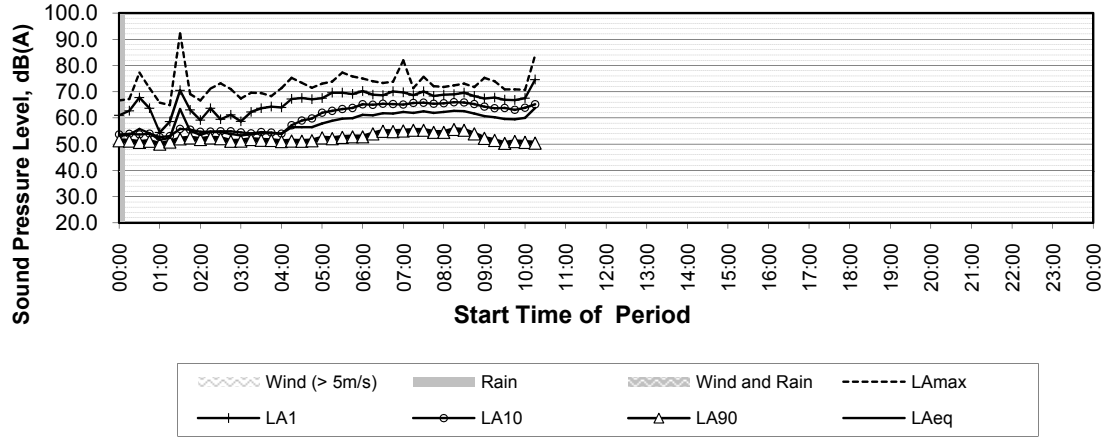
Reference Measurement M1
284 Fullerton Road

Ambient Sound Pressure Levels

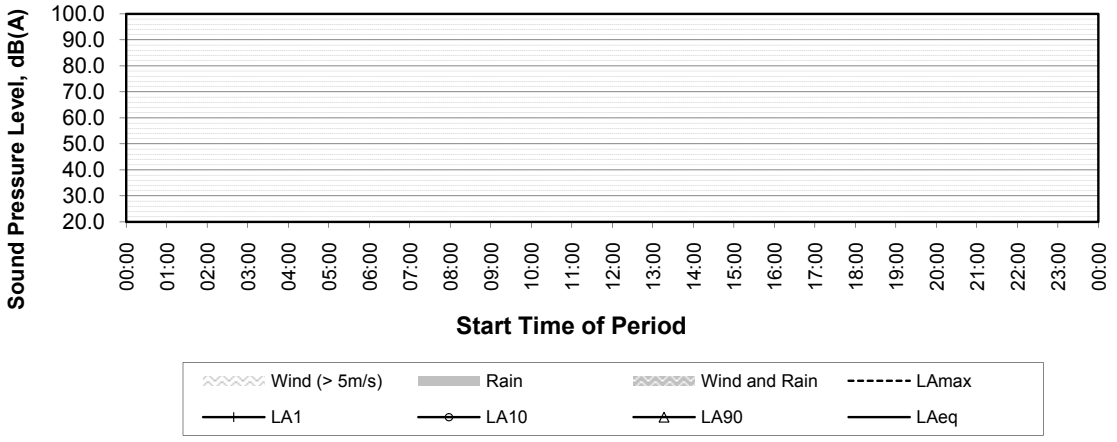
Wednesday, 5 June 2024



Thursday, 6 June 2024



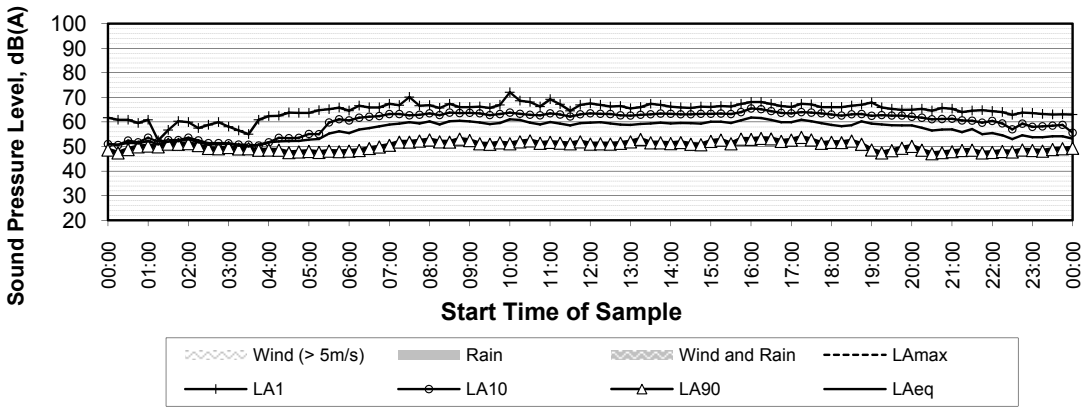
Friday, 7 June 2024



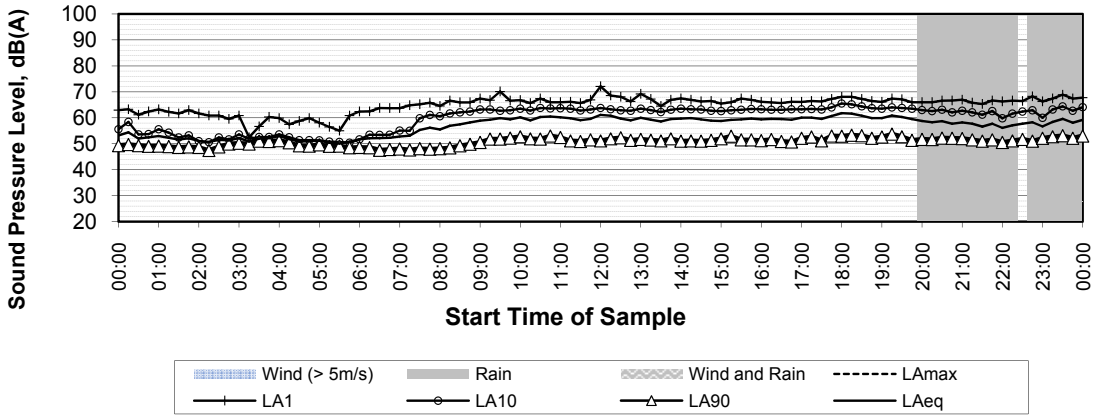
Reference Measurement M1
284 Fullerton Road

Ambient Sound Pressure Levels

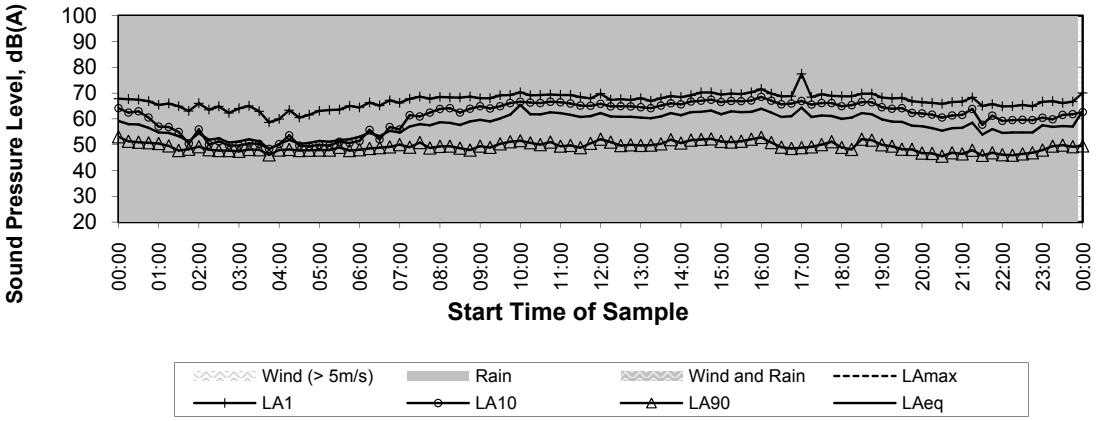
Thursday, 30 May 2024



Friday, 31 May 2024



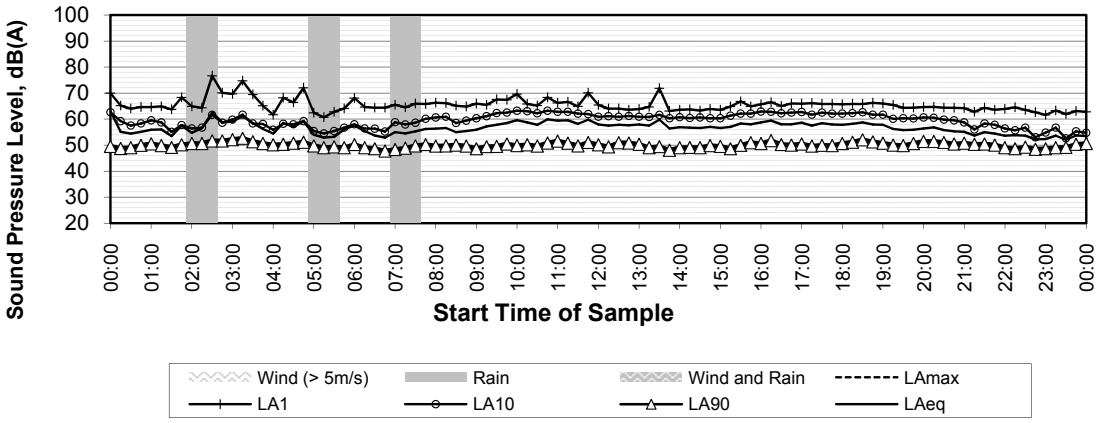
Saturday, 1 June 2024



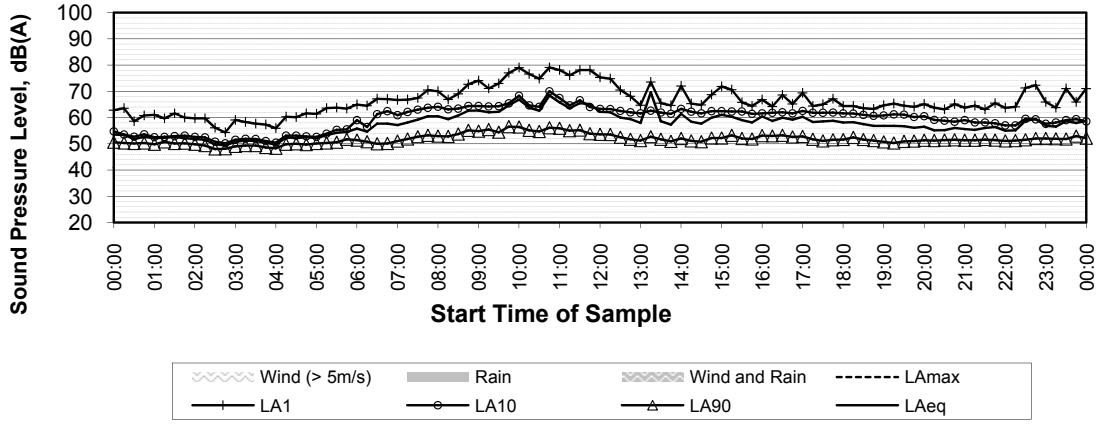
Reference Measurement M2
220 Fullerton Road

Ambient Sound Pressure Levels

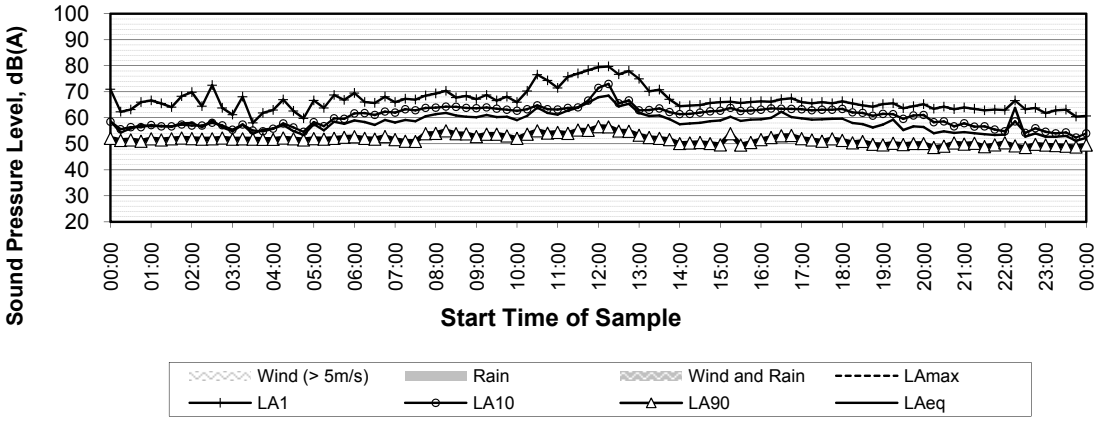
Sunday, 2 June 2024



Monday, 3 June 2024



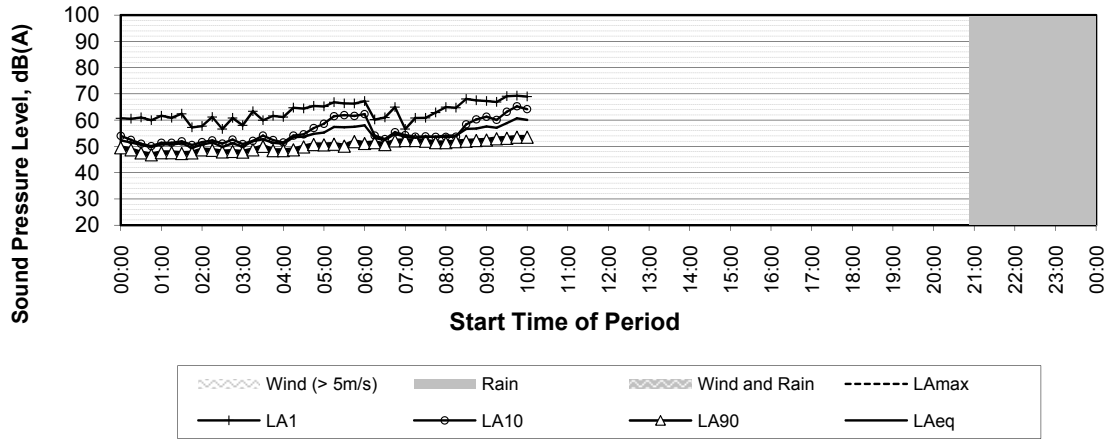
Tuesday, 4 June 2024



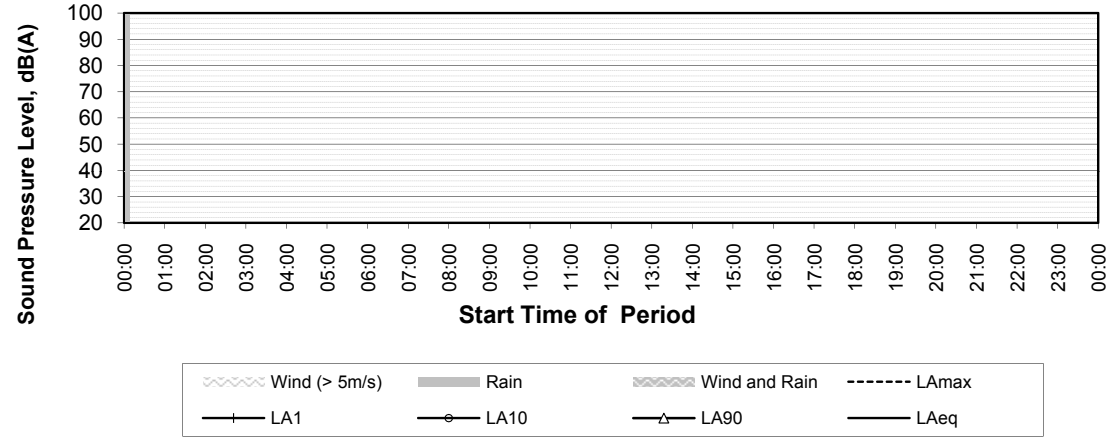
Reference Measurement M2
220 Fullerton Road

Ambient Sound Pressure Levels

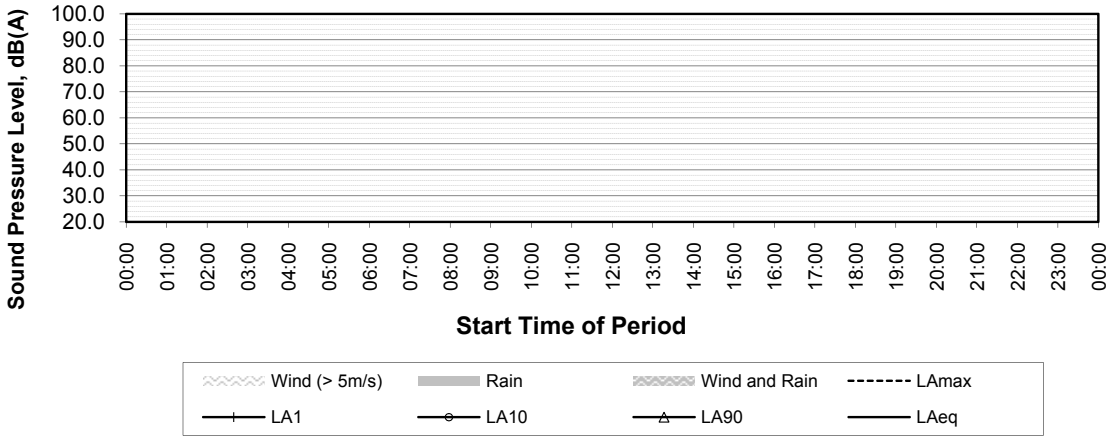
Wednesday, 5 June 2024



Thursday, 6 June 2024



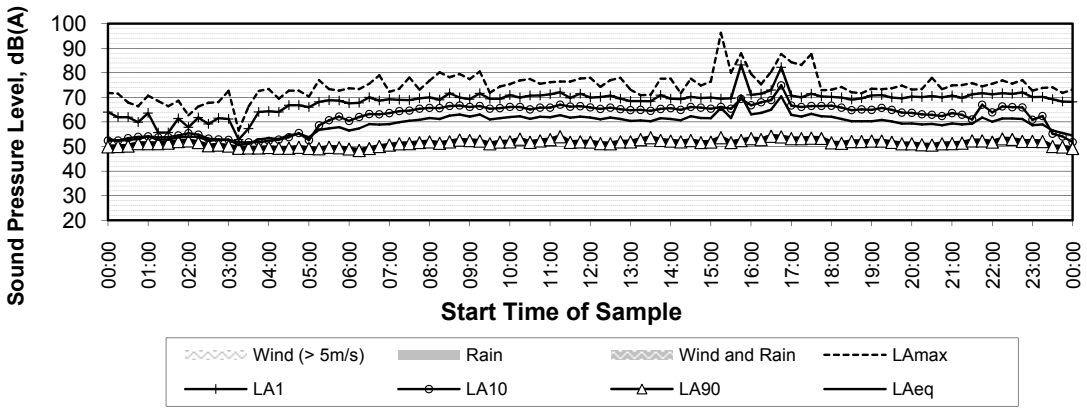
Friday, 7 June 2024



Reference Measurement M2
220 Fullerton Road

Ambient Sound Pressure Levels

Thursday, 30 May 2024



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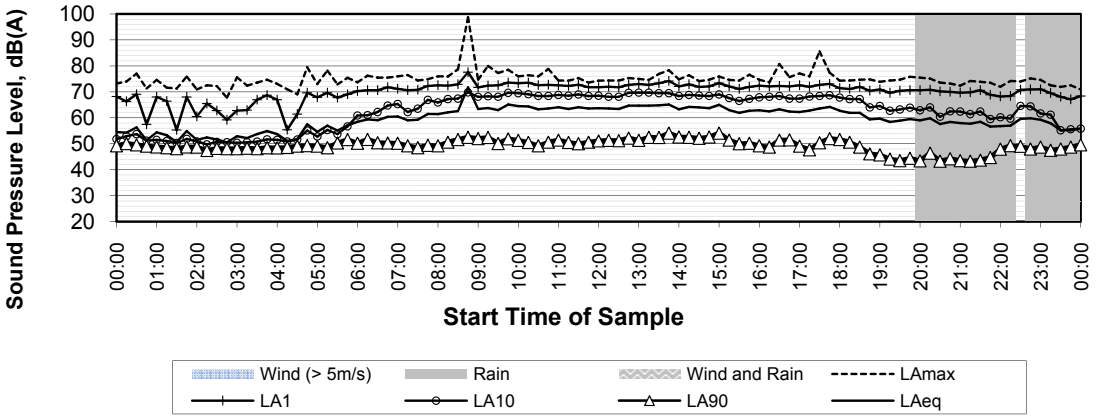

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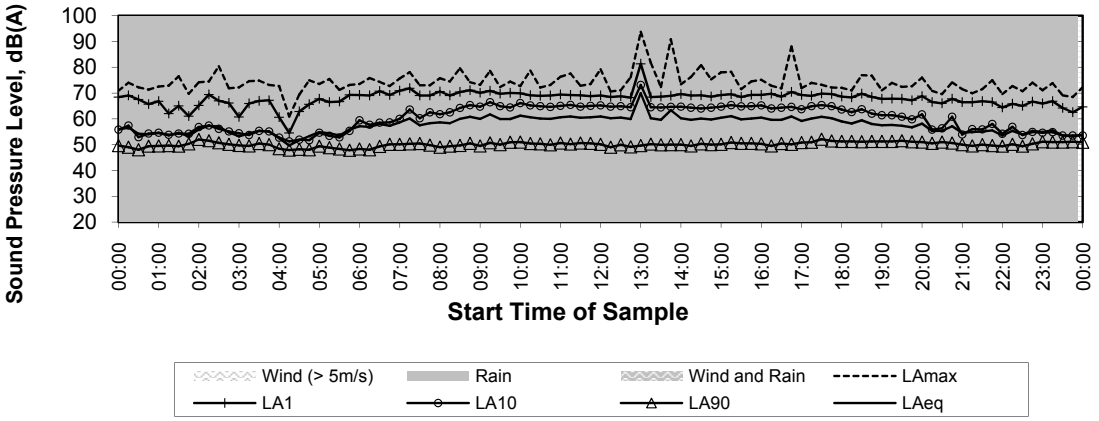
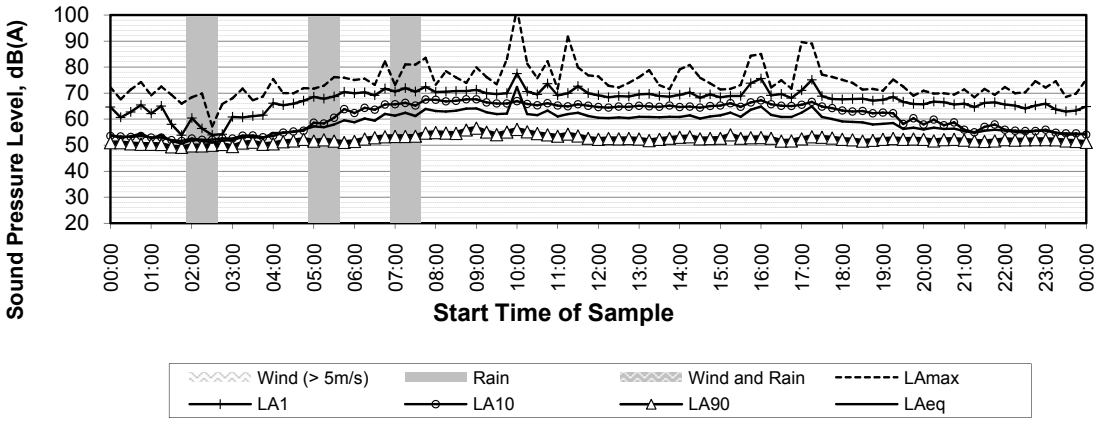


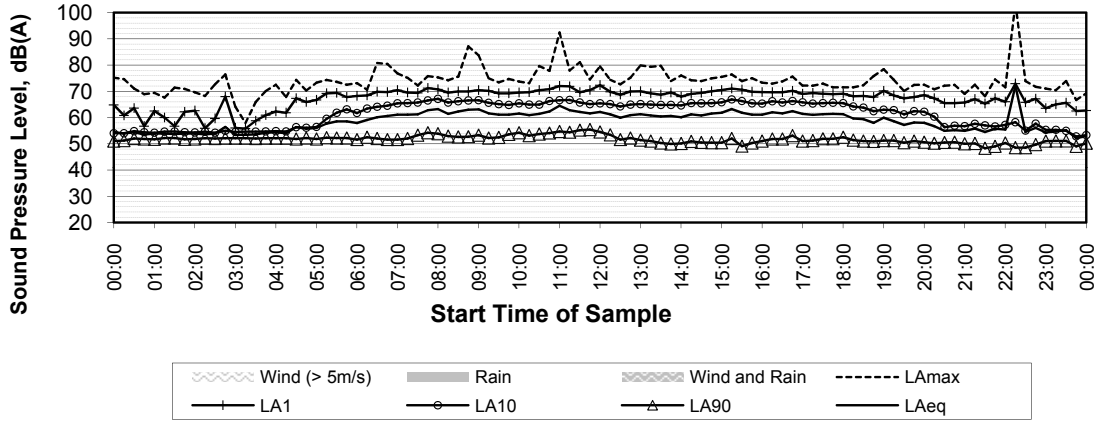
Reference Measurement M3
184 Fullerton Road

Ambient Sound Pressure Levels

Sunday, 2 June 2024



Monday, 3 June 2024



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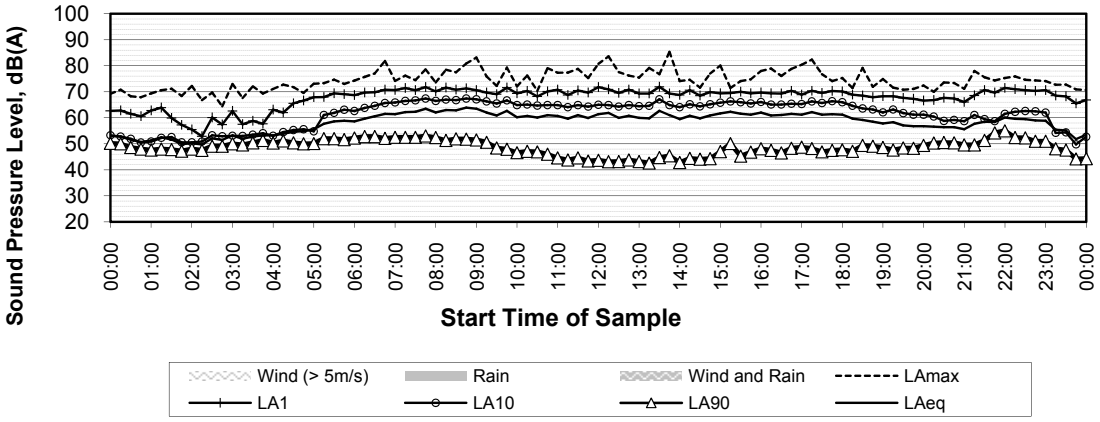
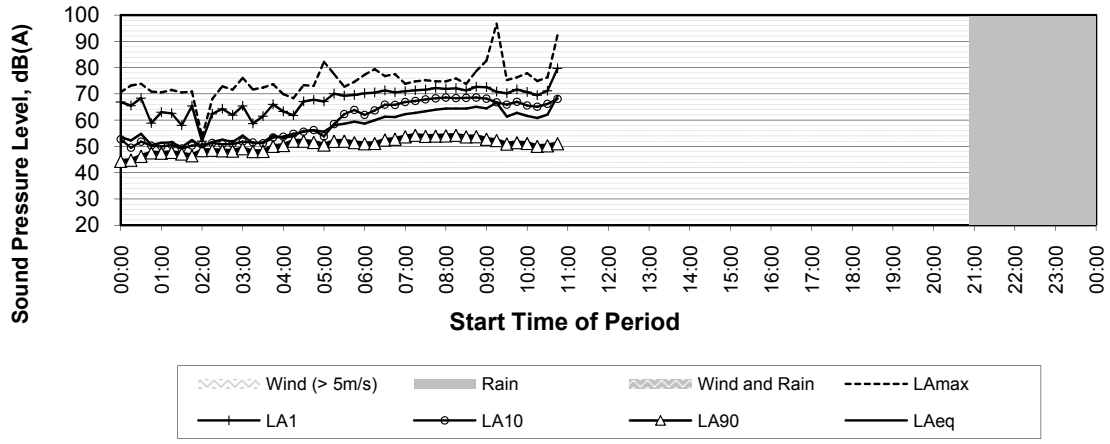


Reference Measurement M3
184 Fullerton Road

Ambient Sound Pressure Levels

Wednesday, 5 June 2024



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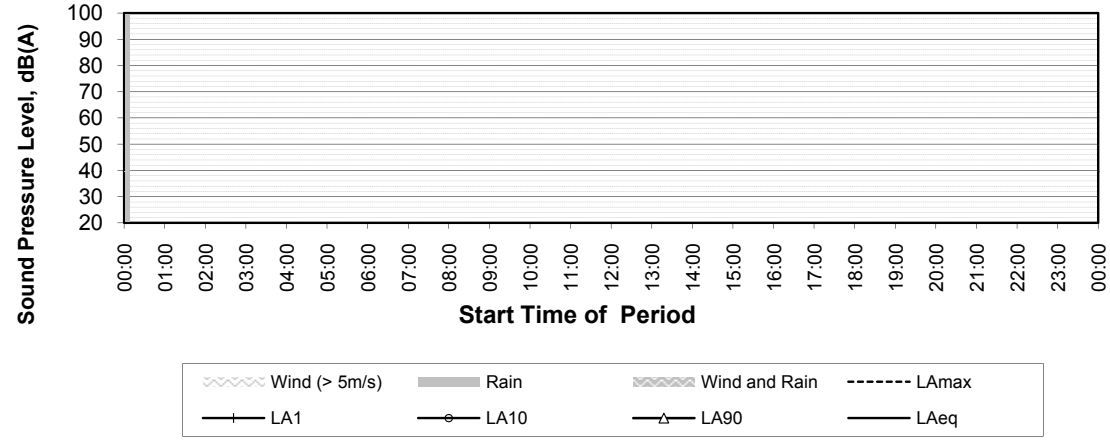
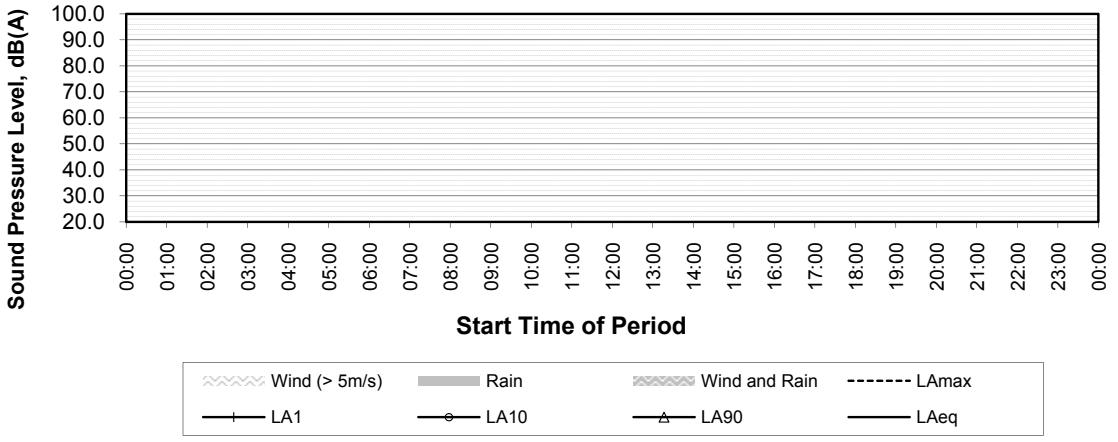


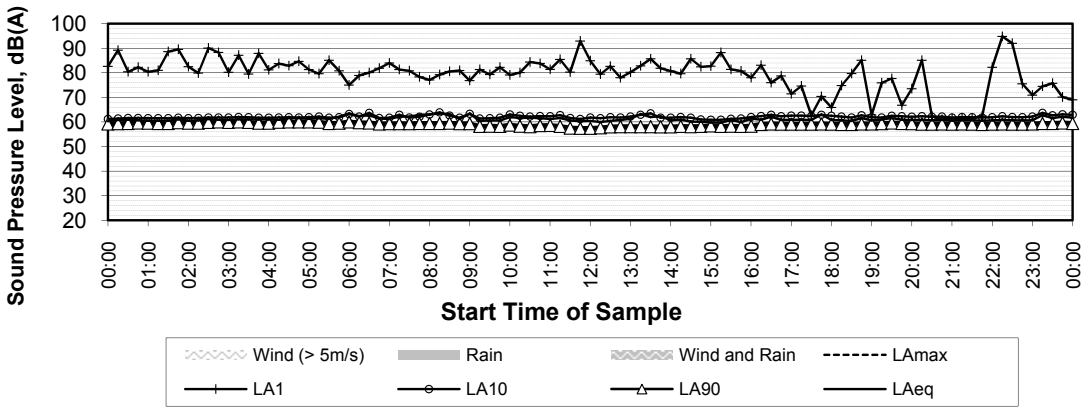
Friday, 7 June 2024



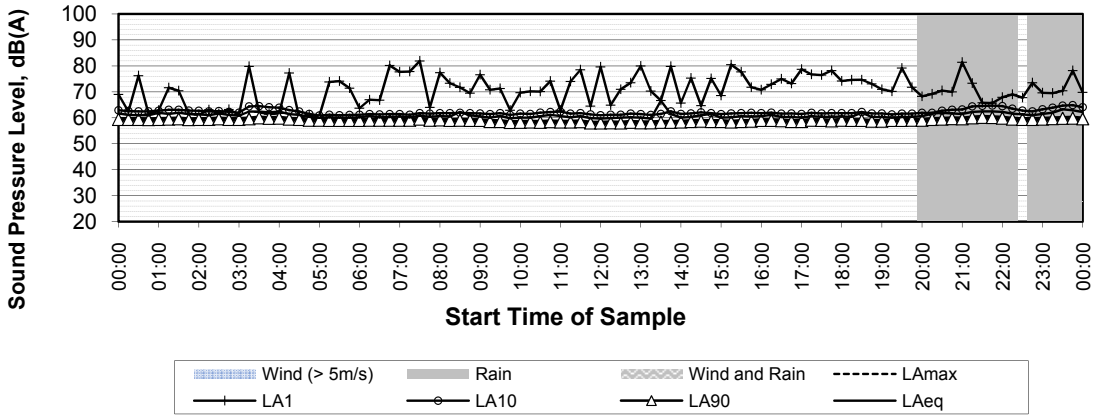
Reference Measurement M3
184 Fullerton Road

Ambient Sound Pressure Levels

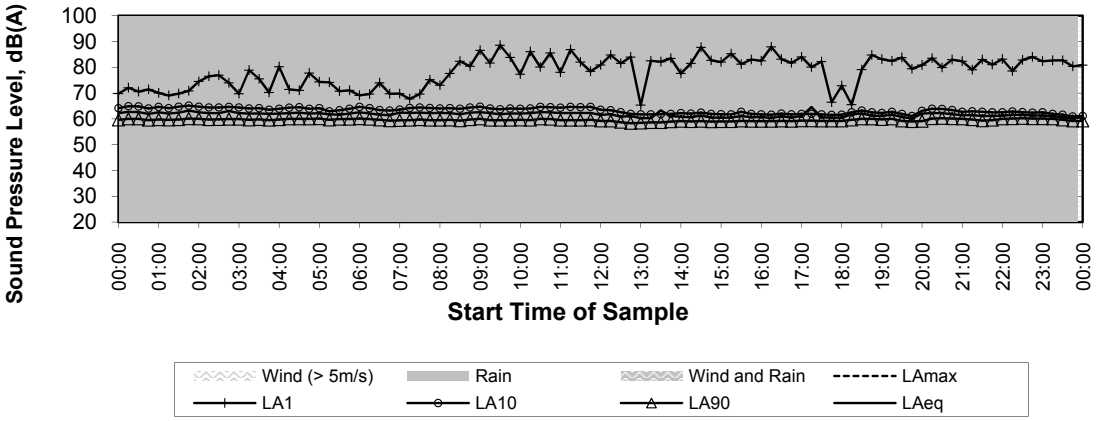
Thursday, 30 May 2024



Friday, 31 May 2024



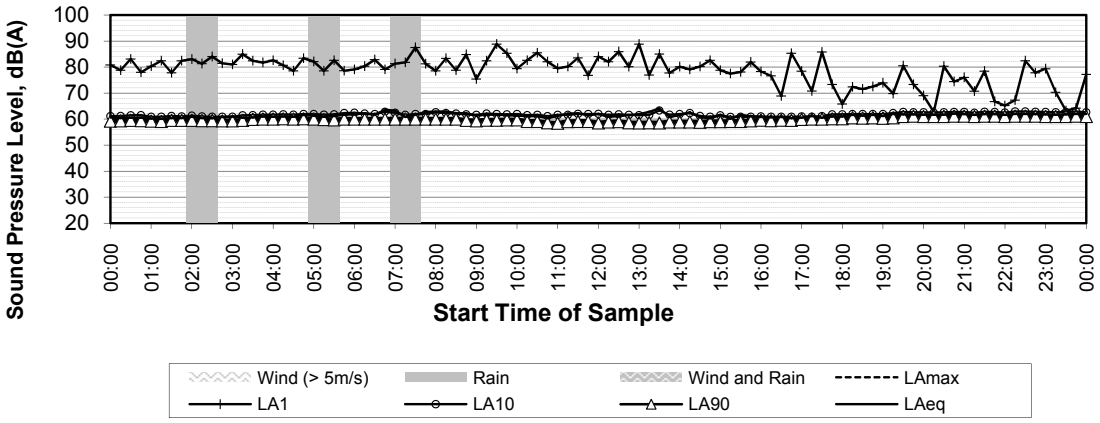
Saturday, 1 June 2024



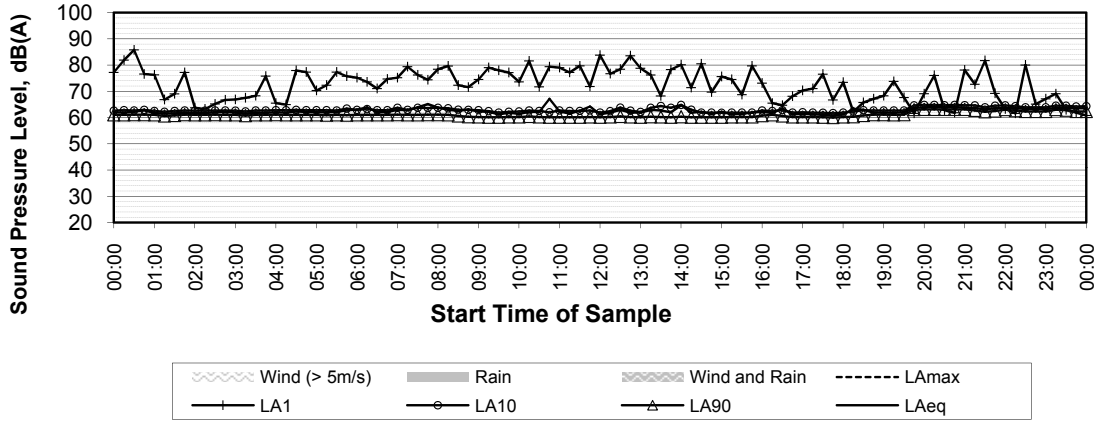
Reference Measurement M4
South Road Boundary

Ambient Sound Pressure Levels

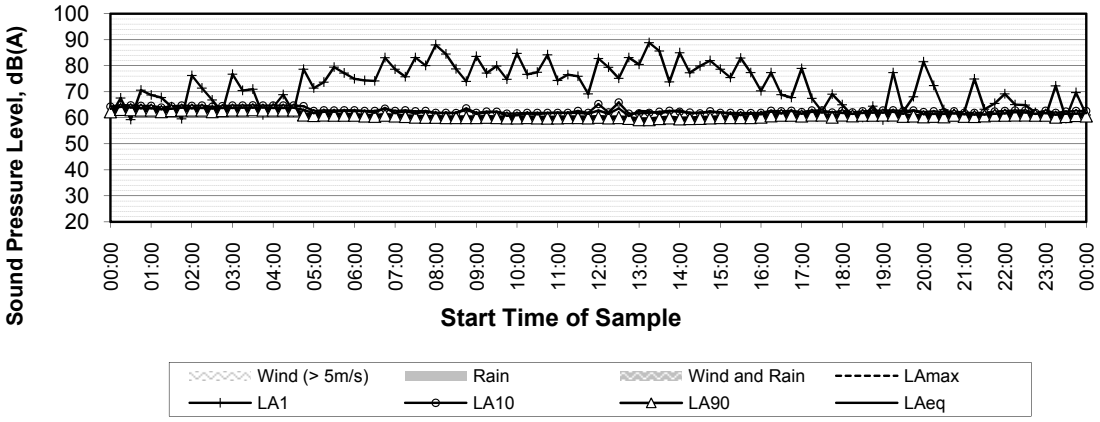
Sunday, 2 June 2024



Monday, 3 June 2024



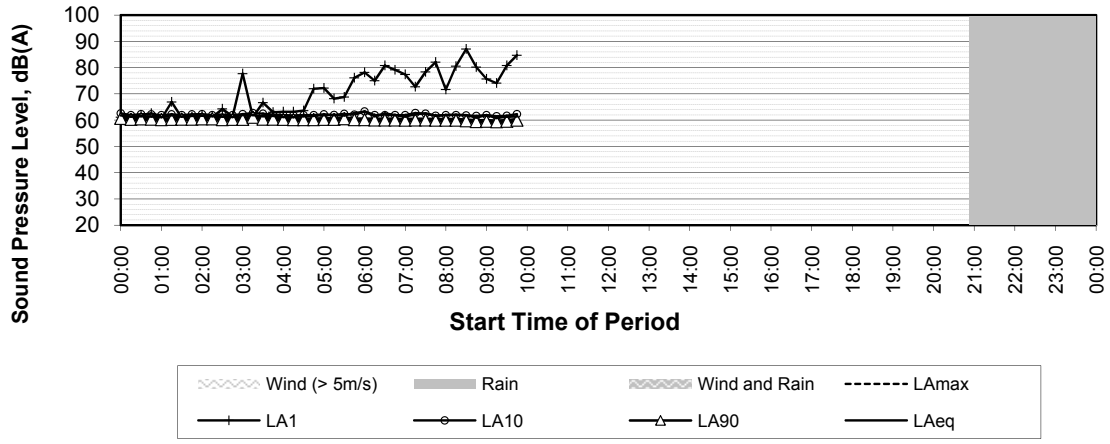
Tuesday, 4 June 2024



Reference Measurement M4
South Road Boundary

Ambient Sound Pressure Levels

Wednesday, 5 June 2024



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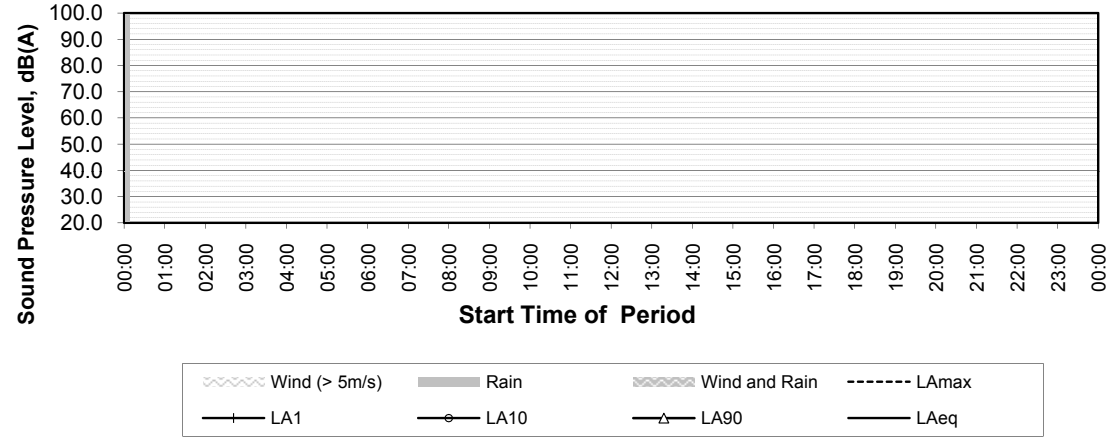
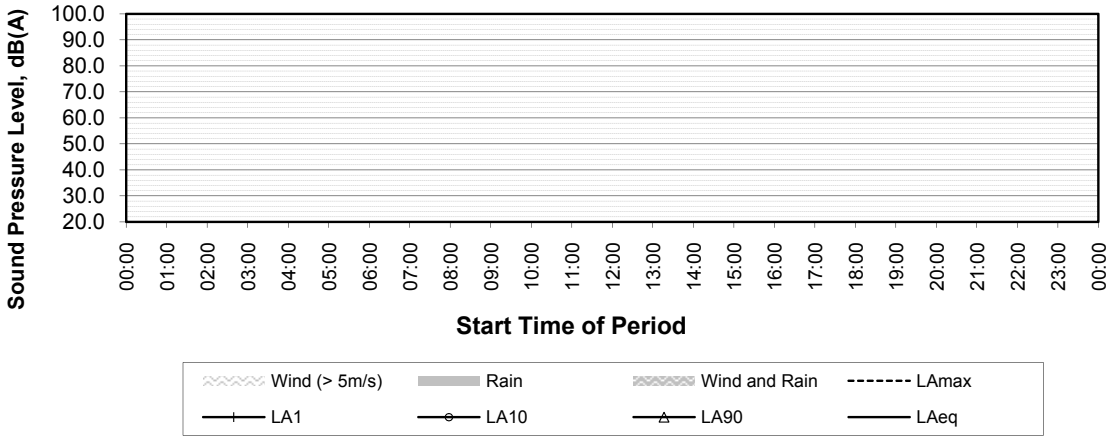


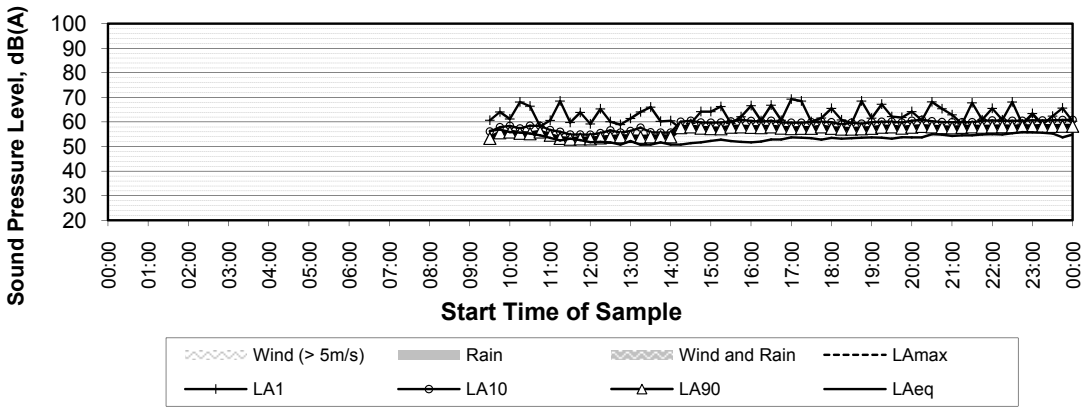
Friday, 7 June 2024



Reference Measurement M4
South Road Boundary

Ambient Sound Pressure Levels

Thursday, 30 May 2024



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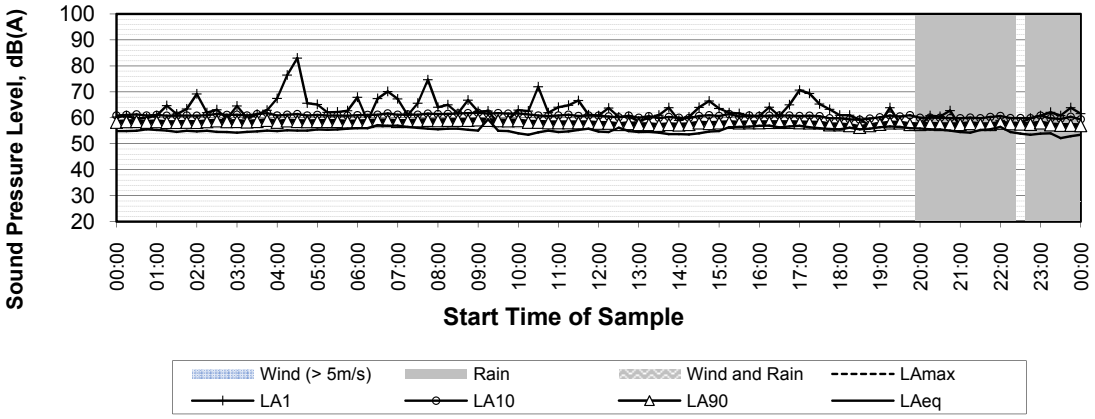
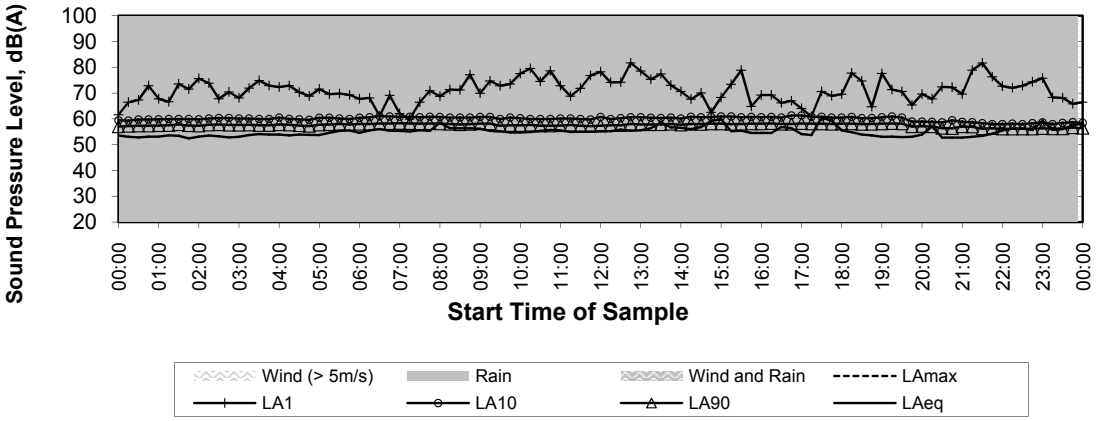


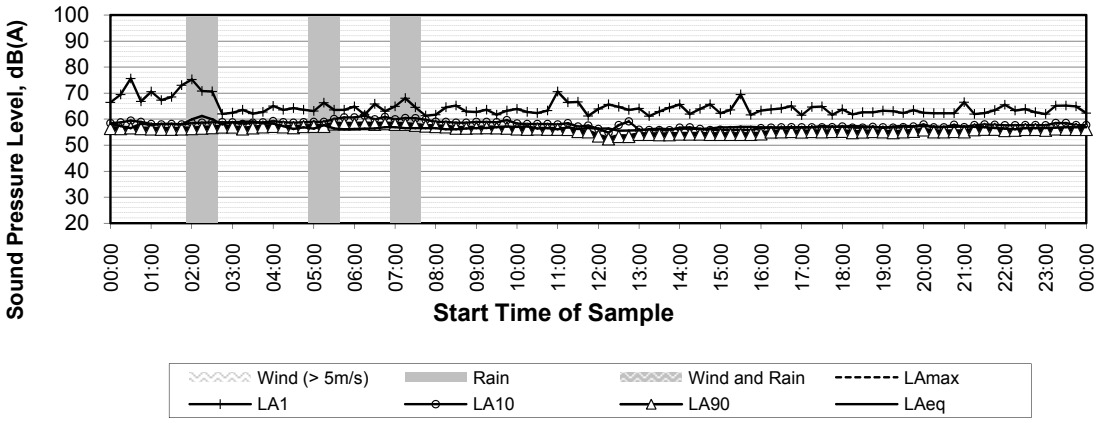
Saturday, 1 June 2024



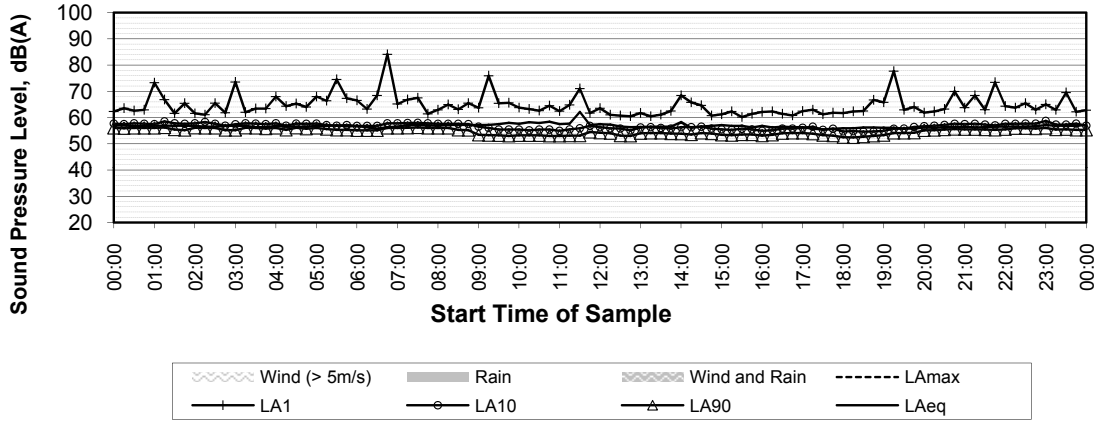
Reference Measurement M5
Riverside Pump Station

Ambient Sound Pressure Levels

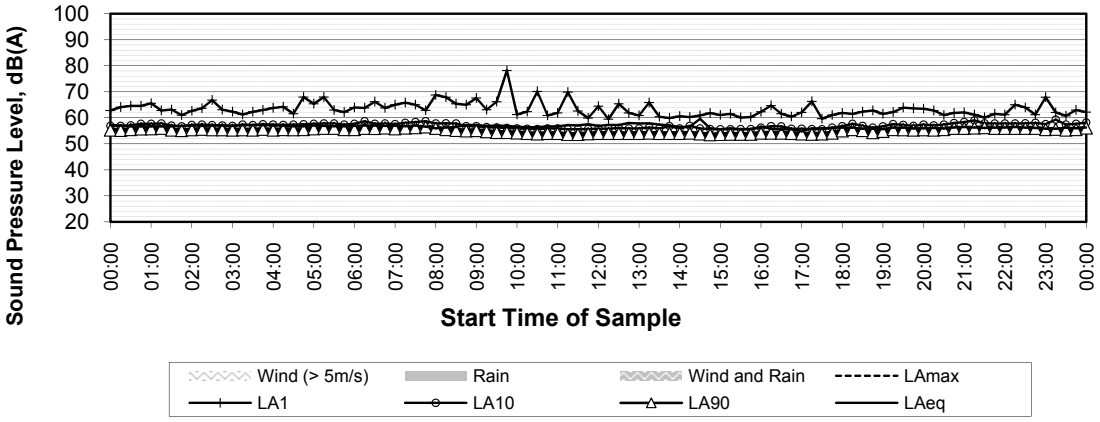
Sunday, 2 June 2024



Monday, 3 June 2024



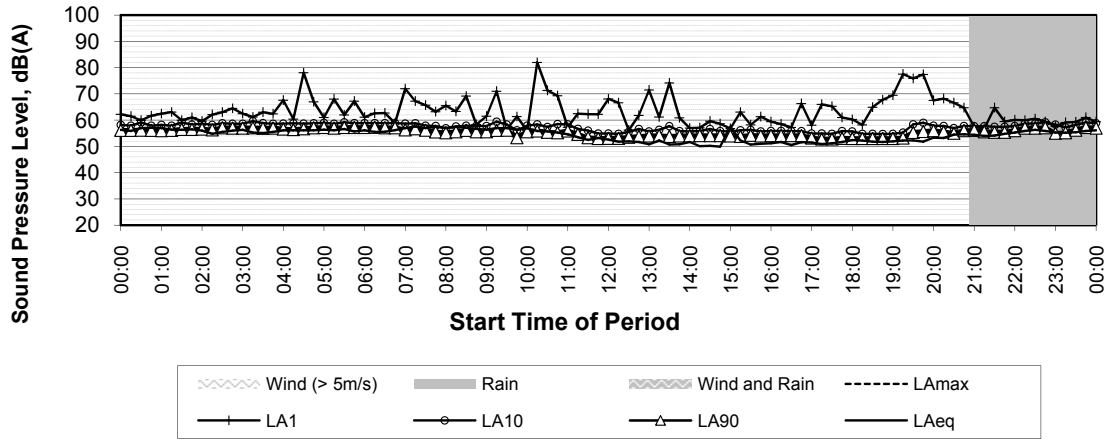
Tuesday, 4 June 2024



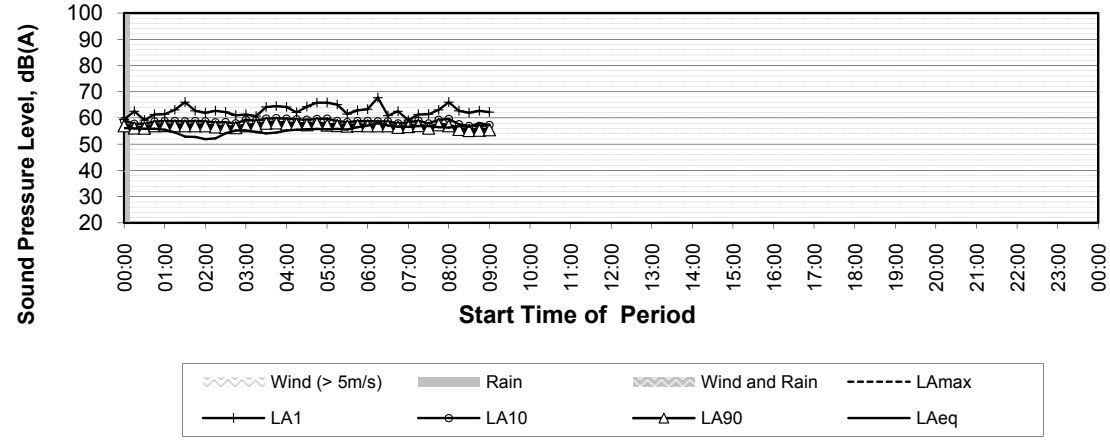
Reference Measurement M5
Riverside Pump Station

Ambient Sound Pressure Levels

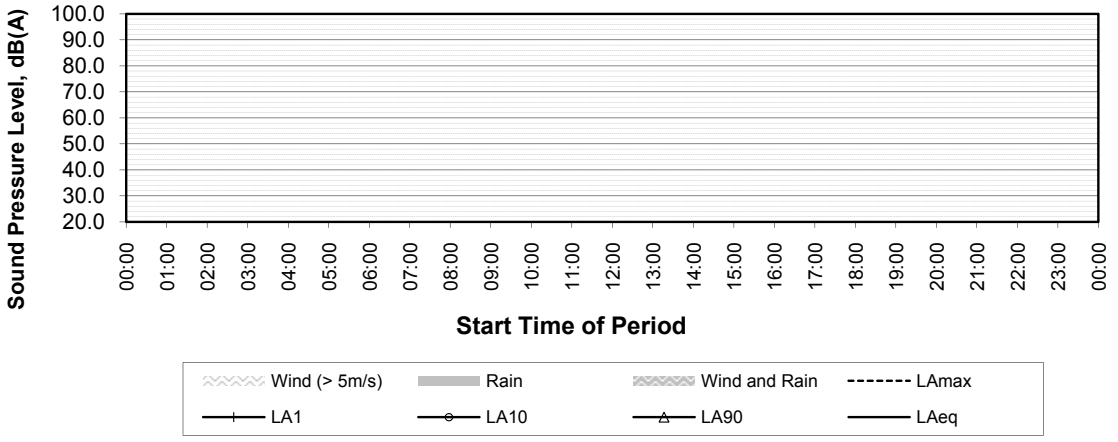
Wednesday, 5 June 2024



Thursday, 6 June 2024



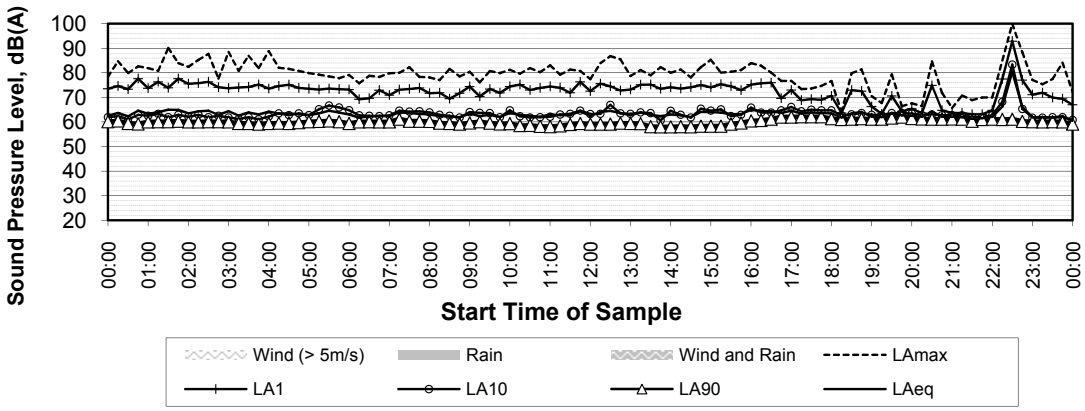
Friday, 7 June 2024



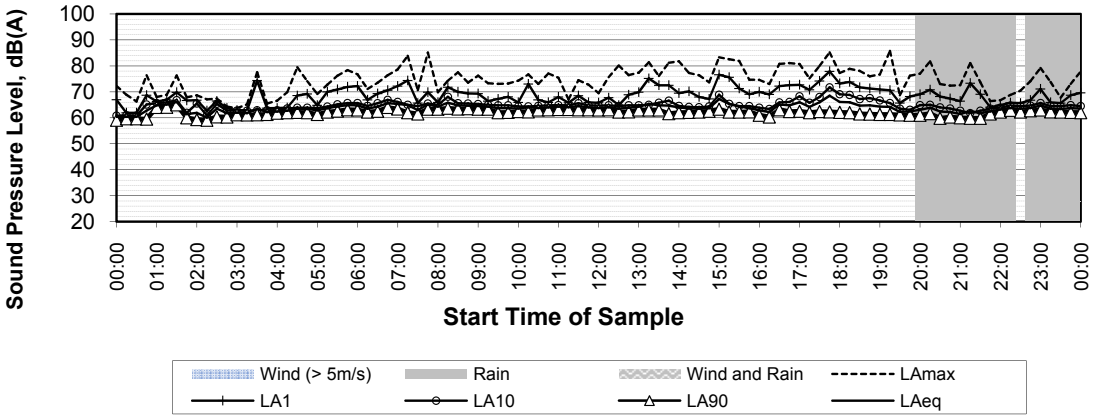
Reference Measurement M5
Riverside Pump Station

Ambient Sound Pressure Levels

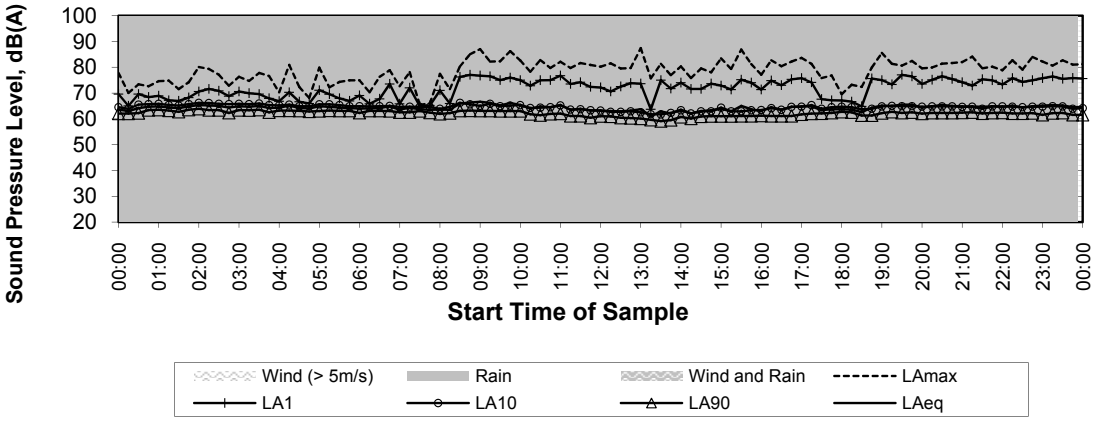
Thursday, 30 May 2024



Friday, 31 May 2024



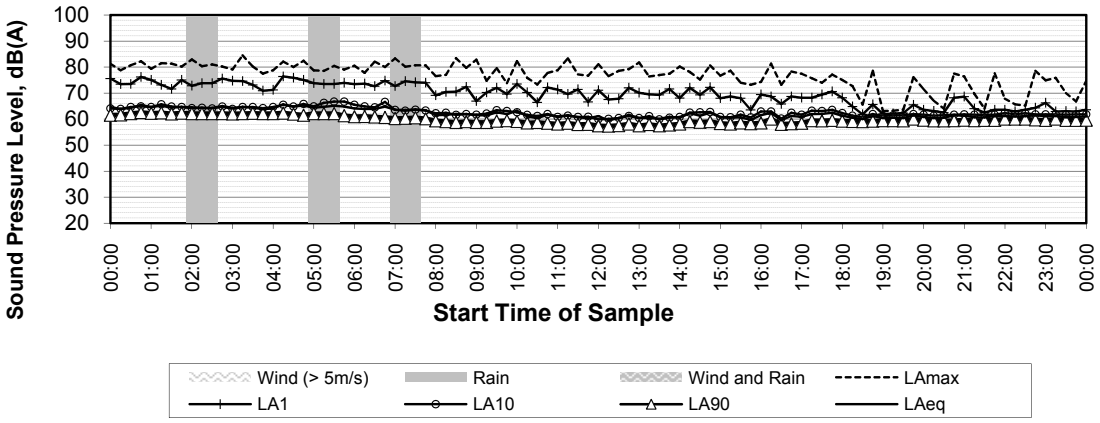
Saturday, 1 June 2024



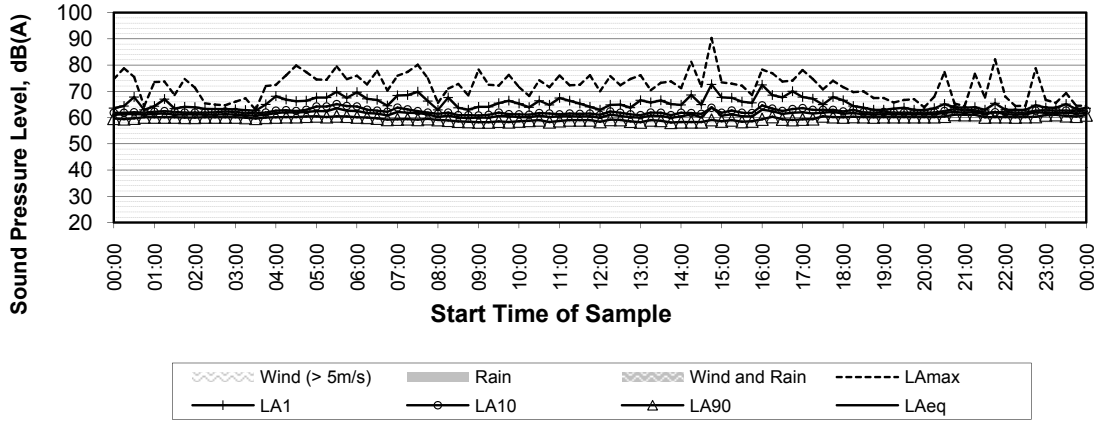
Reference Measurement M6
North Road Boundary (Car Park)

Ambient Sound Pressure Levels

Sunday, 2 June 2024



Monday, 3 June 2024



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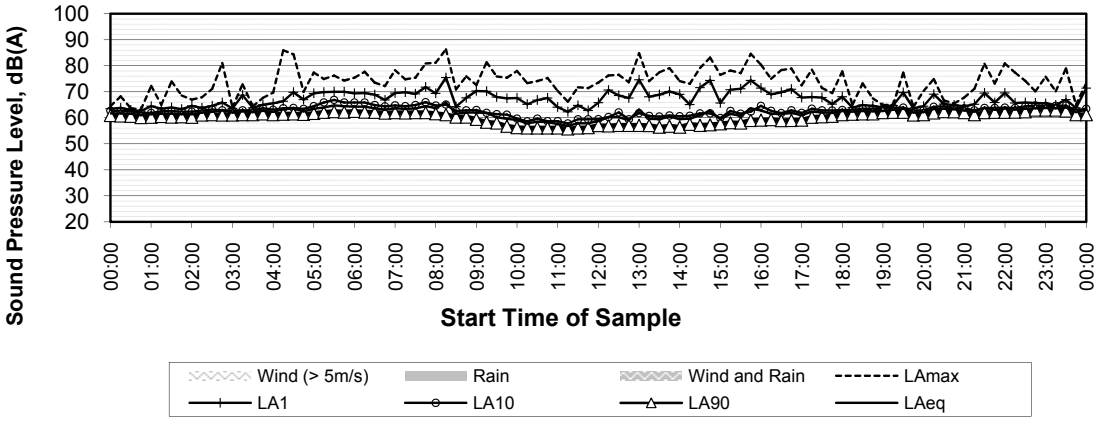
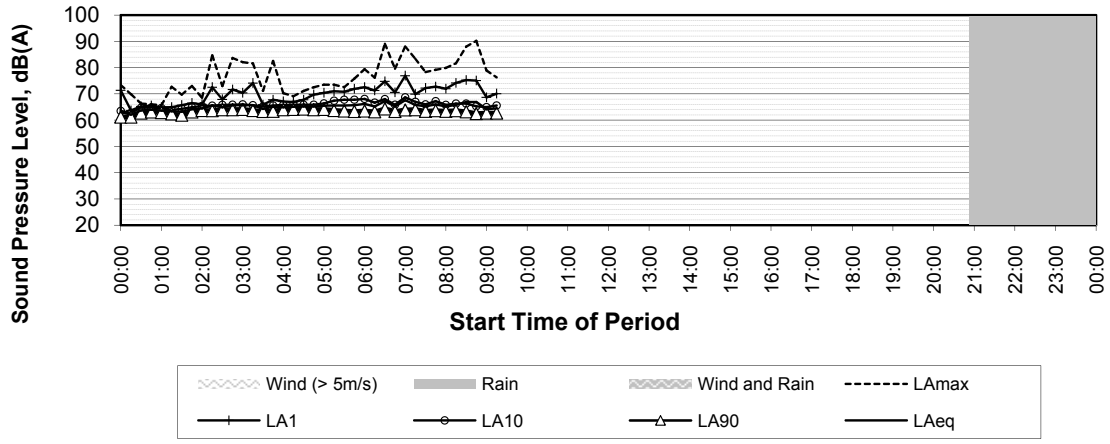


Reference Measurement M6
North Road Boundary (Car Park)

Ambient Sound Pressure Levels

Wednesday, 5 June 2024



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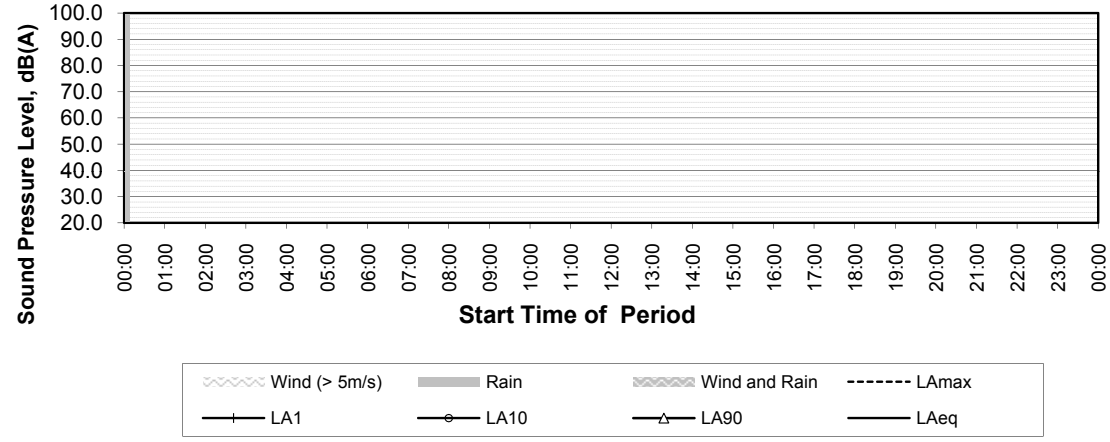

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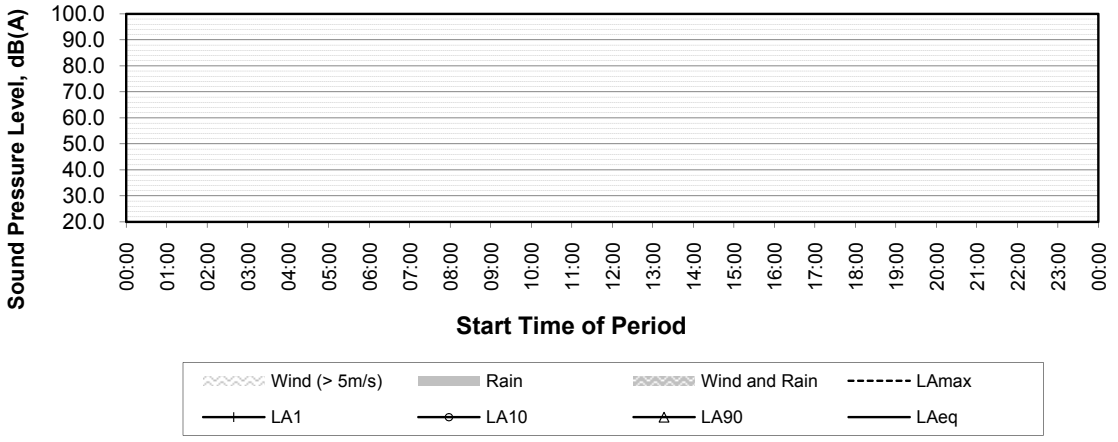

Reference Measurement M6
North Road Boundary (Car Park)

ATTACHMENT 2. SUMMARY of REPORTED NOISE COMPLAINTS

Incident No	Incident Date	Impact Classification	Severity	Area
2023:003533128	21 June 23	Community	0 –Reported Only	Ammonia Plant