Noise Impact Assessment For Public Register

Agilent Technologies LDA UK Ltd

Essex Road, Church Stretton, Shropshire, SY6 6AX

Prepared by:

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Revision	Date	Prepared By	Checked By	Authorised By
00	10 January 2024	Claire Bye	Michelle Dawson (MIOA)	Michelle Dawson (MIOA)
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DRAFT V3	28 June 2024	Esha Shah	Mark Webb	Lisa Brookes
FINAL	23 September 2024	Claire Bye	Michelle Dawson (MIOA)	Lisa Brookes

Basis of Report

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1.0 Introduction

SLR Consulting Limited (SLR) has been instructed by Agilent Technologies LDA UK Ltd (Agilent) to prepare an application for an Environmental Permit (EP) for the existing organic polymer manufacturing site located at Essex Road, Church Stretton, Shropshire, SY6 6AX (the site). The EP application will be submitted to the Environment Agency (EA) for determination.

The site manufactures silica and organic polymers for use in laboratory consumables and industrial applications s at a rate of less than 5 tonnes per year. This is considered to be a listed activity as per the Environmental Permitting (England and Wales) Regulations (EPR) 2016 (as amended):

- Section 4.1 Part A(1)(a)(viii) activity, i.e., producing organic chemicals such as plastic materials (for example polymers, synthetic fibres and cellulose based fibres).

A Noise Impact Assessment (NIA) in accordance with BS4142: 2014 has been completed to assess the potential impact of noise from the facility on nearby sensitive receptors.

The Noise Impact Assessment is presented in this Report. A Noise Management Plan is presented in 428.012990.00001_NMP.

This Report has been completed by Claire Bye an Associate Member of the Institute of Acoustics (AIOA). This Report has been reviewed by Michelle Dawson a Corporate Member of the Institute of Acoustics (MIOA).

1.1 Report Structure

This Report presents:

- A description of the site.
- A description of applicable guidance.
- The results of a baseline background sound survey at locations representative of the nearest noise-sensitive receptors to the site.
- The results of an operational noise survey of all noise sources operating at the site.
- Sound modelling software CadnaA® noise level predictions associated with the operations using the calculation methodologies in ISO 9613-2:1996 *Acoustics – Attenuation of Sound during Propagation Outdoors– Part 2: General Method of Calculation*.
- An assessment undertaken in accordance with British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* as required by the Environment Agency (EA) Guidance *Noise and vibration management: environmental permits.*

Whilst reasonable effort has been made to ensure that this report is easy to understand, it is technical in nature; to assist the reader, a glossary of terminology is included in Appendix A.

2.0 Site Description

The site is located in Church Stretton, Shropshire. The site is accessed via Essex Road and the National Grid Reference (NGR) for the site is centred on SO 45672 93772.

A summary of the site's immediate surrounding land uses is identified in Table 2-1 below.

Table 2-1 Surrounding Land Uses

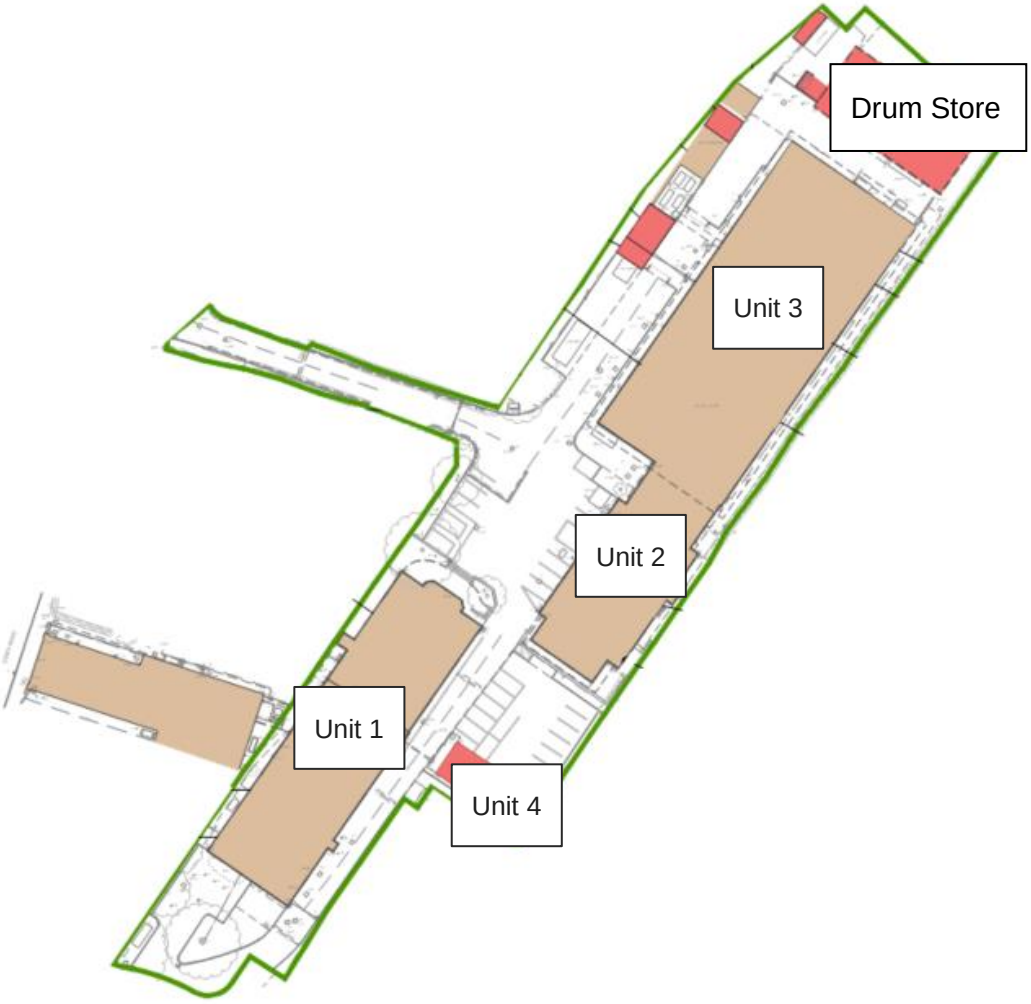
Boundary	Description
North	Directly north of the site comprises residential properties, with the closest property located approximately 20m north on Windsor Place. Ash Brook is located approximately 90m north. Church Stretton Cricket Club and Churchill Park are located approximately 140m to the north-west and Coppice Leasowes Nature Reserve is located approximately 120m to the north-east.
East	A railway line is located directly adjacent to the eastern site boundary. A bowling green, tennis courts and a play area are located beyond the railway line. Residential properties are also located approximately 200m east. A culverted stream, Town Brook passes directly beneath the site in an easterly direction from Essex Road, beneath the central carpark and below Unit 2.
South	Sandford Avenue (B4371) is located directly adjacent to the southern site boundary. Commercial/industrial premises are located a further 75m south. Church Stretton railway station and an unnamed surface water feature are located 120m and 165m south of the site respectively.
West	Essex road and residential properties bound the site to the west, with the closest dwelling located 35m west. Church Stretton town centre and a playing field are located 300m and 340m west respectively.

The position of the Agilent Technologies in the context of the surrounding area can be seen in Figure 2-1

Figure 2-1 Site Location

The site plan of Agilent Technologies can be seen in Figure 2-2.

Figure 2-2 Units



The figure above presents the units at the site. It is understood that plant located on Unit 5 will not be included within the permit, so has not been included within this EP Noise Assessment.

3.0 Scope and Guidance

A summary of the requirements outlined in the EA Guidance document, and the assessment methodology outlined in BS4142:2014+A1:2019 are provided below.

3.1 Noise and Vibration Management: Environmental Permits

The EA released the guidance document *Noise and vibration management: environmental permits* (NVM) in July 2021, replacing the previous guidance presented in *Horizontal Guidance for Noise (H3) parts 1 and 2*. The NVM details when a noise assessment is required, the competency required to undertake an assessment and how to carry out a noise impact assessment.

The NVM references BS4142:2014+A1:2019 as the appropriate assessment methodology.

The NVM outlines how context should be taken into account in the assessment and notes that *"Whilst context allows you to interpret impact thresholds (to a degree), there are practical limits to the extent of the interpretation. It is unlikely you could adjust the assessment outcome beyond the next band (for example, modifying a BS 4142 outcome of more than 10dB to be less than an 'adverse impact')."*

Determining the outcome of the assessment the following should be considered:

- Weekdays rather than weekends.
- What the sound 'means' – meaningful sound is one that conveys an unpleasant meaning beyond its mere acoustic content, for example noise from an abattoir.
- Time of day.
- The absolute sound level.
- Where the sound occurs.
- New industry or new residences.
- Intrinsic links between the source and receptor, for example the source is the resident's place of work.
- Local attitudes.
- The residual acoustic environment.
- The land use at the receptor (for example, gardens rather than yards).
- The exceedance (traditional BS 4142).
- Whatever else might be particular to that individual situation.

Based on the results of the BS4142:2014+A1:2019 assessment the NVM has three distinct requirements as detailed in Table 3-1.

Table 3-1 NVM Assessment

NVM Result	BS4142 Descriptor	Next Stage
Unacceptable level of audible or detectable noise	The closest corresponding BS 4142 descriptor is 'significant adverse impact'	You must take further action or you may have to reduce or stop operations. The environment agencies will not issue a permit if you are likely to be operating at this level.

NVM Result	BS4142 Descriptor	Next Stage
Audible or detectable noise	The closest corresponding BS 4142 descriptor is ‘adverse impact’	Your duty is to use appropriate measures to prevent or, where that is not practicable, minimise noise. You are not in breach if you are using appropriate measures. But you will need to rigorously demonstrate that you are using appropriate measures.
No noise, or barely audible or detectable noise	The closest corresponding BS 4142 descriptor is ‘low impact or no impact’	Low impact does not mean there is no pollution. However, if you have correctly assessed it as low impact under BS 4142, the environment agencies may decide that taking action to minimise noise is a low priority.

3.2 British Standard 4142:2014+A1:2019

British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* is intended to be used to assess the potential adverse impact of sound, of an industrial and/or commercial nature, at nearby noise-sensitive receptor locations within the context of the existing sound environment.

Where the specific sound contains tonality, impulsivity and/or other sound characteristics, penalties should be applied depending on the perceptibility. For tonality, a correction of either 0, 2, 4 or 6dB should be added and for impulsivity, a correction of either 0, 3, 6 or 9dB should be added. If the sound contains specific sound features which are neither tonal nor impulsive, a penalty of 3dB should be added.

In addition, if the sound contains identifiable operational and non-operational periods, that are readily distinguishable against the existing sound environment, a further penalty of 3dB may be applied.

The assessment of impact contained in BS4142:2014+A1:2019 is undertaken by comparing the sound rating level, i.e. the specific sound level of the source plus any penalties, to the measured representative background sound level immediately outside the noise-sensitive receptor location. Consideration is then given to the context of the existing sound environment at the noise-sensitive receptor location to assess the potential impact.

Once an initial estimate of the impact is determined, by subtracting the measured background sound level from the rating sound level, BS4142:2014+A1:2019 states that the following should be considered:

- Typically, the greater the difference, the greater the magnitude of the impact.
- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background level, this is an indication that the specific sound source will have a low impact, depending on the context.

BS4142:2014+A1:2019 notes that:

"Adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact."

BS4142:2014+A1:2019 outlines guidance for the consideration of the context of the potential impact including consideration of the existing residual sound levels, location and/or absolute sound levels.

To account for the acoustic character of proposed sound sources, BS4142:2014+A1:2019 provides the following with respect to the application of penalties to account for *"the subjective prominence of the character of the specific sound at the noise-sensitive locations and the extent to which such acoustically distinguishing characteristics will attract attention".*

- **Tonality** – *"For sound ranging from not tonal to predominantly tonal the Joint Nordic Method gives a correction of between 0dB and +6dB for tonality. Subjectively, this can be converted to a penalty of 2dB for a tone which is just perceptible at the noise receptor, 4dB where it is clearly perceptible and 6dB where it is highly perceptible;*
- **Impulsivity** – *A correction of up to +9dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3dB for impulsivity which is just perceptible at the noise receptor, 6dB where it is clearly perceptible, and 9dB where it is highly perceptible;*
- **Intermittency** – *When the specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on time. If the intermittency is readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied; and*
- **Other Sound Characteristics** – *Where the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distinctive against the residual acoustic environment, a penalty of 3dB can be applied."*

Finally, BS4142:2014+A1:2019 outlines guidance for the consideration of the context of the potential impact, including consideration of the existing residual sound levels, location and/or absolute sound levels.

3.3 ISO 9613-2:1996

The levels of sound generated by the operation of the proposed Plant has been predicted in accordance with the prediction framework within ISO 9613-2:1996 *Acoustics – Attenuation of Sound during Propagation Outdoors– Part 2: General Method of Calculation*. This method of calculation takes into account the distance between the sound sources and the closest receptors, and the amount of attenuation due to atmospheric absorption. The methodology also assumes downwind propagation, i.e. a wind direction that assists the propagation of sound from the source to the receiver.

4.0 Baseline Sound Levels

Three noise surveys at the site have previously been undertaken however, it is required that a noise survey is undertaken either at a time that the existing Agilent Technologies is not operating and/or at a location where any sound from the Agilent Technologies Site would not be distinguishable in the soundscape at the Noise Sensitive Receptors (termed a proxy location). The previous noise surveys do not meet this criterion, therefore an up-to-date 2023 proxy survey was required.

4.1 Survey Date

The 2023 proxy survey was undertaken over a 4-day period between the 9th June and 12th June.

4.2 Baseline Conditions

The surveyor noted the noise climate at each of the survey locations and details are given below:

- Location 1 – Residential Dwelling on Essex Road which would be representative of noise levels at residential dwellings on Essex Road and Windsor Place.

- Location 2 – Residential Dwelling adjacent to the Railway which would be representative of noise levels at residential dwellings off Central Avenue and Watling Street North Essex Road and Windsor Place.

The survey locations (and the NSR locations) are shown in Figure 4-1.

Figure 4-1 Monitoring Locations and Noise Sensitive Receptors

4.2.1 Equipment

All measurement instrumentation was calibrated before and after the measurements. No significant drift in calibration was observed. The calibration chain is traceable via the United Kingdom Accreditation Service to National Standards held at the National Physical Laboratory. The monitoring equipment is identified in Table 4-1.

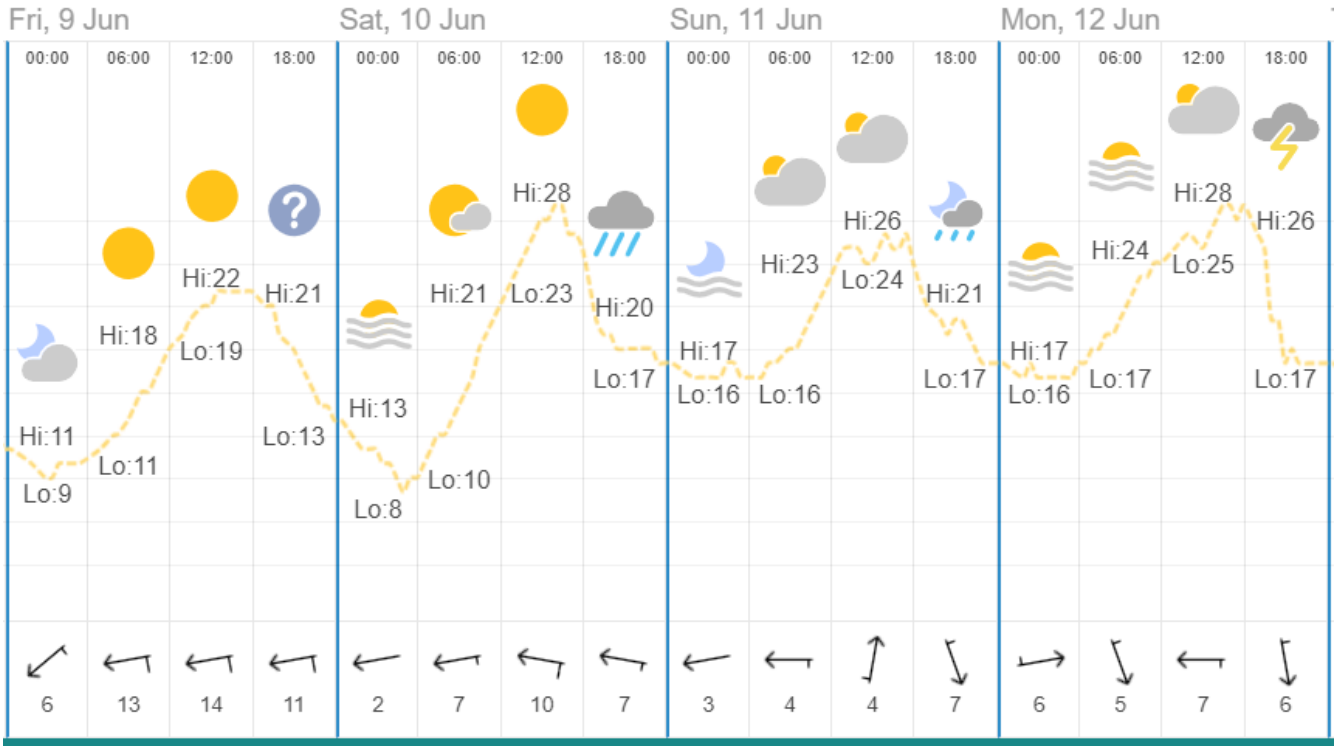
Table 4-1 Sound Level Monitoring Equipment

Location	Equipment	Serial Number
Location 1 – Residential Dwelling on 42 Essex Road	Cirrus CR:171B Class 1 Sound Level Meter	G061094
	Cirrus CR:515 Acoustic Calibrator	72210
Location 2 – Residential Dwelling on 14 Essex Road	Norsonic Nor140 Class 1 Sound Level Meter	1403010
	Norsonic 1251 Acoustic Calibrator	31875

4.2.2 Weather

During the survey, weather conditions were suitable for noise monitoring with conditions being dry and the wind speed less than 5m/s as shown in the figure below.

Figure 4-2 Weather Data



4.3 Survey Results

A summary of the survey results are shown in Table 4-2 and Table 4-3. The full survey results are available in Appendix B.

Table 4-2 Location 1: Residential Dwelling on Essex Road - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
09-Jun	Daytime (11:45 – 23:00)	48.7	80.8	50.0	44.4
	Night-time (23:00 - 07:00)	45.6	76.4	48.3	39.4
10-Jun	Daytime (07:00 – 23:00)	48.0	81.1	49.6	42.1
	Night-time (23:00 - 07:00)	45.2	73.4	48.1	39.6
11-Jun	Daytime (07:00 – 23:00)	48.3	82.5	49.2	41.3
	Night-time 23:00 - 07:00	46.4	74.2	47.6	41.9
12-Jun	Daytime (07:00 – 11:45)	49.3	85.5	50.2	44.8

Table 4-3: Location 2: Residential Dwelling adjacent to the Railway Essex Road - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
09-Jun	Daytime (10:00–23:00)	46.3	80.4	47.0	40.5
	Night-time (23:00 - 07:00)	42.3	70.5	44.5	34.5

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
10-Jun	Daytime (07:00 – 23:00)	42.5	106.0	44.4	38.1
	Night-time (23:00 - 07:00)	44.6	75.2	44.2	34.5
11-Jun	Daytime (07:00 – 23:00)	47.3	92.3	45.7	37.8
	Night-time 23:00 - 07:00	45.8	77.7	45.9	34.6
12-Jun	Daytime (07:00 – 9:45)	50.0	73.7	48.8	43.2

4.4 Background and Residual Sound Levels

From analysis of the level data, the following representative background sound levels will be used in the BS 4142: 2014+A1:2019 numerical assessment for each location.

A summary of the noise levels to be used in the assessment can be seen in Table 4-4. The lowest median background has been selected which is considered robust.

Table 4-4 Baseline Background & Residual Sound Levels for Assessment

Location	Noise-sensitive Receptor	Period	dB $L_{Aeq, 15min}$	dB $L_{A90, 15min}$
1	Windsor Place, Ascot Close, Churchill Road.	Daytime (07:00 – 23:00)	48.0	41.3
		Night-Time (23:00 – 07:00)	45.2	39.4
2	Essex Road, McClintock Place, Lutwyche Road, Sandford Avenue	Daytime (07:00 – 23:00)	42.5	37.8
		Night-Time (23:00 – 07:00)	42.3	34.5

In accordance with BS 4142: 2014+A1:2019, the uncertainty associated with the measured baseline sound levels has been considered and described in the statement of uncertainty in Section 7.3

5.0 Operational Noise Levels / Survey

5.1 Previous Noise Surveys

Ion Acoustics have previously undertaken three environmental noise assessments at the site. The previous assessments include measurements of existing plant and predicted noise levels of proposed plant. These are presented in Table 5-1 overleaf.

The following previous reports undertaken by Ion Acoustics are listed below;

1. 2013 Report_130307 A573 R01 Church Stretton - Plant Noise Report (2).
2. 2020 Report_200729 A1490 R01a Agilent Office Plant Noise Assessment.
3. 2022 Report A1969 R01 Agilent Unit 3 Plant Noise Assessment.

The first report was undertaken in 2013 for an operating licence to extend operating hours to 24 hours a day, 7 days a week. A noise reduction scheme in Unit 1 was also implemented at this time.

The second report was undertaken in 2020 to assess that the new plant on the site, meet the noise limits.

The third report was undertaken in 2022 to assess the proposed plant on the new block and to provide mitigation measures where required.

5.1.1 Previous Noise Survey Measurement Locations

The Location of the plant items measured in the previous noise surveys are indicated in Figure 5-1.

Figure 5-1 Plant Location

5.1.2 Noise Levels from Previous Noise Surveys

Table 5-1 lists the noise emitting plant at the site.

Table 5-1 Noise Levels Presented Within the Previous Noise Reports.

Unit Reference	Report Reference Number	Item	Model	Operation	SPL/SWL	Linear Octave Band (Hz)							dBA
						63	125	250	500	1k	2k	4k	
1	2	AHU 2	Unknown	Outlet	SPL @ 1.0m	-	-	-	-	-	-	-	62.1
	2	AHU 2	Unknown	Inlet	SPL @ 0.8m	-	-	-	-	-	-	-	53.0
2	2	AHU 1	Unknown	Outlet	SPL @ 1.0m	-	-	-	-	-	-	-	62.4
	2	AHU 1	Unknown	Inlet	SPL @ 1.0m	-	-	-	-	-	-	-	50.9
3	2	Chiller Noise	Daikin Q040 CAWN BH Model		SPL @ 1.0m	-	-	-	-	-	-	-	64.0
4	3	Air Handling Unit	FlaktGroup CAIRPlus	In Duct Supply	SWL	61	65	51	45	39	46	45	53
4	3			Breakout	SWL	60	69	60	58	57	61	43	65
5	3	Fume Extract Fan (Cupboard)	Colasit CMV560	In duct Exhaust	SWL	89	91	90	89	88	82	76	92
6	3	Fume Extract Fan (Benches)	Colasit CMV450	In duct Exhaust	SWL	72	81	85	80	81	77	67	85
7	3	Heat Pump	Clivet WSAN-Ysi 22.2	Normal Mode	SWL	66	73	76	78	78	74	66	81
8	3			“Silenced” Mode	SWL	58	67	67	69	70	68	60	74

Unit Reference	Report Reference Number	Item	Model	Operation	SPL/SWL	Linear Octave Band (Hz)							dBA
						63	125	250	500	1k	2k	4k	
9	3	VRF Unit	Daikin RXYSQ8TY1	Normal Mode	SWL	-	82	72	71	67	64	58	73

5.2 2023 Operational Noise Survey – Ion Acoustics

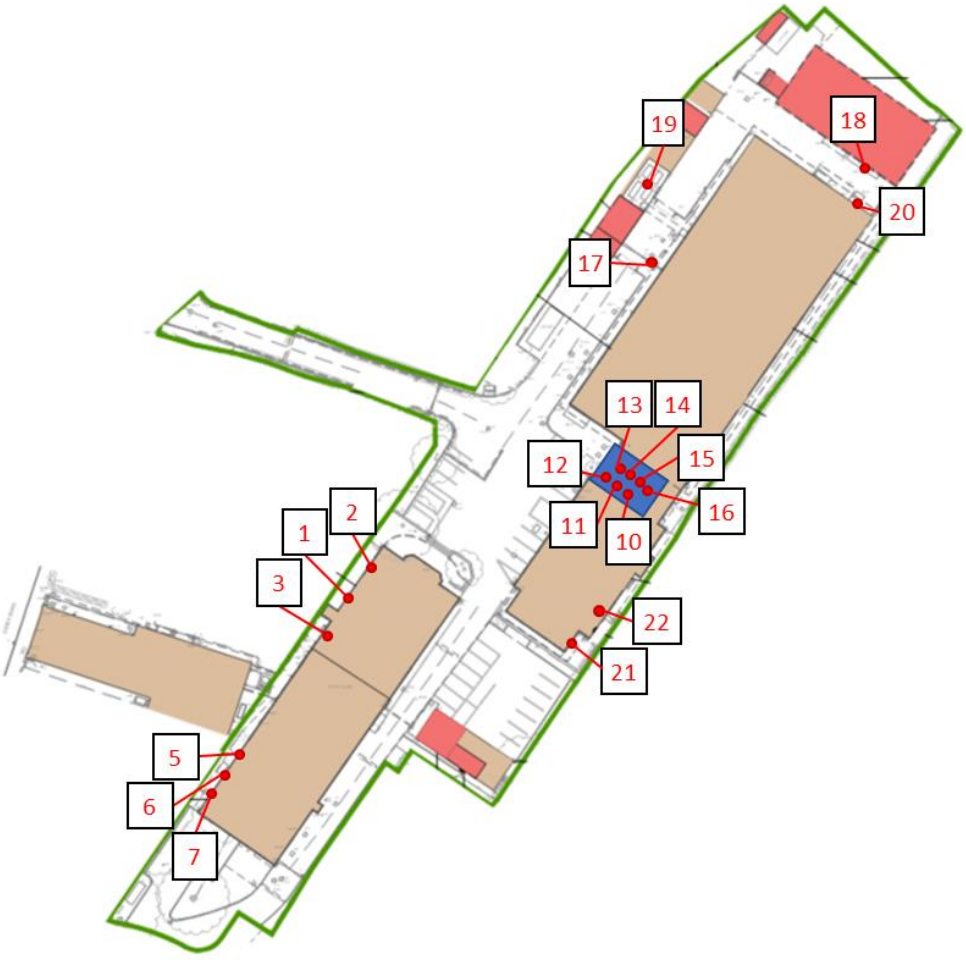
This section presents a summary of the onsite noise measurements undertaken by Ion Acoustics in 2023.

Ion Acoustics have undertaken an operational noise assessment to validate existing measurements of the noise emitting equipment and to ensure that all noise emitting plant on site has been measured such that it can be included within the assessment.

Please see the report 'External Plant Noise Measurements - Acoustics Report A2059 R01 for more details.

The noise monitoring positions for the 2023 noise survey are shown in Figure 5-2.

Figure 5-2 Measurement Positions



The identified noise emitting plant and corresponding sound pressure level are listed in Table 5-2.

Table 5-2 Summary of 2023 Operational Noise Survey

Measure Location	Measurement Description	dB L_{Aeq}	Distance (m)
1	Unit 1 Mitsubishi SUZ-KA50VA	56.8	1.0
2	Unit 1 Mitsibishi MUZ-SF35VE	48.4	1.0
3	Unit 1 Mitsubishi Mr Slim PUZ-ZM100VKA2	48.1	1.0
4	Unit 5 External Daikin AC Chiller Unit EWA Q040CAWNBH	55.3	1.0
5	Unit 1 Danfoss Chiller Optima Slim Pack	62.6	1.0
6	Unit 1 External Trana DX AC Unit Duct Breakout	61.4	1.0
7	External Trane DX AHU Chiller	77.6	1.0
8	Unit 5 roof AHU east unit inlet	58.6	1.0
9	Unit 5 roof AHU West unit inlet	56.1	1.0
10	Unit 2 - Tall twin unit	65.1	1.0
11	Unit 2 AHU Inlet 100%	71.9	1.0
12	Unit 2 AHU Inlet setback	62.8	1.0
13	Unit 2 AHU Exhaust 100%	59.5	1.0
14	Unit 2 AHU Exhaust Setback	54.4	1.0
15	Unit 2 Small Condenser unit MUZ-GF60VE	58.0	1.0
16	Small Condenser MU-GA60VB	64.4	1.0
17	Unit 3 Stack of 5 Exhausts	66.2	See Note
	Unit 3 Stack of 5 Exhausts	66.2	See Note
18	Unit 3 Exhaust metal	63.8	2.0
19	External Climavent DX AC Units	69.8	1.0
20	Unit 3 Exhaust Metal Fan breakout	72.2	1.8
21	Unit 2 Daikin RXYSQ4P8V1B	53.2	1.0
22	Panasonic inverter R410A	60.3	1.0

'Note for measurement location 17 it was not possible to isolate a single extract outlet and therefore all of them were set to run at the same duty. A measurement was then made with exact distance to each stack recorded as shown in Figure 2 below. Figure 2 is a plan view. The height of the microphone was approximately 1.5m below the stack height and this was the highest possible position to get the microphone with the access platform'.[1]

[1] As described within Ion Acoustics Report '230815 A2059 R01 Agilent External Plant Source Noise Measurement Report'

6.0 Noise Model

6.1 Noise Model Assumptions

The sound predictions in this assessment have been undertaken using a proprietary software-based noise model, CadnaA, which implements the full range of UK noise-based calculation methods. The calculation algorithms set out in ISO 9613-2:1996 *Acoustics – Attenuation of sound during propagation outdoors – Part 2 General method of calculation* have been used and the model assumes:

- A ground absorption factor of 0.5.
- Contour Data to include OS terrain data.
- A reflection factor of 3.
- Where it wasn't possible to measure noise sources on site during the 2023 operational noise survey, measured noise levels from previous noise surveys or noise levels from similar plant has been used within the model.

6.2 Operational Hours

Table 6-1 below presents the operational hours of the units on site.

Table 6-1 Operational Hours

Unit	Time Period		
	Operational – Plant at 100%	**Operational – Plant at 25%**	**Not Operational**
1	07:00 – 19:00	N/A	19:00 – 0.700
2	07:00 – 19:00	19:00 – 07:00	N/A
3	06:00 – 00:00	00:00 – 06:00	N/A

Table 6-2 below defines which units will be operational for the daytime and night-time models. This has been based on the worst-case daytime hour and worst case night-time 15min for the most robust approach.

Table 6-2 Model Operational

Time Period	Units		
	Operational – Plant at 100%	**Operational – Plant at 25%**	**Not Operational**
Daytime (07:00 – 23:00)	1,2,3	NA	NA
Night-time (23:00 – 07:00)	3	2	1

Plant has been taken as operational at 100% running where units or buildings are not listed as a worst-case scenario.

6.3 Noise Sources Used Within Model

Table 6-3 below presents the noise sources used within the model.

Table 6-3 Noise Sources used within Model

Name	Type of Source	Sound Power (dBA)
External_Trane_DX_AHU_Chiller	Vertical Area Source	86.4
External_Climavent_DX_AC_Units	Area Source	76.4
Unit_1_External_Trana_DX_AC_Unit_Duct_Breakout	vertical Area Source	71.7
Unit_1_External_Trana_DX_AC_Unit_Duct_Breakout	Vertical Area Source	69.9
Unit_1_Danfoss_Chiller_Optima_Slim_Pack	Vertical Area Source	70.2
Unit_1_Mitsubishi_Mr_Slim_PUZ_ZM100VKA2	Vertical Area Source	50.9
Unit_1_Mitsubishi_SUZ_KA50VA	Vertical Area Source	65.6
Unit_1_Mitsibishi_MUZ_SF35VE	Area Source	40.3
Unit_1_Mitsibishi_MUZ_SF35VE	Vertical Area Source	53.5
Unit_3_Stack_of_5_Exhausts	Point Source	61.2
Unit_3_Stack_of_5_Exhausts	Point Source	61.2
Unit_2_Daikin_RXYSQ4P8V1B	Area Source	50.2
Unit_2_Daikin_RXYSQ4P8V1B	Vertical Area Source	60.7
Panasonic_inverter_R410A	Area Source	62.4
Panasonic_inverter_R410A	Vertical Area Source	69.0
Panasonic_inverter_R410A	Point Source	63.4
Unit_2_AHU_Exhaust_100	Vertical Area Source	63.9
Unit_2_AHU_Exhaust_Setback	Vertical Area Source	58.7[1]
Unit_2_AHU_Inlet_100	Vertical Area Source	81.8
Unit_2_AHU_Inlet_setback	Vertical Area Source	72.6[1]
Unit2_Small_Condenser_unit_MUZ_GF60VE	Area Source	44.8
Unit2_Small_Condenser_unit_MUZ_GF60VE	Vertical Area Source	42.1
Small_Condenser_MU_GA60VB	Area Source	71.2
Small_Condenser_MU_GA60VB	Vertical Area Source	70.6
Unit_2_Tall_twin_unit	Area Source	72.0
Unit_2_Tall_twin_unit	Vertical Area Source	71.4
Unit_3_Stack_of_5_Exhausts	Vertical Area Source	71.9
Unit_3_Stack_of_5_Exhausts	Vertical Area Source	71.9
Unit_3_Stack_of_5_Exhausts	Vertical Area Source	71.9
Unit_3_Stack_of_5_Exhausts	Vertical Area Source	71.9
Unit_3_Stack_of_5_Exhausts	Vertical Area Source	71.9
Unit_3_Stack_of_5_Exhausts	Point Source	69.6
Unit_3_Stack_of_5_Exhausts	Point Source	69.6
Unit_3_Stack_of_5_Exhausts	Point Source	69.6
Unit_3_Stack_of_5_Exhausts	Point Source	69.6
Unit_3_Stack_of_5_Exhausts	Point Source	69.6
External_Climavent_DX_AC_Units	Area Source	56.7
External_Climavent_DX_AC_Units	Area Source	56.7
External_Climavent_DX_AC_Units	Area Source	56.7
External_Climavent_DX_AC_Units	Area Source	56.5
External_Climavent_DX_AC_Units	Area Source	56.5
External_Climavent_DX_AC_Units	Vertical Area Source	76.2

Name	Type of Source	Sound Power (dBA)
External_Climavent_DX_AC_Units	Vertical Area Source	76.2
External_Climavent_DX_AC_Units	Vertical Area Source	76.0
External_Climavent_DX_AC_Units	Vertical Area Source	76.2
External_Climavent_DX_AC_Units	Vertical Area Source	75.9
Unit_3_Exaust_Metal_Fan_breakout	Area Source	82.2
Unit_3_Exaust_Metal_Fan_breakout	Vertical Area Source	76.6
Unit_3_Exaust_Metal_Fan_breakout	Point Source	75.3
Unit_3_Exaust_Metal_Fan_breakout	Point Source	75.3
Unit_3_Exaust_metal	Area Source	64.7
Unit_3_Exaust_metal	Vertical Area Source	70.8
Unit_3_Exaust_metal	Point Source	67.8
Unit_3_Exaust_metal	Point Source	67.8
External_Climavent_DX_AC_Units	Area Source	76.7
Unit_3_Stack_of_5_Exhausts	Point Source	61.2
Unit_3_Stack_of_5_Exhausts	Point Source	61.2

6.4 Model Maps

The figures below presents the daytime and night-time CADNA output images.

Figure 6-1 Noise Model – Daytime

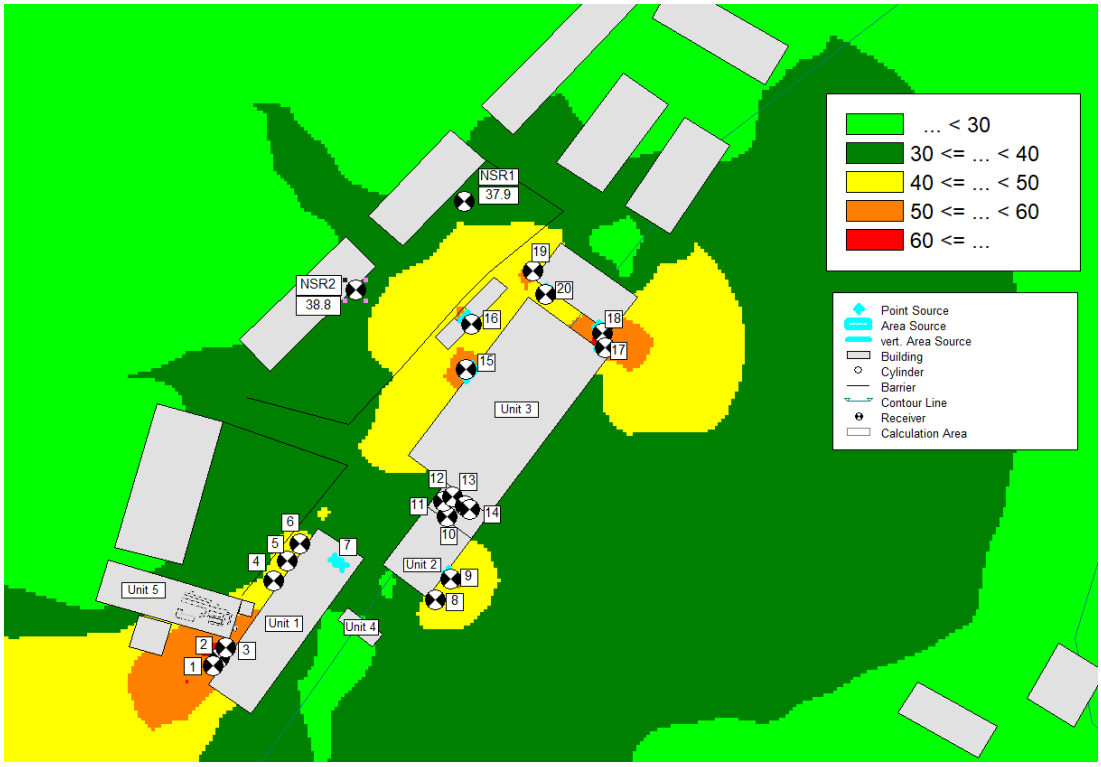


Figure 6-2 Noise Model – Night-time

7.0 BS 4142 Assessment

7.1 Sound Character Corrections

The character of each noise source and the sound correction that will be applied in the BS4142:2014+A1:2019 assessment are detailed below:

- Tonality: SLR has not undertaken the BS4142:2014+A1:2019 *Objective method for assessing the audibility of tones in sound: one third octave method* as no octave data was provided. However, observations from the Surveyor was that no sound was tonal.
- Impulsivity: It is not anticipated that the proposals would produce impulsive noise.
- Other sound characteristics: When operating, the proposals may be readily distinctive against the residual acoustic environment. A 3dB penalty will therefore be required.
- Intermittency: Over the BS4142:2014+A1:2019 reference period of 1-hour in the daytime (07:00 – 23:00) and 15-minutes at night-time (23:00 – 07:00), it is anticipated that the noise sources would be typically constant with no consistent noticeable on/off periods; therefore, no intermittency penalty is required.

7.2 Results

Based on the above, a 3dB character correction is applicable to the predicted specific sound level at the nearest noise-sensitive receptors to derive the corresponding rating levels.

The BS4142 assessment, using the proxy background sound levels, is presented in Table 7-1.

Table 7-1 Proxy BS4142 Assessment, dB

Receptor	Assessment Period	Predicted Specific Sound Level, $L_{Aeq,T}$	Predicted Rating Level, $L_{Ar,Tr}$	Referenced Proxy Background Sound Level $L_{A90,T}$	Difference (dB)
Location 1	Daytime	38	41	41	0
	Night-Time	37	40	39	+1
Location 2	Daytime	39	42	38	+4
	Night-Time	40	43	35	+8

Analysis of the results indicates the following.

- At Location 1, the predicted cumulative sound level is equal to the measured background noise level during the daytime and 1dB(A) over at night.

- At Location 2 the predicted cumulative sound level is above the measured background noise level during both the daytime and the night-time.

    - During the daytime, noise levels are predicted to be 4dB(A) above the background noise level.
    - During the night-time, modelling shows that background sound levels are exceeded by 8dB(A). However, it is understood that at night plant at unit 2 and 3 will be running at 25% capacity. Therefore, at night, the noise model is likely over-predicting the specific sound level, as the model sound input data

for the plant that is operating, has been left at the measured noise level, which was measured at 100% capacity.

While modelling indicates the impact of site on the surrounding area is considered adverse, operating certain plant components at 25% capacity instead of the modelled 100% (due to data limitations) is likely to reduce noise levels at nearby receptors. This coupled with the implementation of the Noise Management Plan, has the potential to lessen the impact, reducing this to a low impact at the closest receptors.

7.3 Uncertainty

Uncertainty inevitably limits the accuracy associated with all steps of any noise assessment, including measurement, calculation, or prediction. Factors include, but are not limited to:

- The inherent accuracy limitation of methodology in Standards and guidance.
- Variability in meteorological conditions.
- The accuracy of sound source input data of a calculation.

It is imperative to minimise the uncertainty to a level commensurate with the intention of the assessment objective. Measures taken in this assessment to minimise uncertainty are:

- A proxy location was used and is considered to provide a representative basis for background noise levels at the nearest receiver locations to the development. Data obtained by SLR was significantly higher (at night) so the use pf the proxy data is considered robust.
- Measurements were rounded to the nearest one decimal place before the final calculations.
- The calculations have been conservative as not to under-predict the resulting impacts.
- Noise model assumptions have been conservative so as not to under-predict the resultant levels, including unfavourable wind vector.

The aforementioned measures have been considered to reduce uncertainty to a level considered not to have any significance to the outcome of this assessment.

8.0 Conclusion

The site manufactures silica and organic polymers for use in laboratory consumables and industrial applications at a rate of less than 5 tonnes per year. This is considered to be a listed activity as per the Environmental Permitting (England and Wales) Regulations (EPR) 2016 (as amended):

- Section 4.1 Part A(1)(a)(viii) activity, i.e., producing organic chemicals such as plastic materials (for example polymers, synthetic fibres and cellulose based fibres).

A Noise Impact Assessment (NIA) in accordance with BS4142: 2014 has been completed to assess the potential impact of noise from the facility on nearby sensitive receptors and support the EP application.

This assessment has found:

- At Location 1, the predicted rating level is less than 5dB(A) above the measured background noise level during the daytime and night-time.

- At Location 2 the predicted rating level is above the measured background noise level during both the daytime and the night-time.
    - During the daytime, noise levels are predicted to be 4dB(A) above the background noise level.
    - During the night-time, modelling shows that background sound level is exceeded by 8dB(A). However, it is understood that at night plant at Units 2 and 3 will be running at 25% capacity. Therefore, at night, the noise model is likely over-predicting the specific sound level, as the model sound input data for the plant that is operating, has been left at the measured noise level, which was measured at 100% capacity.

While modelling indicates the impact of site on the surrounding area is considered adverse, operating certain plant components at 25% capacity instead of the modelled 100% (due to data limitations) is likely to reduce noise levels at nearby receptors. This coupled with the implementation of the Noise Management Plan, has the potential to lessen the impact, bringing it to a low impact at the closest receptors.

Appendix A Glossary of Terminology

Noise Impact Assessment For Public Register

Agilent Technologies LDA UK Ltd

SLR Project No.: 410.064951.00001

23 September 2024

A.1 Glossary of Terminology

The human ear can detect a very wide range of pressure fluctuations, which are perceived as sound. In order to express these fluctuations in a manageable way, a logarithmic scale called the decibel, or dB scale is used. The decibel scale typically ranges from 0dB (the threshold of hearing) to over 120dB. An indication of the range of sound levels commonly found in the environment is given in the following table.

Table 01-01 Sound Levels Commonly Found in the Environment

Sound Level	Location
0dB(A)	Threshold of hearing
20 to 30dB(A)	Quiet bedroom at night
30 to 40dB(A)	Living room during the day
40 to 50dB(A)	Typical office
50 to 60dB(A)	Inside a car
60 to 70dB(A)	Typical high street
70 to 90dB(A)	Inside factory
100 to 110dB(A)	Burglar alarm at 1m away
110 to 130dB(A)	Jet aircraft on take off
140dB(A)	Threshold of Pain

Acoustic Terminology

dB (decibel) The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure ($2x10^{-5}$ Pa).

dB(A) A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.

L_{Aeq} L_{Aeq} is defined as the notional steady sound level which, over a stated period of time, would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.

L_{10} & L_{90} If a non-steady noise is to be described it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L_{10} is the level exceeded for 10% of the time and as such can be regarded as the 'average maximum level'. Similarly, L_{90} is the 'average minimum level' and is often used to describe the background noise. It is common practice to use the L_{10} index to describe traffic noise.

L_{AFmax} L_{AFmax} is the maximum A-weighted sound pressure level recorded over the period stated. L_{Amax} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.

Appendix B Environmental Noise Survey Results

Noise Impact Assessment For Public Register

Agilent Technologies LDA UK Ltd

SLR Project No.: 410.064951.00001

23 September 2024

B.1 Noise Survey Data - Monitoring Location 2

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
09/06/2023 10:00	47.7	70.9	49.8	43.8
09/06/2023 10:15	46.8	68.3	47.3	43.5
09/06/2023 10:30	50.3	70.3	52.9	43.7
09/06/2023 10:45	46.8	68.5	47.5	43.7
09/06/2023 11:00	46.5	61.2	48.1	43.8
09/06/2023 11:15	46.2	62.4	47.0	43.6
09/06/2023 11:30	53.1	69.2	56.2	44.0
09/06/2023 11:45	45.9	61.2	46.8	44.0
09/06/2023 12:00	47.1	69.2	47.0	43.4
09/06/2023 12:15	45.9	62.0	46.9	43.6
09/06/2023 12:30	46.5	70.6	47.2	43.7
09/06/2023 12:45	46.8	60.6	48.4	44.0
09/06/2023 13:00	47.6	62.0	49.5	44.0
09/06/2023 13:15	46.4	63.1	48.1	43.9
09/06/2023 13:30	48.9	73.3	49.1	44.6
09/06/2023 13:45	46.1	58.4	47.9	43.9
09/06/2023 14:00	50.1	75.9	47.9	44.3
09/06/2023 14:15	50.6	71.0	48.0	44.2
09/06/2023 14:30	46.8	60.4	48.5	44.0
09/06/2023 14:45	46.8	62.0	48.7	44.1
09/06/2023 15:00	48.5	68.1	50.6	43.8
09/06/2023 15:15	46.7	60.9	48.2	43.8
09/06/2023 15:30	46.3	67.5	46.7	41.0
09/06/2023 15:45	47.0	72.2	48.7	42.3
09/06/2023 16:00	48.9	80.4	47.2	40.6
09/06/2023 16:15	46.4	66.8	49.3	40.5
09/06/2023 16:30	48.3	68.2	52.1	40.1
09/06/2023 16:45	44.6	67.7	44.3	39.6
09/06/2023 17:00	45.3	64.5	46.5	39.8
09/06/2023 17:15	42.7	55.5	45.1	39.1
09/06/2023 17:30	44.4	61.5	47.8	39.5
09/06/2023 17:45	45.4	70.3	46.9	39.3
09/06/2023 18:00	45.4	68.7	46.8	39.1
09/06/2023 18:15	44.7	72.6	46.3	39.3
09/06/2023 18:30	47.5	72.2	46.3	38.8
09/06/2023 18:45	46.5	71.4	48.8	39.2
09/06/2023 19:00	48.6	70.1	47.0	37.7
09/06/2023 19:15	43.5	67.2	43.5	37.0
09/06/2023 19:30	45.7	66.1	47.8	36.5
09/06/2023 19:45	41.0	61.8	43.9	36.0
09/06/2023 20:00	37.2	50.6	38.9	35.1
09/06/2023 20:15	37.1	45.0	39.4	34.5
09/06/2023 20:30	40.7	60.5	39.3	34.8
09/06/2023 20:45	36.8	45.8	38.5	34.8
09/06/2023 21:00	36.1	48.0	37.8	34.5
09/06/2023 21:15	41.7	67.8	40.3	34.8
09/06/2023 21:30	37.6	56.5	39.0	34.3
09/06/2023 21:45	37.4	54.5	38.3	30.6
09/06/2023 22:00	34.8	45.2	38.3	29.7
09/06/2023 22:15	32.7	44.6	35.8	28.9
09/06/2023 22:30	30.8	38.2	32.5	29.0

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
09/06/2023 22:45	32.9	44.4	35.8	29.1
09/06/2023 23:00	31.3	42.8	33.3	28.7
09/06/2023 23:15	32.5	43.6	35.8	28.9
09/06/2023 23:30	30.9	44.2	31.9	28.5
09/06/2023 23:45	32.2	50.3	34.4	28.5
10/06/2023 00:00	30.9	46.3	33.1	28.6
10/06/2023 00:15	31.6	44.1	33.3	28.5
10/06/2023 00:30	34.0	53.8	35.3	28.8
10/06/2023 00:45	31.6	40.1	33.4	29.0
10/06/2023 01:00	32.5	44.1	35.4	28.6
10/06/2023 01:15	32.4	40.8	34.8	29.2
10/06/2023 01:30	50.7	70.5	53.7	31.6
10/06/2023 01:45	41.2	65.2	43.7	32.4
10/06/2023 02:00	39.9	56.1	43.1	33.3
10/06/2023 02:15	41.5	54.8	44.7	34.4
10/06/2023 02:30	44.1	64.4	47.1	34.5
10/06/2023 02:45	41.3	57.5	44.5	33.8
10/06/2023 03:00	44.9	66.6	44.7	33.5
10/06/2023 03:15	41.8	53.7	45.0	34.9
10/06/2023 03:30	41.8	60.4	44.3	36.2
10/06/2023 03:45	42.2	56.9	45.8	36.9
10/06/2023 04:00	43.4	67.5	46.3	36.9
10/06/2023 04:15	42.1	55.6	44.7	37.3
10/06/2023 04:30	41.5	55.9	44.5	37.3
10/06/2023 04:45	43.9	62.2	45.7	37.3
10/06/2023 05:00	42.3	55.9	44.8	37.4
10/06/2023 05:15	41.9	62.3	44.0	37.5
10/06/2023 05:30	41.9	62.2	44.6	37.2
10/06/2023 05:45	43.7	63.2	44.7	38.3
10/06/2023 06:00	44.3	65.1	46.8	38.3
10/06/2023 06:15	41.9	59.6	44.2	38.1
10/06/2023 06:30	43.6	57.8	45.9	39.6
10/06/2023 06:45	45.8	64.6	48.9	40.0
10/06/2023 07:00	44.1	63.0	46.5	39.4
10/06/2023 07:15	43.9	59.8	45.5	39.7
10/06/2023 07:30	44.5	63.2	45.5	40.3
10/06/2023 07:45	46.1	70.1	47.7	39.9
10/06/2023 08:00	48.3	70.8	48.6	40.0
10/06/2023 08:15	44.7	67.0	45.0	39.8
10/06/2023 08:30	44.2	59.9	45.8	39.7
10/06/2023 08:45	51.5	68.1	47.7	41.1
10/06/2023 09:00	45.0	69.2	45.2	40.3
10/06/2023 09:15	44.5	56.2	46.9	40.2
10/06/2023 09:30	45.1	66.0	46.8	40.0
10/06/2023 09:45	43.0	58.7	44.3	40.3
10/06/2023 10:00	42.8	59.7	44.0	40.3
10/06/2023 10:15	45.3	68.2	45.0	40.3
10/06/2023 10:30	43.7	66.7	43.3	40.2
10/06/2023 10:45	46.7	75.8	44.8	40.1
10/06/2023 11:00	44.4	62.6	45.1	39.8
10/06/2023 11:15	71.2	106.0	47.0	40.6
10/06/2023 11:30	46.2	66.5	46.7	40.3
10/06/2023 11:45	42.6	58.6	43.5	39.8
10/06/2023 12:00	45.8	67.8	44.1	40.0

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
10/06/2023 12:15	41.5	51.4	42.7	39.6
10/06/2023 12:30	43.8	71.3	42.8	39.4
10/06/2023 12:45	42.1	57.2	43.0	38.7
10/06/2023 13:00	46.7	66.2	47.0	39.5
10/06/2023 13:15	43.4	66.6	44.8	38.8
10/06/2023 13:30	42.2	58.8	45.0	38.2
10/06/2023 13:45	41.0	61.7	42.7	37.8
10/06/2023 14:00	45.6	67.9	44.9	38.0
10/06/2023 14:15	42.7	61.8	44.2	37.1
10/06/2023 14:30	52.6	82.2	51.5	40.4
10/06/2023 14:45	50.3	79.4	50.6	38.9
10/06/2023 15:00	42.5	61.2	44.5	38.3
10/06/2023 15:15	45.7	76.5	45.2	37.0
10/06/2023 15:30	45.9	66.2	45.8	37.7
10/06/2023 15:45	41.6	59.7	43.3	35.4
10/06/2023 16:00	41.7	72.0	42.3	36.3
10/06/2023 16:15	46.0	70.1	47.5	36.3
10/06/2023 16:30	45.1	66.9	46.4	36.8
10/06/2023 16:45	45.7	67.7	45.5	38.2
10/06/2023 17:00	40.2	55.9	42.1	36.1
10/06/2023 17:15	43.9	64.7	43.9	35.8
10/06/2023 17:30	46.9	57.1	50.9	37.9
10/06/2023 17:45	50.6	69.8	49.1	40.1
10/06/2023 18:00	41.8	63.9	40.9	34.0
10/06/2023 18:15	45.7	70.4	43.9	34.9
10/06/2023 18:30	39.5	56.4	41.6	33.9
10/06/2023 18:45	46.1	69.9	46.6	34.3
10/06/2023 19:00	45.1	68.3	43.2	32.5
10/06/2023 19:15	42.8	67.0	39.3	32.3
10/06/2023 19:30	48.5	69.2	49.2	33.4
10/06/2023 19:45	42.9	63.3	41.2	32.2
10/06/2023 20:00	38.1	57.4	39.5	33.1
10/06/2023 20:15	40.0	68.5	38.2	32.7
10/06/2023 20:30	34.3	46.5	36.7	30.9
10/06/2023 20:45	35.5	43.2	38.0	31.4
10/06/2023 21:00	34.4	47.9	36.7	29.8
10/06/2023 21:15	34.5	45.6	36.3	30.9
10/06/2023 21:30	36.0	50.7	37.8	33.7
10/06/2023 21:45	34.3	46.6	36.3	29.0
10/06/2023 22:00	33.0	43.1	35.7	28.9
10/06/2023 22:15	32.3	46.1	35.0	28.5
10/06/2023 22:30	31.8	44.6	33.4	28.9
10/06/2023 22:45	32.1	43.3	34.4	28.6
10/06/2023 23:00	32.0	48.1	33.4	29.0
10/06/2023 23:15	32.5	48.0	34.4	29.3
10/06/2023 23:30	31.6	40.4	33.7	28.8
10/06/2023 23:45	31.3	41.7	33.2	28.4
11/06/2023 00:00	30.4	42.7	32.1	28.5
11/06/2023 00:15	30.4	44.2	31.7	28.3
11/06/2023 00:30	32.2	45.0	34.8	28.0
11/06/2023 00:45	34.4	49.0	38.1	28.7
11/06/2023 01:00	31.7	51.1	33.5	28.6
11/06/2023 01:15	35.6	57.7	34.6	29.4
11/06/2023 01:30	57.0	75.2	59.9	33.5

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
11/06/2023 01:45	45.4	67.5	46.6	33.2
11/06/2023 02:00	40.6	59.8	42.8	33.1
11/06/2023 02:15	42.9	60.4	45.6	35.2
11/06/2023 02:30	42.4	56.6	45.6	34.6
11/06/2023 02:45	41.8	61.1	45.1	33.3
11/06/2023 03:00	42.4	60.2	45.1	33.7
11/06/2023 03:15	43.8	61.1	45.6	34.4
11/06/2023 03:30	43.5	61.3	46.3	36.0
11/06/2023 03:45	41.2	56.2	43.7	35.6
11/06/2023 04:00	40.7	58.2	43.1	35.2
11/06/2023 04:15	42.0	64.2	44.3	36.1
11/06/2023 04:30	41.9	61.2	44.1	36.6
11/06/2023 04:45	40.7	57.0	42.9	36.1
11/06/2023 05:00	42.0	62.2	43.3	37.2
11/06/2023 05:15	44.7	65.7	48.1	37.2
11/06/2023 05:30	43.9	61.7	46.7	36.8
11/06/2023 05:45	43.2	63.8	45.8	36.6
11/06/2023 06:00	45.2	61.8	48.4	37.0
11/06/2023 06:15	42.1	58.8	45.0	37.1
11/06/2023 06:30	42.5	64.4	44.9	37.5
11/06/2023 06:45	44.1	59.6	47.7	37.2
11/06/2023 07:00	43.8	66.3	45.6	37.3
11/06/2023 07:15	43.4	62.1	45.7	37.1
11/06/2023 07:30	43.4	66.0	43.9	38.2
11/06/2023 07:45	43.2	65.3	45.1	38.1
11/06/2023 08:00	48.7	69.6	51.0	38.7
11/06/2023 08:15	46.0	63.5	47.7	37.6
11/06/2023 08:30	47.1	67.4	47.9	39.2
11/06/2023 08:45	42.3	62.0	43.9	38.0
11/06/2023 09:00	44.8	66.4	45.1	39.3
11/06/2023 09:15	46.2	66.9	47.6	38.9
11/06/2023 09:30	48.8	71.9	49.5	38.2
11/06/2023 09:45	49.7	73.4	50.1	38.6
11/06/2023 10:00	40.4	54.9	41.8	37.9
11/06/2023 10:15	49.0	70.7	48.0	38.8
11/06/2023 10:30	45.7	65.9	43.1	37.7
11/06/2023 10:45	45.3	69.6	44.3	38.5
11/06/2023 11:00	42.4	57.3	44.8	38.1
11/06/2023 11:15	42.7	64.9	43.1	37.7
11/06/2023 11:30	44.4	65.0	45.9	37.8
11/06/2023 11:45	44.8	71.3	46.1	38.3
11/06/2023 12:00	44.0	63.8	45.0	38.0
11/06/2023 12:15	44.7	67.4	45.5	38.0
11/06/2023 12:30	46.4	70.0	47.4	38.1
11/06/2023 12:45	42.4	59.4	44.9	37.2
11/06/2023 13:00	42.5	60.8	43.8	37.4
11/06/2023 13:15	46.7	69.9	45.4	37.2
11/06/2023 13:30	42.1	60.8	43.0	37.6
11/06/2023 13:45	46.4	66.1	47.7	37.2
11/06/2023 14:00	46.7	67.7	47.7	37.8
11/06/2023 14:15	48.8	69.3	49.8	37.0
11/06/2023 14:30	48.9	67.5	50.5	37.1
11/06/2023 14:45	46.1	68.7	45.7	37.5
11/06/2023 15:00	44.2	63.6	44.8	37.8

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
11/06/2023 15:15	43.3	67.4	43.9	38.6
11/06/2023 15:30	49.8	73.8	49.5	36.4
11/06/2023 15:45	44.1	65.3	45.7	36.6
11/06/2023 16:00	45.7	70.3	47.0	35.8
11/06/2023 16:15	56.0	92.3	46.6	33.9
11/06/2023 16:30	49.2	81.3	45.6	36.6
11/06/2023 16:45	44.6	65.1	46.1	37.5
11/06/2023 17:00	41.9	61.5	43.6	36.7
11/06/2023 17:15	42.9	63.3	43.2	36.3
11/06/2023 17:30	44.3	64.8	45.0	36.4
11/06/2023 17:45	44.8	69.1	46.5	36.2
11/06/2023 18:00	43.7	59.7	46.5	37.2
11/06/2023 18:15	42.5	63.2	44.7	35.7
11/06/2023 18:30	47.9	64.5	52.1	37.4
11/06/2023 18:45	58.2	69.4	61.2	52.5
11/06/2023 19:00	49.1	67.1	53.2	38.1
11/06/2023 19:15	52.0	76.5	42.1	35.1
11/06/2023 19:30	48.3	72.2	45.8	36.0
11/06/2023 19:45	38.0	51.2	39.6	36.0
11/06/2023 20:00	42.4	56.3	44.0	39.3
11/06/2023 20:15	42.9	56.9	44.6	40.3
11/06/2023 20:30	46.3	56.1	48.4	43.5
11/06/2023 20:45	47.0	60.0	48.1	44.6
11/06/2023 21:00	45.6	57.7	47.4	43.0
11/06/2023 21:15	44.4	56.3	46.4	41.8
11/06/2023 21:30	43.1	53.7	44.9	40.1
11/06/2023 21:45	41.2	53.6	42.8	39.0
11/06/2023 22:00	44.5	55.1	45.8	43.0
11/06/2023 22:15	39.9	55.9	42.5	34.8
11/06/2023 22:30	34.8	49.8	36.9	32.0
11/06/2023 22:45	33.4	52.0	36.0	30.5
11/06/2023 23:00	32.2	56.6	33.8	29.8
11/06/2023 23:15	32.7	53.8	34.7	29.1
11/06/2023 23:30	33.0	45.5	36.3	29.3
11/06/2023 23:45	35.4	52.2	39.2	29.5
12/06/2023 00:00	32.7	44.9	35.2	29.1
12/06/2023 00:15	30.7	42.6	32.3	28.6
12/06/2023 00:30	31.8	52.7	33.8	29.2
12/06/2023 00:45	31.3	42.6	32.1	28.7
12/06/2023 01:00	31.5	46.0	33.7	28.8
12/06/2023 01:15	35.6	56.7	38.0	28.8
12/06/2023 01:30	47.8	63.3	52.5	34.4
12/06/2023 01:45	54.3	77.7	52.4	34.3
12/06/2023 02:00	47.6	65.6	52.1	34.8
12/06/2023 02:15	44.2	65.7	45.4	33.6
12/06/2023 02:30	40.1	65.6	42.7	33.6
12/06/2023 02:45	44.8	65.0	48.2	33.5
12/06/2023 03:00	42.3	59.2	45.1	33.3
12/06/2023 03:15	47.4	69.9	45.9	36.7
12/06/2023 03:30	43.1	57.0	44.6	38.8
12/06/2023 03:45	44.0	63.6	45.9	39.2
12/06/2023 04:00	45.6	66.5	45.7	40.7
12/06/2023 04:15	44.8	59.4	46.6	41.9
12/06/2023 04:30	46.0	67.5	48.0	42.6

Date and Time	L_{Aeq} (dB)	L_{AFmax} (dB)	L_{A10} (dB)	L_{A90} (dB)
12/06/2023 04:45	46.4	66.3	48.3	42.8
12/06/2023 05:00	46.2	62.6	48.2	43.1
12/06/2023 05:15	45.9	60.5	48.2	42.9
12/06/2023 05:30	47.4	65.7	49.6	43.2
12/06/2023 05:45	49.3	65.1	53.1	43.4
12/06/2023 06:00	51.1	74.0	52.5	43.9
12/06/2023 06:15	45.3	59.8	46.7	43.1
12/06/2023 06:30	45.0	60.1	46.3	42.8
12/06/2023 06:45	48.2	63.6	50.5	44.2
12/06/2023 07:00	48.6	66.3	52.0	43.2
12/06/2023 07:15	46.9	71.6	48.2	42.7
12/06/2023 07:30	45.7	60.4	46.5	42.8
12/06/2023 07:45	47.5	70.3	46.3	42.6
12/06/2023 08:00	47.6	64.2	48.8	42.7
12/06/2023 08:15	51.2	73.4	49.6	43.2
12/06/2023 08:30	49.6	73.2	48.4	43.0
12/06/2023 08:45	51.8	72.7	51.4	43.4
12/06/2023 09:00	55.1	73.7	56.7	43.9
12/06/2023 09:15	48.8	71.0	49.1	43.9
12/06/2023 09:30	46.7	70.1	47.6	43.3

B.2 Noise Survey Data - Monitoring Location 2

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
09/06/2023 11:45	54.8	80.8	54.0	44.7
09/06/2023 12:00	47.8	64.2	50.6	44.0
09/06/2023 12:15	47.7	65.4	47.8	43.9
09/06/2023 12:30	47.6	64.9	49.0	44.2
09/06/2023 12:45	48.5	60.8	51.0	43.5
09/06/2023 13:00	49.6	70.9	48.9	44.9
09/06/2023 13:15	48.4	67.0	50.6	44.1
09/06/2023 13:30	49.5	65.8	50.6	44.5
09/06/2023 13:45	48.6	67.3	50.5	45.4
09/06/2023 14:00	50.1	69.3	52.3	44.3
09/06/2023 14:15	47.6	67.6	48.0	44.9
09/06/2023 14:30	49.3	71.2	50.8	44.5
09/06/2023 14:45	47.8	73.8	48.1	44.5
09/06/2023 15:00	49.9	74.6	50.2	45.0
09/06/2023 15:15	47.1	61.2	47.7	44.4
09/06/2023 15:30	48.7	67.4	48.8	45.0
09/06/2023 15:45	48.5	62.5	50.4	43.9
09/06/2023 16:00	48.9	66.3	49.9	44.7
09/06/2023 16:15	48.0	65.5	50.1	45.0
09/06/2023 16:30	51.0	71.6	50.9	48.0
09/06/2023 16:45	53.0	73.2	52.1	48.3
09/06/2023 17:00	49.2	76.1	49.6	45.3
09/06/2023 17:15	47.6	62.6	49.8	44.9
09/06/2023 17:30	47.5	68.8	48.1	43.5
09/06/2023 17:45	47.0	66.0	48.5	45.1
09/06/2023 18:00	48.8	68.3	50.2	43.6
09/06/2023 18:15	48.2	64.3	49.3	44.5
09/06/2023 18:30	49.1	70.9	50.3	44.4
09/06/2023 18:45	47.7	68.0	48.2	43.5
09/06/2023 19:00	48.5	64.7	50.5	44.6
09/06/2023 19:15	47.9	62.9	50.1	43.4
09/06/2023 19:30	48.2	61.3	50.0	44.8
09/06/2023 19:45	48.0	60.3	50.6	44.4
09/06/2023 20:00	46.4	63.3	48.1	43.5
09/06/2023 20:15	47.1	59.4	48.8	45.1
09/06/2023 20:30	48.2	60.2	50.8	43.6
09/06/2023 20:45	47.8	69.8	47.3	43.7
09/06/2023 21:00	48.0	66.9	48.7	44.3
09/06/2023 21:15	47.6	63.2	50.4	43.1
09/06/2023 21:30	49.8	71.4	47.3	44.8

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
09/06/2023 21:45	46.8	58.8	50.1	42.9
09/06/2023 22:00	45.2	61.7	45.6	43.2
09/06/2023 22:15	45.7	56.8	46.0	44.4
09/06/2023 22:30	46.1	54.9	50.2	42.5
09/06/2023 22:45	46.0	63.2	45.6	43.2
09/06/2023 23:00	46.0	67.8	45.6	43.4
09/06/2023 23:15	46.2	51.7	50.3	42.9
09/06/2023 23:30	46.3	63.8	46.6	44.1
09/06/2023 23:45	45.1	62.8	44.8	41.2
10/06/2023 00:00	45.2	54.1	49.8	39.9
10/06/2023 00:15	43.5	62.5	43.8	38.5
10/06/2023 00:30	42.1	47.1	43.3	38.6
10/06/2023 00:45	44.3	51.1	49.4	38.1
10/06/2023 01:00	40.3	44.9	43.2	37.9
10/06/2023 01:15	43.4	48.4	44.1	42.5
10/06/2023 01:30	39.7	55.6	40.4	38.3
10/06/2023 01:45	44.1	51.0	49.1	37.9
10/06/2023 02:00	42.9	54.6	43.9	38.2
10/06/2023 02:15	42.1	45.2	43.8	38.3
10/06/2023 02:30	42.3	50.8	48.2	38.3
10/06/2023 02:45	42.3	50.8	48.8	37.9
10/06/2023 03:00	43.6	52.4	44.1	42.6
10/06/2023 03:15	40.6	44.8	43.4	38.2
10/06/2023 03:30	43.4	49.7	48.6	38.3
10/06/2023 03:45	41.0	50.5	43.3	38.2
10/06/2023 04:00	43.7	49.1	44.3	42.9
10/06/2023 04:15	42.3	68.0	43.6	39.0
10/06/2023 04:30	43.7	57.7	48.6	39.1
10/06/2023 04:45	47.9	76.4	48.3	39.3
10/06/2023 05:00	50.5	74.7	51.6	43.2
10/06/2023 05:15	49.4	69.6	51.5	39.5
10/06/2023 05:30	49.2	64.9	52.2	39.8
10/06/2023 05:45	48.2	69.0	50.8	41.8
10/06/2023 06:00	48.9	62.8	52.3	44.6
10/06/2023 06:15	47.7	65.4	50.1	42.1
10/06/2023 06:30	47.4	65.9	50.3	42.1
10/06/2023 06:45	45.8	57.4	49.7	41.8
10/06/2023 07:00	47.6	63.1	49.7	44.0
10/06/2023 07:15	46.1	62.7	47.4	41.8
10/06/2023 07:30	46.8	58.4	49.7	42.3
10/06/2023 07:45	47.0	61.1	50.0	41.9
10/06/2023 08:00	47.5	67.9	49.0	43.5
10/06/2023 08:15	46.5	61.6	48.9	41.7

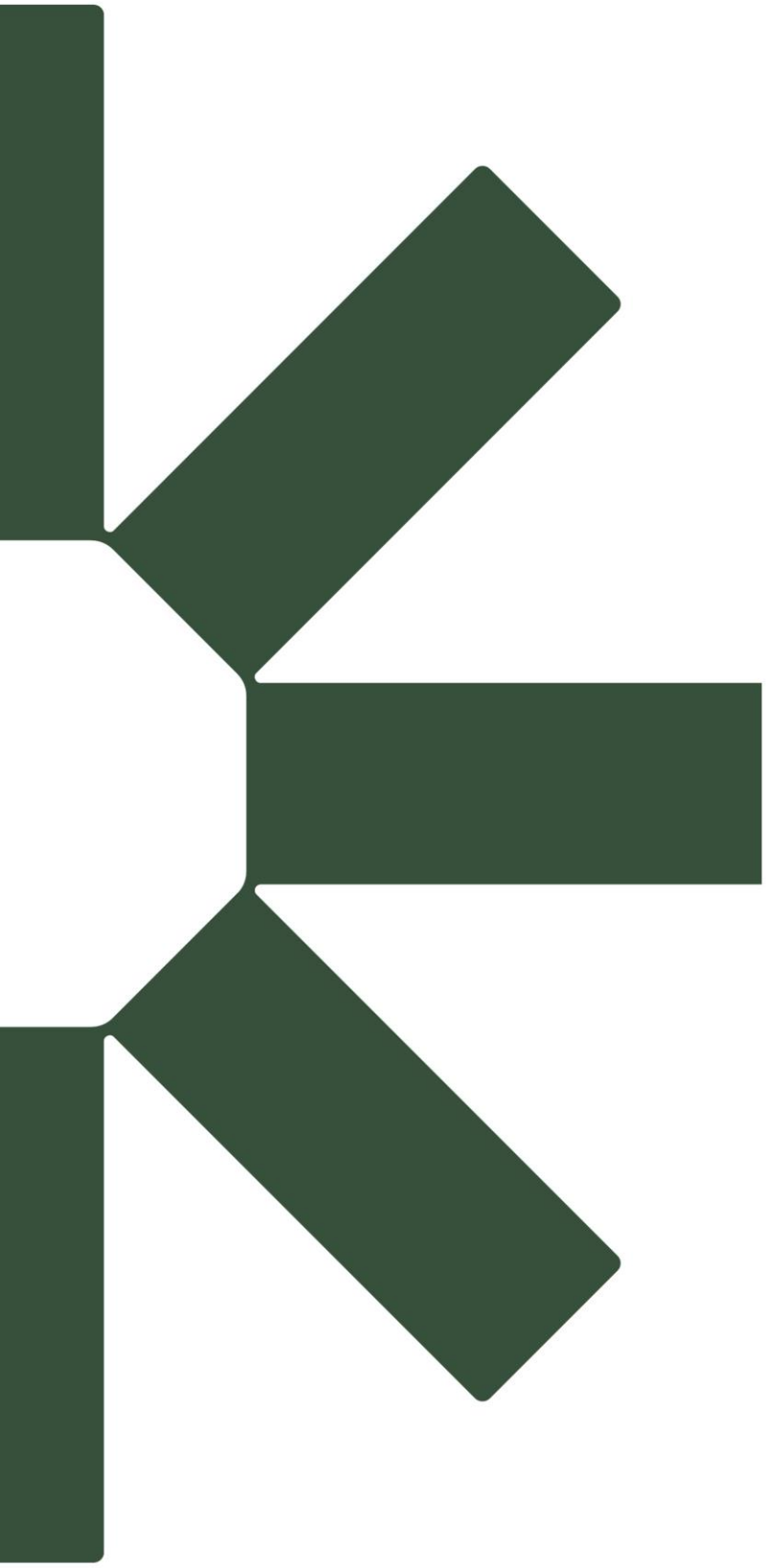
Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
10/06/2023 08:30	47.8	66.3	50.4	41.5
10/06/2023 08:45	47.5	65.1	50.5	42.3
10/06/2023 09:00	48.5	67.6	50.9	43.5
10/06/2023 09:15	47.1	62.1	49.6	41.7
10/06/2023 09:30	48.1	63.2	50.7	42.1
10/06/2023 09:45	45.2	57.3	46.9	42.9
10/06/2023 10:00	46.3	67.7	45.9	41.9
10/06/2023 10:15	47.0	60.7	50.0	41.7
10/06/2023 10:30	50.9	77.2	51.0	43.3
10/06/2023 10:45	52.4	78.5	50.5	42.4
10/06/2023 11:00	53.5	72.6	53.2	42.5
10/06/2023 11:15	54.8	80.3	52.3	44.0
10/06/2023 11:30	48.2	65.9	49.6	43.1
10/06/2023 11:45	48.0	66.8	50.1	42.1
10/06/2023 12:00	45.9	58.5	47.9	43.7
10/06/2023 12:15	49.3	60.3	52.5	42.9
10/06/2023 12:30	47.2	69.3	47.5	42.5
10/06/2023 12:45	49.0	77.4	49.7	43.8
10/06/2023 13:00	50.8	81.1	47.9	42.1
10/06/2023 13:15	45.9	59.4	46.7	43.8
10/06/2023 13:30	46.7	58.2	49.7	42.0
10/06/2023 13:45	47.0	65.5	47.1	42.5
10/06/2023 14:00	47.1	60.1	49.7	43.5
10/06/2023 14:15	47.9	60.2	51.3	42.8
10/06/2023 14:30	47.9	72.0	46.5	43.4
10/06/2023 14:45	45.4	54.2	48.9	41.8
10/06/2023 15:00	46.3	62.3	45.8	43.2
10/06/2023 15:15	49.7	70.3	52.2	41.5
10/06/2023 15:30	46.3	64.4	46.5	42.4
10/06/2023 15:45	46.1	60.7	49.0	40.0
10/06/2023 16:00	44.8	62.8	47.0	41.1
10/06/2023 16:15	45.8	62.1	48.2	40.9
10/06/2023 16:30	48.5	72.6	46.3	40.0
10/06/2023 16:45	46.1	60.8	49.1	41.9
10/06/2023 17:00	49.8	74.2	50.6	44.4
10/06/2023 17:15	50.3	73.9	51.4	43.5
10/06/2023 17:30	50.2	63.5	53.7	41.8
10/06/2023 17:45	46.8	60.6	48.9	42.9
10/06/2023 18:00	50.7	70.3	53.4	39.6
10/06/2023 18:15	45.6	64.3	45.4	39.1
10/06/2023 18:30	46.7	63.8	49.3	41.4
10/06/2023 18:45	47.6	70.2	50.3	38.5
10/06/2023 19:00	45.7	64.6	45.7	42.2

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
10/06/2023 19:15	46.7	63.0	49.9	40.3
10/06/2023 19:30	46.1	69.6	44.9	41.9
10/06/2023 19:45	47.9	64.6	50.4	40.8
10/06/2023 20:00	49.2	67.2	52.6	44.2
10/06/2023 20:15	43.8	58.6	45.3	42.0
10/06/2023 20:30	47.2	70.0	49.7	38.3
10/06/2023 20:45	43.0	61.0	44.3	39.6
10/06/2023 21:00	45.9	54.2	49.8	42.1
10/06/2023 21:15	46.4	65.2	47.2	38.8
10/06/2023 21:30	43.8	63.3	44.4	42.1
10/06/2023 21:45	44.8	52.1	49.6	38.8
10/06/2023 22:00	45.0	63.0	43.9	38.9
10/06/2023 22:15	44.0	56.7	45.5	42.1
10/06/2023 22:30	45.9	62.1	49.6	38.9
10/06/2023 22:45	41.8	57.9	43.3	38.9
10/06/2023 23:00	42.7	57.3	43.4	39.5
10/06/2023 23:15	44.4	58.3	49.5	38.1
10/06/2023 23:30	41.8	52.9	42.9	38.2
10/06/2023 23:45	42.3	52.4	43.4	40.1
11/06/2023 00:00	44.6	51.8	49.4	39.6
11/06/2023 00:15	42.2	48.2	43.1	41.2
11/06/2023 00:30	43.1	53.4	47.9	38.1
11/06/2023 00:45	42.4	52.6	49.1	37.5
11/06/2023 01:00	42.0	44.4	42.5	41.4
11/06/2023 01:15	44.7	67.2	49.0	38.5
11/06/2023 01:30	40.7	50.4	42.1	37.7
11/06/2023 01:45	42.5	46.4	43.0	41.9
11/06/2023 02:00	44.5	50.6	49.3	38.3
11/06/2023 02:15	40.3	57.0	42.3	37.8
11/06/2023 02:30	42.2	44.2	42.6	41.6
11/06/2023 02:45	43.7	50.4	49.0	38.0
11/06/2023 03:00	40.9	50.6	42.2	37.5
11/06/2023 03:15	42.5	47.8	43.2	41.7
11/06/2023 03:30	43.5	53.7	48.7	38.4
11/06/2023 03:45	47.8	71.4	49.3	38.1
11/06/2023 04:00	53.8	73.4	54.3	42.1
11/06/2023 04:15	43.1	58.8	46.1	39.1
11/06/2023 04:30	44.6	58.2	49.5	39.2
11/06/2023 04:45	46.9	61.4	49.8	42.6
11/06/2023 05:00	43.4	57.8	45.3	39.7
11/06/2023 05:15	46.1	60.4	49.6	39.3
11/06/2023 05:30	45.9	60.5	48.8	40.4
11/06/2023 05:45	46.0	62.9	47.6	41.0

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
11/06/2023 06:00	46.2	60.3	49.8	40.4
11/06/2023 06:15	44.8	59.0	46.8	41.3
11/06/2023 06:30	45.9	60.6	48.3	41.3
11/06/2023 06:45	46.8	61.7	50.1	40.2
11/06/2023 07:00	43.7	60.4	44.9	40.0
11/06/2023 07:15	48.5	70.2	48.9	42.8
11/06/2023 07:30	47.7	65.2	50.4	40.4
11/06/2023 07:45	45.8	61.5	48.4	40.4
11/06/2023 08:00	46.9	61.5	49.7	42.9
11/06/2023 08:15	46.8	65.8	49.8	40.7
11/06/2023 08:30	45.0	58.2	47.7	40.5
11/06/2023 08:45	47.0	62.2	49.5	43.3
11/06/2023 09:00	49.0	73.9	50.3	41.2
11/06/2023 09:15	45.2	68.1	47.2	40.2
11/06/2023 09:30	46.4	59.0	49.0	43.1
11/06/2023 09:45	46.5	62.0	50.0	41.3
11/06/2023 10:00	44.9	60.7	47.5	41.2
11/06/2023 10:15	45.3	66.8	46.8	42.9
11/06/2023 10:30	48.1	63.3	50.5	41.4
11/06/2023 10:45	47.4	66.4	49.1	40.4
11/06/2023 11:00	44.2	63.0	45.6	42.0
11/06/2023 11:15	53.2	82.5	49.7	40.0
11/06/2023 11:30	47.1	70.2	45.9	40.9
11/06/2023 11:45	46.4	61.6	49.3	42.1
11/06/2023 12:00	46.7	68.9	49.2	39.4
11/06/2023 12:15	46.7	63.7	48.7	42.4
11/06/2023 12:30	46.8	61.8	49.4	40.6
11/06/2023 12:45	48.4	68.8	49.2	42.9
11/06/2023 13:00	46.7	66.6	49.9	42.3
11/06/2023 13:15	45.6	68.0	46.0	42.2
11/06/2023 13:30	48.5	63.7	50.6	43.5
11/06/2023 13:45	45.6	63.2	47.7	41.5
11/06/2023 14:00	45.7	58.5	47.3	43.1
11/06/2023 14:15	46.5	62.1	49.9	41.3
11/06/2023 14:30	46.9	65.3	47.1	41.6
11/06/2023 14:45	48.1	64.6	49.9	42.7
11/06/2023 15:00	45.8	61.8	47.1	41.2
11/06/2023 15:15	45.3	58.3	47.7	42.5
11/06/2023 15:30	48.8	66.8	51.3	40.5
11/06/2023 15:45	48.4	74.5	45.9	42.3
11/06/2023 16:00	48.9	71.0	50.0	40.6
11/06/2023 16:15	47.8	63.4	51.1	41.3
11/06/2023 16:30	48.5	60.8	51.3	42.7

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
11/06/2023 16:45	47.2	63.4	50.4	40.0
11/06/2023 17:00	45.5	64.9	45.4	41.9
11/06/2023 17:15	45.5	60.4	49.1	39.8
11/06/2023 17:30	47.9	69.9	50.1	42.0
11/06/2023 17:45	46.4	62.1	49.8	39.2
11/06/2023 18:00	45.8	63.2	45.9	39.4
11/06/2023 18:15	46.4	66.7	49.0	41.9
11/06/2023 18:30	47.4	69.0	49.5	37.9
11/06/2023 18:45	43.3	58.2	44.0	41.3
11/06/2023 19:00	45.8	66.1	49.7	39.2
11/06/2023 19:15	45.7	62.2	46.2	40.1
11/06/2023 19:30	47.8	67.3	50.5	41.7
11/06/2023 19:45	43.6	58.5	45.2	39.7
11/06/2023 20:00	46.7	70.1	45.9	42.2
11/06/2023 20:15	45.5	62.1	49.9	38.8
11/06/2023 20:30	44.5	62.6	45.1	39.4
11/06/2023 20:45	46.3	63.3	49.9	42.1
11/06/2023 21:00	59.0	75.2	63.4	45.6
11/06/2023 21:15	56.3	67.4	58.7	47.0
11/06/2023 21:30	47.0	60.8	50.4	40.1
11/06/2023 21:45	51.2	72.7	47.6	39.7
11/06/2023 22:00	45.0	63.5	44.5	41.5
11/06/2023 22:15	45.8	56.1	50.2	40.0
11/06/2023 22:30	45.9	63.7	46.8	43.8
11/06/2023 22:45	47.5	64.3	50.2	44.9
11/06/2023 23:00	49.7	69.2	51.6	46.7
11/06/2023 23:15	49.0	67.9	49.9	45.9
11/06/2023 23:30	49.2	67.9	51.3	46.2
11/06/2023 23:45	45.8	63.0	47.4	43.1
12/06/2023 00:00	45.8	65.3	47.1	43.7
12/06/2023 00:15	47.9	71.5	51.4	43.0
12/06/2023 00:30	45.9	68.1	47.0	43.0
12/06/2023 00:45	43.6	59.9	44.6	42.5
12/06/2023 01:00	45.1	55.2	50.2	38.0
12/06/2023 01:15	40.0	53.0	42.4	37.3
12/06/2023 01:30	42.7	50.9	43.3	41.8
12/06/2023 01:45	43.9	52.0	49.6	38.0
12/06/2023 02:00	42.3	52.8	43.8	37.4
12/06/2023 02:15	43.0	58.0	43.6	41.9
12/06/2023 02:30	41.0	53.4	43.0	37.8
12/06/2023 02:45	44.4	52.2	50.3	37.3
12/06/2023 03:00	42.7	51.9	43.3	41.9
12/06/2023 03:15	41.1	51.1	43.2	38.2

Date and Time	L_{Aeq} (dB)	L_{AFMax} (dB)	LA10 (dB)	LA90 (dB)
12/06/2023 03:30	44.7	52.7	50.3	37.3
12/06/2023 03:45	43.9	53.6	46.3	38.0
12/06/2023 04:00	42.4	55.1	43.8	39.0
12/06/2023 04:15	46.5	59.3	50.7	39.0
12/06/2023 04:30	47.7	68.8	48.8	39.8
12/06/2023 04:45	47.2	70.4	46.2	40.1
12/06/2023 05:00	47.1	61.8	50.7	39.1
12/06/2023 05:15	44.5	57.6	47.8	39.1
12/06/2023 05:30	50.2	71.2	46.8	42.0
12/06/2023 05:45	48.5	74.2	51.1	42.5
12/06/2023 06:00	45.3	56.9	47.2	42.3
12/06/2023 06:15	47.5	62.8	48.6	44.8
12/06/2023 06:30	49.8	69.5	50.7	43.5
12/06/2023 06:45	48.9	71.5	50.8	44.9
12/06/2023 07:00	46.7	57.5	47.3	45.4
12/06/2023 07:15	49.5	66.6	50.8	44.8
12/06/2023 07:30	49.7	61.6	52.8	44.8
12/06/2023 07:45	47.8	64.3	49.2	45.5
12/06/2023 08:00	48.3	65.7	49.1	44.2
12/06/2023 08:15	48.6	62.9	51.2	44.1
12/06/2023 08:30	49.6	70.9	50.2	45.0
12/06/2023 08:45	47.4	61.8	49.9	43.7
12/06/2023 09:00	48.1	66.7	50.7	44.0
12/06/2023 09:15	47.6	62.0	49.4	44.6
12/06/2023 09:30	48.0	61.5	49.8	44.6
12/06/2023 09:45	47.5	57.9	50.8	43.8
12/06/2023 10:00	47.5	65.2	47.3	44.8
12/06/2023 10:15	49.4	68.4	52.3	45.0
12/06/2023 10:30	48.6	66.8	49.6	43.6
12/06/2023 10:45	46.6	58.3	47.5	45.3
12/06/2023 11:00	48.7	62.9	51.4	44.2
12/06/2023 11:15	51.6	69.6	51.7	44.8
12/06/2023 11:30	54.8	85.5	53.8	48.3



Making Sustainability Happen