Noise Impact Assessment

Shotton Mill Permit Variation Application

Shotton Mill Ltd.

Prepared by:

SLR Consulting Limited

15 Middle Pavement, Nottingham, NG1 7DX

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1.0 Introduction

SLR Consulting Limited (SLR) has been appointed by Shotton Mill Limited (SML), to undertake a Noise Impact Assessment to support a variation to the existing Environmental Permit (EP), reference EPR/BT4885IT for the Shotton Mill site located at Weighbridge Road, Deeside Industrial Park, Flintshire, CH5 2LW, hereafter referred to as '*the Site'*.

The existing Site was permitted for the following listed activities under the Environmental Permitting Regulations (England and Wales) 2016 (as amended):

- Section 6.1, Part A(1)(b) – producing in an industrial plant, paper and board where the plant has a production capacity of more than 20 tonnes per day.
- Section 1.1, Part A(1)(a) – burning any fuel in an appliance with a rated thermal input of 50MW or more.
- Section 5.1, Part A(1)(b) – the incineration of non-hazardous waste in an incineration or co-incineration plant in a facility with a capacity exceeding 3 tonnes per hour.
- Section 5.4, Part A(1)(a)(i) – disposal of non-hazardous waste in a facility exceeding 50 tonnes per day by biological treatment.

The following Directly Associated Activities (DAA) were also permitted:

- Discharge of site drainage from the installation.
- Materials recovery facility.
- Wood recycling facility.

SML have planning permission to repurpose the site to produce containerboard and tissue paper, rather than newsprint. The listed activities and DAAs will remain unchanged, however the plant and operation on Site will change because of the following new plant being installed as part of the repurposing:

- new paper machine (PM) for containerboard;
- new pulp preparation equipment;
- new Effluent Treatment Plant (ETP);
- new Tissue paper mill; and
- new Combined Heat and Power (CHP) plant.

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 new plant.
- An assessment of existing and cumulative sound from the Site undertaken in accordance with British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound* as required by the Natural Resources Wales (NRW) *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 and Variation

2.1 Location

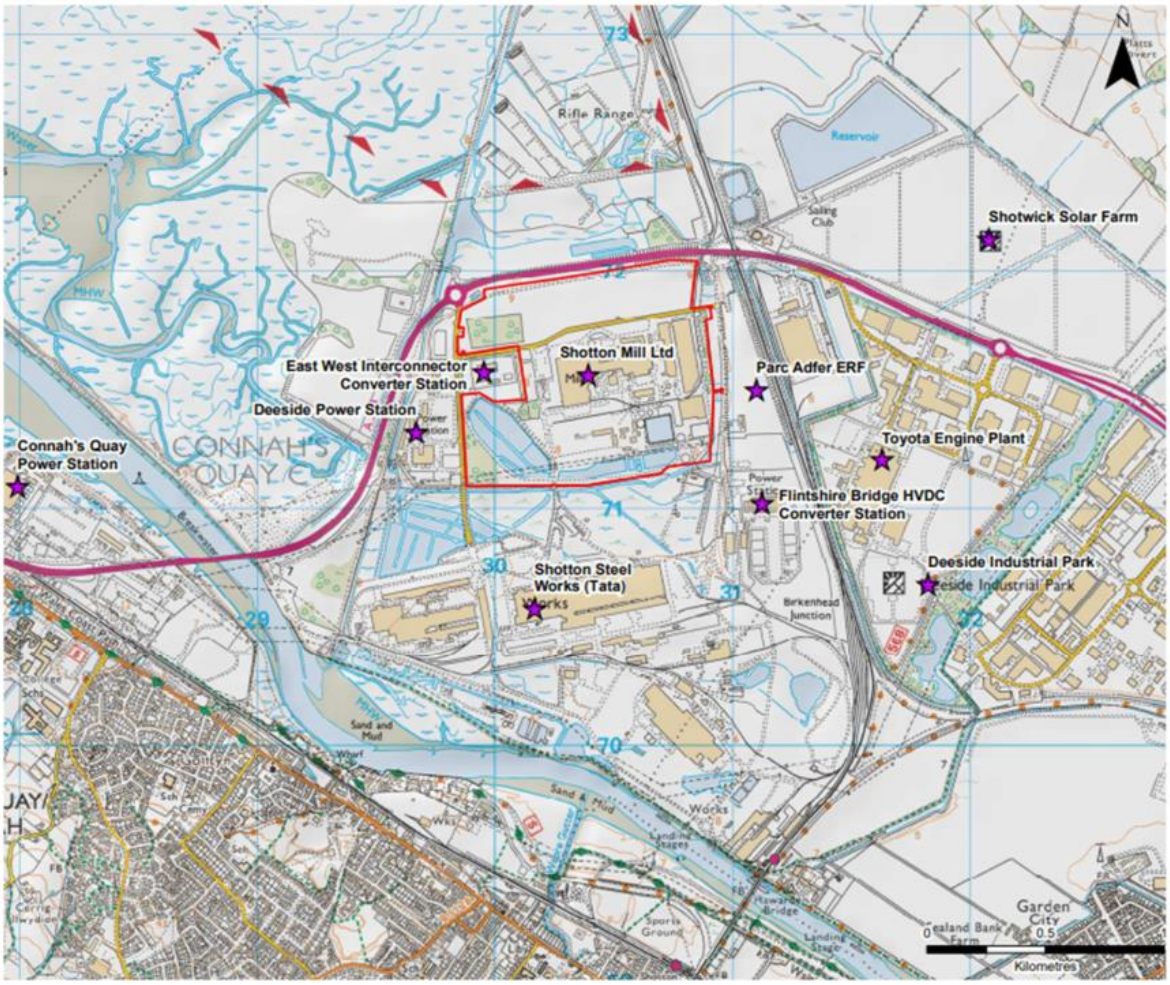
The Site is situated within the Deeside Industrial Park close to the Dee Estuary in Flintshire, North Wales. The Dee Estuary is subject to a number of national and European wildlife designations. The Site lies to the south of the A548 dual carriageway, with access to the A548 being via a local distributor road that serves the Deeside Industrial Park.

Beyond Shotton Mill, the land uses are predominantly commercial and industrial. The Tata Steel site, covering approximately 75 hectares comprising of large industrial units, office space, car parking, and a site wide road network system sits to the southwest of the Paper Mill.

The nearest residential areas are located at least 1.5km of the Site; to the north at Burton, to the northwest at Puddington, and to the south at Connah's Quay and Shotton.

The location of the Site in the context of the surrounding area can be seen in Figure 2-1.

Figure 2-1 Site Location and Context



2.2 The Existing Site and Previous Operations

The Mill was founded in 1983 to produce newsprint paper. Due to the decline in newspaper circulation, demand for newsprint products has declined globally. Consequently, the

production and sales of newsprint has now ceased, and the outdated plant is being sold off/disposed of to make way for the redevelopment of the Site, including expansion into adjoining land.

Certain operations are continuing at the Site, even though newsprint production has ceased: these include processing of recycled paper received from recycling facilities around the UK; energy generation from the biomass facility; materials recovery, and preparation of wood for the biomass plant. In addition, administration and engineering staff are still based at the Site.

The Mill employed around 530 people during the height of production in the 1990s, but as newsprint demand has declined these numbers have also reduced to around 190 currently. This represents a large skilled and experienced workforce that SML intends to retain during the conversion of the Site to new product production.

2.3 Variation

The UK paper industry currently imports more containerboard and tissue products than it produces, while exporting recycled paper. The permitted development will address this by increasing production of containerboard and tissue products at the Site, utilising 100% recycled paper for the new cardboard paper production facility.

The Site already holds an Environmental Permit (EP) issued by NRW, with the permit reference EPR/BT4885IT. This EP allows the Site to produce newsprint, operate a combustion plant, operate a biomass power plant, and run an effluent treatment plant.

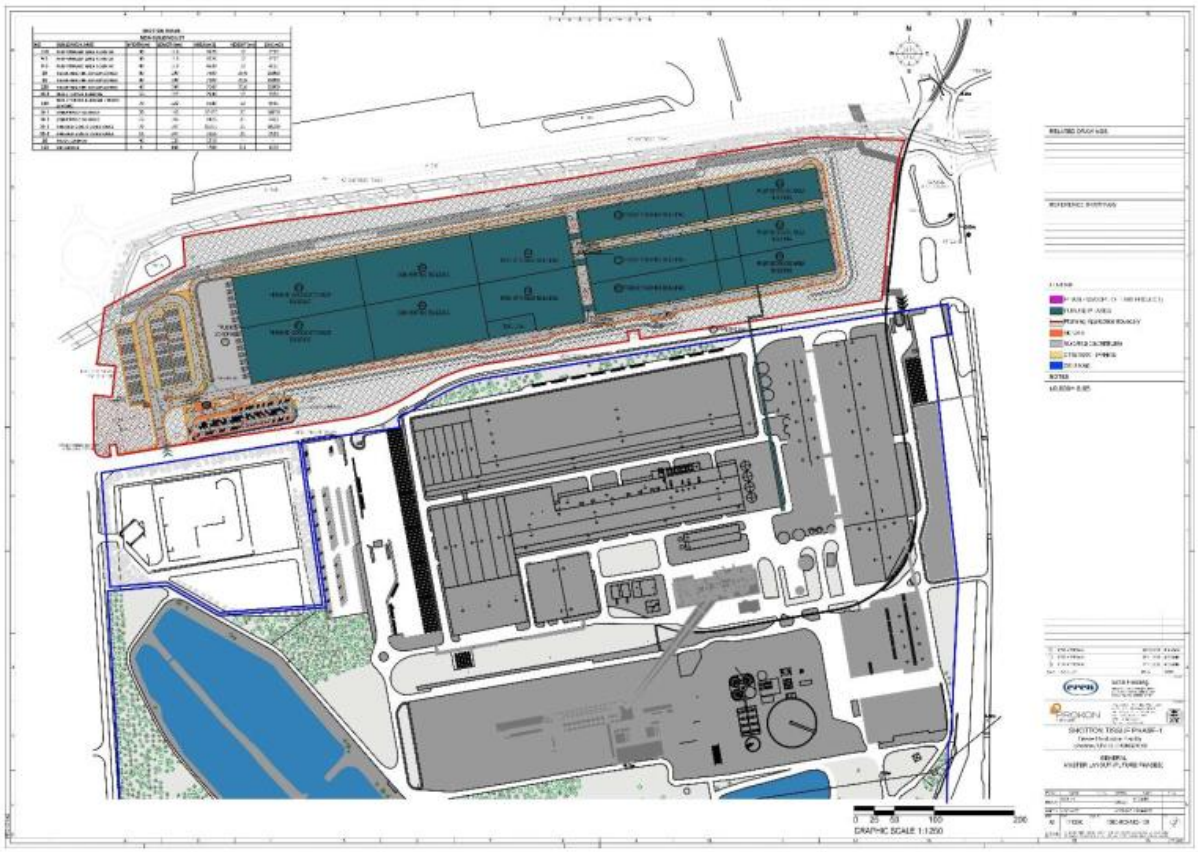
The Site's redevelopment requires a variation of the EP to include the new operations, such as the production of containerboard and tissue, the operation of a Combined Heat and Power (CHP) plant, and a new effluent treatment plant.

The permitted site layout, including buildings to be retained, is shown on Drawing 002.

Full details of the design of the permitted development are discussed in the accompanying Best Available Techniques and Operating Techniques (BATOT) report (ref. 410.065169.00001_BATOT).

The approved masterplan is shown in Figure 2-2 below, for reference.

Figure 2-2 Approved Masterplan (Planning Ref. FUL/000384/23)



The proposed development falls within two parcels of land known as the Main Site and the Expansion Site. The two elements are described below:

- The **Main Site**: This comprises the redevelopment of the existing developed Site (which extends to 61 ha). Section 2.4 and 2.5 of this Report details the permitted development at the Main Site.
- The **Expansion Site**: This comprises the brownfield vacant site to the north of the Main Site, which extends to 22 ha and is allocated for employment purposes. This development includes construction of new tissue machine buildings, storage and auxiliary buildings, a new site access, and associated infrastructure. Section 2.6 of this Report details the development proposals at the Expansion Site.

[Please note: the Expansion Site is not included in this EP substantial variation application, as the development of this land is planned in the future.]

2.4 Main Site (Existing)

Within the Main Site, some buildings will be retained and repurposed for alternative uses. The existing buildings and plant to be retained are detailed below.

2.4.1 Biomass Plant

Existing energy generation plant on the Site comprises the Biomass Plant, which uses recovered wood products to generate both heat and power. As part of the development work, the generation capacity of the Biomass Plant will be reconfigured to produce more heat and slightly less electricity.

2.4.2 Wood Preparation Facility

The Wood Preparation Facility prepares recycled wood grades for use in the Biomass Plant. The Facility uses a number of different techniques to removes stones, metal and other unwanted contaminants from the fuel stream.

2.4.3 Material Recycling facility (MRF)

The MRF takes co-mingled waste streams from household collections and processes them into a series of materials for further processing at customers premises.

2.4.4 Water Treatment Lagoons

The existing lagoons will remain as integral items of the Effluent Treatment Plant.

2.4.5 132 kV substation

This is to remain as a substation and will not be altered.

2.5 Site Development (New Plant)

As outlined above, the redevelopment of the Main Site will comprise both the retention of some existing buildings and the construction of new buildings. The accompanying BATOT report should be referred to for full details of the new operations.

The following provides an overview of the individual elements of the new operations proposed at the Main Site.

2.5.1 Paper Machine Building

The Paper Machine (PM) building will have four floors and will house the Paper Machine and other plant and machinery. The PM will produce cardboard from recycled paper and card, with an annual output of 750,000tpa.

The PM will mainly contain rooms and equipment required for it to function (such as vacuum rooms, tank areas equipment areas and processed air handling area).

2.5.2 The Tissue Machine

The Tissue Machine building will produce jumbo rolls of tissue. Jumbo rolls would be stretch film wrapped and then transferred to the Reel Storage Building.

The Tissue Machine building will also house machinery in each building over three floors.

2.5.3 Effluent Treatment Facility

Paper production use large quantities of water. The objective of the wastewater treatment system is to recycle as much water as possible for re-use in the system and to ensure that any water that is discharged from Site meets the regulatory standards.

Wastewater from the production process would be treated in a new Effluent Treatment Plant (ETP).

The new ETP will replace the existing facilities with new, state-of-the-art technology comprising anaerobic digestion in combination with further processing to remove organic pollutants.

A biogas flare will be installed as a safety device to ensure a continuous and safe combustion of the biogas generated in the anaerobic reactor at the ETP.

2.5.4 Old Corrugated Cardboard Building

The Old Corrugated Cardboard Building will utilise the footprint of an existing building, which will be redeveloped. The recycling process includes the recycling of old corrugated containers (OCC), otherwise known as cardboard boxes; the OCC pulping line is a significant outlet for recycled paper collected by local authorities and businesses across the UK. The building will remain largely similar to the existing building but will increase in height by 3 metres.

2.5.5 CHP Plant

To meet the steam and power requirements of the new containerboard and tissue production facilities, SML will be constructing a new CHP plant which will operate in addition to the existing biomass power plant. The CHP will be fuelled by natural gas, but will be ready to use hydrogen when a supply becomes available.

2.6 Traffic movements

A preliminary estimate has been made of likely HGV traffic movements generated by the development, with the information obtained from the Transport Assessment which supported the EIA for Site.

2.6.1 Historic peak operation

In terms of the historic peak operation of the Site in 2014, the Former Shotton Mill gave rise to 315 two-way HGV trips to the Site per day. This equated to 114,975 two-way HGV trips per year.

For cars and lights vehicles, there were 587 two-way vehicle movements per day which equated to 214,255 two-way trips year.

2.6.2 Proposed Development

For HGVS there are predicted to be 1,217 two-way HGV movements per day. This would equate to 444,205 two-way HGV movements per year.

For cars and lights vehicles, 1,411 two-way vehicle movements per day are predicted, which would equate to 515,015 two-way trips year.

3.0 Scope and Guidance

A summary of the requirements outlined in the NRW guidance document, and the assessment methodology outlined in BS 4142 are provided below.

3.1 Noise and vibration management: environmental permits

NRW, together with the Environment Agency (EA), published a joint guidance document *Noise and vibration management: environmental permits* (NVM) in July 2021, replacing the previous guidance.

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 BS 4142 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 BS 4142 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.
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* (BS 4142) 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 correction 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 correction 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 corrections, 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; and
- 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 sound level, this is an indication of the specific sound source having 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."

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 9613-2:2024

The levels of sound generated by the operation of the proposed Site has been predicted in accordance with the prediction framework within ISO 9613-2:2024 *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 all receivers.

3.4 Residential Noise Sensitive Receptors

The following residential Noise Sensitive Receptors (NSRs) have been identified as the closest residential areas which surround the Site.

Assessment at these locations is expected to represent the worst-case scenario; other NSRS may be affected by noise from the operations, however the impact at these locations would be equal to or less than the receptors identified in Table 3-2and Figure 3-1 below.

Table 3-2 Noise Sensitive Receptors

Receptor	Location	Bearing from Site	Distance to Site Boundary (m)	X Co-ordinate	Y Co-ordinate
NSR1	Burton Marsh Farm	North	2,200	330512	374211
NSR2	Barn Farm	North east	1,900	331847	373676
NSR3	Sealand Avenue	South east	2,400	332529	369413
NSR4	Shotwick	East	2,700	333734	371938
NSR5	Dee View Road	South west	1,300	329329	369818
NSR6	Airfield Road	South east	2,200	332804	369638

Figure 3-1 Receptor Location Plan

3.5 Ecological Receptors

The application site lies within:

- 340m of the Dee Estuary (Wales) SAC / SPA / Ramsar site
- 1.5km of the River Dee and Bala Lake SAC

Regarding ecological receptors in the vicinity of the site, NRW consultation response dated 7th June 2024 (ref. CAS-256863-R6S0) stated the following relating to noise and visual disturbance to bird features in the vicinity of the Site:

"2. Noise and visual disturbance to bird features

Although not submitted as part of this application, we are satisfied with the bird surveys completed to date for the associated proposed development at this site and the conclusions drawn from these. Therefore, as the proposed works fall within the overall footprint of the site redevelopment that was previously considered for the approved planning application

(ref: FUL/000011/22), we do not have concerns about increased noise or visual disturbance to overwintering bird features of the Dee Estuary SPA/Ramsar site. The applicant has evidenced the low numbers of qualifying species present within and close to the site boundaries appropriately. As previously advised, we welcome the measures relating to downlighting and reducing the potential impacts of light pollution.

Ecological receptors have therefore not been considered further within this noise impact assessment.

4.0 Baseline Sound Survey

4.1 Survey Date

To further inform this assessment SLR completed a noise survey to determine baseline sound levels in the vicinity of NSRs between Friday 5th July 2024 and Monday 8th July 2024. During the Survey the Site was not operational.

4.2 Equipment

Sound pressure level measurements were carried out using the equipment listed in **Appendix B**.

The sound level meters were calibrated before the measurements using the handheld acoustic calibrator and the calibration was checked upon completion of the survey. No significant drift was observed with calibration offsets of ≤ 0.3dB. The calibration chain of equipment has been maintained to traceably to national standards, no greater than one year for sound calibrators and two years for sound level meters.

Following guidance, the microphones were affixed to tripods horizontally, positioned 1.5m above the ground, and placed at a distance of over 3.5m from any other reflecting surfaces.

The following noise level indices were recorded:

- $L_{Aeq,T}$: The A-weighted equivalent continuous noise level over the measurement period.
- L_{A90}: The A-weighted noise level exceeded for 90% of the measurement period. This parameter is often used to describe background noise.
- L_{A10}: The A-weighted noise level exceeded for 10% of the measurement period. This parameter is often used to describe road traffic noise.
- L_{AFmax}: The maximum A-weighted noise level during the measurement period.

4.3 Survey Locations

Baseline sound level measurements were undertaken at five locations, representative of the closest residential areas which surround the Site.

The locations are detailed in Table 4-1, and shown on Figure 4-1 below. Photographs of the equipment set up at the monitoring locations, can be seen in **Appendix C**.

Table 4-1 Noise Monitoring Locations

Location	Receptor	Description	Monitoring Start	Monitoring End
Location 1	NSR1	Approximately 2km to the north of the Site at Burton. The noise meter was left at the RSPB Burton Mere Wetlands.	05/07/24 10:00	08/07/24 13:30
Location 2	NSR2	Approximately 2.5km to the north-east of the Site at Paddington. The meter was left at The Stables.	05/07/24 12:30	08/07/24 14:00
Location 3	NSR3 and NSR6	Approximately 3km to the south-east of the Site. The meter was left at No. 94 Farm Road.	05/07/24 13:30	08/07/24 12:45
Location 4	NSR4	Approximately 3.2km to the east of the Site. The meter was left at St Michael's Church Carpark.	05/07/24 11:00	08/07/24 13:15
Location 5	NSR5	Approximately 2km to the south-west of the Site. The meter was left to the rear of Coast Road Furniture.	05/07/24 12:30	08/07/24 12:45

Figure 4-1 Noise Survey Locations

4.4 Weather Conditions

A weather station was deployed at Location 1 for the duration of the study, to measure the temperature, rainfall, and wind speed and direction, every 15 minutes. The results from this device have indicated that conditions were conducive to surveying works over the duration of the study:

- Temperatures ranged from 13 to 29°C.
- Gust and average wind speeds remained below 5 m/s.
- There was an absence of rainfall.
- The wind direction was predominantly from the south (77%).

A summary of the recorded weather data during the survey period, together with wind direction plot, is provided in **Appendix D**.

4.5 Soundscape

During the attended period of the survey, observations and detailed notes were made of all audible sources, at each of the survey locations. Additionally, where audio recordings have been made, these have also been reviewed.

The soundscape at each location is detailed as follows:

- Location 1:
  - Natural sound from the movement of vegetation caused by a slight breeze of less than 5m/s.
  - Bird song.
  - Sheep in distance audible.
  - High altitude aircraft passing during set up.
- Location 2:
  - Distant road traffic noise faintly audible from Weighbridge Road/A548.
  - Natural sound from the movement of vegetation caused by a slight breeze of less than 5m/s.
  - Bird song.
- Location 3:
  - Nearby road traffic noise from Farm Road and connecting roads. Cars driving approximately 30mph. Distant road traffic noise from A494 also audible – steady flow of traffic traveling approximately 70mph.
  - Construction noise audible from the site to north, near Airfield Road.
  - Natural sound from the movement of vegetation caused by a slight breeze of less than 5m/s.
  - Insect calls.
  - Bird song.
- Location 4:
  - Neighbouring residents cutting grass near by during set up.
  - Natural sound from the movement of vegetation caused by a slight breeze of less than 5m/s.
  - Birdsong.
  - Sheep in distance audible.
- Location 5:
  - Road traffic noise heavily dominant (traffic flow constant) from the A548 to the north
  - Natural sound from the movement of vegetation caused by a slight breeze of less than 5m/s.
  - Bird song.

Based on the observations made, it is considered that the measured noise levels are representative of the prevailing noise climate at locations representative of the closest NSRs and have therefore been considered as such for the purposes of the assessment.

4.6 Baseline Sound Level Results

A summary of the baseline survey results at Locations 1 to 5 is provided within Tables 4-2 to 4-6. The full survey results are provided in **Appendix E**.

Table 4-2 Location 1 - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
Friday 5th July 2024	Day	42.6	79.5	42.9	35.9
	Night	42.5	76.8	34.8	24.3
Saturday 6th July 2024	Day	46.6	75.1	46.6	40.7
	Night	50.1	84.5	34.7	29.6
Sunday 7th July 2024	Day	44.6	73.2	43.3	35.1
	Night	46.9	82.3	34.1	29.2
Monday 8th July 2024	Day	41.2	72.0	40.8	34.8

Table 4-3 Location 2 - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
Friday 5th July 2024	Day	40.8	72.4	40.3	31.3
	Night	41.6	75.1	34.8	27.8
Saturday 6th July 2024	Day	47.4	93.8	46.0	39.2
	Night	39.4	70.1	39.1	35.0
Sunday 7th July 2024	Day	41.6	74.2	41.5	33.0
	Night	42.9	64.6	39.2	35.2
Monday 8th July 2024	Day	44.7	69.6	43.6	38.0

Table 4-4 Location 3 - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
Friday 5th July 2024	Day	48.0	78.1	43.1	36.7
	Night	42.3	73.1	40.6	36.2
Saturday 6th July 2024	Day	48.8	77.2	50.6	43.1
	Night	41.0	69.5	39.1	36.0
Sunday 7th July 2024	Day	43.5	77.0	44.3	36.5
	Night	40.2	66.5	37.8	33.8
Monday 8th July 2024	Day	46.5	72.0	46.8	42.4

Table 4-5 Location 4 - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
	Day	45.8	77.2	45.0	38.8

Friday 5th July 2024	Night	43.6	66.7	44.3	37.3
Saturday 6th July 2024	Day	49.0	74.7	50.4	44.3
	Night	45.4	68.0	46.2	41.1
Sunday 7th July 2024	Day	62.9	89.3	45.0	38.4
	Night	47.9	70.5	42.1	36.9
Monday 8th July 2024	Day	50.6	72.6	51.8	47.8

Table 4-6 Location 5 - Summary of Measured Sound Levels, free-field, dB

Date	Period	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
Friday 5th July 2024	Day	56.4	88.9	58.9	48.7
	Night	48.6	78.0	49.1	38.4
Saturday 6th July 2024	Day	54.5	86.8	57.7	45.7
	Night	49.3	87.4	45.5	38.7
Sunday 7th July 2024	Day	55.5	88.9	58.0	45.3
	Night	49.0	82.5	46.3	38.3
Monday 8th July 2024	Day	55.1	86.8	57.8	47.8

4.7 Baseline Background Sound Levels for Assessment

The 'typical' background sound levels have been reported in this section in accordance with BS 4142 as established from histograms of the recorded dB $L_{A90,15min}$ data at each survey Location, provided in **Appendix F**.

The 'typical' baseline background sound levels for weekday, weekend, daytime and night-time periods to be used in the BS4142 assessments are presented in Table 4-7.

Table 4-7 Baseline Background Sound Levels for Future Assessment

Monitoring Location	Period		L_{A90} Range, dB	L_{A90} Selected, dB
1	Weekday	Daytime	27 - 41	36
		Night	22 - 47	24
	Weekend	Daytime	24 - 50	37
		Night	23 - 40	28
2	Weekday	Daytime	25 - 49	34
		Night	25 - 47	29
	Weekend	Daytime	28 - 49	34
		Night	30 - 49	35
3	Weekday	Daytime	33 - 50	42
		Night	29 - 44	36

Monitoring Location	Period		L_{A90} Range, dB	L_{A90} Selected, dB
	Weekend	Daytime	32 - 51	38
		Night	31 - 42	36
4	Weekday	Daytime	32 - 51	39
		Night	32 - 47	37
	Weekend	Daytime	30 - 54	39
		Night	33 - 52	36
5	Weekday	Daytime	39 - 51	49
		Night	36 - 44	37
	Weekend	Daytime	37 - 51	44
		Night	37 - 49	39

4.7.1 Location 1 Weekday

During the daytime, the background noise levels were in the range of 27 - 41dB(A), with over 50% of levels occupying the 34 – 37dB(A) range. 36dB(A) is therefore considered a robust representative value within the range. At night-time background levels ranged between 22-47dB(A), with most levels occupying the 22 – 24dB(A) range. 24dB(A) is considered a robust value.

4.7.2 Location 1 Weekend

During the daytime, background noise levels occupied the 24 – 50dB(A) range. 37dB(A) is considered a robust value as it represented the most popular value. During the night-time background levels ranged from 23 - 40dB(A), with over 50% of levels occupying the 27 - 30dB(A) range. 28dB(A) is therefore considered a strong representative value.

4.7.3 Location 2 Weekday

During the daytime, the background noise levels were in the range of 25 – 49dB(A), with 25% of levels occupying the 34 – 35dB(A) range. 34dB(A) is therefore considered a robust representative value within the range. At night-time background levels ranged between 25 - 47dB(A). 29dB(A) is considered a robust value.

4.7.4 Location 2 Weekend

During the daytime, the background noise levels were in the range of 28 – 49dB(A), with 34dB(A) representing the modal value. During the night-time, there was a strong modal value at 35dB(A) which represented over 25% of levels.

4.7.5 Location 3 Weekday

During the daytime, the background noise levels were in the range of 33 – 50dB(A), with 25% of levels occupying the 42 – 43dB(A) range. 42dB(A) is therefore considered a robust representative value within the range. At night-time background levels ranged between 29 - 44dB(A). 36dB(A) is considered a robust value as it represented 22% of levels.

4.7.6 Location 3 Weekend

During the daytime, the background noise levels were in the range of 32 – 51dB(A), with 30% of levels occupying the 37 – 39dB(A) range. 38dB(A) is therefore considered a robust

representative value within the range. At night-time background levels ranged between 31-42dB(A). 36dB(A) is considered a robust value as it represented 22% of levels.

4.7.7 Location 4 Weekday

During the daytime, the background noise levels were in the range of 32 – 51dB(A). 39dB(A) is considered a robust value as it represented 23% of levels. At night-time background levels ranged between 32 - 47dB(A), with over 50% of levels occupying the 37 – 39dB(A) range. 37dB(A) is therefore considered a strong representative value.

4.7.8 Location 4 Weekend

During the daytime, the background noise levels were in the range of 30 – 54dB(A). There was a strong modal value at 39dB(A) which represented 14% of levels. At night-time background levels ranged between 33 - 52dB(A). 36dB(A) is considered a robust value as it represented 17% of levels.

4.7.9 Location 5 Weekday

During the daytime, the background noise levels were in the range of 39 – 51dB(A), with over 50% of levels occupying the 48 – 50dB(A) range. 49dB(A) is therefore considered a robust representative value within the range. During the night-time, there was a strong modal value at 37dB(A) which represented 44% of levels.

4.7.10 Location 5 Weekend

During the daytime, the background noise levels were in the range of 37 – 51dB(A), with over 40% of levels occupying the 43 – 45dB(A) range. 44dB(A) is therefore considered a robust representative value within the range. During the night-time, there was a strong modal value at 39dB(A) which represented 40% of levels.

5.0 Specific Sound Level

5.1 Introduction

This section of the Report considers the specific sound levels generated by the Site in accordance with BS4142, focusing on the calculation and prediction of the specific sound levels at the NSRs.

A description of the permit variation is detailed Section 2.0 of this Report and includes a breakdown of the Main Site and Expansion Site, along with the buildings and operations which will be retained, and the new operations that will be included.

A summary of the main operations and plant at the Site is set out below:

- **Main Site**
  - Paper Machine Building – New four-story building housing new Paper Machine, and other plant.
  - Tissue Machine - Retention and extension of former PM2 building, to include Tissue Paper Machine x 1.
  - Effluent Treatment Facility – installation of new treatment plant, AD and Biogas plant.
  - CHP – The new installation will comprise plant located in external areas. The major components of the CHP include the following:
    - 2 x Solar Turbines Titan T250 gas turbines (housed within acoustic enclosures), venting via 75m high stacks, and associated air intake system;
    - 2 x Heat Recovery Steam Generators (HRSGs);
    - 2 x Conventional back-up boilers, venting via a single 30m high stack;
  - Retention of Biomass Plant, Wood Preparation Facility, MRF, Water Treatment Lagoons, Bale Conveyor, Tanks, Hazardous and Non-Hazardous Waste Buildings, and substation.

5.2 Noise Model

This assessment makes use of a site-specific noise model, whereby predictions of the specific (operational) sound levels from the development have been undertaken within the modelling software CadnaA, which implements the calculation algorithms set out in ISO 9613-2:1996 *Acoustics – Attenuation of sound during propagation outdoors – Part 2 General method of calculation*. The model assumes:

- A ground absorption factor of 0.8.
- Contour Data to include OS terrain data.
- A reflection factor of 2.
- Receptor heights; daytime sound levels have been predicted to 1.5m above ground level, the approximate height of a ground floor window. Night-time sound levels have been predicted to 4.0m above ground level, the approximate height of a first-floor window.

Sound level inputs to the model have been informed by a combination of measurement and prediction. Sound measurements were undertaken internally within the existing buildings at

the Main Site, and of external sources (where these were operational at the time of the survey) in 2021 when the Site was operational.

Where sound sources were not operational or will be new (where source data is not available at this stage), SLR has utilised archive library data, including from a previous papermill noise assessment (SLR report ref. 425.09898.00001).

To inform the noise model and ensure accurate representation of the Site, a comprehensive review of the available technical drawings, elevation plans, and other design information has been undertaken. This has enabled the determination of dimensions, heights, and positioning, of the buildings and external plant.

The source data used in the noise model is detailed within **Appendix G**.

5.3 HGV Movements

In addition to fixed plant on-Site HGV movements have also been included as follows:

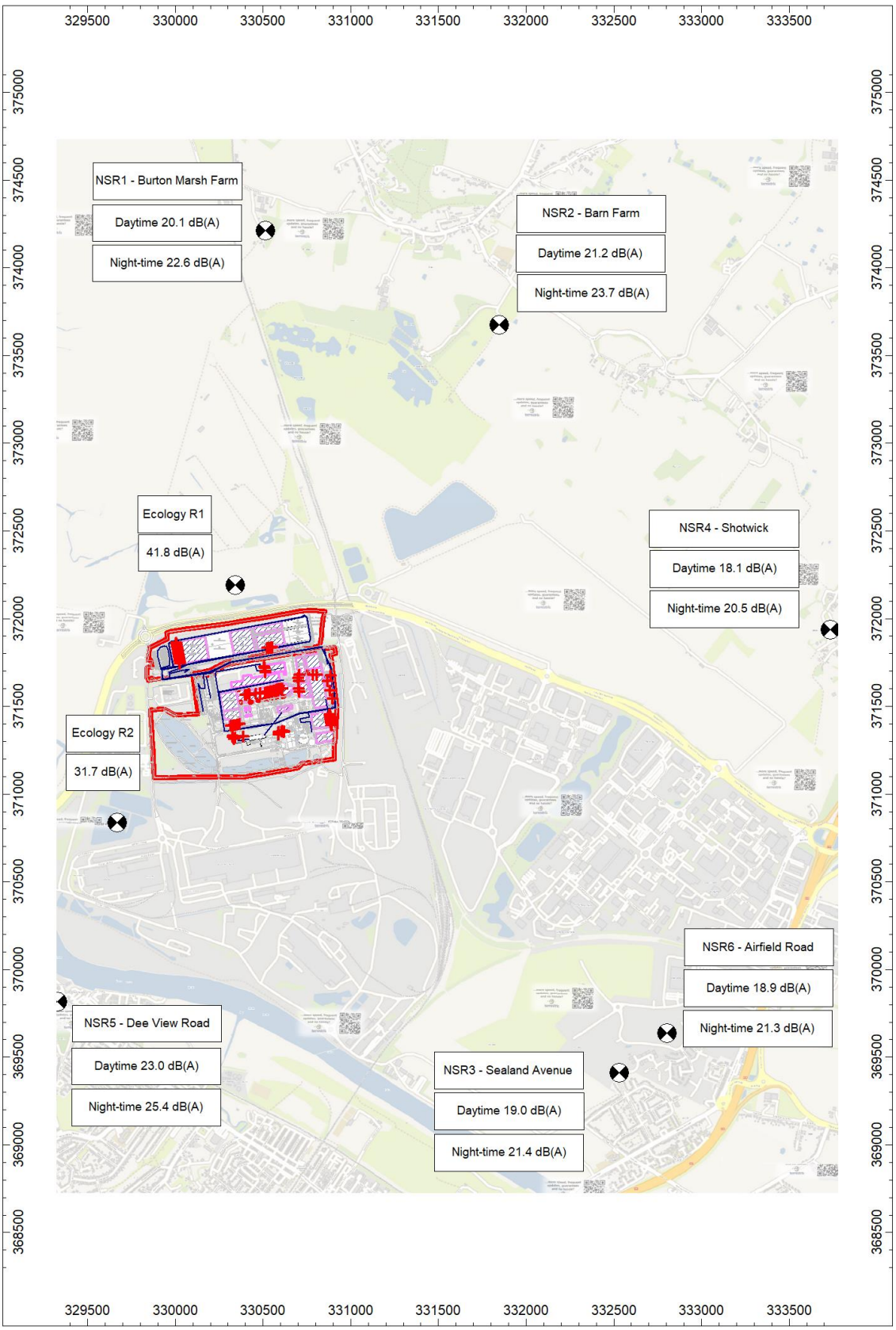
- Height 1m.
- Moving point source.
- Speen 10mph.
- Daytime 1-hour movements = 20.
- Night-Time 15-minute movements = 2.5.
- Sound Power 93dB(A).

5.4 Noise Model Results – Specific Sound Levels

The daytime and night-time noise model outputs, showing the predicted specific (operational) sound levels at each NSR are provided in Figure 5-1. It should be noted that the only difference between daytime and night-time models, is the receptor heights (daytime 1.5m and night-time 4m).[1]

[1] SLR historically measured data from WEPA UK

Figure 5-1 Daytime and Night-time Specific Sound Levels – dB $L_{Aeq,\ T}$



6.0 BS 4142 Assessment

6.1 Sound Character Corrections

BS 4142 acoustic feature corrections are to be applied to the specific level to determine the rating level. These corrections relate to the perception of the sound outdoors at the receptor location.

Due to the relatively large separation distances between the noise generating activities and the receptor locations it is considered that determining potential corrections for individual activities is not required. Instead, the determination of corrections has been applied to the Site as a whole. A description of the corrections to be applied are detailed below:

- Tonality: 0dB; It is anticipated that none of the proposed sound sources would be tonal at the receptors. No tonal feature correction is required.
- Impulsivity: 0dB. It is anticipated that none of the proposed sound sources would be impulsive at the receptors. No impulsivity feature correction is required.
- Intermittency: 0dB. No adjustment has been made for intermittency due to distance and screening by the intervening buildings.
- Other sound characteristics: 3dB. It is anticipated that some of the noise sources could have a sound characteristic that differs to those already existing at the Site. A 3dB correction has been applied as a precautionary measure.

Total correction: 3dB at all NSRs.

6.2 BS 4142 Assessment

The corrections described above have been added to the predicted sound levels shown in Figure 5-1 to derive the rating levels at each of the NSRs.

The rating levels have then been compared to the derived background sound levels.

The results of the BS 4142 assessment are shown in Table 6-1, where the rating levels and the background sound levels have been rounded to the nearest decibel.

Table 6-1 BS4142 Assessment

Receptor	Assessment Period		Predicted Specific Sound Level, dB $L_{Aeq,T}$	Predicted Rating Level, dB $L_{Ar,Tr}$	Background Sound Level dB $L_{A90,T}$	Difference
NSR1	Weekday	Daytime	20	23	36	-13
		Night-Time	23	26	24	+2
	Weekend	Daytime	20	23	37	-14
		Night-Time	23	26	28	-2
NSR2	Weekday	Daytime	21	24	34	-10
		Night-Time	24	27	29	-2
	Weekend	Daytime	21	24	34	-10
		Night-Time	24	27	35	-8
NSR3	Weekday	Daytime	19	22	42	-20
		Night-Time	21	24	36	-12
	Weekend	Daytime	19	22	38	-16
		Night-Time	21	24	36	-12
NSR4	Weekday	Daytime	18	21	39	-18
		Night-Time	21	24	37	-13
	Weekend	Daytime	18	21	39	-18
		Night-Time	21	24	36	-12
NSR5	Weekday	Daytime	23	26	49	-23
		Night-Time	25	28	37	-9
	Weekend	Daytime	23	26	44	-18
		Night-Time	25	28	39	-11
NSR6	Weekday	Daytime	19	22	42	-20
		Night-Time	21	24	36	-12
	Weekend	Daytime	19	22	38	-16
		Night-Time	21	24	36	-12

The results in Table 6-1 show that the rating levels resulting from the daytime operation of the Site, are predicted to be below the representative background sound level, at all of the assessment locations.

In this regard, BS 4142 states that *"where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context".*

For the night-time operation of the Site, the rating levels are predicted to be below the background sound levels at all of the assessment locations, except at NSR1 where it is predicted to be just 2dB above the background sound level.

At all NSRs other than NSR1, as the assessment in Table 6-1 indicates that rating levels will remain below the representative background levels during the night-time, this is an indication that the operation of the Site will have a low impact.

At NSR1, where the rating level is predicted to be 2dB above the background sound level during the night-time, which could be an indication of an adverse impact, depending on the context (discussed below).

6.3 Context Assessment

It has been acknowledged that the assessment in Table 6-1 needs to be considered in context, in accordance with NRW guidance and BS 4142.

BS 4142 states, "*The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound sources exceeds the background sound level and the context in which the sound occurs."*

The first requirement of this statement has been addressed in the initial noise impact assessment. To determine the context in which the industrial sound will reside, especially at NSR1, BS 4142 states three factors must be considered:

- The absolute level of sound;
- The character and level of the residual sound compared to the character and level of the specific sound; and
- The sensitivity of the receptor.

BS 4142 Section 11 states: *"Where background sound levels and rating levels are low, absolute levels might be as, or more, relevant than the margin by which the rating level exceeds the background. This is especially true at night. Where residual sound levels are very high, the residual sound might itself result in adverse impacts or significant adverse impacts, and the margin by which the rating level exceeds the background might simply be an indication of the extent to which the specific sound source is likely to make those impacts worse*."

The absolute level is the existing residual $L_{Aeq,T}$ plus the Site specific $L_{Aeq,T}$ sound level. A summary of the measured residual $L_{Aeq,T}$ sound levels at NSR1 are shown in Table 4-2, and the measured levels have been reviewed.

During the period from 23:00 hrs on 05/07/2024 to 07:00 hrs on 06/07/2024, residual levels were low, fluctuating between 25dB and 33dB $L_{Aeq,15\text{-}min}$. Starting around 03:30 hrs, sound levels began to rise, peaking at 50dB $L_{Aeq,15\text{-}min}$ by 05:00 hrs, reflecting the onset of morning activities. After 05:00 hrs, the levels remained elevated, indicating sustained early morning activity.

It is noted that the night of 5th July was lowest overall with a measured level 42.5dB $L_{Aeq,T}$. For example, on the night of 6th July, residual levels were consistently higher, fluctuating between 29dB and 65dB $L_{Aeq,15\text{-}min}$. Similarly, the night of 7th July showed residual levels ranging from 27dB to 60dB $L_{Aeq,15\text{-}min}$, with notable peaks from 04:00 hrs.

By comparison, the specific sound level at NSR1 is predicted to be just 23dB $L_{Aeq,T}$ as shown in Table 6-1 above. This indicates that the Site's specific noise contribution, once operational, will be relatively low compared to the existing residual sound levels.

The potential increase in the absolute $L_{Aeq,T}$ sound levels at NSR1 may be calculated by logarithmically adding the predicted $L_{Aeq,T}$ sound level of the Site, to the baseline residual $L_{Aeq,T}$ night-time sound levels measured at Location 1 (shown in Table 4-2). When using the lowest overall measured level of 42.5dB, this would result in no increase to the total absolute noise level.

It is acknowledged that, given the variability and sometimes lowest residual $L_{Aeq,15\text{-}min}$ sound level (of 25dB $L_{Aeq,15\text{-}min}$), the increase in absolute sound levels could be up to 2dB at times. However, because the absolute level would still be low, it is therefore unlikely that sound from the Site will significantly exacerbate the existing residual levels or contribute to adverse impacts. Furthermore, the site is located within the Deeside Industrial Park, a designated industrial area where other operational activities are already present. This suggests that sound from Site will have a minimal effect on the overall sound environment.

Additionally, analysis of the model outputs indicates that there would not be any one source dominating the operational sound level at NSRs, with contributions to the overall specific levels emanating from several sources including the boiler and wood conveyors, with the highest contribution from a single item of plant being **approximately 23dB at NSR5** (the highest predicted specific level). It is therefore considered that there would not be any operations that would lead to prominent audible sound at any of the NSRs.

The existing sensitive receptors are considered to be of moderate sensitivity due to the occupants' need for quiet rest and relaxation. It is not possible to determine the exact glazing and ventilation specifications installed at the receptors. Therefore, it is assumed that the dwellings are naturally ventilated with no specific mitigation measures, such as façade insulation treatment or ventilation, to control noise ingress from the surrounding area.

During the night-time period, the highest Site rating level has been predicted to be in the order of 26dB $L_{Ar,\ Tr}$ in the worst-case (NSR5) at a first-floor window height of 4m. If considering residents choosing to sleep with windows open during the summer months, a level difference of around 9dB would be expected inside the dwelling through a partially open window. An emissions rating level of 17dB $L_{Ar,\ Tr}$ may therefore be estimated inside the worst-affected receptor, which in absolute terms may be considered very low.

It is therefore concluded that the daytime and night-time operation of the site is likely to have a low impact at all NSRs.

6.4 Summary

The assessment concludes that the noise impact from the operations at the Site at all receptors, falls under the category of ‘No noise, or barely audible or detectable noise' as defined by NRW (Table 3-1). This level of noise indicates that no action is needed beyond the implementation of basic appropriate measures or Best Available Techniques (BAT).

7.0 Uncertainty

It has been a requirement of BS 4142 to minimise uncertainty to a level commensurate with the intention of the assessment objective. Uncertainty has been considered as a limit to the accuracy of any noise assessment, including associated steps of measurement, calculation, or prediction. Factors have been considered to include (but not limited to) the following:

To reduce measurement uncertainty the following steps have been taken:

- In accordance with guidance, the sound level meters were mounted vertically on a tripod 1.5m above the ground/roof. Monitoring locations were also more than 3.5 metres from any other reflecting surfaces.
- The sound level measurements were undertaken during dry weather and with wind speeds of less than 5m/s.
- The results of each measurement period have been reported to the nearest 0.1dB.
- Noise measurements were made using a Class 1, integrating sound level meter.
- Field calibration checks were undertaken before and after measurements to record very low levels of equipment drift. Instrumentation was appropriate and in accordance with Section 5 of BS 4142.
- Based on the accuracy of the prediction methodology, i.e., ISO 9613-2, the uncertainty of the CadnaA® model accuracy (including contour data, barrier and sound reduction corrections for buildings, etc.) it is considered that the results of the assessment are as accurate as reasonably practicable, with downwind propagation and 100% on-time for all sources likely to result in conservative predictions.

These measures have been considered to reduce uncertainty to a level considered not to significantly affect the outcome of this assessment.

8.0 Conclusion

SLR has been appointed by Shotton Mill Limited to undertake a Noise Impact Assessment to support a variation to the existing Environmental Permit, reference EPR/BT4885IT for the Shotton Mill site located at Weighbridge Road, Deeside Industrial Park, Flintshire, CH5 2LW.

An assessment of cumulative sound from the Site has been undertaken in accordance with British Standard 4142:2014+A1:2019 *Methods for rating and assessing industrial and commercial sound;* as required by the Natural Resources Wales (NRW) Guidance Noise and vibration management: environmental permits.

The assessment concludes that the noise impact from the operations at the Site, at all noise sensitive receptors, falls under the category of '*No noise, or barely audible or detectable noise'* as defined by NRW.

This level of noise indicates that no action is needed beyond the implementation of basic appropriate measures or Best Available Techniques (BAT).

10.0 Closure

The assessment has required a suitable level of technical ability and has been undertaken by a Suitably Qualified Person (SQP). An individual with all the following credentials has been considered a SQP for this noise assessment:

- Has a minimum of three years' verifiable experience (within the last five years) of providing noise impact assessments. Such experience has clearly demonstrated a practical understanding of factors affecting acoustics in relation to the built environment, including acting in an advisory capacity to provide recommendations and design advice in planning, and;
- Holds a recognised acoustic qualification and membership of an appropriate professional body. The primary professional body for acoustics in the UK is the Institute of Acoustics.

This assessment has been led and managed by a SQP as defined above.

The SQP confirms that the relevant measurements and calculations:

- Represent good industry practice in accordance with available guidance.
- Are appropriate given the development being assessed and scope of works proposed.
- Avoid invalid, biased and exaggerated claims.

The checker and author of this document confirm that they both comply with the definition of a SQP defined in this Section.

N Auckland, BSc. (Hons) MIOA
Associate Acoustics Consultant

Michelle Dawson, BSc. (Hons) MIOA
Technical Director

Appendix A Glossary

A.1 Glossary of Terminology

In order to assist the understanding of acoustic terminology and the relative change in noise, the following background information is provided.

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.

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 L_n 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_{Amax} — L_{Amax} 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 Monitoring Equipment and Calibration Details

Sound Monitoring Equipment and Calibration Details

Monitoring Location	Equipment	Manufacturer	Type	Serial Number	Laboratory Calibration Date
Location 1	Sound Level Meter	Cirrus	CR:831B	C171175FF	29.09.2022
	Pre-Amplifier		CR:200C	2188	29.09.2022
	½" Pre-Polarised Microphone		MK:224	210918D	21.09.2022
Location 2	Sound Level Meter	Cirrus	CR:171B	G079816	31.01.2023
	Pre-Amplifier		MV:200F	7256F	
	½" Pre-Polarised Microphone		MK:224	211337D	
	Calibrator		CR:515	81268	18.05.2023
Location 3	Sound Level Meter	Cirrus	CR:171B	G400055	24.10.2023
	Pre-Amplifier		MV:200F	12896F	
	½" Pre-Polarised Microphone		MK:172	2553	
	Calibrator		MK:224	216095D	24.10.2023
Location 4	Sound Level Meter	Rion	NL-52	976174	01.11.2021
	Pre-Amplifier		NH-25	76291	
	½" Pre-Polarised Microphone		UC-59	12067	
Location 5	Sound Level Meter	Norsonic	140	1403010	06.09.2022
	Pre-Amplifier		1209	21575	
	½" Pre-Polarised Microphone		1225	271137	
	Calibrator		1251	31875	08.08.2023

Appendix C Survey Photographs

C.1 Survey Location 1


C.2 Survey Location 2

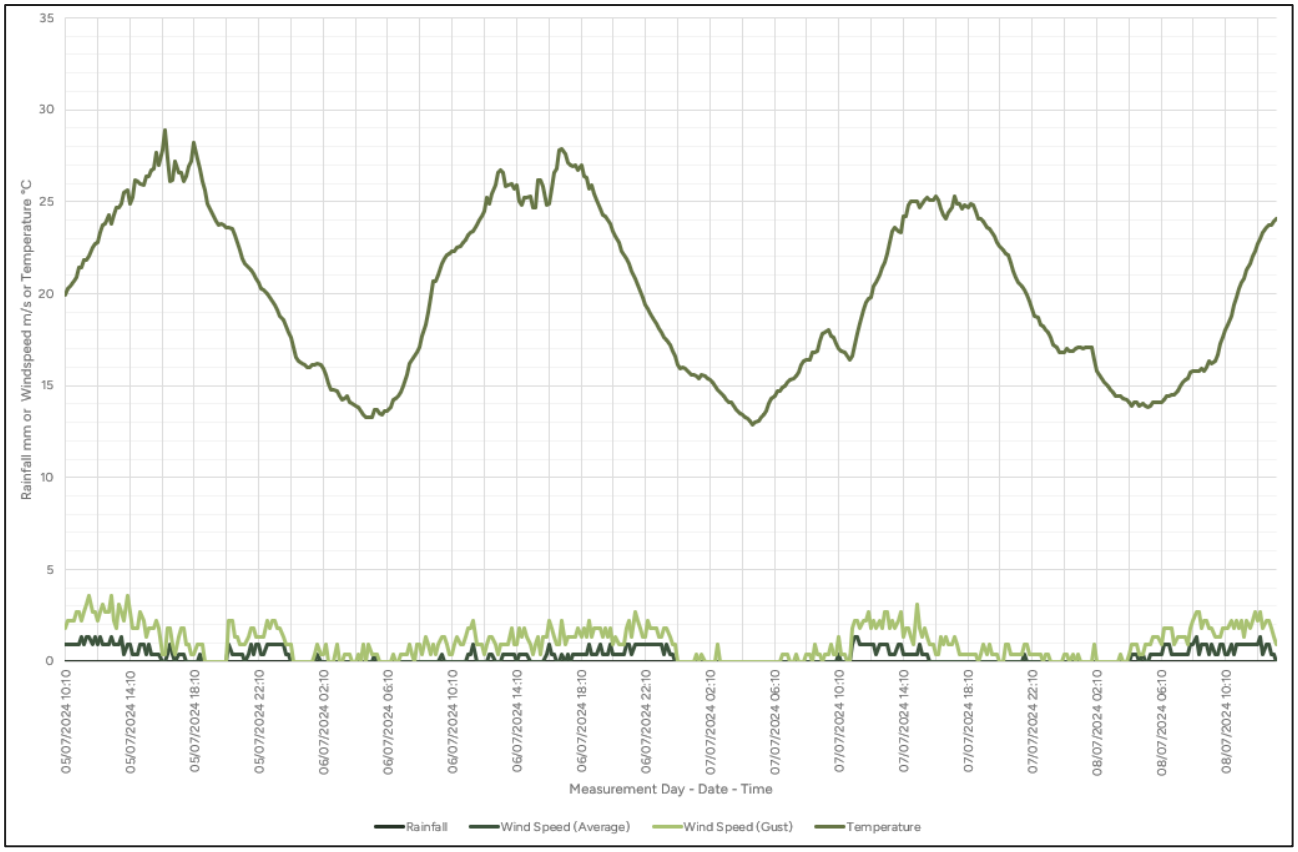

C.3 Survey Location 3


C.4 Survey Location 4

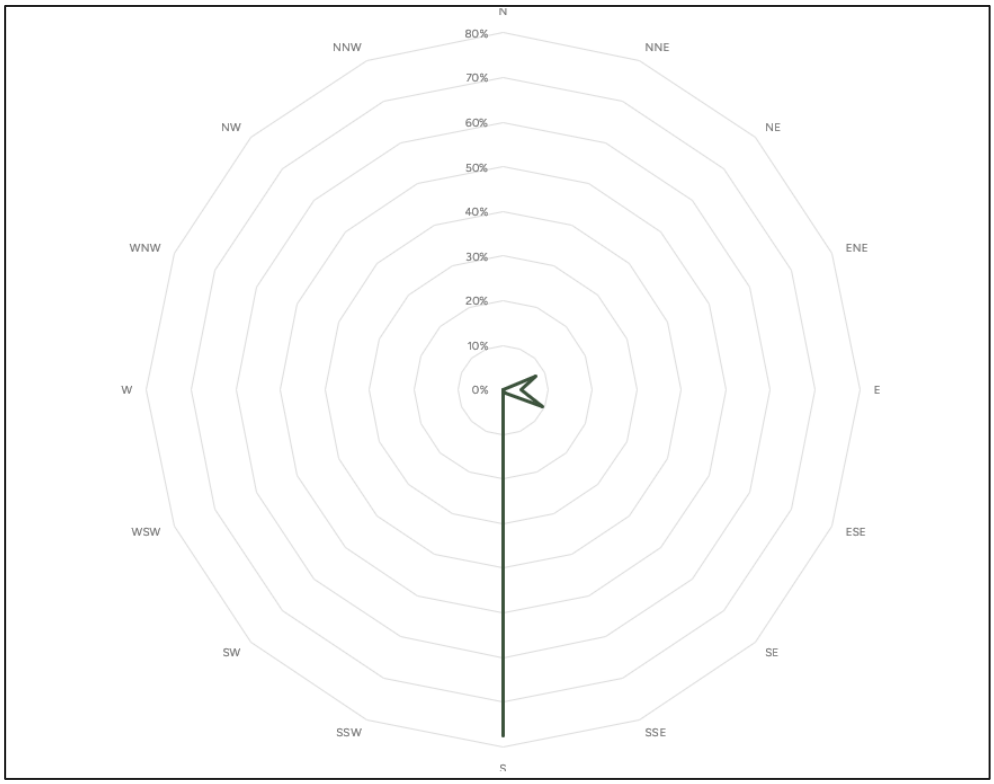
C.5 Survey Location 5

Appendix D Weather Data

D.1 Weather Data Summary



D.2 Wind Direction Plot



Appendix E Survey Data

E.1 Measured Sound Levels at Location 1, free-field, dB

Date	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
05/07/2024 10:00	48.30	79.50	47.90	37.80
05/07/2024 10:15	44.20	65.20	45.30	35.90
05/07/2024 10:30	40.20	62.30	41.90	35.90
05/07/2024 10:45	38.60	51.80	40.90	35.20
05/07/2024 11:00	37.80	59.50	39.50	34.10
05/07/2024 11:15	40.10	60.10	41.90	36.40
05/07/2024 11:30	40.50	62.60	40.90	37.00
05/07/2024 11:45	39.80	49.80	42.10	36.30
05/07/2024 12:00	38.70	55.60	40.60	35.80
05/07/2024 12:15	38.30	56.50	40.00	35.40
05/07/2024 12:30	38.40	58.50	40.20	36.00
05/07/2024 12:45	41.00	54.60	43.50	36.70
05/07/2024 13:00	41.80	61.00	43.00	37.90
05/07/2024 13:15	41.70	60.20	43.30	37.10
05/07/2024 13:30	40.60	57.40	43.20	36.10
05/07/2024 13:45	42.10	59.70	43.60	38.60
05/07/2024 14:00	41.20	53.50	43.10	37.60
05/07/2024 14:15	38.70	53.30	40.60	35.90
05/07/2024 14:30	40.00	50.80	41.90	36.90
05/07/2024 14:45	41.50	61.20	44.00	37.10
05/07/2024 15:00	41.30	54.20	43.40	37.00
05/07/2024 15:15	40.70	58.70	42.30	37.30
05/07/2024 15:30	44.50	62.20	45.40	38.20
05/07/2024 15:45	41.20	61.90	41.90	37.30
05/07/2024 16:00	39.40	56.40	41.30	36.40
05/07/2024 16:15	47.70	69.30	46.50	38.30
05/07/2024 16:30	42.50	57.80	45.20	37.00
05/07/2024 16:45	43.00	64.90	40.50	35.20
05/07/2024 17:00	39.10	58.70	41.20	34.00
05/07/2024 17:15	38.70	53.10	40.60	32.70
05/07/2024 17:30	45.90	65.50	45.10	32.00
05/07/2024 17:45	37.00	55.90	39.50	32.20
05/07/2024 18:00	37.30	60.40	38.70	31.30
05/07/2024 18:15	37.80	59.90	38.10	30.10
05/07/2024 18:30	45.80	64.60	46.10	31.50

05/07/2024 18:45	40.10	58.90	43.00	31.10
05/07/2024 19:00	39.60	60.00	40.80	30.40
05/07/2024 19:15	43.20	60.10	45.50	30.50
05/07/2024 19:30	39.70	61.90	42.90	30.90
05/07/2024 19:45	40.30	59.70	42.90	29.60
05/07/2024 20:00	40.50	63.20	42.00	29.30
05/07/2024 20:15	51.30	67.30	55.90	33.00
05/07/2024 20:30	46.00	60.50	49.80	33.50
05/07/2024 20:45	41.30	60.50	43.70	31.10
05/07/2024 21:00	43.30	60.80	43.60	31.90
05/07/2024 21:15	43.20	59.90	46.00	36.50
05/07/2024 21:30	42.70	66.70	45.30	36.40
05/07/2024 21:45	44.50	58.80	47.50	38.40
05/07/2024 22:00	40.30	51.00	42.90	35.90
05/07/2024 22:15	38.90	47.60	41.80	33.60
05/07/2024 22:30	35.50	55.10	37.90	27.20
05/07/2024 22:45	36.50	51.50	39.60	30.20
05/07/2024 23:00	26.80	41.60	29.60	22.80
05/07/2024 23:15	29.40	43.90	33.70	22.00
05/07/2024 23:30	27.20	42.10	30.10	22.10
05/07/2024 23:45	33.20	51.60	36.80	22.00
06/07/2024 00:00	33.40	50.80	36.90	22.30
06/07/2024 00:15	26.40	42.10	28.70	22.70
06/07/2024 00:30	25.20	37.10	27.20	22.60
06/07/2024 00:45	27.90	43.70	30.40	24.30
06/07/2024 01:00	30.40	44.70	34.10	23.50
06/07/2024 01:15	29.40	44.50	33.00	23.50
06/07/2024 01:30	25.90	41.70	28.10	22.70
06/07/2024 01:45	25.50	37.50	27.60	23.20
06/07/2024 02:00	29.70	43.60	33.00	24.20
06/07/2024 02:15	29.40	52.60	31.10	25.40
06/07/2024 02:30	28.30	39.50	30.60	25.50
06/07/2024 02:45	29.70	45.30	32.10	24.30
06/07/2024 03:00	32.10	49.50	35.50	22.00
06/07/2024 03:15	26.70	42.90	28.50	22.90
06/07/2024 03:30	36.70	50.80	40.50	31.30
06/07/2024 03:45	45.50	52.40	47.50	43.40
06/07/2024 04:00	40.80	51.20	44.20	34.20

06/07/2024 04:45	48.30	62.90	51.00	40.70
06/07/2024 05:00	50.30	76.80	51.70	39.80
06/07/2024 05:15	46.90	64.00	50.40	37.70
06/07/2024 05:30	44.00	62.80	47.00	35.00
06/07/2024 05:45	41.30	59.90	43.60	34.90
06/07/2024 06:00	44.90	58.20	48.60	38.00
06/07/2024 06:15	47.40	52.60	49.60	43.50
06/07/2024 06:30	47.70	58.50	49.40	44.10
06/07/2024 06:45	47.90	59.30	48.90	47.00
06/07/2024 07:00	48.50	60.10	50.60	44.50
06/07/2024 07:15	50.90	59.10	51.90	49.90
06/07/2024 07:30	50.00	66.80	51.90	47.20
06/07/2024 07:45	48.20	59.70	49.80	45.80
06/07/2024 08:00	44.40	59.30	45.50	41.70
06/07/2024 08:15	47.50	67.30	49.80	41.60
06/07/2024 08:30	50.60	60.80	51.60	49.80
06/07/2024 08:45	53.40	75.10	54.60	46.80
06/07/2024 09:00	49.90	66.30	47.70	45.60
06/07/2024 09:15	47.00	58.20	49.00	43.50
06/07/2024 09:30	46.70	68.90	44.50	41.00
06/07/2024 09:45	46.00	66.30	45.60	38.10
06/07/2024 10:00	45.00	62.10	46.30	38.40
06/07/2024 10:15	48.30	70.70	46.20	40.80
06/07/2024 10:30	50.70	69.60	51.70	43.50
06/07/2024 10:45	47.30	75.00	47.30	41.60
06/07/2024 11:00	46.10	64.50	48.30	42.90
06/07/2024 11:15	45.70	58.00	47.70	42.60
06/07/2024 11:30	44.00	58.70	46.10	40.10
06/07/2024 11:45	47.10	67.80	46.30	38.60
06/07/2024 12:00	45.40	59.10	48.10	41.30
06/07/2024 12:15	44.20	55.20	46.60	41.20
06/07/2024 12:30	43.40	61.10	46.00	39.40
06/07/2024 12:45	42.40	60.10	45.00	38.00
06/07/2024 13:00	41.90	62.10	43.20	38.60
06/07/2024 13:15	45.60	63.40	45.60	41.70
06/07/2024 13:30	46.60	61.20	48.10	43.20
06/07/2024 13:45	45.30	59.30	47.20	42.50
06/07/2024 14:00	47.00	60.20	49.10	42.70

06/07/2024 14:15	46.30	56.30	48.50	43.10
06/07/2024 14:30	46.00	58.70	47.90	43.10
06/07/2024 14:45	46.20	62.40	47.70	41.80
06/07/2024 15:00	44.80	57.30	47.00	42.10
06/07/2024 15:15	45.00	57.30	46.60	42.20
06/07/2024 15:30	44.80	59.80	46.20	42.40
06/07/2024 15:45	47.40	67.60	48.00	41.60
06/07/2024 16:00	45.00	60.10	47.00	41.00
06/07/2024 16:15	45.70	60.80	48.00	42.10
06/07/2024 16:30	42.50	59.40	44.10	38.90
06/07/2024 16:45	44.20	66.00	44.10	38.70
06/07/2024 17:00	45.70	74.30	43.50	37.70
06/07/2024 17:15	42.70	58.80	44.20	38.50
06/07/2024 17:30	42.80	58.50	44.70	38.40
06/07/2024 17:45	45.80	66.30	46.40	37.60
06/07/2024 18:00	43.60	64.00	45.10	40.00
06/07/2024 18:15	41.10	58.90	42.60	37.40
06/07/2024 18:30	43.10	62.10	44.70	39.30
06/07/2024 18:45	43.90	54.80	46.60	39.80
06/07/2024 19:00	45.40	60.90	47.60	39.40
06/07/2024 19:15	46.00	63.80	47.00	40.60
06/07/2024 19:30	44.20	55.50	46.40	40.40
06/07/2024 19:45	42.50	56.20	44.30	39.60
06/07/2024 20:00	45.90	67.00	47.60	39.80
06/07/2024 20:15	49.10	63.50	53.00	40.50
06/07/2024 20:30	52.70	66.70	56.40	43.20
06/07/2024 20:45	48.70	66.20	52.10	39.20
06/07/2024 21:00	47.20	65.60	50.20	38.50
06/07/2024 21:15	42.60	58.50	45.90	36.00
06/07/2024 21:30	43.90	61.40	45.30	37.00
06/07/2024 21:45	41.00	52.40	43.00	37.90
06/07/2024 22:00	40.80	56.10	42.80	38.20
06/07/2024 22:15	40.60	51.00	42.80	37.10
06/07/2024 22:30	39.50	56.10	42.20	34.50
06/07/2024 22:45	34.50	47.60	37.00	31.00
06/07/2024 23:00	32.00	43.70	33.90	29.30
06/07/2024 23:15	34.40	52.50	37.30	29.50
06/07/2024 23:30	32.80	43.10	35.10	30.30

06/07/2024 23:45	31.30	38.90	32.90	29.70
07/07/2024 00:00	33.70	47.60	36.20	30.50
07/07/2024 00:15	32.50	43.70	34.30	30.10
07/07/2024 00:30	32.00	41.80	34.00	29.80
07/07/2024 00:45	31.30	42.40	33.10	29.30
07/07/2024 01:00	30.90	39.00	32.40	29.30
07/07/2024 01:15	30.70	50.80	32.40	28.20
07/07/2024 01:30	29.10	42.50	30.70	27.20
07/07/2024 01:45	28.60	40.00	30.10	26.80
07/07/2024 02:00	31.40	43.80	34.30	27.60
07/07/2024 02:15	30.80	48.00	32.80	27.60
07/07/2024 02:30	29.20	42.60	31.80	26.30
07/07/2024 02:45	31.40	43.50	35.60	26.50
07/07/2024 03:00	28.50	41.50	30.20	26.10
07/07/2024 03:15	28.80	46.20	30.00	26.50
07/07/2024 03:30	30.80	47.50	31.30	27.00
07/07/2024 03:45	30.50	56.20	31.30	27.00
07/07/2024 04:00	38.00	59.80	38.80	28.20
07/07/2024 04:15	64.80	84.50	68.00	29.60
07/07/2024 04:30	41.60	57.70	45.00	33.50
07/07/2024 04:45	46.80	72.20	49.10	36.40
07/07/2024 05:00	42.80	63.50	44.80	34.20
07/07/2024 05:15	39.40	60.30	41.80	34.50
07/07/2024 05:30	37.80	55.30	39.90	33.60
07/07/2024 05:45	40.40	58.70	42.80	34.40
07/07/2024 06:00	46.30	63.10	50.00	36.50
07/07/2024 06:15	46.70	70.40	48.90	34.90
07/07/2024 06:30	40.50	64.80	42.50	33.80
07/07/2024 06:45	41.60	59.60	43.70	35.30
07/07/2024 07:00	49.50	64.20	50.90	44.90
07/07/2024 07:15	47.20	63.70	49.50	41.50
07/07/2024 07:30	42.90	60.00	45.40	36.60
07/07/2024 07:45	46.10	60.90	47.20	37.40
07/07/2024 08:00	43.30	54.10	45.80	38.70
07/07/2024 08:15	44.30	60.50	48.50	38.00
07/07/2024 08:30	46.60	66.20	49.80	36.80
07/07/2024 08:45	38.50	53.00	41.20	33.60
07/07/2024 09:00	38.30	56.50	41.00	32.20

07/07/2024 09:15	38.10	54.70	40.70	34.10
07/07/2024 09:30	39.20	56.50	42.10	32.60
07/07/2024 09:45	44.70	63.30	47.40	35.30
07/07/2024 10:00	45.20	67.40	40.60	32.20
07/07/2024 10:15	44.70	68.30	41.50	31.70
07/07/2024 10:30	37.40	53.90	39.60	32.50
07/07/2024 10:45	36.70	50.20	38.90	32.90
07/07/2024 11:00	45.30	55.20	52.20	33.30
07/07/2024 11:15	34.80	47.10	37.40	31.30
07/07/2024 11:30	35.70	51.90	38.40	32.00
07/07/2024 11:45	41.50	63.10	41.40	31.80
07/07/2024 12:00	43.80	67.40	38.80	32.50
07/07/2024 12:15	39.30	58.00	39.70	32.90
07/07/2024 12:30	39.90	61.20	39.90	34.50
07/07/2024 12:45	40.30	62.70	41.40	35.30
07/07/2024 13:00	40.70	53.80	43.00	37.50
07/07/2024 13:15	40.50	62.60	40.60	34.90
07/07/2024 13:30	38.80	54.90	41.00	34.80
07/07/2024 13:45	39.90	60.60	41.50	33.80
07/07/2024 14:00	40.60	62.80	41.30	34.50
07/07/2024 14:15	47.80	68.60	46.30	36.90
07/07/2024 14:30	40.90	56.90	43.00	36.80
07/07/2024 14:45	43.30	60.20	44.50	38.60
07/07/2024 15:00	45.70	62.60	45.10	37.80
07/07/2024 15:15	39.20	54.00	41.10	36.20
07/07/2024 15:30	40.80	57.10	42.50	36.80
07/07/2024 15:45	47.30	67.90	48.00	37.40
07/07/2024 16:00	41.40	60.20	43.50	37.20
07/07/2024 16:15	44.60	62.50	43.50	36.60
07/07/2024 16:30	41.30	58.00	43.50	37.10
07/07/2024 16:45	44.10	57.60	47.10	39.10
07/07/2024 17:00	40.40	53.40	42.70	36.70
07/07/2024 17:15	43.80	67.40	44.30	36.00
07/07/2024 17:30	41.00	60.50	43.10	34.90
07/07/2024 17:45	42.50	62.70	43.80	35.30
07/07/2024 18:00	39.70	59.30	41.60	34.00
07/07/2024 18:15	38.60	50.30	41.10	34.80
07/07/2024 18:30	39.00	58.10	40.30	34.20

07/07/2024 18:45	43.50	68.00	46.70	33.10
07/07/2024 19:00	41.00	55.00	44.40	34.10
07/07/2024 19:15	39.90	56.30	41.90	34.30
07/07/2024 19:30	49.70	73.20	45.60	33.00
07/07/2024 19:45	46.00	67.10	46.60	30.50
07/07/2024 20:00	45.40	67.00	46.20	32.10
07/07/2024 20:15	46.70	62.00	50.50	32.80
07/07/2024 20:30	49.60	63.20	53.70	35.20
07/07/2024 20:45	55.30	71.70	57.60	40.10
07/07/2024 21:00	48.80	62.30	52.80	36.10
07/07/2024 21:15	46.60	60.30	50.60	37.80
07/07/2024 21:30	44.70	60.10	47.30	38.40
07/07/2024 21:45	41.70	58.70	44.20	37.40
07/07/2024 22:00	40.70	52.90	43.10	36.80
07/07/2024 22:15	40.90	53.70	43.80	36.20
07/07/2024 22:30	37.60	58.10	40.20	29.90
07/07/2024 22:45	29.90	48.30	33.20	23.60
07/07/2024 23:00	28.80	50.80	31.60	23.40
07/07/2024 23:15	27.50	55.50	28.10	23.40
07/07/2024 23:30	27.20	43.60	29.30	24.30
07/07/2024 23:45	28.70	48.70	27.50	23.50
08/07/2024 00:00	27.90	37.30	29.60	25.60
08/07/2024 00:15	33.90	44.90	36.50	29.90
08/07/2024 00:30	32.90	42.30	35.30	30.30
08/07/2024 00:45	31.60	40.20	33.30	29.60
08/07/2024 01:00	31.90	41.50	33.40	30.20
08/07/2024 01:15	30.30	37.00	31.50	29.00
08/07/2024 01:30	29.40	40.70	30.90	27.50
08/07/2024 01:45	31.70	44.90	33.80	27.90
08/07/2024 02:00	32.50	51.80	35.00	27.90
08/07/2024 02:15	29.40	40.10	30.60	27.80
08/07/2024 02:30	30.00	41.30	32.00	27.20
08/07/2024 02:45	29.10	45.60	30.20	27.80
08/07/2024 03:00	30.50	46.90	31.80	28.40
08/07/2024 03:15	28.80	41.00	31.40	26.40
08/07/2024 03:30	31.30	41.80	33.90	28.10
08/07/2024 03:45	33.50	56.30	34.30	28.80
08/07/2024 04:00	60.40	82.30	56.00	29.30

08/07/2024 04:15	40.70	59.70	43.80	31.10
08/07/2024 04:30	49.00	66.30	51.90	35.70
08/07/2024 04:45	48.80	67.60	51.70	37.90
08/07/2024 05:00	42.60	61.50	44.00	35.60
08/07/2024 05:15	39.00	55.30	41.10	35.40
08/07/2024 05:30	41.60	58.10	44.10	37.00
08/07/2024 05:45	46.40	64.40	50.10	38.30
08/07/2024 06:00	51.20	69.70	48.80	38.50
08/07/2024 06:15	42.20	57.60	43.70	39.30
08/07/2024 06:30	42.10	58.90	42.50	38.50
08/07/2024 06:45	43.40	70.60	43.70	39.90
08/07/2024 07:00	42.60	59.30	43.30	41.00
08/07/2024 07:15	41.80	58.20	43.20	39.80
08/07/2024 07:30	40.60	53.50	42.00	38.10
08/07/2024 07:45	38.00	55.80	40.30	34.00
08/07/2024 08:00	39.50	67.20	38.90	31.90
08/07/2024 08:15	43.30	64.70	43.90	32.40
08/07/2024 08:30	37.70	56.00	40.20	32.30
08/07/2024 08:45	47.70	72.00	44.40	33.80
08/07/2024 09:00	40.50	59.60	42.50	35.20
08/07/2024 09:15	44.60	68.70	42.60	33.10
08/07/2024 09:30	38.10	54.00	40.20	33.20
08/07/2024 09:45	37.10	50.30	39.50	33.60
08/07/2024 10:00	36.90	53.70	39.40	33.20
08/07/2024 10:15	41.30	58.40	44.10	35.10
08/07/2024 10:30	37.50	49.60	39.50	35.10
08/07/2024 10:45	38.30	52.50	40.00	35.90
08/07/2024 11:00	39.00	58.20	40.40	35.40
08/07/2024 11:15	40.60	55.20	43.60	36.30
08/07/2024 11:30	39.50	57.90	40.90	36.00
08/07/2024 11:45	43.00	65.60	41.40	35.10
08/07/2024 12:00	39.40	60.50	41.20	34.50
08/07/2024 12:15	44.70	67.50	41.50	35.20
08/07/2024 12:30	38.70	57.70	39.80	33.80
08/07/2024 12:45	38.30	54.30	40.00	35.60
08/07/2024 13:00	38.60	55.90	40.40	33.80
08/07/2024 13:15	38.50	54.30	40.70	34.30

E.2 Measured Sound Levels at Location 2, free-field, dB

Date	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
05/07/2024 12:30	37.6	58.8	39.7	33.6
05/07/2024 12:45	46.9	71.7	47.9	35.0
05/07/2024 13:00	39.4	49.0	41.6	35.7
05/07/2024 13:15	40.9	59.1	42.5	34.7
05/07/2024 13:30	38.0	52.2	40.2	34.0
05/07/2024 13:45	41.2	60.9	41.3	34.4
05/07/2024 14:00	40.5	60.1	41.6	35.3
05/07/2024 14:15	40.1	55.2	42.5	34.0
05/07/2024 14:30	38.4	51.2	40.5	34.9
05/07/2024 14:45	39.2	60.0	41.2	34.2
05/07/2024 15:00	38.7	56.5	40.7	35.2
05/07/2024 15:15	37.6	59.0	39.9	33.8
05/07/2024 15:30	42.2	60.0	45.3	34.0
05/07/2024 15:45	41.3	64.8	42.0	34.1
05/07/2024 16:00	37.8	49.0	40.3	34.3
05/07/2024 16:15	45.9	66.7	48.2	34.8
05/07/2024 16:30	40.8	56.0	42.1	34.8
05/07/2024 16:45	37.3	67.7	37.6	32.3
05/07/2024 17:00	38.6	53.5	42.4	32.3
05/07/2024 17:15	39.4	57.4	42.4	32.0
05/07/2024 17:30	50.3	72.4	46.1	31.1
05/07/2024 17:45	37.7	59.6	39.1	31.0
05/07/2024 18:00	36.8	62.3	38.4	31.5
05/07/2024 18:15	35.5	58.3	37.2	29.3
05/07/2024 18:30	45.0	64.5	38.7	28.8
05/07/2024 18:45	37.0	51.5	39.7	30.0
05/07/2024 19:00	39.1	53.4	43.0	28.9
05/07/2024 19:15	42.5	64.2	37.9	28.5
05/07/2024 19:30	36.0	55.8	36.0	28.8
05/07/2024 19:45	37.7	54.4	41.0	29.2
05/07/2024 20:00	34.1	55.0	35.6	28.1
05/07/2024 20:15	44.1	59.3	48.6	28.1
05/07/2024 20:30	30.9	53.3	32.9	26.7
05/07/2024 20:45	35.2	51.0	38.7	26.3
05/07/2024 21:00	35.3	54.8	35.6	26.8
05/07/2024 21:15	42.2	56.7	46.8	26.6

05/07/2024 21:30	31.8	49.1	34.3	26.2
05/07/2024 21:45	29.6	46.6	31.1	25.8
05/07/2024 22:00	29.8	45.0	33.1	25.2
05/07/2024 22:15	29.8	45.7	33.2	25.2
05/07/2024 22:30	28.2	40.9	29.7	25.9
05/07/2024 22:45	31.5	48.0	32.9	26.5
05/07/2024 23:00	27.9	42.7	28.5	25.2
05/07/2024 23:15	28.8	42.2	32.0	24.7
05/07/2024 23:30	28.4	43.8	30.0	25.4
05/07/2024 23:45	33.3	50.9	36.5	26.0
06/07/2024 00:00	34.2	50.2	37.4	26.3
06/07/2024 00:15	29.6	42.6	32.1	25.5
06/07/2024 00:30	28.2	42.7	30.4	25.3
06/07/2024 00:45	29.7	43.8	31.9	26.5
06/07/2024 01:00	29.9	45.2	32.4	26.4
06/07/2024 01:15	28.7	38.1	30.7	26.1
06/07/2024 01:30	28.0	44.7	28.9	25.8
06/07/2024 01:45	28.3	45.8	28.4	26.1
06/07/2024 02:00	28.5	40.0	29.7	27.0
06/07/2024 02:15	31.7	43.2	33.3	29.1
06/07/2024 02:30	33.4	46.2	34.9	31.1
06/07/2024 02:45	30.5	45.1	33.3	25.8
06/07/2024 03:00	32.3	49.4	34.7	25.0
06/07/2024 03:15	27.6	47.8	29.1	25.0
06/07/2024 03:30	35.2	61.8	36.9	29.0
06/07/2024 03:45	46.5	65.9	48.1	41.1
06/07/2024 04:00	41.5	59.7	44.7	33.2
06/07/2024 04:15	32.0	46.8	32.8	29.3
06/07/2024 04:30	35.9	49.3	39.6	29.6
06/07/2024 04:45	42.3	57.0	46.1	33.4
06/07/2024 05:00	42.5	53.0	45.1	35.9
06/07/2024 05:15	40.6	57.2	43.9	31.9
06/07/2024 05:30	42.6	62.5	44.2	30.0
06/07/2024 05:45	41.1	63.3	43.5	28.6
06/07/2024 06:00	42.0	61.9	40.8	30.3
06/07/2024 06:15	48.9	65.6	50.7	41.6
06/07/2024 06:30	49.0	64.1	50.6	43.8
06/07/2024 06:45	51.0	75.1	51.4	47.2

06/07/2024 07:00	49.8	73.6	51.4	43.5
06/07/2024 07:15	53.1	73.4	54.2	47.1
06/07/2024 07:30	52.4	73.6	53.2	48.8
06/07/2024 07:45	49.0	71.3	49.8	46.1
06/07/2024 08:00	45.0	65.9	46.0	42.6
06/07/2024 08:15	45.7	68.2	47.7	41.0
06/07/2024 08:30	52.1	71.5	53.0	48.5
06/07/2024 08:45	52.3	74.1	53.7	47.6
06/07/2024 09:00	51.4	75.3	51.9	46.6
06/07/2024 09:15	48.1	71.3	49.7	43.2
06/07/2024 09:30	44.4	59.3	46.8	40.5
06/07/2024 09:45	44.7	73.1	43.7	36.8
06/07/2024 10:00	51.5	87.9	36.0	29.4
06/07/2024 10:15	38.5	53.2	40.6	35.4
06/07/2024 10:30	51.7	75.4	54.5	33.9
06/07/2024 10:45	33.3	50.9	35.0	30.0
06/07/2024 11:00	34.4	48.7	36.1	30.8
06/07/2024 11:15	40.9	65.1	39.1	32.0
06/07/2024 11:30	41.4	69.8	40.3	30.3
06/07/2024 11:45	32.2	42.8	33.7	29.8
06/07/2024 12:00	34.7	48.0	36.6	30.7
06/07/2024 12:15	34.2	42.7	36.3	31.5
06/07/2024 12:30	34.6	51.3	35.9	31.3
06/07/2024 12:45	31.8	50.1	33.4	28.9
06/07/2024 13:00	48.2	81.1	41.4	28.7
06/07/2024 13:15	44.5	59.8	46.8	41.0
06/07/2024 13:30	46.6	63.9	48.4	41.5
06/07/2024 13:45	44.2	56.8	46.6	40.5
06/07/2024 14:00	45.8	55.5	48.2	41.6
06/07/2024 14:15	45.5	57.4	48.2	41.2
06/07/2024 14:30	44.3	61.0	46.7	39.6
06/07/2024 14:45	46.2	67.1	48.0	40.3
06/07/2024 15:00	45.0	55.8	47.6	40.2
06/07/2024 15:15	43.5	60.3	45.8	39.8
06/07/2024 15:30	45.5	54.0	48.1	41.9
06/07/2024 15:45	44.2	53.0	46.9	40.1
06/07/2024 16:00	44.7	58.7	47.6	38.9
06/07/2024 16:15	44.9	58.3	47.3	41.1

06/07/2024 16:30	40.8	49.7	43.0	37.7
06/07/2024 16:45	41.3	52.7	43.7	37.3
06/07/2024 17:00	40.8	57.0	43.1	37.0
06/07/2024 17:15	42.1	52.8	44.3	38.3
06/07/2024 17:30	42.3	60.4	44.3	37.4
06/07/2024 17:45	42.5	59.7	45.8	36.5
06/07/2024 18:00	43.9	52.1	45.9	41.3
06/07/2024 18:15	44.0	53.0	46.0	41.5
06/07/2024 18:30	45.0	58.5	47.3	40.9
06/07/2024 18:45	49.5	58.0	51.8	44.7
06/07/2024 19:00	50.8	62.1	53.7	46.1
06/07/2024 19:15	49.6	61.0	52.3	45.4
06/07/2024 19:30	49.9	62.2	52.4	44.1
06/07/2024 19:45	49.9	58.0	52.8	43.3
06/07/2024 20:00	43.9	60.7	45.4	39.5
06/07/2024 20:15	44.2	60.6	47.1	38.7
06/07/2024 20:30	58.5	93.8	47.3	38.9
06/07/2024 20:45	41.8	55.3	44.2	37.8
06/07/2024 21:00	40.5	51.8	42.4	38.0
06/07/2024 21:15	39.5	54.2	41.0	36.2
06/07/2024 21:30	38.9	48.6	40.4	36.5
06/07/2024 21:45	39.2	47.5	40.7	37.2
06/07/2024 22:00	39.0	47.3	41.0	36.4
06/07/2024 22:15	39.8	48.3	41.7	36.7
06/07/2024 22:30	39.1	47.6	40.8	36.9
06/07/2024 22:45	37.3	45.6	39.2	34.9
06/07/2024 23:00	36.7	45.1	38.2	34.6
06/07/2024 23:15	37.5	49.7	39.3	34.9
06/07/2024 23:30	38.0	50.2	39.6	35.6
06/07/2024 23:45	36.8	47.5	38.4	34.7
07/07/2024 00:00	37.2	46.2	38.6	35.4
07/07/2024 00:15	38.0	44.9	39.7	35.6
07/07/2024 00:30	37.7	44.8	39.5	35.3
07/07/2024 00:45	37.5	44.4	39.2	35.1
07/07/2024 01:00	37.8	48.6	39.2	36.0
07/07/2024 01:15	37.0	45.8	38.9	34.9
07/07/2024 01:30	34.7	43.6	36.1	32.6
07/07/2024 01:45	33.2	42.2	34.5	31.5

07/07/2024 02:00	33.5	42.3	35.1	31.5
07/07/2024 02:15	34.8	44.1	36.4	32.7
07/07/2024 02:30	34.9	44.1	36.8	32.3
07/07/2024 02:45	33.6	40.3	34.8	31.8
07/07/2024 03:00	33.3	41.9	34.7	31.6
07/07/2024 03:15	34.4	44.0	36.1	32.4
07/07/2024 03:30	34.0	42.2	35.6	31.9
07/07/2024 03:45	34.0	42.7	35.8	31.9
07/07/2024 04:00	35.4	44.2	37.2	33.1
07/07/2024 04:15	35.5	46.7	37.5	32.6
07/07/2024 04:30	40.5	54.5	43.6	35.3
07/07/2024 04:45	40.6	63.9	43.3	35.4
07/07/2024 05:00	41.0	50.7	44.0	35.2
07/07/2024 05:15	43.3	57.8	46.1	38.2
07/07/2024 05:30	42.0	57.7	44.6	36.8
07/07/2024 05:45	41.8	55.8	44.2	38.0
07/07/2024 06:00	43.4	70.1	44.2	37.3
07/07/2024 06:15	44.7	60.8	46.2	38.9
07/07/2024 06:30	43.9	52.7	46.1	40.9
07/07/2024 06:45	44.7	64.0	46.8	40.8
07/07/2024 07:00	49.8	74.2	51.7	45.1
07/07/2024 07:15	44.9	60.1	47.3	39.6
07/07/2024 07:30	43.5	69.1	45.3	35.7
07/07/2024 07:45	44.7	61.1	45.2	37.5
07/07/2024 08:00	44.7	66.9	46.4	38.7
07/07/2024 08:15	45.8	64.8	49.5	37.6
07/07/2024 08:30	41.9	56.1	44.8	36.3
07/07/2024 08:45	40.5	55.5	43.7	33.8
07/07/2024 09:00	39.5	54.3	43.0	32.3
07/07/2024 09:15	37.6	53.3	40.7	32.9
07/07/2024 09:30	38.9	50.7	42.2	33.3
07/07/2024 09:45	42.8	61.0	43.9	32.9
07/07/2024 10:00	44.4	62.0	47.5	34.1
07/07/2024 10:15	40.0	56.9	42.4	32.9
07/07/2024 10:30	42.8	67.4	41.8	33.1
07/07/2024 10:45	38.3	58.6	40.5	34.3
07/07/2024 11:00	39.7	58.1	42.4	34.5
07/07/2024 11:15	36.1	48.6	38.1	33.0

07/07/2024 11:30	38.5	58.6	40.6	34.5
07/07/2024 11:45	45.3	66.4	44.5	36.1
07/07/2024 12:00	38.3	59.5	39.7	33.0
07/07/2024 12:15	39.2	58.8	41.3	33.7
07/07/2024 12:30	36.2	50.0	38.2	33.5
07/07/2024 12:45	38.7	54.3	41.4	33.5
07/07/2024 13:00	42.4	73.3	40.9	34.0
07/07/2024 13:15	40.8	59.3	40.9	33.7
07/07/2024 13:30	35.3	49.3	37.2	32.3
07/07/2024 13:45	35.9	49.4	38.0	32.2
07/07/2024 14:00	37.2	58.8	39.0	32.9
07/07/2024 14:15	39.1	52.1	41.8	34.3
07/07/2024 14:30	40.5	60.1	41.5	34.3
07/07/2024 14:45	40.3	58.9	41.6	34.3
07/07/2024 15:00	45.0	65.1	43.0	34.4
07/07/2024 15:15	45.2	57.1	48.9	33.9
07/07/2024 15:30	47.3	61.4	50.8	34.2
07/07/2024 15:45	44.3	64.1	46.5	34.7
07/07/2024 16:00	38.2	51.3	40.6	34.1
07/07/2024 16:15	42.4	65.7	38.9	32.7
07/07/2024 16:30	37.2	47.0	39.5	34.0
07/07/2024 16:45	40.5	57.0	43.5	32.6
07/07/2024 17:00	36.9	56.9	38.9	33.0
07/07/2024 17:15	38.5	56.5	41.9	32.2
07/07/2024 17:30	37.5	53.4	41.1	31.4
07/07/2024 17:45	36.0	54.9	38.9	31.7
07/07/2024 18:00	36.6	52.5	38.9	30.9
07/07/2024 18:15	37.3	50.9	40.1	31.7
07/07/2024 18:30	35.9	51.1	38.3	31.5
07/07/2024 18:45	39.6	62.9	38.9	30.3
07/07/2024 19:00	38.4	51.5	42.4	31.1
07/07/2024 19:15	42.2	58.8	43.7	30.8
07/07/2024 19:30	39.4	61.6	41.6	31.2
07/07/2024 19:45	38.4	63.9	38.8	29.7
07/07/2024 20:00	38.9	57.9	43.2	29.0
07/07/2024 20:15	36.6	55.2	39.8	29.2
07/07/2024 20:30	36.7	55.1	36.4	28.7
07/07/2024 20:45	47.5	65.0	51.1	29.2

07/07/2024 21:00	44.1	60.4	49.0	30.0
07/07/2024 21:15	41.8	58.5	46.0	28.5
07/07/2024 21:30	36.7	66.6	35.8	29.2
07/07/2024 21:45	30.7	43.5	32.5	27.8
07/07/2024 22:00	31.3	40.2	33.4	28.4
07/07/2024 22:15	30.0	38.3	32.0	28.0
07/07/2024 22:30	32.3	41.3	34.8	28.0
07/07/2024 22:45	32.4	43.7	34.2	28.9
07/07/2024 23:00	32.7	41.0	34.7	29.9
07/07/2024 23:15	32.4	42.8	34.1	30.0
07/07/2024 23:30	35.5	45.6	37.3	32.8
07/07/2024 23:45	33.9	42.8	36.0	31.3
08/07/2024 00:00	36.5	45.2	39.3	32.9
08/07/2024 00:15	37.3	45.6	39.0	34.9
08/07/2024 00:30	39.1	49.2	41.2	36.0
08/07/2024 00:45	36.8	44.7	38.2	34.9
08/07/2024 01:00	38.5	45.2	39.9	36.6
08/07/2024 01:15	37.6	44.5	39.4	35.0
08/07/2024 01:30	36.8	40.5	37.8	35.6
08/07/2024 01:45	36.2	41.1	37.2	35.0
08/07/2024 02:00	36.5	41.2	37.8	34.8
08/07/2024 02:15	36.8	41.2	38.1	35.2
08/07/2024 02:30	34.5	40.5	35.4	33.2
08/07/2024 02:45	35.5	39.8	36.6	33.8
08/07/2024 03:00	37.0	46.8	38.4	35.1
08/07/2024 03:15	35.0	44.7	36.6	33.0
08/07/2024 03:30	35.5	49.2	37.1	32.8
08/07/2024 03:45	35.5	45.3	36.7	33.9
08/07/2024 04:00	38.5	47.0	40.4	35.7
08/07/2024 04:15	40.4	49.8	42.8	37.6
08/07/2024 04:30	41.9	52.3	44.7	37.7
08/07/2024 04:45	43.9	55.5	47.0	38.5
08/07/2024 05:00	42.5	52.2	45.3	38.1
08/07/2024 05:15	44.5	60.4	46.8	40.5
08/07/2024 05:30	46.4	60.2	48.6	42.5
08/07/2024 05:45	45.2	56.8	47.2	42.4
08/07/2024 06:00	47.7	59.5	49.5	44.9
08/07/2024 06:15	48.2	56.2	49.5	46.5

08/07/2024 06:30	49.3	60.9	50.4	47.5
08/07/2024 06:45	51.5	64.6	53.1	49.0
08/07/2024 07:00	50.7	55.6	51.7	49.3
08/07/2024 07:15	48.9	56.2	50.8	46.7
08/07/2024 07:30	47.4	59.6	49.5	43.3
08/07/2024 07:45	43.6	58.3	47.7	35.7
08/07/2024 08:00	40.7	56.9	43.3	33.8
08/07/2024 08:15	42.7	58.0	41.9	33.3
08/07/2024 08:30	36.6	58.6	37.9	32.9
08/07/2024 08:45	37.8	51.3	40.3	34.2
08/07/2024 09:00	37.9	54.8	40.5	34.2
08/07/2024 09:15	43.5	61.5	44.9	35.7
08/07/2024 09:30	44.1	61.1	46.8	36.5
08/07/2024 09:45	42.3	63.7	45.4	36.7
08/07/2024 10:00	43.5	62.1	45.9	38.1
08/07/2024 10:15	44.3	58.0	47.9	38.6
08/07/2024 10:30	41.0	53.4	42.5	39.1
08/07/2024 10:45	41.2	64.1	43.0	38.2
08/07/2024 11:00	43.7	60.9	45.0	39.0
08/07/2024 11:15	41.4	52.8	43.3	39.0
08/07/2024 11:30	42.3	61.7	43.5	37.9
08/07/2024 11:45	44.3	59.5	48.3	38.6
08/07/2024 12:00	41.7	58.3	43.6	37.2
08/07/2024 12:15	45.1	65.8	41.6	37.5
08/07/2024 12:30	43.0	67.5	41.8	37.8
08/07/2024 12:45	43.2	61.9	44.9	38.7
08/07/2024 13:00	43.7	66.8	44.3	37.5
08/07/2024 13:15	43.0	67.1	43.3	39.1
08/07/2024 13:30	41.5	55.8	43.4	38.2
08/07/2024 13:45	42.7	69.6	41.5	38.0

E.3 Measured Sound Levels at Location 3, free-field, dB

Date	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
05/07/2024 13:30	51.9	65.6	53.7	49.4
05/07/2024 13:45	50.6	78.1	52.1	46.6
05/07/2024 14:00	50.5	66.8	52.9	46.7
05/07/2024 14:15	51.7	62.7	54.2	47.7
05/07/2024 14:30	56.0	66.9	58.1	50.1

05/07/2024 14:45	53.2	69.7	56.9	46.3
05/07/2024 15:00	49.2	64.9	51.1	45.3
05/07/2024 15:15	51.9	62.7	54.5	47.6
05/07/2024 15:30	52.2	67.4	54.4	48.9
05/07/2024 15:45	51.1	62.9	53.3	47.6
05/07/2024 16:00	50.8	67.7	52.9	47.3
05/07/2024 16:15	51.7	72.7	53.0	47.1
05/07/2024 16:30	51.2	61.8	53.6	47.1
05/07/2024 16:45	47.8	63.8	50.4	42.8
05/07/2024 17:00	44.4	63.7	45.2	39.4
05/07/2024 17:15	42.6	55.7	44.6	39.1
05/07/2024 17:30	41.6	57.8	43.4	38.3
05/07/2024 17:45	40.5	56.1	42.4	37.4
05/07/2024 18:00	39.3	52.2	40.8	36.7
05/07/2024 18:15	42.0	56.5	44.2	36.7
05/07/2024 18:30	41.8	64.4	42.1	35.6
05/07/2024 18:45	40.9	65.0	42.8	34.7
05/07/2024 19:00	39.8	64.3	42.5	34.6
05/07/2024 19:15	36.8	54.5	38.8	33.7
05/07/2024 19:30	42.0	62.4	39.5	34.3
05/07/2024 19:45	39.8	60.0	40.8	34.2
05/07/2024 20:00	37.6	58.7	38.4	33.2
05/07/2024 20:15	41.8	61.5	45.2	35.2
05/07/2024 20:30	40.9	59.2	40.7	34.2
05/07/2024 20:45	38.3	62.9	38.2	34.4
05/07/2024 21:00	36.6	63.3	37.5	34.6
05/07/2024 21:15	42.6	61.1	40.1	35.8
05/07/2024 21:30	40.4	60.0	41.0	36.4
05/07/2024 21:45	36.2	49.6	37.3	34.6
05/07/2024 22:00	41.0	69.7	39.5	35.0
05/07/2024 22:15	41.8	67.5	41.7	34.6
05/07/2024 22:30	39.2	64.4	37.6	34.1
05/07/2024 22:45	38.5	50.7	40.7	35.3
05/07/2024 23:00	38.2	51.8	39.6	35.9
05/07/2024 23:15	38.0	48.4	39.3	36.4
05/07/2024 23:30	39.9	46.2	41.8	36.8
05/07/2024 23:45	39.0	53.8	40.4	36.9
06/07/2024 00:00	39.1	47.2	40.3	37.7
06/07/2024 00:15	39.5	51.6	40.6	37.9
06/07/2024 00:30	39.6	46.1	40.7	38.0
06/07/2024 00:45	38.8	49.2	40.5	35.7
06/07/2024 01:00	39.2	55.3	41.0	36.8
06/07/2024 01:15	39.8	47.0	41.6	38.1
06/07/2024 01:30	38.7	48.8	40.2	37.1
06/07/2024 01:45	37.1	56.8	39.2	34.0
06/07/2024 02:00	37.1	45.3	38.8	34.5

06/07/2024 02:15	37.7	47.0	40.8	33.9
06/07/2024 02:30	40.4	58.3	43.1	37.1
06/07/2024 02:45	41.6	57.7	42.5	34.8
06/07/2024 03:00	41.4	58.5	40.5	35.6
06/07/2024 03:15	37.6	54.5	38.8	36.1
06/07/2024 03:30	37.7	51.4	39.0	36.0
06/07/2024 03:45	34.9	51.0	36.7	31.7
06/07/2024 04:00	32.4	49.6	34.2	29.9
06/07/2024 04:15	32.9	47.5	34.7	30.1
06/07/2024 04:30	32.9	50.3	35.3	29.1
06/07/2024 04:45	38.9	62.4	39.8	29.7
06/07/2024 05:00	43.2	64.3	45.3	32.8
06/07/2024 05:15	38.9	54.4	41.3	33.6
06/07/2024 05:30	44.3	65.1	46.1	36.2
06/07/2024 05:45	44.0	57.5	46.4	39.8
06/07/2024 06:00	47.2	73.1	49.1	40.9
06/07/2024 06:15	43.6	60.5	45.3	39.3
06/07/2024 06:30	51.0	72.3	54.4	40.8
06/07/2024 06:45	49.6	68.9	52.2	43.5
06/07/2024 07:00	53.3	69.7	54.4	50.9
06/07/2024 07:15	52.1	71.4	53.0	50.3
06/07/2024 07:30	49.1	71.8	51.0	44.7
06/07/2024 07:45	52.8	77.2	54.6	48.8
06/07/2024 08:00	48.2	73.9	49.1	44.3
06/07/2024 08:15	49.1	67.1	51.6	44.9
06/07/2024 08:30	49.2	69.9	50.2	47.5
06/07/2024 08:45	49.8	66.9	50.9	46.4
06/07/2024 09:00	51.6	75.0	53.4	47.0
06/07/2024 09:15	50.6	71.8	51.5	48.2
06/07/2024 09:30	53.0	73.1	55.0	48.8
06/07/2024 09:45	51.7	71.7	53.8	47.3
06/07/2024 10:00	47.3	65.7	48.9	42.7
06/07/2024 10:15	46.8	60.4	48.8	43.8
06/07/2024 10:30	47.4	63.2	49.6	43.2
06/07/2024 10:45	45.8	64.1	47.1	43.2
06/07/2024 11:00	48.4	62.9	51.1	44.0
06/07/2024 11:15	48.8	59.8	51.4	45.0
06/07/2024 11:30	50.0	63.1	52.4	45.4
06/07/2024 11:45	46.6	63.3	48.2	42.9
06/07/2024 12:00	47.1	57.2	50.0	43.2
06/07/2024 12:15	49.0	62.6	51.5	45.1
06/07/2024 12:30	49.0	65.5	50.7	43.8
06/07/2024 12:45	47.3	65.3	50.6	42.4
06/07/2024 13:00	46.4	58.5	48.7	42.7
06/07/2024 13:15	47.3	56.1	50.5	42.3
06/07/2024 13:30	51.0	62.8	54.2	45.0

06/07/2024 13:45	52.2	63.2	55.8	44.7
06/07/2024 14:00	52.0	64.7	54.9	46.3
06/07/2024 14:15	51.1	64.1	53.6	45.2
06/07/2024 14:30	50.3	61.2	53.1	45.1
06/07/2024 14:45	51.5	64.7	54.5	45.0
06/07/2024 15:00	52.3	62.8	55.1	46.1
06/07/2024 15:15	51.5	65.6	54.2	45.2
06/07/2024 15:30	50.3	63.6	52.9	45.1
06/07/2024 15:45	50.6	63.9	53.6	44.9
06/07/2024 16:00	48.8	64.4	51.2	43.0
06/07/2024 16:15	47.6	58.5	51.2	40.9
06/07/2024 16:30	45.1	57.1	48.2	40.0
06/07/2024 16:45	48.8	71.3	52.0	40.8
06/07/2024 17:00	47.3	62.5	50.3	41.7
06/07/2024 17:15	43.3	52.9	46.4	38.3
06/07/2024 17:30	43.9	53.7	46.8	39.1
06/07/2024 17:45	46.0	60.2	49.3	39.1
06/07/2024 18:00	50.2	71.7	52.2	40.0
06/07/2024 18:15	47.9	63.0	50.9	41.3
06/07/2024 18:30	46.6	60.9	49.6	41.4
06/07/2024 18:45	47.6	72.4	50.2	41.3
06/07/2024 19:00	49.4	65.4	52.3	42.9
06/07/2024 19:15	45.4	62.5	48.1	39.9
06/07/2024 19:30	42.8	56.0	45.5	38.9
06/07/2024 19:45	45.4	66.5	47.0	39.8
06/07/2024 20:00	47.6	67.8	48.7	45.4
06/07/2024 20:15	45.8	66.8	47.3	41.0
06/07/2024 20:30	45.0	66.2	44.2	38.0
06/07/2024 20:45	44.6	64.3	47.6	37.8
06/07/2024 21:00	39.6	61.9	41.2	36.8
06/07/2024 21:15	39.1	64.5	39.7	36.5
06/07/2024 21:30	40.0	58.7	41.2	36.9
06/07/2024 21:45	39.5	57.9	40.6	37.1
06/07/2024 22:00	39.8	58.2	39.8	37.3
06/07/2024 22:15	42.1	68.2	40.4	37.4
06/07/2024 22:30	40.5	65.6	40.6	37.2
06/07/2024 22:45	39.2	47.0	40.8	37.2
06/07/2024 23:00	39.2	53.4	39.8	37.5
06/07/2024 23:15	43.0	62.8	40.8	37.7
06/07/2024 23:30	39.3	64.3	39.8	37.6
06/07/2024 23:45	38.2	48.4	39.3	36.6
07/07/2024 00:00	37.7	45.7	38.9	36.2
07/07/2024 00:15	38.4	50.1	39.4	36.6
07/07/2024 00:30	37.7	45.1	38.9	36.1
07/07/2024 00:45	37.5	49.5	38.6	35.9
07/07/2024 01:00	36.5	41.9	37.5	35.1

07/07/2024 01:15	36.0	42.0	37.1	34.7
07/07/2024 01:30	35.8	47.0	37.1	33.9
07/07/2024 01:45	35.1	52.0	36.1	32.2
07/07/2024 02:00	37.5	54.9	38.7	34.1
07/07/2024 02:15	35.4	49.9	36.4	34.0
07/07/2024 02:30	36.2	53.8	37.4	33.3
07/07/2024 02:45	36.0	50.8	36.7	33.9
07/07/2024 03:00	34.3	43.3	35.5	32.2
07/07/2024 03:15	40.0	68.9	38.4	33.7
07/07/2024 03:30	35.6	41.4	36.7	34.2
07/07/2024 03:45	37.0	47.2	38.4	35.1
07/07/2024 04:00	37.2	43.3	38.8	35.4
07/07/2024 04:15	39.4	47.6	40.8	37.7
07/07/2024 04:30	40.1	60.7	40.1	35.6
07/07/2024 04:45	43.2	62.0	44.1	36.3
07/07/2024 05:00	45.9	65.5	44.9	36.3
07/07/2024 05:15	45.4	63.9	46.9	37.4
07/07/2024 05:30	43.8	57.9	47.8	37.3
07/07/2024 05:45	43.8	61.5	46.4	35.6
07/07/2024 06:00	42.7	63.7	44.6	36.1
07/07/2024 06:15	43.3	57.0	45.8	37.3
07/07/2024 06:30	38.3	47.2	39.8	36.3
07/07/2024 06:45	48.5	69.5	52.7	40.3
07/07/2024 07:00	46.1	66.8	48.8	42.3
07/07/2024 07:15	44.5	59.0	46.3	40.9
07/07/2024 07:30	43.1	60.5	43.4	36.7
07/07/2024 07:45	39.1	56.4	41.6	35.8
07/07/2024 08:00	44.6	61.1	46.5	38.9
07/07/2024 08:15	41.0	57.7	42.9	35.9
07/07/2024 08:30	37.6	55.7	39.9	34.9
07/07/2024 08:45	43.5	72.5	43.2	35.2
07/07/2024 09:00	41.8	51.7	45.1	36.0
07/07/2024 09:15	36.3	49.4	38.0	34.1
07/07/2024 09:30	41.8	66.7	43.5	33.6
07/07/2024 09:45	43.6	64.0	45.8	33.3
07/07/2024 10:00	37.2	55.0	37.8	33.0
07/07/2024 10:15	41.8	64.2	42.1	33.6
07/07/2024 10:30	41.5	65.0	42.4	33.3
07/07/2024 10:45	40.5	64.9	39.3	33.6
07/07/2024 11:00	44.1	64.9	44.5	34.8
07/07/2024 11:15	40.4	61.2	40.8	35.1
07/07/2024 11:30	47.5	67.4	48.5	34.8
07/07/2024 11:45	41.1	61.2	43.2	33.5
07/07/2024 12:00	40.8	62.5	39.3	34.4
07/07/2024 12:15	45.1	64.3	42.5	34.3
07/07/2024 12:30	42.8	61.9	44.2	34.7

07/07/2024 12:45	47.3	67.3	48.4	38.6
07/07/2024 13:00	43.7	63.3	46.2	39.5
07/07/2024 13:15	42.7	58.6	44.9	38.3
07/07/2024 13:30	40.5	51.2	42.9	37.5
07/07/2024 13:45	42.4	54.5	44.8	38.2
07/07/2024 14:00	42.1	57.1	44.2	38.1
07/07/2024 14:15	43.3	57.2	46.0	38.5
07/07/2024 14:30	43.5	55.0	46.4	38.7
07/07/2024 14:45	45.7	70.6	47.4	40.0
07/07/2024 15:00	45.6	64.7	49.4	39.8
07/07/2024 15:15	43.4	57.3	46.0	39.3
07/07/2024 15:30	45.1	68.9	47.1	39.1
07/07/2024 15:45	47.5	65.4	50.2	39.4
07/07/2024 16:00	44.0	59.8	46.5	39.0
07/07/2024 16:15	45.5	66.0	46.8	38.6
07/07/2024 16:30	48.0	75.4	48.3	40.0
07/07/2024 16:45	44.5	56.3	47.3	39.8
07/07/2024 17:00	43.0	61.3	45.4	39.3
07/07/2024 17:15	42.7	58.1	45.0	38.7
07/07/2024 17:30	42.1	54.9	44.6	38.3
07/07/2024 17:45	44.0	74.8	43.7	38.0
07/07/2024 18:00	48.6	77.0	45.4	37.8
07/07/2024 18:15	42.2	54.2	45.7	37.1
07/07/2024 18:30	47.8	70.4	46.5	38.3
07/07/2024 18:45	42.2	65.9	44.3	37.9
07/07/2024 19:00	46.2	70.4	43.0	37.7
07/07/2024 19:15	43.9	61.8	45.4	36.4
07/07/2024 19:30	46.3	65.0	44.1	36.5
07/07/2024 19:45	44.2	65.6	43.2	35.7
07/07/2024 20:00	44.5	62.6	45.8	37.7
07/07/2024 20:15	39.5	56.4	40.3	36.0
07/07/2024 20:30	37.2	50.2	38.6	34.9
07/07/2024 20:45	44.0	62.8	44.5	34.7
07/07/2024 21:00	38.0	61.3	36.6	33.8
07/07/2024 21:15	35.4	45.5	36.9	33.5
07/07/2024 21:30	34.6	42.2	36.2	33.0
07/07/2024 21:45	36.0	63.4	36.0	33.2
07/07/2024 22:00	34.6	44.5	36.0	32.1
07/07/2024 22:15	34.8	58.4	35.4	32.7
07/07/2024 22:30	37.2	63.3	37.3	33.5
07/07/2024 22:45	34.0	44.5	35.1	32.4
07/07/2024 23:00	37.5	63.6	38.8	33.3
07/07/2024 23:15	34.0	43.1	35.2	32.6
07/07/2024 23:30	35.8	42.6	37.2	33.5
07/07/2024 23:45	36.6	48.7	37.8	34.9
08/07/2024 00:00	36.7	43.1	37.8	35.2

08/07/2024 00:15	35.6	42.0	37.1	33.8
08/07/2024 00:30	36.5	46.7	38.5	33.7
08/07/2024 00:45	34.8	44.5	36.0	33.1
08/07/2024 01:00	35.0	45.0	36.2	33.3
08/07/2024 01:15	35.0	44.1	36.5	33.1
08/07/2024 01:30	34.1	44.4	35.9	31.9
08/07/2024 01:45	35.6	42.2	37.1	33.8
08/07/2024 02:00	34.6	44.1	37.2	31.5
08/07/2024 02:15	33.4	41.2	34.8	31.5
08/07/2024 02:30	33.6	47.0	35.1	31.1
08/07/2024 02:45	32.5	45.3	33.5	31.4
08/07/2024 03:00	33.4	45.9	34.7	31.8
08/07/2024 03:15	33.7	43.2	35.2	31.8
08/07/2024 03:30	34.7	46.9	36.1	33.0
08/07/2024 03:45	37.2	48.6	39.4	33.7
08/07/2024 04:00	37.4	43.8	38.8	35.7
08/07/2024 04:15	38.7	47.0	40.3	36.7
08/07/2024 04:30	38.0	49.5	39.5	36.0
08/07/2024 04:45	44.5	61.2	46.0	36.9
08/07/2024 05:00	41.3	60.5	42.4	38.1
08/07/2024 05:15	44.5	66.0	43.7	39.8
08/07/2024 05:30	42.7	48.6	43.9	41.0
08/07/2024 05:45	44.2	66.5	44.1	41.5
08/07/2024 06:00	44.5	62.9	43.2	39.2
08/07/2024 06:15	44.9	61.7	40.6	35.8
08/07/2024 06:30	39.2	57.4	40.2	36.4
08/07/2024 06:45	48.1	58.6	49.4	35.9
08/07/2024 07:00	42.8	60.6	42.7	35.7
08/07/2024 07:15	42.9	59.4	43.3	37.4
08/07/2024 07:30	46.0	70.7	48.9	40.3
08/07/2024 07:45	44.9	68.0	45.8	41.6
08/07/2024 08:00	44.9	60.2	46.1	41.5
08/07/2024 08:15	43.9	64.0	44.9	41.3
08/07/2024 08:30	45.4	60.0	46.7	42.0
08/07/2024 08:45	45.5	60.1	46.5	42.4
08/07/2024 09:00	46.3	62.1	48.0	42.4
08/07/2024 09:15	48.2	61.8	50.8	43.0
08/07/2024 09:30	47.8	66.7	50.4	44.1
08/07/2024 09:45	46.3	61.2	48.6	43.0
08/07/2024 10:00	45.3	58.3	46.8	42.5
08/07/2024 10:15	49.4	68.6	48.1	42.3
08/07/2024 10:30	44.9	55.8	46.5	42.8
08/07/2024 10:45	46.9	59.0	49.7	42.9
08/07/2024 11:00	48.5	60.2	50.3	45.4
08/07/2024 11:15	48.5	69.7	49.8	44.3
08/07/2024 11:30	48.2	72.0	46.0	42.4

08/07/2024 11:45	45.7	63.8	46.9	42.6
08/07/2024 12:00	44.8	58.0	46.1	42.7
08/07/2024 12:15	48.0	65.2	51.4	43.6
08/07/2024 12:30	45.1	62.8	46.4	42.1

E.4 Measured Sound Levels at Location 4, free-field, dB

Date	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
05/07/2024 11:00	42.3	61.1	43.5	38.8
05/07/2024 11:15	42.7	56.6	43.8	41.0
05/07/2024 11:30	43.2	62.3	44.7	38.7
05/07/2024 11:45	46.1	73.9	43.8	37.4
05/07/2024 12:00	42.3	60.2	44.1	38.7
05/07/2024 12:15	43.6	63.7	44.0	38.9
05/07/2024 12:30	43.0	62.8	43.7	38.8
05/07/2024 12:45	48.0	68.6	49.5	38.9
05/07/2024 13:00	46.9	60.4	47.8	45.9
05/07/2024 13:15	48.3	66.9	50.1	40.0
05/07/2024 13:30	44.9	60.9	46.5	40.1
05/07/2024 13:45	46.6	66.1	48.3	39.3
05/07/2024 14:00	50.8	61.1	57.3	40.3
05/07/2024 14:15	41.5	53.4	43.3	39.2
05/07/2024 14:30	43.5	60.7	45.7	38.5
05/07/2024 14:45	42.5	59.6	45.3	37.8
05/07/2024 15:00	41.8	57.3	43.1	38.8
05/07/2024 15:15	43.4	63.0	45.7	39.4
05/07/2024 15:30	48.1	69.8	51.2	39.1
05/07/2024 15:45	43.4	59.5	45.6	39.5
05/07/2024 16:00	42.1	59.1	44.0	39.2
05/07/2024 16:15	45.9	61.8	46.9	39.9
05/07/2024 16:30	43.6	62.0	45.4	39.6
05/07/2024 16:45	44.3	63.4	44.2	39.3
05/07/2024 17:00	41.4	57.0	43.0	38.3
05/07/2024 17:15	45.7	67.6	47.2	38.0
05/07/2024 17:30	48.0	66.3	48.3	37.6
05/07/2024 17:45	44.0	63.2	47.5	37.0
05/07/2024 18:00	41.9	57.7	45.2	35.8
05/07/2024 18:15	43.6	67.8	46.1	37.5
05/07/2024 18:30	55.7	77.2	45.0	37.7
05/07/2024 20:30	49.5	77.0	51.8	41.4
05/07/2024 20:45	43.7	63.3	46.0	39.1
05/07/2024 21:00	45.0	70.1	45.0	32.7
05/07/2024 21:15	39.8	58.0	42.1	32.6
05/07/2024 21:30	37.2	47.7	39.2	34.7
05/07/2024 21:45	37.9	50.8	40.8	33.4
05/07/2024 22:00	38.7	55.8	39.8	35.1

05/07/2024 22:15	37.5	50.5	39.7	34.4
05/07/2024 22:30	36.9	48.2	38.9	33.4
05/07/2024 22:45	36.1	49.3	39.3	32.4
05/07/2024 23:00	36.7	53.4	38.4	34.0
05/07/2024 23:15	35.2	50.4	36.8	32.7
05/07/2024 23:30	37.3	44.2	39.5	34.4
05/07/2024 23:45	40.2	52.7	42.9	36.3
06/07/2024 00:00	40.8	49.9	43.2	37.4
06/07/2024 00:15	39.4	49.5	41.4	36.1
06/07/2024 00:30	39.4	46.2	41.5	36.5
06/07/2024 00:45	42.0	50.2	44.4	38.8
06/07/2024 01:00	44.3	57.1	48.2	37.3
06/07/2024 01:15	42.4	52.5	46.1	35.3
06/07/2024 01:30	40.2	48.8	42.8	36.3
06/07/2024 01:45	40.4	48.1	42.8	36.5
06/07/2024 02:00	42.6	48.7	44.8	39.3
06/07/2024 02:15	41.3	48.1	43.5	38.5
06/07/2024 02:30	40.8	48.8	42.9	38.0
06/07/2024 02:45	38.7	49.3	41.8	32.1
06/07/2024 03:00	44.4	55.3	47.5	34.7
06/07/2024 03:15	39.0	54.8	40.5	37.2
06/07/2024 03:30	37.5	55.2	39.6	34.8
06/07/2024 03:45	38.7	52.8	40.8	35.5
06/07/2024 04:00	41.7	52.4	45.0	36.6
06/07/2024 04:15	43.1	54.5	45.5	39.4
06/07/2024 04:30	44.2	57.9	46.4	40.6
06/07/2024 04:45	42.1	56.0	44.2	38.7
06/07/2024 05:00	46.4	66.3	49.3	35.1
06/07/2024 05:15	44.1	59.7	46.6	37.4
06/07/2024 05:30	49.6	65.8	51.4	39.2
06/07/2024 05:45	44.9	60.5	47.6	38.4
06/07/2024 06:00	44.0	61.1	47.2	38.3
06/07/2024 06:15	45.9	66.7	47.2	38.5
06/07/2024 06:30	48.7	61.2	50.8	45.5
06/07/2024 06:45	49.8	62.6	51.2	47.0
06/07/2024 07:00	50.8	63.3	51.7	49.6
06/07/2024 07:15	52.5	60.6	54.0	50.6
06/07/2024 07:30	50.8	64.0	52.2	49.1
06/07/2024 07:45	51.7	58.8	52.9	50.4
06/07/2024 08:00	53.8	61.7	55.6	52.2
06/07/2024 08:15	53.7	60.6	54.9	52.2
06/07/2024 08:30	54.3	66.0	55.5	52.3
06/07/2024 08:45	54.6	62.1	55.5	53.6
06/07/2024 09:00	52.4	62.9	54.3	50.0
06/07/2024 09:15	50.1	57.7	51.0	49.1
06/07/2024 09:30	48.3	63.6	49.8	46.6

06/07/2024 09:45	48.4	66.4	51.5	43.3
06/07/2024 10:00	46.3	61.1	49.7	41.9
06/07/2024 10:15	48.9	69.4	48.8	42.9
06/07/2024 10:30	50.0	58.5	53.6	44.5
06/07/2024 10:45	47.1	56.4	49.1	44.6
06/07/2024 11:00	49.6	68.2	51.0	44.9
06/07/2024 11:15	49.1	59.6	51.3	45.3
06/07/2024 11:30	49.3	65.6	51.0	45.4
06/07/2024 11:45	48.7	62.5	50.9	44.2
06/07/2024 12:00	48.7	58.6	51.1	45.5
06/07/2024 12:15	48.6	65.5	51.0	45.1
06/07/2024 12:30	49.3	67.1	50.0	45.1
06/07/2024 12:45	48.1	66.7	48.9	44.1
06/07/2024 13:00	46.9	60.3	49.2	43.6
06/07/2024 13:15	46.4	59.5	49.4	42.6
06/07/2024 13:30	49.8	74.7	51.6	44.7
06/07/2024 13:45	48.4	70.2	50.9	43.8
06/07/2024 14:00	49.0	55.4	51.6	45.5
06/07/2024 14:15	48.6	60.2	51.1	45.1
06/07/2024 14:30	49.8	72.4	52.3	45.2
06/07/2024 14:45	50.8	68.6	52.8	45.8
06/07/2024 15:00	47.4	55.7	50.0	43.9
06/07/2024 15:15	48.3	65.0	50.7	43.6
06/07/2024 15:30	49.1	64.4	51.2	45.0
06/07/2024 15:45	50.7	58.5	53.4	46.7
06/07/2024 16:00	48.8	63.0	51.2	44.1
06/07/2024 16:15	47.8	56.3	50.5	43.6
06/07/2024 16:30	46.6	57.0	49.1	42.3
06/07/2024 16:45	47.7	62.9	49.4	40.8
06/07/2024 17:00	48.2	70.6	50.3	41.8
06/07/2024 17:15	44.0	61.4	46.4	40.6
06/07/2024 17:30	45.4	59.5	47.0	41.8
06/07/2024 17:45	46.1	62.2	49.1	40.8
06/07/2024 18:00	47.3	62.7	49.1	44.5
06/07/2024 18:15	46.7	58.3	48.5	44.0
06/07/2024 18:30	48.3	61.9	49.8	46.0
06/07/2024 18:45	48.9	57.1	51.3	45.8
06/07/2024 19:00	50.2	62.7	52.6	47.4
06/07/2024 19:15	46.7	56.8	48.3	44.3
06/07/2024 19:30	47.8	61.0	49.6	45.0
06/07/2024 19:45	47.9	62.1	50.4	43.8
06/07/2024 20:00	46.0	56.8	47.9	43.1
06/07/2024 20:15	45.1	53.3	46.6	43.3
06/07/2024 20:30	47.3	64.4	48.6	43.0
06/07/2024 20:45	43.9	51.4	45.6	41.9
06/07/2024 21:00	43.2	49.8	44.6	41.3

06/07/2024 21:15	42.6	57.0	44.1	40.8
06/07/2024 21:30	45.1	64.9	45.4	41.2
06/07/2024 21:45	44.2	69.6	45.0	41.5
06/07/2024 22:00	43.0	49.2	44.6	40.9
06/07/2024 22:15	43.1	51.0	44.6	41.6
06/07/2024 22:30	43.6	51.0	45.3	41.9
06/07/2024 22:45	46.8	54.9	48.8	43.4
06/07/2024 23:00	47.3	63.6	49.4	44.2
06/07/2024 23:15	47.3	61.0	49.5	44.1
06/07/2024 23:30	47.5	64.6	49.4	43.1
06/07/2024 23:45	44.5	53.9	46.5	41.7
07/07/2024 00:00	43.3	51.8	45.4	40.7
07/07/2024 00:15	44.0	55.6	45.9	41.5
07/07/2024 00:30	42.3	48.2	43.8	40.2
07/07/2024 00:45	42.9	54.5	44.9	40.1
07/07/2024 01:00	44.0	53.9	46.7	39.1
07/07/2024 01:15	41.2	51.3	43.1	38.8
07/07/2024 01:30	39.7	46.6	41.6	37.5
07/07/2024 01:45	39.6	50.5	42.2	36.0
07/07/2024 02:00	39.6	51.3	42.0	36.0
07/07/2024 02:15	39.3	46.4	41.6	35.9
07/07/2024 02:30	39.1	49.4	41.6	35.1
07/07/2024 02:45	38.6	47.0	40.9	35.4
07/07/2024 03:00	37.7	45.8	40.3	34.1
07/07/2024 03:15	41.5	48.7	44.2	37.4
07/07/2024 03:30	42.8	53.0	45.4	38.4
07/07/2024 03:45	40.8	49.7	43.3	37.1
07/07/2024 04:00	43.4	56.2	45.6	39.8
07/07/2024 04:15	46.1	58.8	48.5	42.1
07/07/2024 04:30	45.9	56.6	48.1	42.6
07/07/2024 04:45	46.4	59.8	48.6	43.0
07/07/2024 05:00	49.8	62.9	52.2	45.0
07/07/2024 05:15	47.8	60.6	49.6	44.0
07/07/2024 05:30	48.3	61.6	50.3	45.0
07/07/2024 05:45	47.7	60.3	49.4	45.5
07/07/2024 06:00	47.9	58.3	49.6	45.8
07/07/2024 06:15	49.7	68.0	50.5	46.0
07/07/2024 06:30	47.8	57.1	49.5	45.7
07/07/2024 06:45	47.2	61.7	49.3	44.6
07/07/2024 07:00	51.0	62.4	52.5	49.2
07/07/2024 07:15	49.1	61.5	52.7	45.6
07/07/2024 07:30	43.9	55.3	46.4	40.2
07/07/2024 07:45	44.5	58.7	46.6	39.3
07/07/2024 08:00	61.5	89.3	51.3	42.6
07/07/2024 08:15	46.8	63.2	49.4	41.2
07/07/2024 08:30	43.1	62.0	45.4	38.1

07/07/2024 08:45	42.8	62.2	43.8	36.6
07/07/2024 09:00	48.4	70.2	48.8	39.3
07/07/2024 09:15	47.7	69.4	47.4	37.1
07/07/2024 09:30	48.1	70.7	52.4	36.7
07/07/2024 09:45	46.8	64.0	50.9	36.8
07/07/2024 10:00	44.4	64.3	48.2	36.4
07/07/2024 10:15	41.8	63.1	42.6	37.8
07/07/2024 10:30	46.9	74.5	48.9	37.9
07/07/2024 10:45	73.3	85.6	79.1	38.2
07/07/2024 11:00	76.9	84.8	81.4	39.1
07/07/2024 11:15	77.0	87.0	81.5	40.0
07/07/2024 11:30	47.3	66.3	46.9	38.8
07/07/2024 11:45	44.4	59.3	45.9	40.3
07/07/2024 12:00	43.3	60.1	44.3	38.9
07/07/2024 12:15	42.7	67.0	43.6	37.3
07/07/2024 12:30	47.7	66.9	51.4	37.8
07/07/2024 12:45	45.0	64.6	47.6	39.1
07/07/2024 13:00	44.6	63.9	45.9	39.3
07/07/2024 13:15	45.5	64.3	44.6	40.1
07/07/2024 13:30	44.2	61.8	45.9	40.3
07/07/2024 13:45	41.6	52.7	43.6	38.7
07/07/2024 14:00	41.9	58.1	43.4	38.9
07/07/2024 14:15	44.8	68.9	46.6	39.7
07/07/2024 14:30	41.3	52.2	43.4	38.4
07/07/2024 14:45	42.6	54.6	44.9	38.8
07/07/2024 15:00	45.1	64.1	47.8	39.2
07/07/2024 15:15	41.5	52.9	43.5	38.3
07/07/2024 15:30	42.8	59.9	44.0	38.8
07/07/2024 15:45	44.7	61.6	47.3	39.3
07/07/2024 16:00	42.4	59.3	45.0	38.6
07/07/2024 16:15	44.6	63.0	46.6	41.0
07/07/2024 16:30	53.8	88.0	50.6	40.9
07/07/2024 16:45	46.0	70.7	47.7	40.2
07/07/2024 17:00	52.7	84.2	45.5	38.9
07/07/2024 17:15	43.7	63.7	44.7	38.9
07/07/2024 17:30	41.7	56.6	44.8	38.0
07/07/2024 17:45	56.0	73.7	59.4	38.7
07/07/2024 18:00	44.5	68.6	44.1	38.0
07/07/2024 18:15	42.5	59.0	43.6	39.3
07/07/2024 18:30	40.2	50.9	42.1	37.9
07/07/2024 18:45	39.9	60.3	39.7	36.7
07/07/2024 19:00	40.0	54.9	42.7	36.6
07/07/2024 19:15	39.9	57.7	41.8	36.1
07/07/2024 19:30	39.5	58.4	40.7	36.4
07/07/2024 19:45	40.9	65.1	40.9	36.2
07/07/2024 20:00	42.6	59.9	45.5	35.3

07/07/2024 20:15	41.8	65.4	42.6	33.4
07/07/2024 20:30	35.6	51.9	37.4	33.0
07/07/2024 20:45	45.5	65.3	42.8	32.7
07/07/2024 21:00	35.1	46.0	37.1	32.9
07/07/2024 21:15	34.5	47.8	36.1	32.6
07/07/2024 21:30	34.5	45.4	36.3	31.8
07/07/2024 21:45	32.9	55.3	33.7	30.4
07/07/2024 22:00	33.0	58.8	33.5	30.4
07/07/2024 22:15	33.2	48.6	34.9	30.7
07/07/2024 22:30	34.8	51.3	36.7	32.3
07/07/2024 22:45	36.3	44.9	38.8	33.1
07/07/2024 23:00	38.5	47.9	40.0	36.4
07/07/2024 23:15	36.9	45.4	39.0	34.4
07/07/2024 23:30	37.2	46.1	39.3	33.9
07/07/2024 23:45	37.5	45.0	39.2	35.2
08/07/2024 00:00	37.2	44.6	39.4	34.3
08/07/2024 00:15	37.0	46.3	39.1	33.3
08/07/2024 00:30	39.1	50.5	40.9	36.9
08/07/2024 00:45	38.4	48.8	40.6	34.8
08/07/2024 01:00	38.8	46.8	41.0	35.9
08/07/2024 01:15	37.4	44.3	39.3	34.6
08/07/2024 01:30	38.6	49.7	40.6	35.5
08/07/2024 01:45	39.4	52.1	41.4	37.0
08/07/2024 02:00	39.4	46.3	42.1	35.8
08/07/2024 02:15	38.2	43.8	40.1	35.7
08/07/2024 02:30	38.8	44.9	41.1	35.6
08/07/2024 02:45	39.1	49.1	41.5	35.9
08/07/2024 03:00	39.9	46.1	42.2	36.0
08/07/2024 03:15	40.0	46.1	42.0	36.9
08/07/2024 03:30	42.0	49.3	44.6	37.5
08/07/2024 03:45	44.1	52.4	47.1	39.0
08/07/2024 04:00	46.5	53.9	48.8	43.4
08/07/2024 04:15	48.2	64.3	50.4	44.8
08/07/2024 04:30	48.7	56.6	50.6	46.4
08/07/2024 04:45	49.6	56.0	51.2	47.8
08/07/2024 05:00	50.8	56.4	53.2	48.1
08/07/2024 05:15	52.4	60.7	54.0	49.9
08/07/2024 05:30	54.1	63.9	55.4	52.4
08/07/2024 05:45	53.8	59.5	55.9	51.7
08/07/2024 06:00	51.3	65.2	52.5	49.8
08/07/2024 06:15	52.0	62.5	53.2	50.6
08/07/2024 06:30	53.2	70.5	53.6	50.7
08/07/2024 06:45	53.5	67.9	55.3	50.3
08/07/2024 07:00	51.8	59.4	53.0	50.3
08/07/2024 07:15	51.4	63.2	52.6	49.6
08/07/2024 07:30	49.8	62.6	51.3	47.8

08/07/2024 07:45	49.5	58.2	51.1	47.7
08/07/2024 08:00	49.2	59.2	50.9	47.3
08/07/2024 08:15	53.1	69.0	57.1	48.1
08/07/2024 08:30	48.4	64.0	49.8	46.6
08/07/2024 08:45	49.8	64.6	51.0	47.9
08/07/2024 09:00	49.9	72.6	50.3	46.4
08/07/2024 09:15	48.6	60.8	51.2	45.6
08/07/2024 09:30	49.1	57.0	50.6	47.1
08/07/2024 09:45	49.2	58.3	50.7	47.2
08/07/2024 10:00	49.6	58.9	51.5	47.4
08/07/2024 10:15	52.3	65.5	53.7	50.5
08/07/2024 10:30	51.8	57.6	53.4	49.7
08/07/2024 10:45	51.6	65.3	53.2	49.4
08/07/2024 11:00	51.2	57.3	52.8	49.6
08/07/2024 11:15	51.6	64.4	52.8	49.7
08/07/2024 11:30	51.6	67.1	52.8	49.6
08/07/2024 11:45	50.9	58.7	52.6	48.4
08/07/2024 12:00	50.3	66.4	51.8	47.6
08/07/2024 12:15	50.2	63.8	52.0	47.3
08/07/2024 12:30	50.7	60.1	52.6	47.8
08/07/2024 12:45	49.7	70.3	51.1	46.5
08/07/2024 13:00	49.7	66.0	50.9	47.7

E.5 Measured Sound Levels at Location 5, free-field, dB

Date	Time	$L_{Aeq,T}$	L_{Amax}	Median L_{A10}	Median L_{A90}
05/07/2024	12:30:00	56.8	68.7	60.2	49.0
05/07/2024	12:45:00	56.2	70.4	59.5	49.4
05/07/2024	13:00:00	58.5	82.3	59.8	49.5
05/07/2024	13:15:00	58.3	72.5	60.4	50.6
05/07/2024	13:30:00	55.7	65.9	59.1	48.5
05/07/2024	13:45:00	56.4	66.2	59.6	50.2
05/07/2024	14:00:00	60.6	81.1	61.9	50.6
05/07/2024	14:15:00	56.4	70.6	59.1	49.5
05/07/2024	14:30:00	56.1	70.5	59.3	49.5
05/07/2024	14:45:00	58.5	83.2	59.8	50.1
05/07/2024	15:00:00	58.0	78.1	60.1	49.7
05/07/2024	15:15:00	57.0	72.8	59.2	50.2
05/07/2024	15:30:00	55.6	70.9	58.6	49.6
05/07/2024	15:45:00	56.5	70.1	59.3	50.5
05/07/2024	16:00:00	56.4	73.9	59.1	50.0
05/07/2024	16:15:00	55.7	67.4	58.5	49.5
05/07/2024	16:30:00	56.2	67.5	59.2	50.0
05/07/2024	16:45:00	56.0	69.3	59.0	48.9
05/07/2024	17:00:00	55.7	66.4	58.7	49.4
05/07/2024	17:15:00	57.0	75.2	59.2	49.5

05/07/2024	17:30:00	55.3	69.4	58.2	49.2
05/07/2024	17:45:00	55.5	72.0	58.0	48.7
05/07/2024	18:00:00	55.9	71.2	58.9	48.7
05/07/2024	18:15:00	55.2	72.1	58.3	48.0
05/07/2024	18:30:00	54.7	69.0	58.0	48.2
05/07/2024	18:45:00	57.7	78.3	59.1	48.3
05/07/2024	19:00:00	53.6	69.5	57.0	46.0
05/07/2024	19:15:00	53.9	68.1	57.4	46.9
05/07/2024	19:30:00	53.8	70.5	56.7	46.2
05/07/2024	19:45:00	58.6	86.9	57.7	46.9
05/07/2024	20:00:00	60.3	88.9	58.9	45.9
05/07/2024	20:15:00	55.5	70.0	59.0	48.2
05/07/2024	20:30:00	56.4	72.7	59.7	48.4
05/07/2024	20:45:00	55.7	73.5	58.9	47.2
05/07/2024	21:00:00	55.5	72.0	58.5	48.4
05/07/2024	21:15:00	54.8	70.1	57.8	46.8
05/07/2024	21:30:00	55.8	75.5	58.5	48.3
05/07/2024	21:45:00	53.7	67.0	57.3	45.9
05/07/2024	22:00:00	53.8	72.9	57.5	43.9
05/07/2024	22:15:00	52.9	66.3	56.8	43.5
05/07/2024	22:30:00	53.1	64.9	57.3	44.9
05/07/2024	22:45:00	53.9	75.6	57.0	44.1
05/07/2024	23:00:00	53.9	78.0	56.3	44.1
05/07/2024	23:15:00	52.0	71.0	55.3	43.9
05/07/2024	23:30:00	50.0	65.0	54.4	41.0
05/07/2024	23:45:00	51.1	65.7	55.1	41.2
06/07/2024	00:00:00	50.1	62.8	53.8	42.7
06/07/2024	00:15:00	51.7	70.9	54.7	42.2
06/07/2024	00:30:00	50.9	66.0	55.3	40.4
06/07/2024	00:45:00	51.0	67.1	54.7	41.4
06/07/2024	01:00:00	50.5	64.2	54.6	42.5
06/07/2024	01:15:00	51.0	65.1	54.9	42.4
06/07/2024	01:30:00	50.9	67.9	54.6	41.1
06/07/2024	01:45:00	46.4	63.2	49.2	38.9
06/07/2024	02:00:00	52.3	77.1	53.0	38.7
06/07/2024	02:15:00	48.3	69.6	50.2	39.2
06/07/2024	02:30:00	48.0	65.1	51.5	39.4
06/07/2024	02:45:00	48.1	68.5	51.3	39.4
06/07/2024	03:00:00	46.1	61.5	47.9	38.0
06/07/2024	03:15:00	42.7	62.8	42.3	36.9
06/07/2024	03:30:00	45.7	64.9	45.9	37.2
06/07/2024	03:45:00	45.0	66.7	46.5	37.4
06/07/2024	04:00:00	44.0	62.1	45.5	36.6
06/07/2024	04:15:00	45.3	68.8	42.5	36.6
06/07/2024	04:30:00	39.9	60.4	38.2	36.6
06/07/2024	04:45:00	43.3	67.0	41.1	36.8

06/07/2024	05:00:00	41.3	60.8	40.5	37.0
06/07/2024	05:15:00	42.0	64.9	40.5	36.6
06/07/2024	05:30:00	38.9	62.3	38.2	36.2
06/07/2024	05:45:00	41.3	63.9	40.2	36.5
06/07/2024	06:00:00	43.6	66.2	41.8	36.5
06/07/2024	06:15:00	43.4	62.8	42.4	37.1
06/07/2024	06:30:00	48.6	68.1	49.0	37.3
06/07/2024	06:45:00	47.1	67.0	47.3	37.4
06/07/2024	07:00:00	48.6	67.7	50.1	38.0
06/07/2024	07:15:00	48.4	67.1	51.4	37.9
06/07/2024	07:30:00	48.2	66.0	49.9	37.3
06/07/2024	07:45:00	48.1	67.8	49.8	37.3
06/07/2024	08:00:00	51.6	71.4	55.3	39.6
06/07/2024	08:15:00	50.3	66.0	54.5	39.3
06/07/2024	08:30:00	51.2	65.9	55.1	44.1
06/07/2024	08:45:00	54.7	68.2	57.2	49.7
06/07/2024	09:00:00	53.1	69.3	57.0	45.1
06/07/2024	09:15:00	53.2	66.6	57.2	44.0
06/07/2024	09:30:00	54.2	66.5	57.2	49.2
06/07/2024	09:45:00	51.4	68.3	55.0	43.4
06/07/2024	10:00:00	51.8	67.1	56.0	41.9
06/07/2024	10:15:00	52.6	70.5	56.4	41.5
06/07/2024	10:30:00	52.9	64.5	58.1	42.0
06/07/2024	10:45:00	56.2	82.9	58.1	42.7
06/07/2024	11:00:00	53.4	64.9	58.1	42.9
06/07/2024	11:15:00	54.1	69.2	58.6	43.6
06/07/2024	11:30:00	56.7	82.5	58.3	44.2
06/07/2024	11:45:00	53.8	65.5	58.2	43.4
06/07/2024	12:00:00	54.2	64.9	58.5	44.4
06/07/2024	12:15:00	54.0	69.9	57.7	44.5
06/07/2024	12:30:00	54.4	67.0	58.2	45.4
06/07/2024	12:45:00	54.9	66.5	58.5	45.3
06/07/2024	13:00:00	55.3	68.9	59.1	46.1
06/07/2024	13:15:00	54.0	64.6	58.0	45.4
06/07/2024	13:30:00	55.4	70.8	58.6	46.4
06/07/2024	13:45:00	56.3	80.5	57.9	44.8
06/07/2024	14:00:00	55.8	79.0	58.1	45.7
06/07/2024	14:15:00	54.5	68.9	58.0	47.5
06/07/2024	14:30:00	55.1	66.9	58.1	49.4
06/07/2024	14:45:00	55.7	75.5	58.2	49.4
06/07/2024	15:00:00	55.0	65.8	58.0	49.0
06/07/2024	15:15:00	54.6	66.1	58.2	47.9
06/07/2024	15:30:00	56.5	77.1	58.8	49.8
06/07/2024	15:45:00	56.0	80.7	58.5	48.7
06/07/2024	16:00:00	54.8	68.1	57.9	49.1
06/07/2024	16:15:00	54.8	70.6	57.8	48.5

06/07/2024	16:30:00	54.9	64.0	58.1	49.2
06/07/2024	16:45:00	54.8	69.8	57.8	48.7
06/07/2024	17:00:00	54.6	76.5	57.1	48.1
06/07/2024	17:15:00	57.3	81.9	58.0	47.6
06/07/2024	17:30:00	55.6	76.3	58.1	48.2
06/07/2024	17:45:00	55.6	78.2	57.6	47.9
06/07/2024	18:00:00	55.0	70.2	57.9	47.4
06/07/2024	18:15:00	54.3	70.6	57.4	48.9
06/07/2024	18:30:00	53.8	63.7	56.9	47.6
06/07/2024	18:45:00	54.6	67.5	57.4	49.0
06/07/2024	19:00:00	56.2	77.4	58.1	47.5
06/07/2024	19:15:00	53.4	71.7	56.8	47.4
06/07/2024	19:30:00	53.8	71.3	57.0	47.8
06/07/2024	19:45:00	61.2	86.8	58.5	47.9
06/07/2024	20:00:00	53.0	64.9	56.6	46.9
06/07/2024	20:15:00	53.2	65.1	57.1	46.6
06/07/2024	20:30:00	53.3	65.5	57.3	46.2
06/07/2024	20:45:00	54.1	70.4	57.3	46.7
06/07/2024	21:00:00	53.1	66.1	56.8	45.7
06/07/2024	21:15:00	58.7	85.8	58.0	45.6
06/07/2024	21:30:00	54.0	70.2	57.3	44.7
06/07/2024	21:45:00	55.3	79.3	55.8	43.3
06/07/2024	22:00:00	52.0	67.3	56.2	43.0
06/07/2024	22:15:00	51.0	69.5	55.0	43.2
06/07/2024	22:30:00	52.1	71.6	55.9	43.3
06/07/2024	22:45:00	50.7	67.2	54.6	42.0
06/07/2024	23:00:00	52.8	72.3	55.8	41.6
06/07/2024	23:15:00	59.9	87.4	55.2	41.2
06/07/2024	23:30:00	48.6	63.8	52.5	39.7
06/07/2024	23:45:00	49.6	64.5	54.3	38.7
07/07/2024	00:00:00	47.6	67.1	49.0	38.7
07/07/2024	00:15:00	49.2	66.1	53.7	39.3
07/07/2024	00:30:00	48.0	66.8	51.1	38.5
07/07/2024	00:45:00	55.0	80.9	52.5	38.6
07/07/2024	01:00:00	49.6	70.2	52.5	39.0
07/07/2024	01:15:00	50.0	69.5	53.3	39.8
07/07/2024	01:30:00	45.1	62.0	46.1	38.7
07/07/2024	01:45:00	43.9	66.3	40.8	38.9
07/07/2024	02:00:00	42.0	62.4	40.9	38.9
07/07/2024	02:15:00	44.7	65.4	40.5	38.8
07/07/2024	02:30:00	42.0	62.9	40.2	38.7
07/07/2024	02:45:00	43.0	65.0	41.3	38.3
07/07/2024	03:00:00	42.7	60.6	41.6	38.4
07/07/2024	03:15:00	38.9	45.2	39.5	38.3
07/07/2024	03:30:00	43.8	67.5	41.4	38.2
07/07/2024	03:45:00	43.6	66.5	40.7	38.1

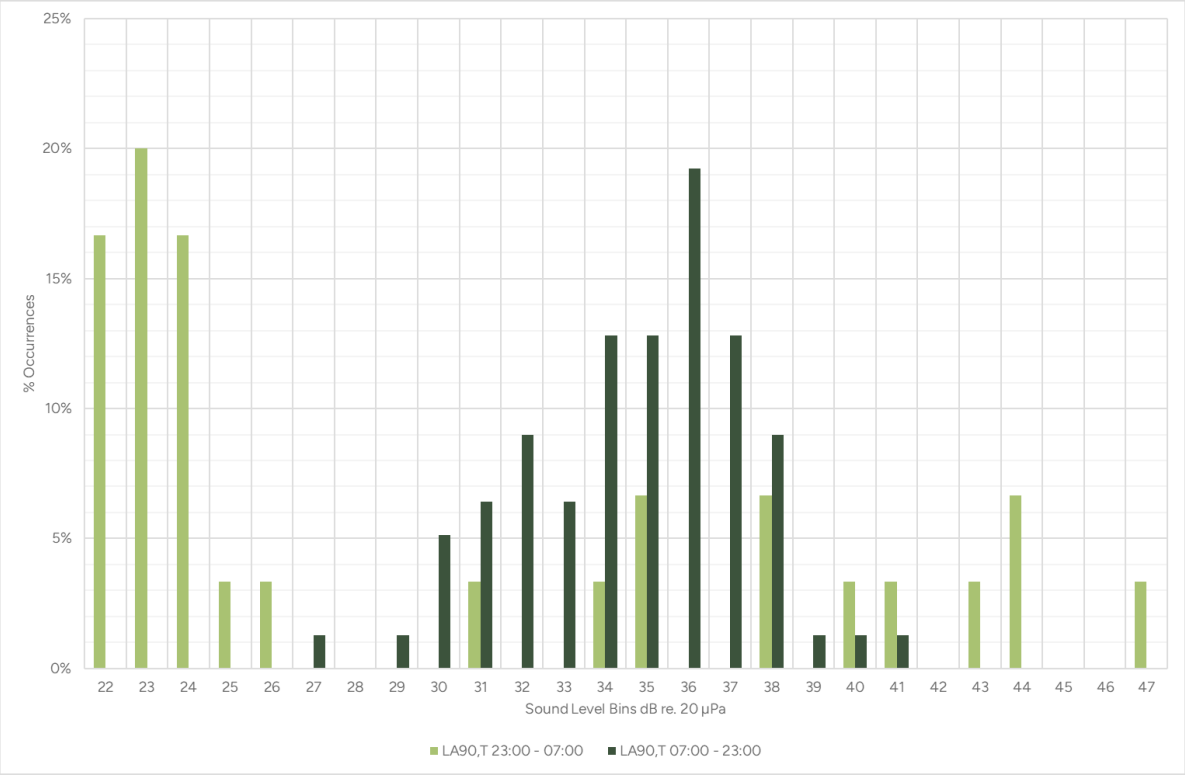
07/07/2024	04:00:00	44.2	69.6	41.0	38.1
07/07/2024	04:15:00	41.4	62.4	40.0	38.2
07/07/2024	04:30:00	45.9	67.1	43.5	38.4
07/07/2024	04:45:00	43.6	65.4	40.7	38.5
07/07/2024	05:00:00	40.9	61.4	39.7	38.2
07/07/2024	05:15:00	42.8	64.6	40.4	38.3
07/07/2024	05:30:00	48.7	70.5	45.1	38.5
07/07/2024	05:45:00	46.3	69.3	45.8	38.5
07/07/2024	06:00:00	47.1	66.7	46.5	39.0
07/07/2024	06:15:00	47.4	68.3	47.0	39.4
07/07/2024	06:30:00	46.1	63.7	47.4	39.4
07/07/2024	06:45:00	50.0	68.5	53.1	39.6
07/07/2024	07:00:00	54.1	70.6	58.1	42.7
07/07/2024	07:15:00	54.6	66.8	59.0	44.6
07/07/2024	07:30:00	55.8	80.5	58.0	42.3
07/07/2024	07:45:00	52.6	70.2	56.5	40.9
07/07/2024	08:00:00	54.1	72.2	58.0	42.5
07/07/2024	08:15:00	55.2	76.0	58.2	43.2
07/07/2024	08:30:00	53.9	67.5	58.5	43.1
07/07/2024	08:45:00	54.8	75.2	58.6	44.0
07/07/2024	09:00:00	55.2	74.2	59.3	44.3
07/07/2024	09:15:00	55.6	73.0	59.2	45.3
07/07/2024	09:30:00	55.6	75.2	59.2	44.9
07/07/2024	09:45:00	55.6	70.0	59.2	45.9
07/07/2024	10:00:00	55.6	67.1	58.7	46.6
07/07/2024	10:15:00	57.2	74.4	59.7	47.8
07/07/2024	10:30:00	56.1	76.2	58.9	47.9
07/07/2024	10:45:00	54.5	72.9	58.0	45.0
07/07/2024	11:00:00	55.9	72.1	59.4	44.9
07/07/2024	11:15:00	54.1	68.0	58.0	44.4
07/07/2024	11:30:00	53.5	69.6	56.8	44.4
07/07/2024	11:45:00	55.3	73.2	57.5	43.8
07/07/2024	12:00:00	54.6	71.1	58.0	45.3
07/07/2024	12:15:00	54.0	68.6	57.4	45.0
07/07/2024	12:30:00	53.2	65.8	56.7	45.2
07/07/2024	12:45:00	52.8	65.0	55.9	45.1
07/07/2024	13:00:00	54.6	71.0	57.3	45.1
07/07/2024	13:15:00	55.6	73.8	58.0	45.8
07/07/2024	13:30:00	53.1	66.1	56.7	44.2
07/07/2024	13:45:00	53.5	68.3	56.8	44.0
07/07/2024	14:00:00	54.0	75.3	57.5	44.6
07/07/2024	14:15:00	57.0	75.7	57.2	46.3
07/07/2024	14:30:00	57.3	81.9	58.0	47.6
07/07/2024	14:45:00	55.6	76.3	58.1	48.2
07/07/2024	15:00:00	55.6	78.2	57.6	47.9
07/07/2024	15:15:00	55.0	70.2	57.9	47.4

07/07/2024	15:30:00	54.3	70.6	57.4	48.9
07/07/2024	15:45:00	53.4	64.9	58.1	42.9
07/07/2024	16:00:00	54.1	69.2	58.6	43.6
07/07/2024	16:15:00	56.7	82.5	58.3	44.2
07/07/2024	16:30:00	53.8	65.5	58.2	43.4
07/07/2024	16:45:00	54.2	64.9	58.5	44.4
07/07/2024	17:00:00	57.7	78.3	59.1	48.3
07/07/2024	17:15:00	53.6	69.5	57.0	46.0
07/07/2024	17:30:00	53.9	68.1	57.4	46.9
07/07/2024	17:45:00	53.8	70.5	56.7	46.2
07/07/2024	18:00:00	58.6	86.9	57.7	46.9
07/07/2024	18:15:00	60.3	88.9	58.9	45.9
07/07/2024	18:30:00	56.4	66.2	59.6	50.2
07/07/2024	18:45:00	60.6	81.1	61.9	50.6
07/07/2024	19:00:00	56.4	70.6	59.1	49.5
07/07/2024	19:15:00	56.1	70.5	59.3	49.5
07/07/2024	19:30:00	58.5	83.2	59.8	50.1
07/07/2024	19:45:00	54.9	64.0	58.1	49.2
07/07/2024	20:00:00	54.8	69.8	57.8	48.7
07/07/2024	20:15:00	54.6	76.5	57.1	48.1
07/07/2024	20:30:00	57.3	81.9	58.0	47.6
07/07/2024	20:45:00	55.6	76.3	58.1	48.2
07/07/2024	21:00:00	55.6	78.2	57.6	47.9
07/07/2024	21:15:00	55.0	70.2	57.9	47.4
07/07/2024	21:30:00	54.7	68.2	57.2	49.7
07/07/2024	21:45:00	53.1	69.3	57.0	45.1
07/07/2024	22:00:00	53.2	66.6	57.2	44.0
07/07/2024	22:15:00	54.2	66.5	57.2	49.2
07/07/2024	22:30:00	51.4	68.3	55.0	43.4
07/07/2024	22:45:00	51.8	67.1	56.0	41.9
07/07/2024	23:00:00	52.6	70.5	56.4	41.5
07/07/2024	23:15:00	54.3	70.6	57.4	48.9
07/07/2024	23:30:00	53.4	64.9	58.1	42.9
07/07/2024	23:45:00	54.1	69.2	58.6	43.6
08/07/2024	00:00:00	56.7	82.5	58.3	44.2
08/07/2024	00:15:00	43.6	66.5	40.7	38.1
08/07/2024	00:30:00	44.2	69.6	41.0	38.1
08/07/2024	00:45:00	41.4	62.4	40.0	38.2
08/07/2024	01:00:00	45.9	67.1	43.5	38.4
08/07/2024	01:15:00	43.6	65.4	40.7	38.5
08/07/2024	01:30:00	48.3	69.6	50.2	39.2
08/07/2024	01:45:00	48.0	65.1	51.5	39.4
08/07/2024	02:00:00	48.1	68.5	51.3	39.4
08/07/2024	02:15:00	46.1	61.5	47.9	38.0
08/07/2024	02:30:00	42.7	62.8	42.3	36.9
08/07/2024	02:45:00	45.1	62.0	46.1	38.7

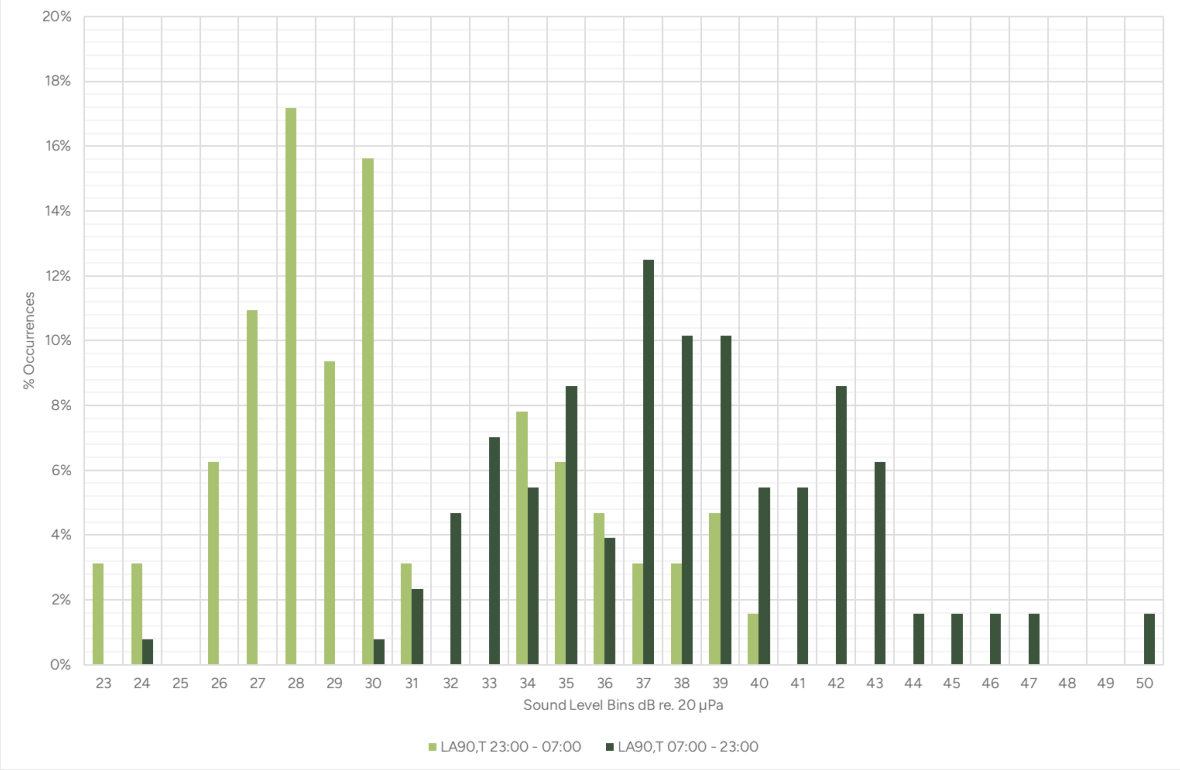
08/07/2024	03:00:00	43.9	66.3	40.8	38.9
08/07/2024	03:15:00	42.0	62.4	40.9	38.9
08/07/2024	03:30:00	44.7	65.4	40.5	38.8
08/07/2024	03:45:00	42.0	62.9	40.2	38.7
08/07/2024	04:00:00	42.7	62.8	42.3	36.9
08/07/2024	04:15:00	45.7	64.9	45.9	37.2
08/07/2024	04:30:00	45.0	66.7	46.5	37.4
08/07/2024	04:45:00	44.0	62.1	45.5	36.6
08/07/2024	05:00:00	45.3	68.8	42.5	36.6
08/07/2024	05:15:00	39.9	60.4	38.2	36.6
08/07/2024	05:30:00	48.6	68.1	49.0	37.3
08/07/2024	05:45:00	47.1	67.0	47.3	37.4
08/07/2024	06:00:00	48.6	67.7	50.1	38.0
08/07/2024	06:15:00	48.4	67.1	51.4	37.9
08/07/2024	06:30:00	48.1	67.8	49.8	37.3
08/07/2024	06:45:00	51.6	71.4	55.3	39.6
08/07/2024	07:00:00	50.3	66.0	54.5	39.3
08/07/2024	07:15:00	51.2	65.9	55.1	44.1
08/07/2024	07:30:00	56.0	80.7	58.5	48.7
08/07/2024	07:45:00	54.8	68.1	57.9	49.1
08/07/2024	08:00:00	54.8	70.6	57.8	48.5
08/07/2024	08:15:00	54.9	64.0	58.1	49.2
08/07/2024	08:30:00	54.8	69.8	57.8	48.7
08/07/2024	08:45:00	54.6	76.5	57.1	48.1
08/07/2024	09:00:00	56.2	77.4	58.1	47.5
08/07/2024	09:15:00	53.4	71.7	56.8	47.4
08/07/2024	09:30:00	53.8	71.3	57.0	47.8
08/07/2024	09:45:00	61.2	86.8	58.5	47.9
08/07/2024	10:00:00	53.0	64.9	56.6	46.9
08/07/2024	10:15:00	53.2	65.1	57.1	46.6
08/07/2024	10:30:00	51.4	68.3	55.0	43.4
08/07/2024	10:45:00	51.8	67.1	56.0	41.9
08/07/2024	11:00:00	52.6	70.5	56.4	41.5
08/07/2024	11:15:00	52.9	64.5	58.1	42.0
08/07/2024	11:30:00	56.2	82.9	58.1	42.7
08/07/2024	11:45:00	55.9	71.2	58.9	48.7
08/07/2024	12:00:00	55.2	72.1	58.3	48.0
08/07/2024	12:15:00	54.7	69.0	58.0	48.2
08/07/2024	12:30:00	57.7	78.3	59.1	48.3

Appendix F Survey Graphs

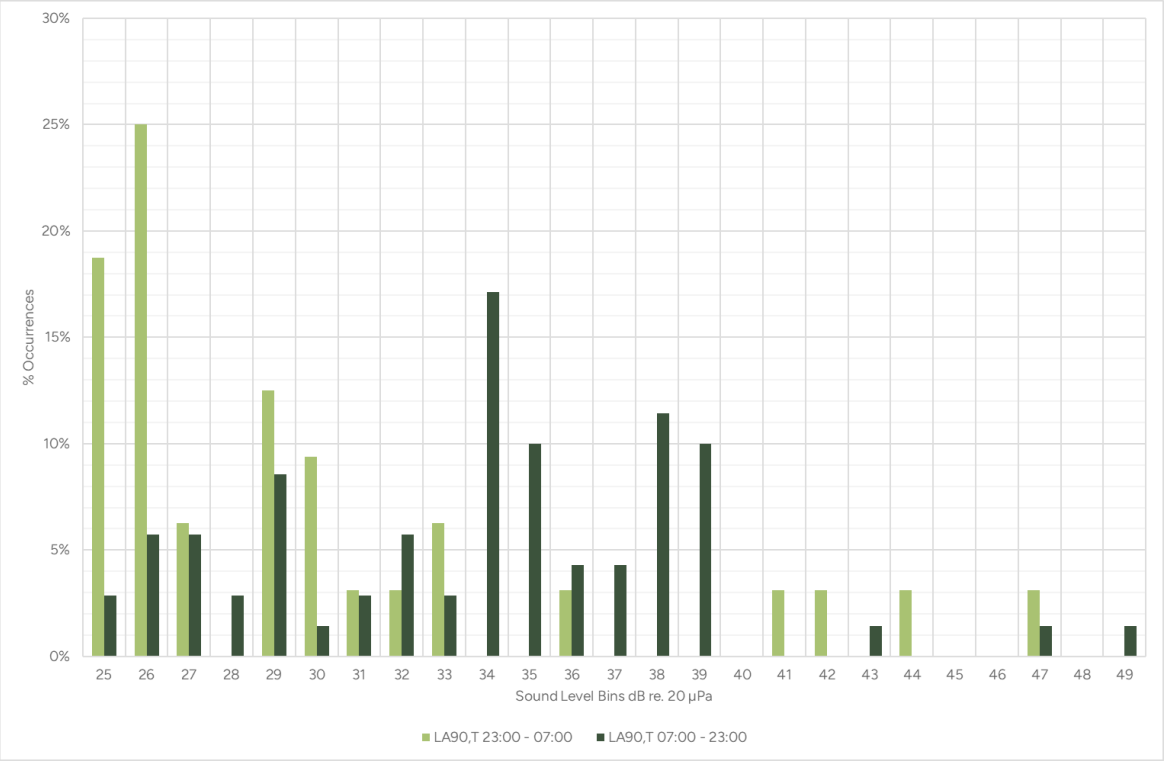
Location 1 Histogram, Weekday daytime and night-time, L90



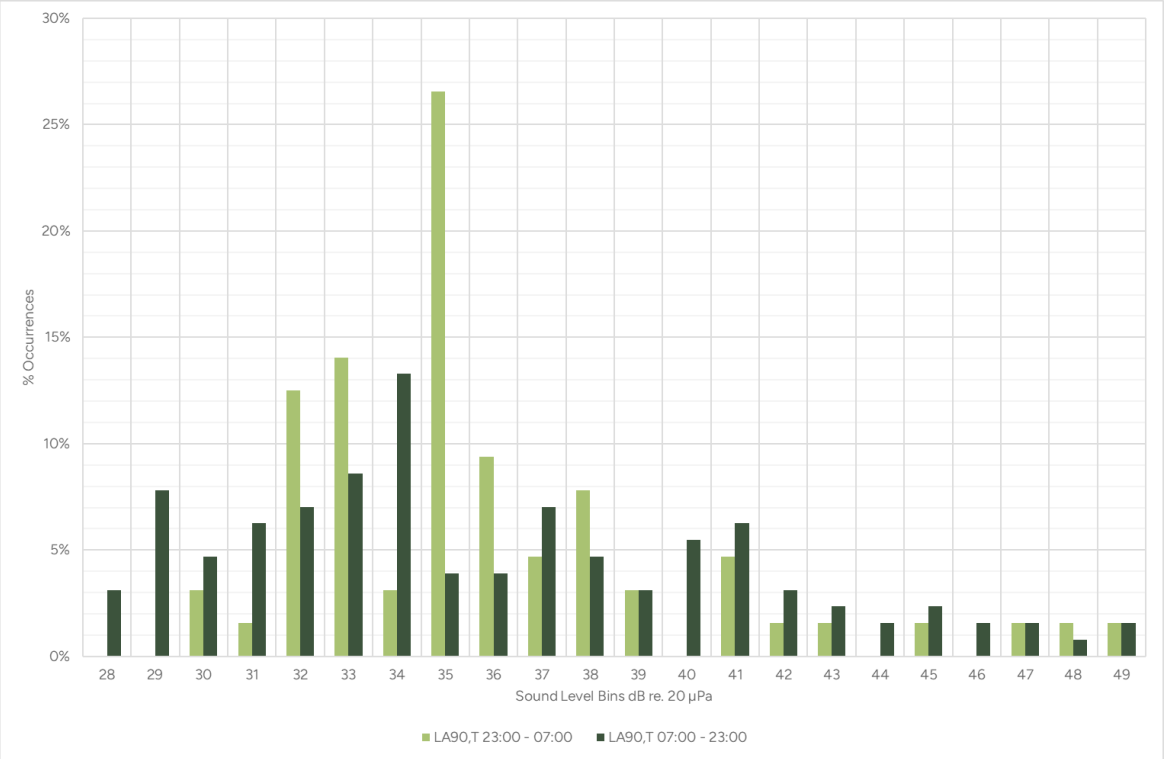
Location 1 Histogram, Weekend daytime and night-time, L90



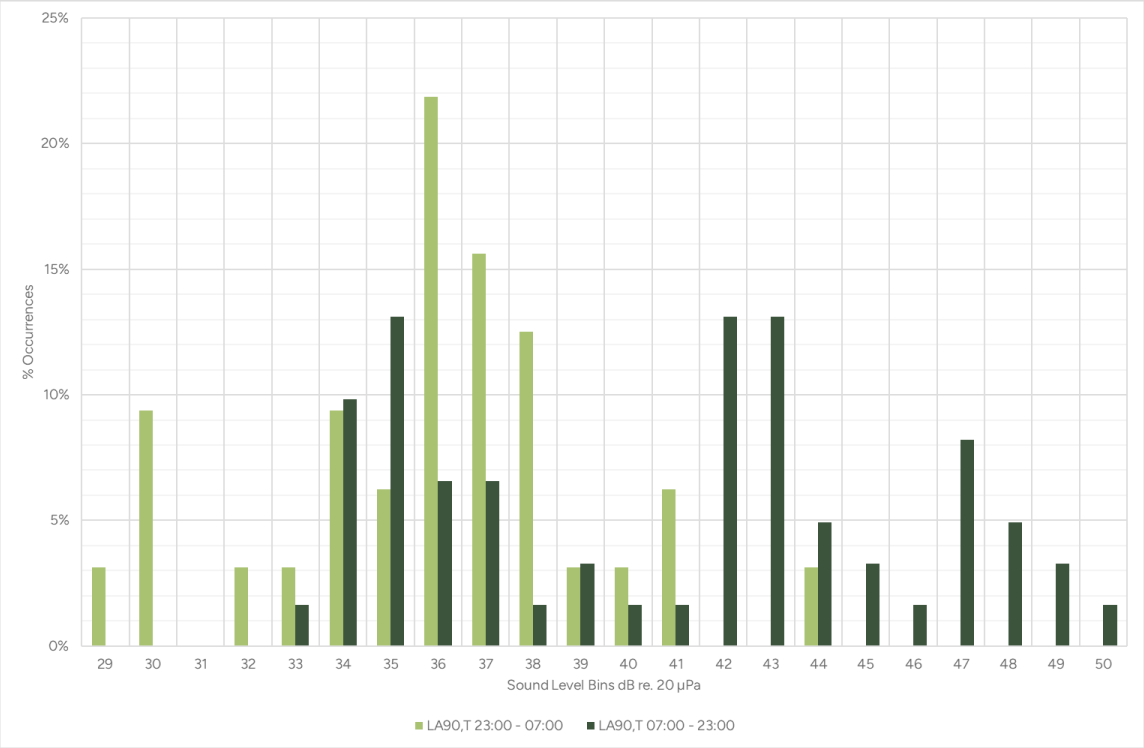
Location 2 Histogram, Weekday daytime and night-time, LA90



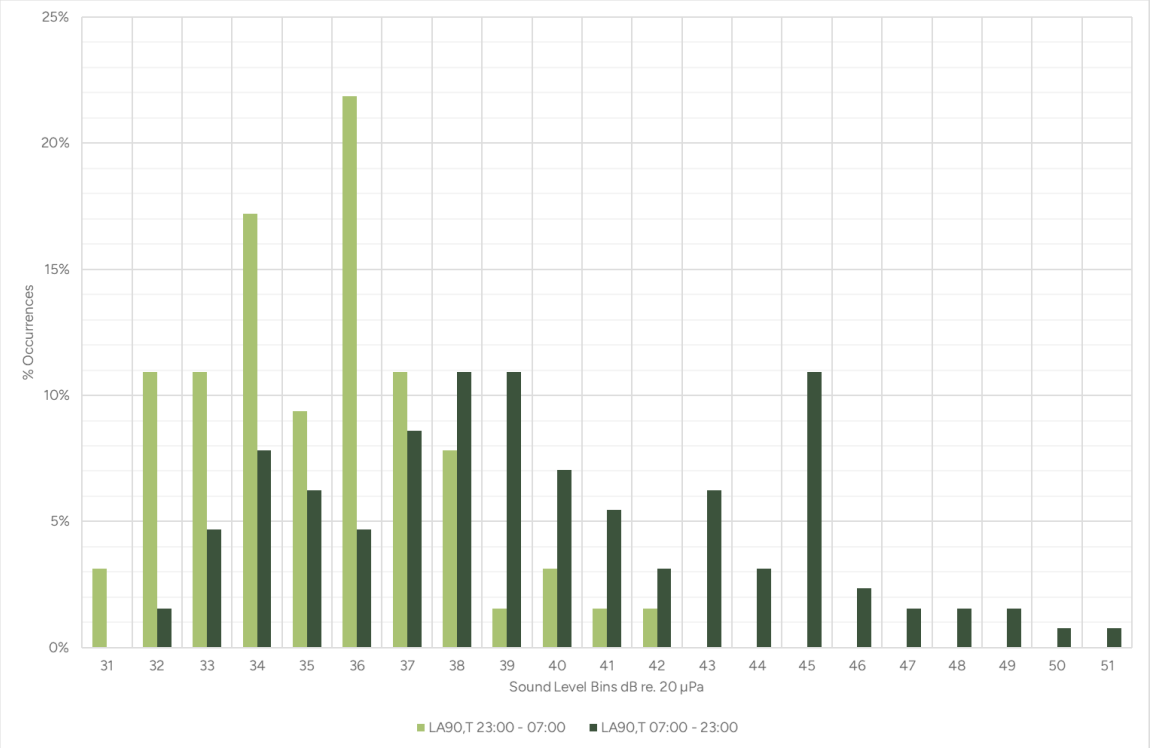
Location 2 Histogram, Weekend daytime and night-time, LA90



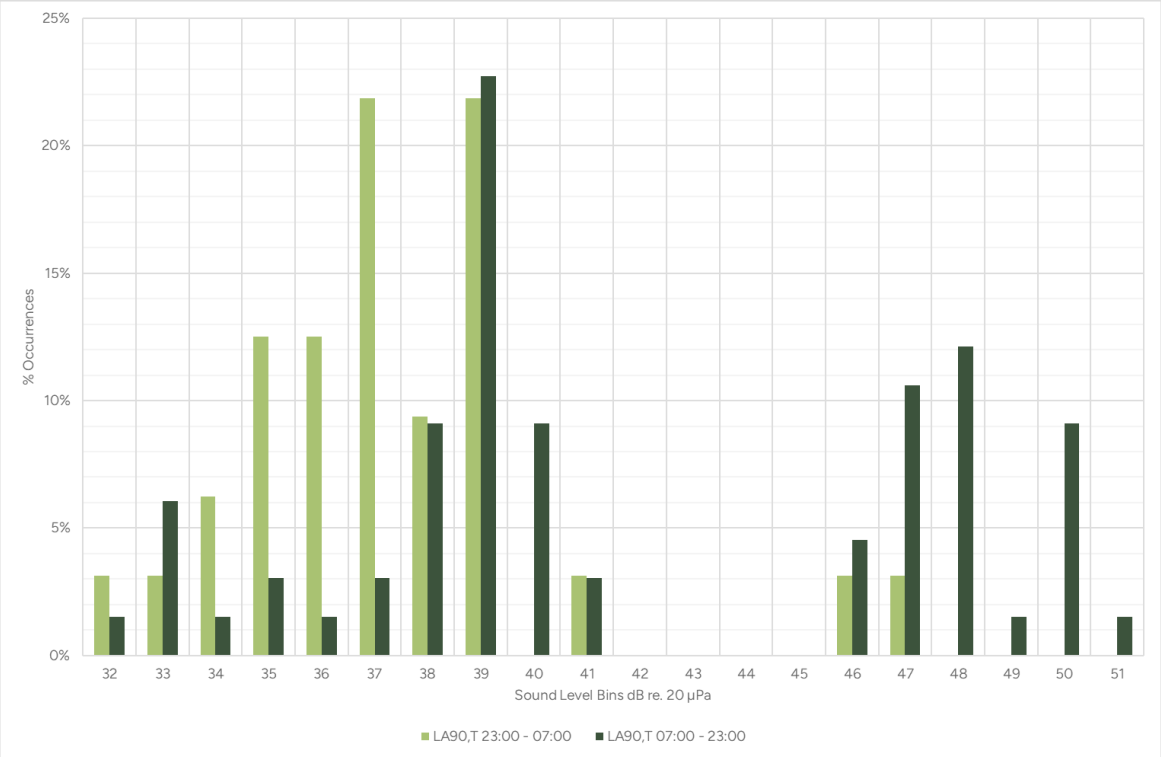
Location 3 Histogram, Weekday daytime and night-time, L90



Location 3 Histogram, Weekend daytime and night-time, L90



Location 4 Histogram, Weekday daytime and night-time, L90



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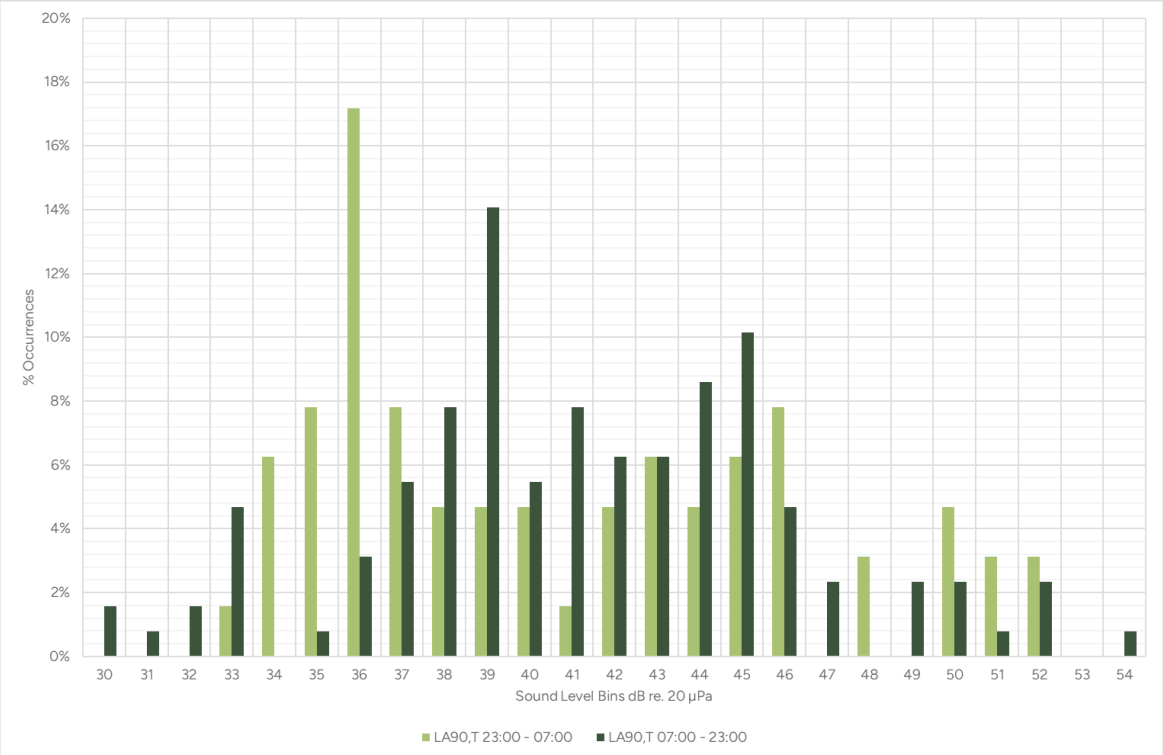
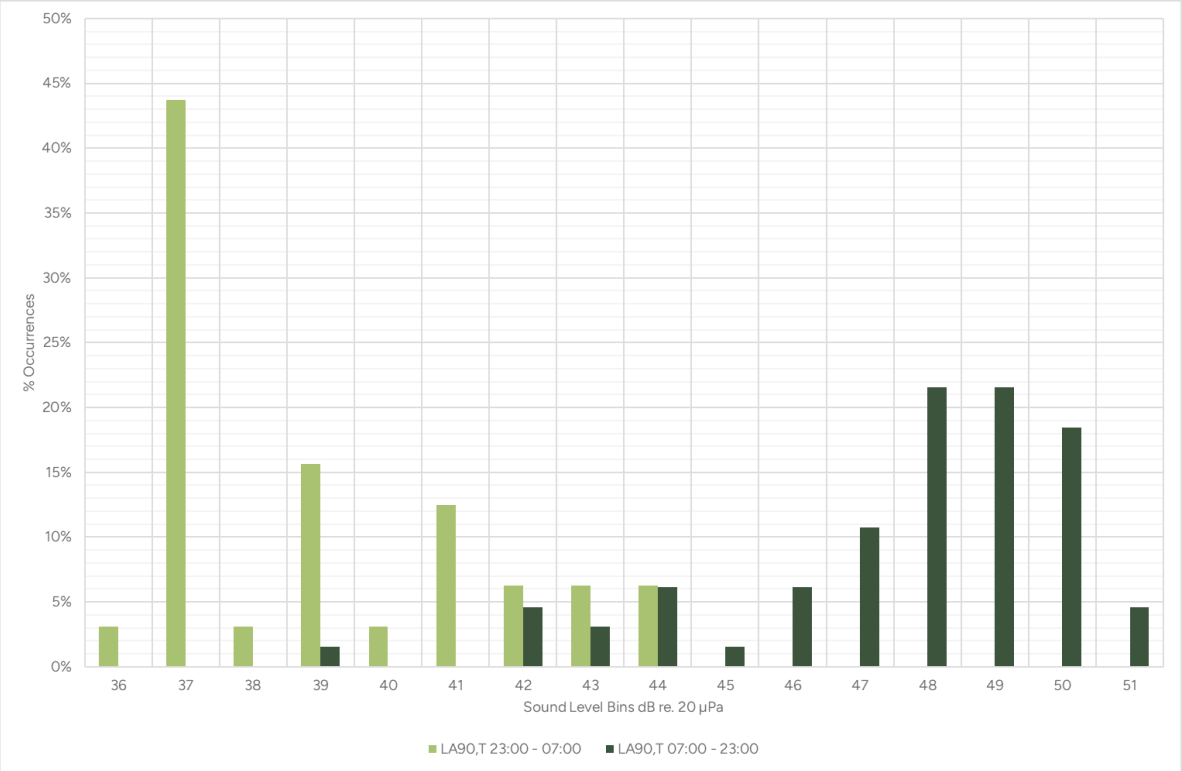
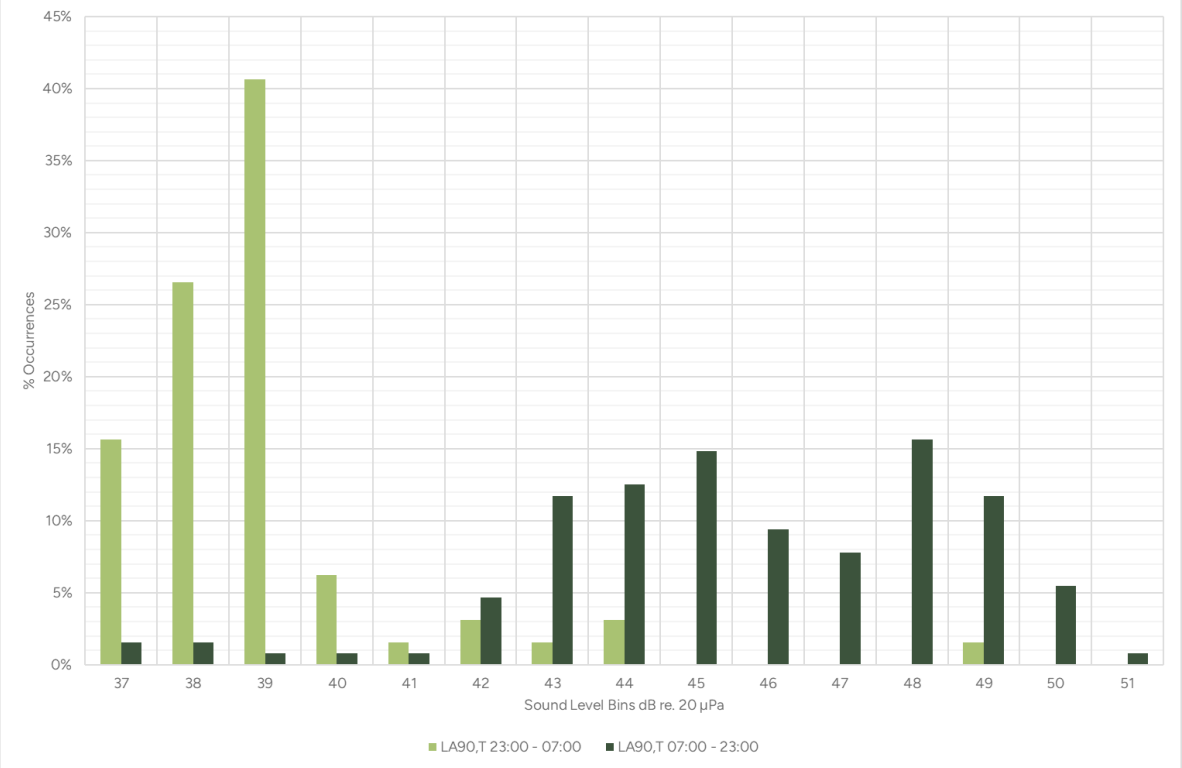


Location 5 Histogram, Weekday daytime and night-time, L90



Location 5 Histogram, Weekend daytime and night-time, L90



Appendix G Noise Model Source Data

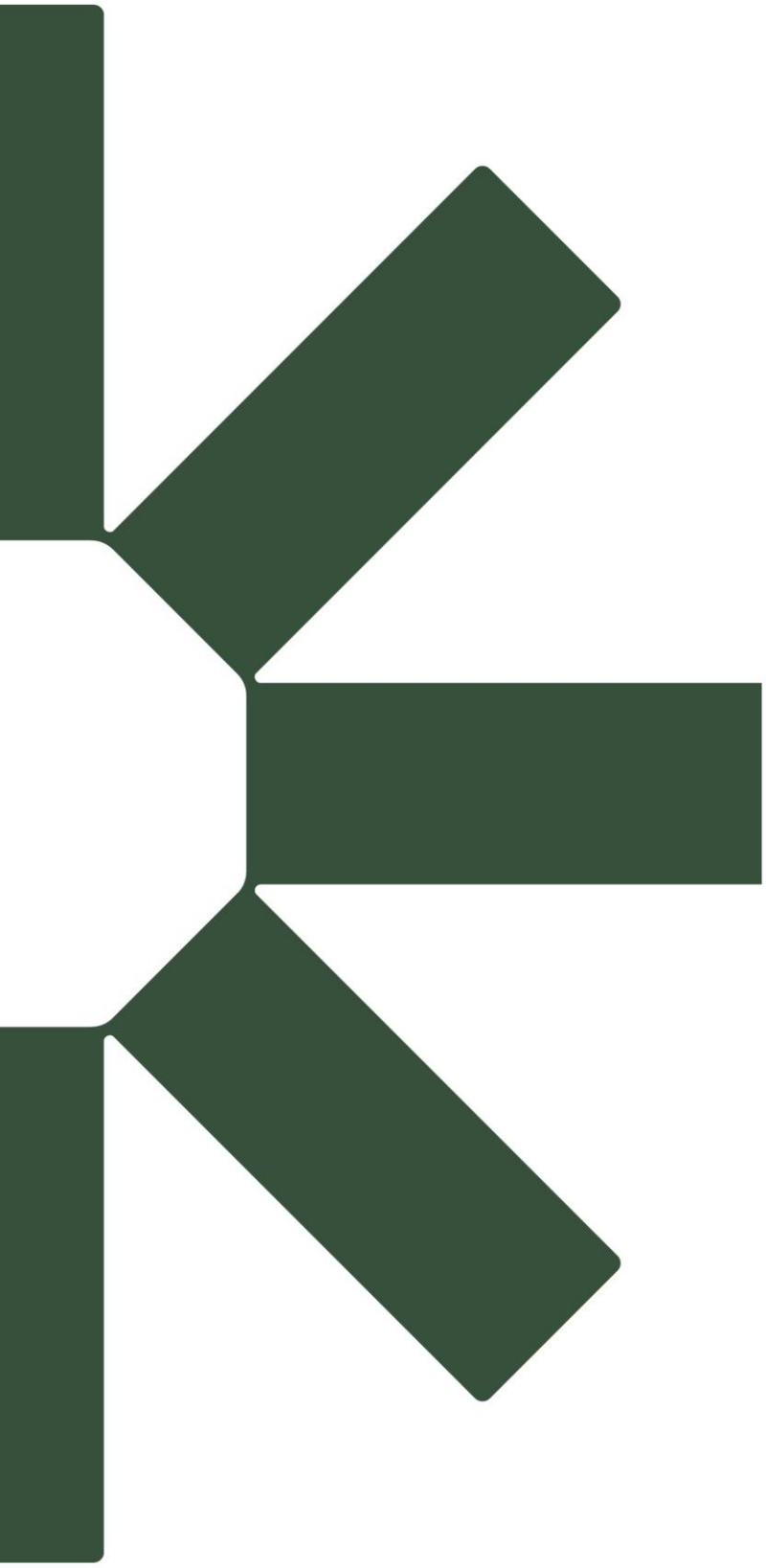
G.1 CadnaA - Source data

The significant noise sources proposed as part of the variation are shown in the Table below together with measured sound level data.

Source	Level L_{Aeq}	Octave Band Centre Frequency, Linear									Data Source	% On-time/ No Movements
		31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
Paper Machine internal (also assumed for Corrugated Machine and Tissue Machine buildings)	97.3	87.8	88.50	86.2	87.1	85.9	87.7	93.9	89.7	82.2	Measured on site by SLR (internal)	100%
Bucket Loader: Hyundai TPH:HL960 (wood processing)	75.4	82.2	82.1	80.4	78.0	71.1	65.4	68.8	63.8	52.1	Measured on site by SLR (2m)	100%
Grabber (raw material area, wood processing)	81.1	80.6	81.1	78.4	79.0	80.3	75.1	72.9	67.4	60.8	Measured on site by SLR (2m)	100%
Wood conveyor	79.8	82.7	85.5	79.5	75.5	74.3	74.1	72.6	69.8	71.9	Measured on site by SLR (2m)	100%
Boiler 7	74.5	70.0	70.4	67.1	69.1	67.6	68.5	68.9	66.1	63.1	Measured on site by SLR (2m)	100%
Wood shredder	86.4	83.7	84.8	82.0	82.5	86.9	79.5	76.9	71.8	65.1	Measured on site by SLR (1m)	100%
Over magnet for wood processing	87.3	83.3	83.2	81.8	81.5	83.2	82.0	81.2	77.6	71.8	Measured on site by SLR (2m)	100%
Wood processing dust extraction filter fan	83.1	86.4	87.6	89.3	85.2	77.1	71.0	76.9	74.3	60.2	Measured on site by SLR (2m)	100%
Vibrating screen and dust extraction	77.4	85.3	83.2	83.7	80.8	72.8	69.0	69.5	64.0	56.5	Measured on site by SLR (1m)	100%
MRF Building	-	-	-	-	-	102.0	-	-	-	-	Measured on site by SLR (internal)	100%
Film vacuum MRF (x2)	90.2	92.0	92.9	104.6	90.8	82.1	74.9	74.3	70.4	65.2	Measured on site by SLR (1m) WEPA UK	100%

Source	Level L_{Aeq}	Octave Band Centre Frequency, Linear									Data Source	% On-time/ No Movements
		31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
Conveyors (New Old Corrugated Cardboard building – internal)	78.4	79.1	80.2	81.7	77.7	75.8	73.4	70.4	63.0	53.7	SLR historically measured (1m) WEPA UK	100%
Forklift pass by (Warehouse, Recovered Fibre, New Old Corrugated Cardboard & Dispatch buildings-internal)	66.0	65.5	70.9	64.0	58.8	59.2	54.3	52.4	49.4	41.9	SLR historically measured (3m) (WEPA UK)	100%
Forklift loading/unloading (Dispatch Area, Paper Machine, Corrugated Cardboard, Tissue Machine, Truck Loading)	73.8	67.2	63.1	64.3	59.6	61.0	55.0	54.0	50.6	41.5	SLR historically measured (3m) (WEPA UK)	100%
CHP – Air intake (x2)	80 @ 1m	45.9	57.1	67	74.4	75.4	75.4	73.7	66.6	54.7	Provided by Applicant – contracted level	100%
CHP - Gas Turbine in enclosure (x2)	80 @1m	45.9	57.1	67	74.4	75.4	75.4	73.7	66.6	54.7	Provided by Applicant – contracted level	100%
CHP - Heat Recovery Steam Generator (x2)	80 @ 1m	45.9	57.1	67	74.4	75.4	75.4	73.7	66.6	54.7	Provided by Applicant – contracted level	100%
CHP stack (x2)	80.8 (Lw)	89.6	91.8	87.1	81.7	78	73.8	72.6	67.1	53.9	SLR historically measured	100%
Back-up Boiler (x2)	80 @1m	45.9	57.1	67	74.4	75.4	75.4	73.7	66.6	54.7	Provided by Applicant – contracted level	100%
Back-up Boiler stack (x1)	80 @1m	45.9	57.1	67	74.4	75.4	75.4	73.7	66.6	54.7	Provided by Applicant – contracted level	100%
ETP pump (x4)	90 (Lw)	-	-	-	-	-	-	-	-	-	SLR historically measured (Sunderland)	100%

Source	Level L_{Aeq}	Octave Band Centre Frequency, Linear									Data Source	% On-time/ No Movements
		31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
ETP air blower (x2)	84.3 (Lw)	73.4	72.7	73.3	85.5	83.3	73.4	78.3	64.1	53.3	SLR historically measured (Sunderland)	100%
Clamp truck (Reel Storage building – internal)	74.1	80	74.3	69	63	68.5	65.1	62.1	58.3	52.6	SLR historically measured (8m) (WEPA UK)	100%
Roof stack/exhausts (CHP, Paper Machine & New Old Corrugated Cardboard buildings) (Lw)	85 (Lw)	-	-	-	-	-	-	-	-	-	SLR historically measured	100%
106kV substation	60	-	-	-	-	-	-	-	-	-	SLR historically measured (1m) Minera transformer)	100%
HGV	68.3	63.6	62.3	61.4	55.6	56.9	59.5	58.3	52.6	44.5	SLR historically measured (8m) WEPA UK)	See Table 11-9
Reverse alarms (Dispatch Area, Paper Machine, Corrugated Cardboard, Tissue Machine, Truck Loading) (Lw)	93.0 (Lw)	91.9	95.4	91.8	89.5	88.1	88.4	86.9	81.3	70	SLR historically measured (Cumwell Lane)	15 seconds per movement
HGV weighbridge (x3)	73.2	85.9	75.4	76.8	71.1	69.8	68.6	66	57.5	46.4	SLR historically measured (5m) Penmill	12 per hour



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