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GLOSSARY OF ACOUSTIC TERMS

Term	Description
Sound Pressure Level	The result of the pressure variations in the air achieved by the sound waves
Sound Power Level	A measure of the acoustic energy emitted from a source of noise, expressed in decibels
Frequency	The number of cycles per second and what provides sounds with their distinctive tones.
Decibel (dB)	A logarithmic unit to express sound levels in reasonable numbers and relative to reference figures, e.g. the lowest sound pressure level that can be detected by humans
'A' weighting	A frequency adjustment applied to sound levels to reflect how the sound is perceived by the human ear up to 85 dB.
Hz	Hertz (Hz) is the unit of frequency
$L_{A90,T}$	The A-weighted sound pressure level exceeded 90% of the measurement time (T) i.e. the quietest 10% of the period.
$L_{Aeq,T}$	The equivalent A-weighted sound pressure level of the measurement time, i.e. the RMS sound level. It is also known as the time-averaged sound pressure level.
$L_{AFmax,T}$	The highest (maximum) A-weighted sound pressure level measured in the time period (T). Sometimes measurements are used with the either the Fast (F) or Slow (S) time weighting.
Peak Particle Velocity (PPV)	A measure of vibration in mm/s (velocity) used to assess likelihood of damage and perceptibility of vibration.
Free-field sound pressure level	The sound pressure level measured at least 3m from the building facade and therefore does not contain reflected sound (apart from ground).
Facade sound pressure	The sound pressure level measured 1-2m from a facade or an acoustically reflective vertical surface. Facade sound pressure levels are 3dB higher than the equivalent free-field sound pressure level.

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KEY LEGISLATION, POLICY AND GUIDANCE CONSIDERATIONS

Legislation

Control of Pollution Act 1974

- A2.1** Powers are given to Local Planning Authorities (LPAs) under the Control of Pollution Act 1974 (COPA) for the control of noise from construction sites. Sections 59A, 60 and 61 of COPA 1974 allow LPAs to serve notices imposing conditions on the way in which construction work is conducted. It is a criminal offence to contravene such a notice without a reasonable excuse, which can be avoided provided the work is carried out under a consent issued under Section 61 of the Act. Such consents may be applied for in advance of construction work being carried out.
- A2.2** LPAs can produce Regulations to control noise from plant or machinery under Section 68 of COPA 1974, but the reference is generally to use codes of practice issued under Section 71 to minimise noise. Although breach of a code of practice is not a criminal offence, these may be taken into account in legal proceedings.
- A2.3** Under COPA 1974, a LPA may designate all or part of its area as a noise abatement zone. The consequence of this is that noise levels are recorded and entered into a public register. Noise levels may only exceed pre-defined limits with prior consent from the LPA.

The Environmental Noise (England) Regulations 2006 (as amended 2008, 2009, 2010 and 2018)

- A2.4** The environmental Noise (England) Regulations 2006 implement the Assessment and Management of Environmental Noise Directive 2002/49/EC (END). The END requires:
- The use of harmonised noise indicators and computational measures so that data can be collected and compared in a standardised way;
 - Common protocol for noise mapping;
 - The drawing up of noise maps;
 - Making information available to the public;
 - The drawing up of local action plans; and
 - Collection of data by the Commission to inform future community policy.

National Planning Policy

- A2.5** The National Planning Policy Framework (NPPF) sets out the Government's national planning policies for England and provides the overarching framework within which local planning policies are prepared and decisions on planning applications are made. The August 2026 NPPF includes policies which apply directly to the determination of planning applications. The relevant policies to noise and vibration include Policy P3, *Living conditions and pollution*, and Policy P4, *Impact of development on existing activities*.
- A2.6** Accordingly, planning decisions need to consider noise from existing businesses and community facilities. New noise-sensitive development should incorporate sufficient mitigation to ensure that their continued operation is not unreasonably restricted.
- A2.7** Policy P3 of the National Planning Policy Framework (NPPF), *Living conditions and pollution*, states that:
- "Development proposals should be appropriate for their location, taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, whether these effects are on or off-site; and whether this is as a result of the development itself or the product of preexisting conditions in its vicinity."*
- A2.8** In assessing these effects, consideration should be given to the sensitivity of the site and its intended occupiers and users.
- A2.9** In relation to noise, Policy P3 requires development proposals to provide healthy living conditions by avoiding exposure to noise which could have an unacceptable adverse effect on health and quality of life, with suitable mitigation incorporated where necessary. It also requires development proposals to:

"Mitigate and reduce to a minimum potential adverse impacts resulting from noise, not result in levels of noise exposure which would have a significant observed adverse effect, and maintain the character of tranquil areas."

- A2.10** Planning decisions therefore need to consider both noise generated by a proposed development and existing noise affecting future occupants. Where necessary, suitable mitigation should be incorporated to provide acceptable living conditions, with adverse noise impacts reduced to a minimum and significant observed adverse effects avoided.
- A2.11** Policy P4 of the NPPF, *Impact of development on existing activities*, states that existing businesses, community facilities and public services should not have unreasonable restrictions placed on their current or permitted operation as a result of development being approved after they were established. Development proposals should therefore be capable of being integrated effectively with existing activities in their vicinity, including uses such as pubs, music venues, places of worship and sports clubs.
- A2.12** Where an existing activity could have a significant adverse effect on a proposed new development, Policy P4 requires the nature of the potential impacts to be identified, with the applicant acting as the 'agent of change', and requires suitable mitigation to be demonstrated before first occupation where necessary.
- A2.13** Accordingly, noise from existing businesses and community facilities should be considered when introducing new noise-sensitive residential development. Sufficient mitigation should be incorporated where necessary to provide acceptable conditions for future residents while ensuring that the lawful current or permitted operation of existing activities is not unreasonably restricted.

National Planning Practice Guidance (2014)

- A2.14** The National Planning Practice Guidance (NPPG) provides further context to the NPPF and the two documents should be read together. The document provides guidance on how to recognise when noise could be a concern and the factors that influence this, along with outline guidance on noise mitigation through engineering and design, etc.

Noise Policy Statement for England (2010)

- A2.15** The Noise Policy Statement for England (NPSE) sets out the long-term vision of Government noise policy. The NPSE states that its aims are as follows:
- "Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:
- *Avoid significant adverse impacts on health and quality of life;*
 - *Mitigate and minimise adverse impacts on health and quality of life; and*
 - *Where possible, contribute to the improvement of health and quality of life."*
- A2.16** The NPSE adopts established concepts from toxicology that can be applied to noise impacts. The concept details noise levels, at which the effects of an exposure may be classified into a specific category. The classification categories as detailed within the NPSE are as follows:
- No Observed Effect Level (NOEL) - the level below which no effect can be detected. Below this level no detectable effect on health and quality of life due to noise can be established;
 - Lowest Observable Adverse Effect Level (LOAEL) - the level above which adverse effects on health and quality of life can be detected; and
 - Significant Observed Adverse Effect Level (SOAEL) - the level above which significant adverse effects on health and quality of life occur.
- A2.17** The SOAEL does not have a single objective noise level that is applicable to all sources of noise in all situations and therefore, the SOAEL is likely to be different for different sources, different receptors and at different times of the day.
- A2.18** The first aim of the NPSE is to avoid significant adverse effects on health and quality of life, taking into account the guiding principles of sustainable development. The second aim considers situations where impacts are established between the LOAEL and SOAEL. In such circumstances, all reasonable steps should be taken to mitigate and minimise the effects. However, this does not mean that such adverse effects cannot occur. The third aim seeks to improve health and quality of life, where possible, through the pro-active management of noise, whilst also taking account of the guiding principles of sustainable development.

A2.19 DEFRA have led a study to identify the SOAEL and LOAEL for a limited range of noise sources. The study was understood to have ended in 2012. However, no guidance from this research has been issued at the time of writing (August 2021).

ProPG: for Planning and Noise (2014)

A2.20 The Professional Practice Guidance on Planning and Noise (ProPG) was introduced to provide guidance on the management of noise within the planning system in England with respect to residential uses.

A2.21 The document emphasises that good acoustic design should avoid ‘unreasonable’ acoustic conditions and prevent ‘unacceptable’ acoustic conditions both internally (inside dwellings), and externally in spaces intended for amenity. The document highlights that care should be taken not to over-design mitigation and states that:

‘Good acoustic design should provide an integrated solution whereby the optimum acoustic outcome is achieved, without design compromises that will adversely affect living conditions and the quality of life of the inhabitants or other sustainable design objectives and requirements.

A2.22 This typically involves careful consideration of:

- Checking the feasibility of relocating or reduce noise levels from relevant sources;
- Consider the options for planning the site or building layout;
- Consider the orientation of proposed building(s);
- Select construction types and methods for meeting building performance requirements;
- Examine the effects of noise control measures on ventilation, fire regulation, health and safety cost, CDM etc; and
- Assess the viability of alternative solutions.

Local Planning Policy

London Borough of Haringey Development Management Policies (2017)

A2.23 With respect to noise and vibration, Policy DM23: Environmental Protection of the Haringey Development Management DPD (2017) is relevant.

A2.24 Policy DM23 seeks to ensure that development does not result in unacceptable environmental impacts, including from noise and vibration, and that appropriate mitigation is incorporated where necessary.

A2.25 The Council seeks to ensure that new noise-sensitive development is located away from existing or planned sources of noise pollution. Where potentially noisy development is proposed, it must be demonstrated that appropriate measures will be implemented to mitigate its effects.

A2.26 A noise assessment is required where development is noise-sensitive or where a proposed activity has the potential to generate noise. The assessment should demonstrate that suitable acoustic conditions can be achieved and that the amenity of existing and future occupants is appropriately protected.

A2.27 Noise and vibration associated with construction activities should also be appropriately managed to minimise effects on surrounding receptors, including through appropriate construction management measures.

A2.28 Overall, the Haringey Local Plan framework requires noise and vibration to be considered as part of the design of development, with appropriate assessment and mitigation used to protect the amenity of both existing and future occupants.

London Plan, 2021

A2.29 Policy D14 of the London Plan refers specifically to noise. The content is mainly the same as the draft versions, with the notable addition of policy used to specifically protect existing noise-generating uses from the development of noise sensitive buildings within their vicinity, reflecting the Agent of Change principle (Policy D13).

A2.30 Other policies consider noise (C4, D3, CEW3, S19 and S22), though relate back to the positions and objectives outlined in HIC3, H1 and H3.

The Mayor’s Ambient Noise Strategy, 2004

A2.31 The Mayor’s Ambient Noise Strategy ‘Sunder City’ is the first city-wide strategy focusing on controlling ambient noise. This primarily concerns noise from transport and industry and states that: “This strategy sets out the

main steps that need to be taken, including quieter road surfaces, smoother traffic flow, rail infrastructure improvements, aircraft noise measures, and improved design for new developments.

A2.32 The aim of the Mayor’s ambient noise strategy is a practical one – to minimise the adverse impacts of noise on people living and working in, and visiting London using the best available practices and technology within a sustainable development framework”.

British Standards and Guidance

A2.33 The following paragraphs summarise the outline assessment British Standards and guidance documents used to set target criteria for the identification of noise and vibration impacts:

Construction Noise and Vibration

A2.34 Estimation of noise and vibration generated during each principal phase of the construction works and an assessment of the likely significant effects on surrounding sensitive receptors using the methodology set out in British Standard BS 5228:2009+A1 2014 Code of Practice for Noise and Vibration on Construction and Open Sites (Part 1: Noise, Part 2: Vibration).

Road traffic noise

A2.35 For the assessment of noise associated with road traffic, reference will be made to the Calculation of Road Traffic Noise (CRTN). Further advice is also given in the Design Manual for Roads and Bridges (DMRB) for road traffic noise assessments. Each of these documents offer a means of predicting noise levels and changes in noise level and assessment of the impact of the changes. Guidance on the impact assessment of traffic noise is provided within the Institute of Environmental Management and Assessment (IEMA) Guidance Note No. 1 Guidelines for the Environmental Assessment of Road Traffic.

Human Response to Vibration

A2.36 British Standard BS 6472-1: Guide to Evaluation of Human Exposure to Vibration in Buildings. Part 1: Vibration Sources other than Blasting. BS 6472-1 provides guidance on the measurement and assessment of vibration levels affecting humans in buildings resulting from sources such as road and rail traffic or building services systems. The probability of adverse comment is assessed by considering the vibration dose value (VDV), which quantifies the total exposure to vibration over a specified period.

IEMA Guidelines for Environmental Noise Impact Assessment, 2014

A2.37 IEMA Guidelines for Environmental Noise Impact Assessment 2014. The IEMA guidelines set out guidance on significance criteria for noise impact based on the changes in noise levels.

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Ashley House

Noise and Vibration Survey Report

Prepared for:
ReShape

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31st July 2026

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EXECUTIVE SUMMARY

- 1 Trium Environmental Consulting LLP (Trium) are appointed to provide acoustic advice for the Proposed Development at Ashley House, London.
- 2 An environmental noise and vibration survey was completed on the site between 7th July 2026 and 13th July 2026. The survey comprised long term unattended noise monitoring at two positions, short term attended noise monitoring at three positions and unattended vibration monitoring at one position.
- 3 The survey indicates that the dominant noise source was road traffic from the surrounding road network (Hale Road, Ashley Road, Watermead Way and Park View Road).
- 4 Vibration levels associated with underground train movements along the Victoria Line (London Underground) service tunnel located adjacent to the Site were measured during the survey.
- 5 The results from the survey will be used to inform the acoustic evaluation of the Site and further noise and vibration impact assessment.

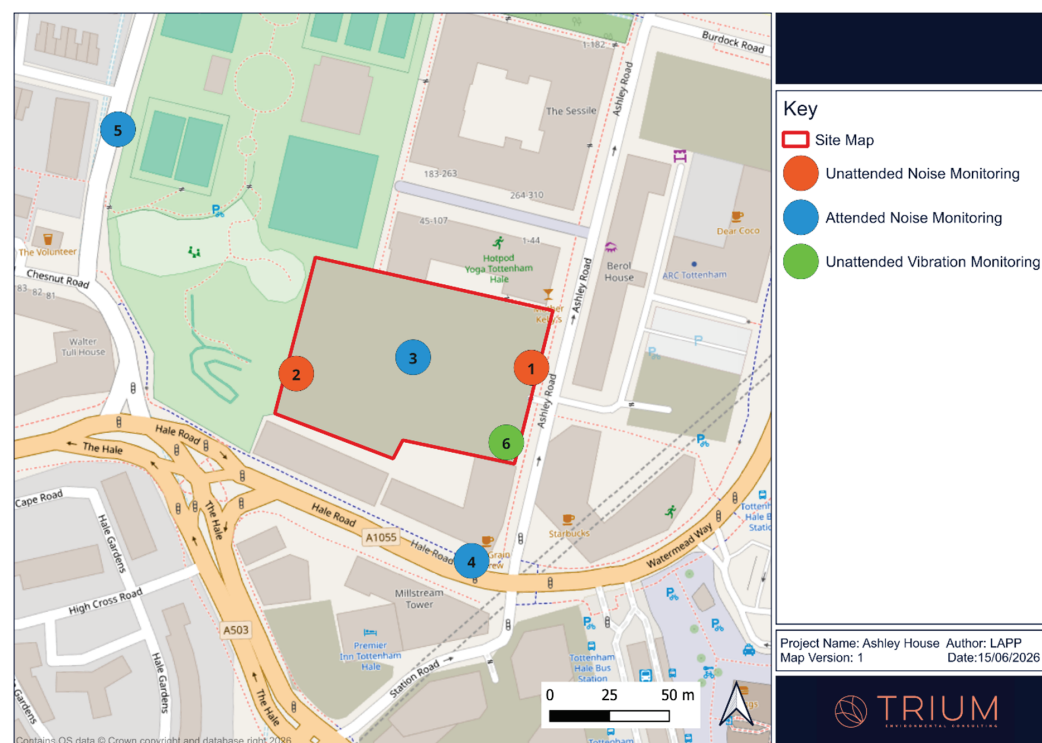
INTRODUCTION

- 1 Trium has been appointed to undertake an environmental noise and vibration survey at Ashley House, London.
- 2 The purpose of the survey is to establish the existing baseline conditions in and around the site. This will be used to evaluate the potential impacts of the Proposed Development on the site and surrounding area.
- 3 This report presents the survey method and results.

SITE DESCRIPTION

- 4 The site location in relation to its surroundings is shown in Figure 1.

Figure 1 The Site Location and Measurement Positions (Indicative Redline Boundary)



Proposed Development

- 5 The Proposed Development includes construction of a part seven, part eight, and part 19 storey co-living building providing 522 shared-living units and a six-storey block of 87 affordable homes. There will also be an ancillary commercial/employment and community spaces at ground and first floor levels.

Existing Surroundings

- 6 The site is bounded by Ashley Road to the east, Hale Road to the south, Down Lane Park to the west and Rosa Luxemburg Apartments to the north.
- 7 A railway servicing Tottenham Hale train station is located 140m east of the site.

- 8 Approximately 40m to the southeast beneath the site is a tunnel carrying Victoria Line trains from the main passenger route to the stabling yard in Northumberland Park. The tunnel is used by out of service non-passenger stock Victoria Line trains.
- 9 The surrounding buildings predominantly comprise a mixture of residential and commercial use.

ENVIRONMENTAL NOISE AND VIBRATION SURVEY

- 10 The noise survey comprised:
 - Unattended noise monitoring at two positions;
 - Attended noise monitoring at three positions; and
 - Unattended vibration monitoring at one position.
- 11 The measurement positions relative to the site (outlined in red) are shown in Figure 1.
- 12 Unattended noise measurements were completed at Positions 1 to 2; attended noise measurements were completed at Positions 3 to 5; unattended vibration measurements were completed at Position 6.
- 13 Details of the weather and equipment used are provided in Appendix A. The equipment was installed and collected by Luke Papini.
- Position 1**
- 14 The unattended measurements at Position 1 were taken over 15-minute periods between 13:04 on 7th July 2026 and 10:49 on 13th July 2026.
- 15 The microphone was affixed to the site hoarding approximately 2.8m above ground level and at least 3.5m from continuous vertically reflective surfaces, i.e. free-field level conditions.
- 16 The dominant noise source observed during installation and pick up was road traffic from Ashley Road and Hale Road.
- 17 Figure 2 illustrates the noise monitoring at Position 1.

Figure 2 Photograph of Noise Monitoring at Position 1



18 Table 1 summarises the day and night ambient sound pressure levels measured at Position 1.

Table 1 Summary of Sound Pressure Levels Measured at Position 1

Date	Day (07:00-19:00)	Evening (19:00-23:00)	Night (23:00-07:00)
	$L_{Aeq,12h}$ (dB)	$L_{Aeq,4h}$ (dB)	$L_{Aeq,8h}$ (dB)
07/07/2026	57*	56	54
08/07/2026	58	56	52
09/07/2026	57	55	53
10/07/2026	57	55	54
11/07/2026	56	57	55
12/07/2026	56	56	53
13/07/2026	58*	-	-

*Measurements not completed over entire time period

- 19 The time history graphs illustrating the sound pressure levels measured across the survey period are provided in Appendix B.
- 20 The statistical analysis of the background sound levels is provided in Appendix C. The representative background sound level has been assessed to be $L_{A90,15min}$ 53 dB during the day and $L_{A90,15min}$ 48 dB during the night.
- 21 The tenth highest maximum noise level measured across the night time periods ranged between L_{Amax} 62 – 74 dB. The maximum noise levels were likely determined by the local road network.

Position 2

- 22 The unattended measurements at Position 2 were taken over 15-minute periods between 12:30 on 7th July 2026 and 11:00 on 13th July 2026.
- 23 The microphone was positioned approximately 3m above the ground level and at least 3.5m from continuous vertically reflective surfaces, i.e. free-field level conditions.
- 24 The dominant noise source observed during installation and pick up was road traffic from Hale Road.
- 25 Figure 3 illustrates the noise monitoring at Position 2.

Figure 3 Photograph of Noise Monitoring at Position 2



26 Table 2 summarises the day and night ambient sound pressure levels measured at Position 2.

Table 2 Summary of Sound Pressure Levels Measured at Position 2

Date	Day (07:00-19:00)	Evening (19:00-23:00)	Night (23:00-07:00)
	$L_{Aeq,12h}$ (dB)	$L_{Aeq,4h}$ (dB)	$L_{Aeq,8h}$ (dB)
07/07/2026	57*	56	55
08/07/2026	57	56	53
09/07/2026	57	56	54
10/07/2026	58	57	53
11/07/2026	57	57	55
12/07/2026	56	58	54
13/07/2026	58*	-	-

*Measurements not completed over entire time period

- 27 The time history graphs illustrating the sound pressure levels measured across the survey period are provided in Appendix B.

- 28 The statistical analysis of the background sound levels is provided in Appendix C. The representative background sound level has been assessed to be $L_{A90,15min}$ 54 dB during the day and $L_{A90,15min}$ 47 dB during the night.
- 29 The tenth highest maximum noise level measured across the night time periods ranged between L_{AFmax} 62 – 75 dB. Based on site observations, the maximum noise levels were likely determined by traffic from Hale Road and Park View Road.

Position 3

- 30 The attended measurements at Position 3 were completed on 13th July 2026.
- 31 The microphone was positioned 1.5m above the ground and approximately 3.5m from other vertically reflective surfaces, i.e. free-field level conditions.
- 32 Position 3 was considered to provide a representative indication of sound levels at the centre of the site.
- 33 Figure 4 illustrates the noise monitoring at Position 3.

Figure 4 Photograph of Noise Monitoring at Position 3



- 34 Table 3 summarises the day ambient sound levels measured at Position 3.

Table 3 Summary of Sound Pressure Levels Measured at Position 3

Date	Time	Sound Pressure Level (dB)		
		$L_{Aeq,15min}$	$L_{A90,15min}$	$L_{AFmax,15min}$
13/07/2026	11:14	54	51	84
	11:29	54	50	72

Position 4

- 35 The attended measurements at Position 4 were completed on 13th July 2026.
- 36 The microphone was positioned 1.5m above the ground and approximately 3.5m from other vertically reflective surfaces, i.e. free-field level conditions.
- 37 Position 4 was considered to be a reliable representation of the sound levels experienced towards the southern boundary of the site, namely road traffic from Hale Road.
- 38 Figure 5 illustrates the noise monitoring at Position 4.

Figure 5 Photograph of Noise Monitoring at Position 4



- 39 Table 4 summarises the day ambient sound levels measured at Position 4.

Table 4 Summary of Sound Pressure Levels Measured at Position 4

Date	Time	Sound Pressure Level (dB)		
		$L_{Aeq,15min}$	$L_{A90,15min}$	$L_{AFmax,15min}$
13/07/2026	11:54	72	65	90
	12:09	70	63	83

Position 5

- 40 The attended measurements at Position 5 were completed on 13th July 2026.
- 41 The microphone was positioned 1.5m above the ground and approximately 3.5m from other vertically reflective surfaces, i.e. free-field conditions.
- 42 Position 5 was considered to provide a representative indication of sound levels experienced towards the western boundary of the site, namely road traffic noise from Park View Road and Hale Road.
- 43 Figure 6 illustrates the noise monitoring at Position 5.

Figure 6 Photograph of Noise Monitoring at Position 5



44 Table 5 summarises the day ambient sound levels measured at Position 5.

Table 5 Summary of Sound Pressure Levels Measured at Position 5

Date	Time	Sound Pressure Level (dB)		
		$L_{Aeq,15min}$	$L_{A90,15min}$	$L_{AFmax,15min}$
13/07/2026	12:30	60	50	82
	12:45	61	51	82

Position 6

- 45 The unattended vibration measurements at Position 6 were taken over 30 second periods between 12:39 on 7th July 2026 and 12:24 on 13th July 2026.
- 46 The vibration meter was located near to the southeast of the site, at the point of the site closest to the underground service tunnel for Victoria Line trains.
- 47 The Y axis of the geophone was positioned towards the alignment of the railway.
- 48 Figure 7 illustrates the vibration monitoring at Position 6.

Figure 7 Unattended Vibration Measurements at Position 6



Table 6 summarises the vibration dose values measured at Position 6.

Table 6 Unattended Vibration Measurement Results at Position 6

Date	Time	Measured Vibration Dose Value (m/s ^{1.75})		
		X Axis	Y Axis	Z-Axis
07/07/2026	Night	0.01	0.01	0.02
08/07/2026	Day	0.00	0.00	0.02
	Night	0.00	0.00	0.02
09/07/2026	Day	0.00	0.00	0.02
	Night	0.00	0.00	0.02
10/07/2026	Day	0.01	0.01	0.03
	Night	0.00	0.00	0.02
11/07/2026	Day	0.00	0.00	0.02
	Night	0.00	0.00	0.02
12/07/2026	Day	0.00	0.00	0.02
	Night	0.00	0.00	0.02
13/07/2026	Day	0.00	0.00	0.02

CONCLUSIONS

- 49 The sound levels around the site were affected by road traffic from the surrounding roads (Hale Road, Ashley Road, Watermead Way and Park View Road).
- 50 The vibration levels in the site were likely determined by train movements from the underground service tunnel for non-passenger stock Victoria Line trains located adjacent to the southeast of the site.

51 The results from the noise survey will be used to inform the noise assessment for the Proposed Development.

APPENDIX A – SURVEY DETAILS

Equipment

- A.1** The noise measurements were completed using one NL-53 sound level meter and one NSRT_mk4 sound level meter. The vibration measurements were completed using one VM-56 vibration level meter.
- A.2** Calibration details for the noise monitoring equipment are provided in Table A.1.

Table A.1 Calibration Information

Position(s)	Equipment	Manufacturer	Calibration Expiry	Calibration Certification
1, 3-5	NL-53	RION	15/04/28	UCRT24/1652
2	NSRT_mk4	Convergence	15/02/27	Cvp2hNU6c3UfoDPy4yr5nD
6	VM-56	RION	04/03/27	TCRT26/2166

- A.3** Calibration checks were completed before and after the noise measurements. No significant deviation in calibration was noted.

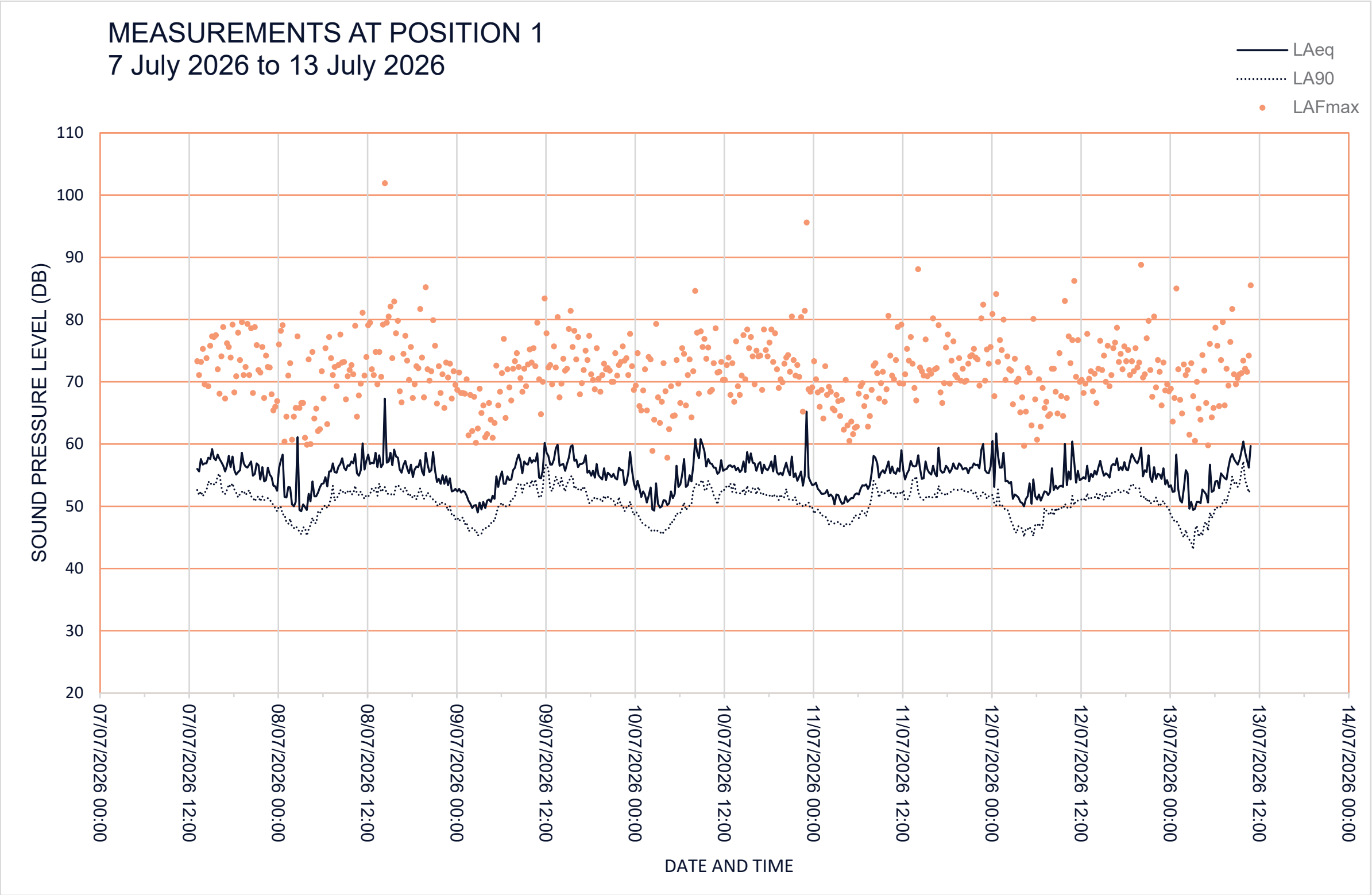
Weather Conditions

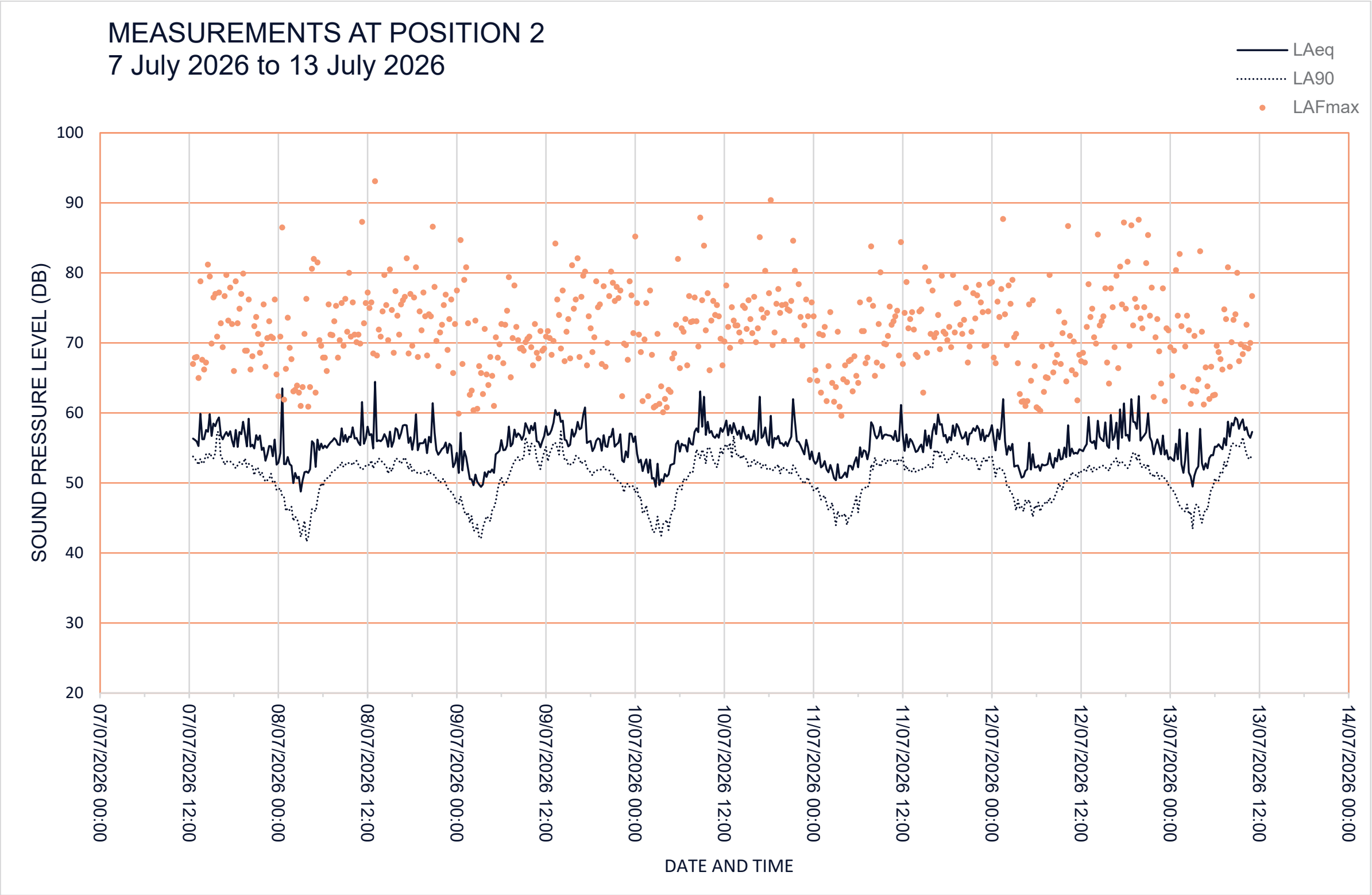
- A.4** Weather monitoring was not completed on the site during the survey. Data from a weather station located at 51.59° N, 0.06° W (ILONDO800) has been referenced and is provided in Table A.2. This is considered appropriate given the length and type of survey.

Table A.2 Summary of Weather Data (07/07/26-13/07/26)

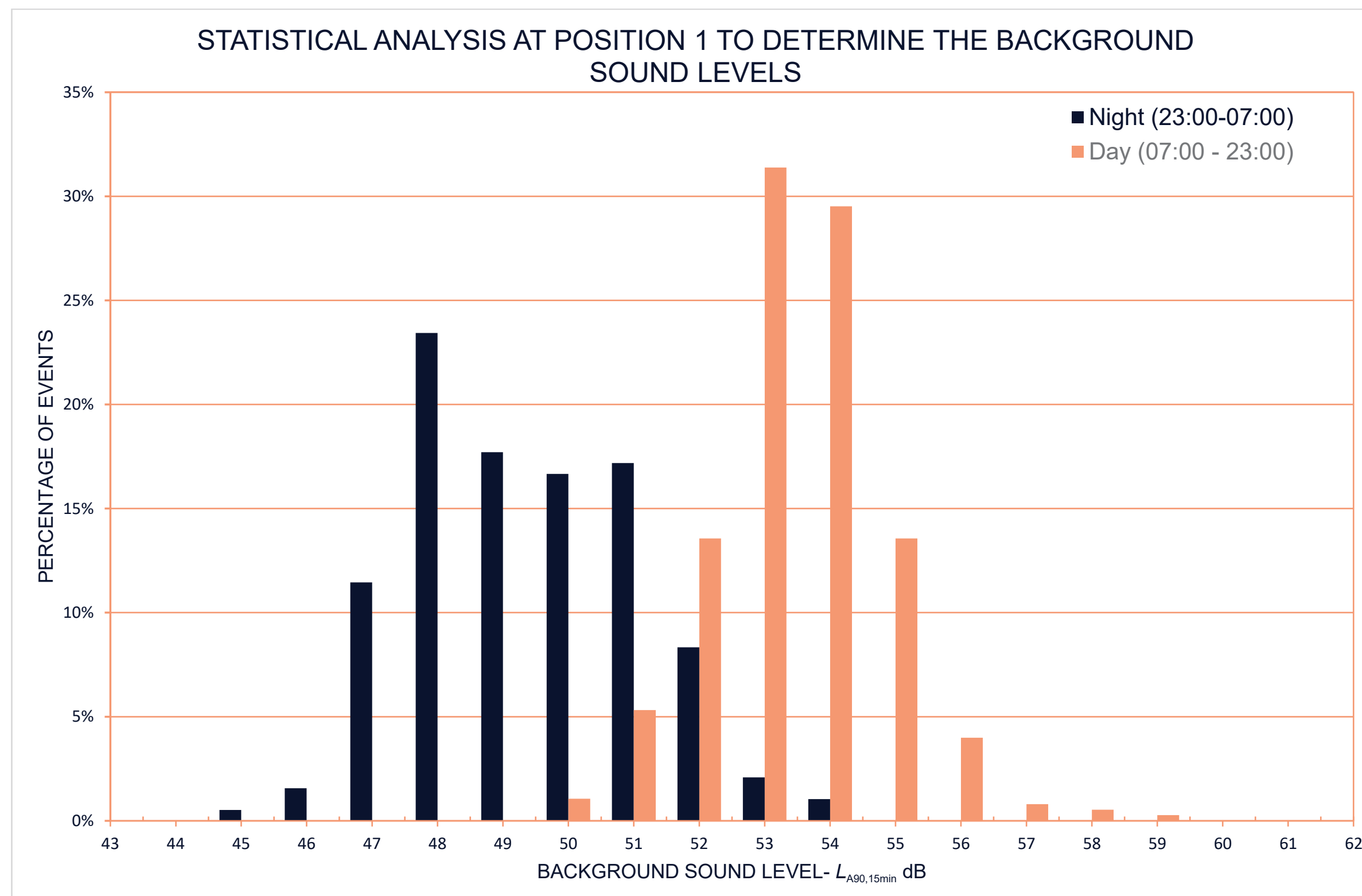
Date	Temperature Range (°C)	Precipitation (mm)	Wind Direction	Average Wind Speed (km/h)
07/07/2026	20-38	0.00	WSW	3.7
08/07/2026	22-37	0.00	WSW	1.1
09/07/2026	23-40	0.00	WSW	2.6
10/07/2026	22-36	0.00	WSW	0.6
11/07/2026	20-34	0.00	WSW	0.7
12/07/2026	19-35	0.00	WSW	1.3
13/07/2026	17-32	0.00	WSW	1.6

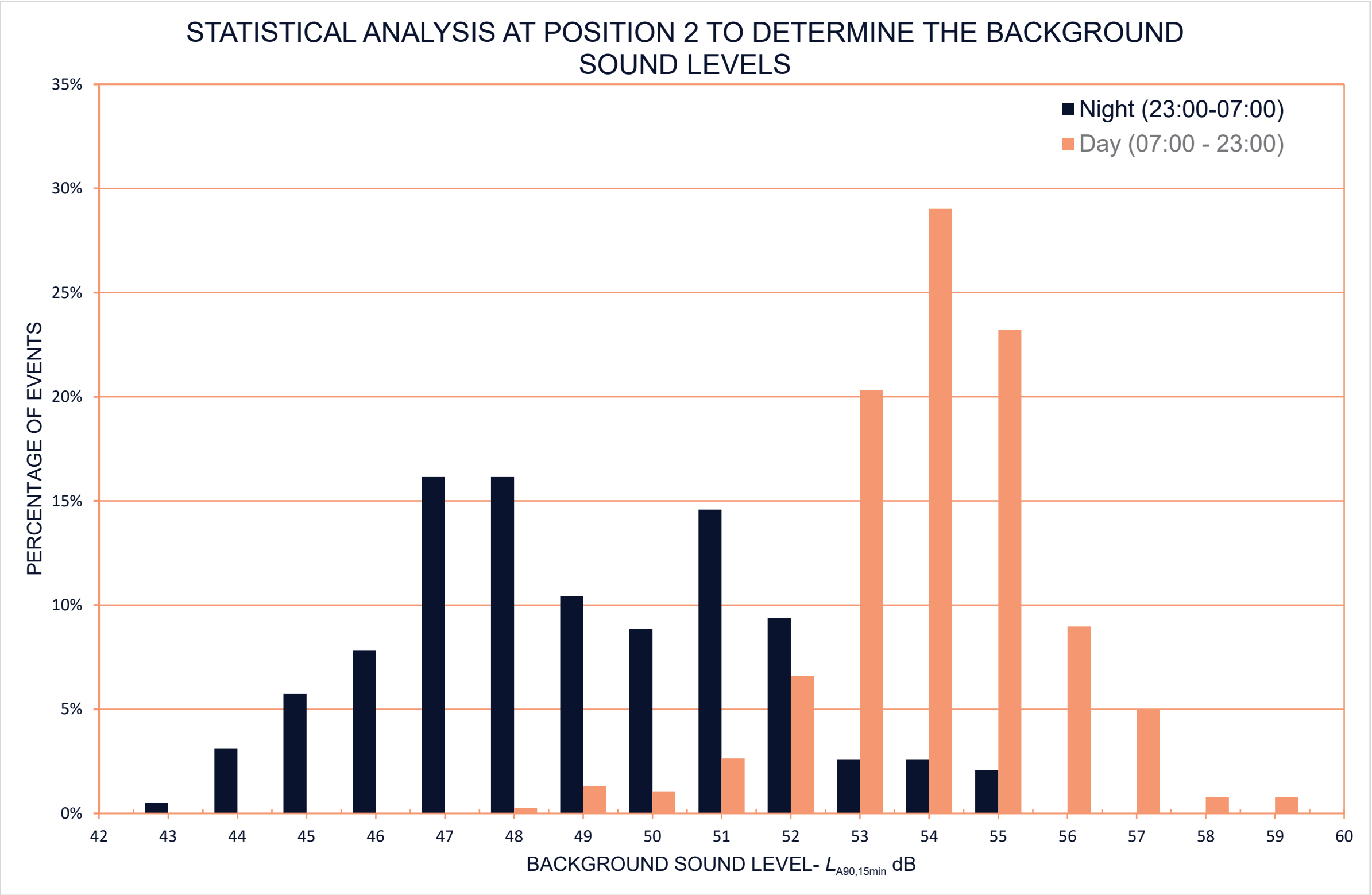
APPENDIX B – TIME HISTORY MEASUREMENT RESULTS





APPENDIX C – STATISTICAL ANALYSIS





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Annex 5: Hale Road Properties 11, 13, 15 and 17 Assessment

CONSTRUCTION PLANT ASSUMPTIONS

A4.1 The construction methodology for the Proposed Development has been reviewed by Trium to assess the potential noise and vibration effects associated with the activities.

Approach to Assessment

A4.2 The construction activities are anticipated to take approximately 29 months. The assessment of construction noise and vibration has considered the periods where the highest potential for adverse effects could occur..

A4.3 The following sections outline the construction assumptions associated with each assessment period.

Assessment Period 1 - Enabling (Estimated Q4 2028)

A4.4 Assessment period 1 covers the remaining site setup and enabling works required for Block A and Block B.

A4.5 Site establishment works will prepare and secure the site ahead of enabling and construction, including 2.4 m perimeter hoarding, access gates and temporary utility connections.

A4.6 Temporary site offices and welfare facilities will initially be provided in cabins to the rear of the site.

Assessment Period 2 – Substructure (Estimated Q4 2028 to Q4 2029)

A4.7 Assessment period 2 covers the piling and substructure works associated with Block A and Block B.

A4.8 The main noise-relevant activities are earthworks and excavation, construction of the piling platform and CFA piling, with two piling rigs anticipated. Piles are expected to be up to 600 mm diameter and approximately 18 - 25 m deep.

A4.9 Associated works include 360° excavators, concrete pours/pumping and crane operations, with one tower crane serving both blocks. Existing demolition material will be reused where possible to form the piling platform.

Assessment Period 3 – Superstructure (Estimated Q1 2029 to Q2 2030)

A4.10 Assessment period 3 covers the superstructure works associated with Block A and Block B

A4.11 The main noise-relevant activities are RC frame construction and concrete pouring/pumping, undertaken progressively on a floor-by-floor basis.

A4.12 Associated activities include operation of the tower crane, platform hoists and potentially telehandlers, together with installation of the unitised façade.

Construction Plant Assumptions List

A4.13 The plant used during each phase of demolition and construction in the modelling is detailed in Table A4.1. It is assumed that the same plant and methods will be used across each site.

Table A4.1 Plant Assumptions (Timeslice 1)

Construction Activity	Plant	BS 5228-1 Reference	Number	A-weighted Sound Power Level (dB)	% On-Time
Enabling and Site Setup	5t excavator	C.2.8	1	95	50%
	8t excavator	C.2.8	1	95	50%
	13t excavator	C.2.7	1	98	40%
	20t excavator	C.2.3	1	106	20%
	HGV/lorries/vans	C.11.10	2	105	25%
	Generator A	C.4.78	1	94	100%
Substructure / Piling	8t excavator	C.2.8	1	95	50%
	13t excavator	C.2.7	1	98	40%
	20t excavator	C.2.3	1	106	20%

	HGV/lorries/vans	C.11.10	2	105	25%
	CFA Piling Rigs	C.3.21	2	107	40%
	Concrete Agitator	D.6.20	1	102	60%
	Concrete Static Pump	C.4.30	1	107	60%
	Generator A	C.4.78	1	94	100%
	Tower Cranes	C.4.78	1	94	80%
Superstructure	Canti Desks	C.4.59	1	104	30%
	HGV/lorries/vans	C.11.10	2	105	25%
	Concrete Agitator	D.6.20	1	102	60%
	Concrete Static Pump	C.3.26	1	103	40%
	Concrete Mobile Pump, boom,	C.4.30	1	106	40%
	Water Misting Machine	C.11.3	1	97	20%
	Generator A	C.4.78	1	94	100%
	Tower Cranes	C.4.78	1	94	100%
	Poker Vibrator (frame)	C.4.48	1	104	40%
	Scaffolding	C.4.33	1	100	50%
	Telehandler	C.2.35	1	99	40%

Appendix: Noise and Vibration

Annex 1: Glossary of Acoustic Terms

Annex 2: Key Legislation, Policy and Guidance Considerations

Annex 3: Noise and Vibration Survey Report

Annex 4: Construction Plant Assumptions

Annex 5: Hale Road Properties 11, 13, 15 and 17 Assessment

HALE ROAD RECEPTORS 11, 13, 15 & 17 ASSESSMENT

- A5.1** ES Volume 1, Chapter 7: Noise and Vibration presents an assessment of enabling and construction noise and vibration at 1-9 & 19-21 Hale Road (odds), represented as Receptor G.
- A5.2** It is understood that the neighbouring properties 11, 13, 15 & 17 Hale Road are vacant and subject to future redevelopment plans. Given the existing baseline condition of the vacant nature of the properties, and that these properties are unlikely to become occupied due to future redevelopment plans, an assessment of these properties has been separately undertaken in this Annex. It is not considered appropriate to consider noise and vibration affects to the vacant dwellings in the main body of the ES chapter assessment.

Additional Baseline Receptors

- A5.2** The additional receptors assessed in this annex have been identified in Table A5.1 and listed with their respective sensitivities (according to ES Volume 1, Chapter 7: Noise and Vibration Table 7.14).

Table A5.1 Summary of Existing Receptors

Receptor Reference ID	Property	Type	Receptor Sensitivity
g1	11 Hale Road	Residential	High
g2	13 Hale Road	Residential	High
g3	15 Hale Road	Residential	High
g4	17 Hale Road	Residential	High

- A5.2** Table A5.2 presents a summary of predicted enabling and construction noise levels at the additional receptors. Table A5.3 presents a summary of the results and the likely effects for each additional receptor in the absence of mitigation.

Table A5.2 Summary of Predicted Enabling and Construction Noise Levels (*L*_{Aeq,10h} dB)

Receptors	Predicted Noise Level per Assessment Period (<i>L</i> _{Aeq,10h} dB)		
	1 - Enabling	2- Substructure	3 - Superstructure
g1 – 11 Hale Road	64	72	71
g2 – 13 Hale Road	64	72	71
g3 – 15 Hale Road	64	72	71
g4 – 17 Hale Road	64	72	71

Table A5.3 Summary of Predicted Likely Effects from Construction Noise

Receptors	Sensitivity	Predicted Likely Effect from Construction Noise per Assessment Period		
		1 - Enabling	2 - Substructure	3 - Superstructure
g1 – 11 Hale Road	High	Minor Adverse (not significant)	Major Adverse (significant)	Major Adverse (significant)
g2 – 13 Hale Road	High	Minor Adverse (not significant)	Major Adverse (significant)	Major Adverse (significant)
g3 – 15 Hale Road	High	Minor Adverse (not significant)	Major Adverse (significant)	Major Adverse (significant)
g4 – 17 Hale Road	High	Minor Adverse (not significant)	Major Adverse (significant)	Major Adverse (significant)

- A5.3** The results presented indicate that the additional receptors would experience Major Adverse (significant), local, direct and temporary effects during the worst case individual assessment scenarios:
- Receptor g1: 11 Hale Road during substructure and superstructure works;
 - Receptor g2: 13 Hale Road during substructure and superstructure works.
 - Receptor g3: 15 Hale Road during substructure and superstructure works.
 - Receptor g4: 17 Hale Road during substructure and superstructure works.
- A5.4** All reasonable steps will be taken to mitigate and minimise the effects through the adoption of Best Practicable Means (BPM). Noise mitigation measures and noise management plans covering BPM shall be put into place to ensure that noise is minimised at all times. Noise mitigation measures representing BPM (as defined in Section 72 of the COPA are described in the ‘*Mitigation, Monitoring and Residual Effects*’ section of this ES chapter.
- Enabling and Construction Vibration**
- A5.5** At receptors located within 20 m of piling activities, vibration levels are expected to be at levels between 1 and 3 mm/s, which corresponds with a Medium magnitude of impact. The additional receptors have been assessed as such:
- Receptor g1: 11 Hale Road (high sensitivity). Effects are assessed as Moderate Adverse (significant);
 - Receptor g2: 13 Hale Road (high sensitivity). Effects are assessed as Moderate Adverse (significant).
 - Receptor g3: 15 Hale Road (high sensitivity). Effects are assessed as Moderate Adverse (significant).
 - Receptor g4: 17 Hale Road (high sensitivity). Effects are assessed as Moderate Adverse (significant).
- A5.6** These effects are classified as Local, Direct and Temporary. As per the other enabling and construction impacts, a worst-case (shortest) distance to the receptors has been taken, and any adverse impacts will be limited in duration, i.e. short-term.

Receptor	Description of the Residual Effect	Scale and Nature	Significant / Not Significant	Geo	D	P	St Mt Lt
g3 – 15 Hale Road g4 – 17 Hale Road							
g1 – 11 Hale Road g2 – 13 Hale Road g3 – 15 Hale Road g4 – 17 Hale Road	Construction traffic noise	Negligible	Not Significant	L	D	T	Mt

Notes:

Residual Effect

- Scale = Negligible / Minor / Moderate / Major
- Nature = Beneficial or Adverse

Geo (Geographic Extent) = Local (L), Borough (B), Regional (R), National (N)

D = Direct / I = Indirect

P = Permanent / T = Temporary

St = Short Term / Mt = Medium Term / Lt = Long Term

N/A = not applicable / not assessed