



Technical Note

Title:	HORIBA MIRA Plot 44 Baseline Noise Survey		
Client:	Nature Positive on behalf of Swanvale Development Ltd		
Reference:	2062574-RSKA-TN-001-(01)		
Date:	21 January 2025		
Prepared:	Cyril Joe BSc (Hons) MSc	Approved:	Daniel Vallis BSc (Hons) CEnv MIOA MEnvSc

1 Introduction

1.1 Instruction

RSK Acoustics (RSKA) has been instructed by Nature Positive (an RSK company) to provide a baseline noise survey to support BREEAM assessments required of a new commercial development within the MIRA Technology Park in Nuneaton.

This technical note provides a brief summary of the baseline noise survey conducted during the period between 10 December 2024 to 16 December 2024.

1.2 Site Location

The site is bounded by Watling Street (A5) to the south, Wood Lane to the east, the A444 to the west and Fenn Lanes to the north/north-east. It is situated approximately 3km north of Nuneaton and 5.5km west of Hinckley.

The development is situated in a predominantly agricultural area and the site is comprised of office units along its centre, southern and south-western perimeter, with vehicle testing tracks and testing facilities occupying the majority of its north and north-eastern area.

Plot 44 is located approximately 125m north of Watling Street (A5) and 150m west of Wood Lane, along the southeastern corner of the technology park.

The nearest noise sensitive receptors to the development site have been identified as the houses in Lindley Lodge Cottages on Watling Street (R1) and in Grange Cottage Farm on Wood Lane (R2). R1 and R2 are approximately 120m south and 250m east of the proposed development building.

2 Baseline Noise Survey

2.1 Monitoring Location

The baseline noise survey was undertaken over midweek and weekend periods at two monitoring locations representative of the site and nearest receptors respectively.

As the monitoring was unattended, security and accessibility of the monitoring equipment was considered for the survey. These locations are considered to be 'representative of the acoustic climate' at the nearest receptors by considering surrounding noise sources, such as the contribution from distant road traffic and agricultural activity.

Table 2.1 below details the nearest noise sensitive receptors to the proposed development, and their representative monitoring location; and Figure 2.1 depicts their location in the context of the receptors (green outline) and application site (brown outline).

Reference	Receptor Name	Representative monitoring location
R1	Lindley Lodge Cottages on Watling Street (A5)	MP1
R2	Grange Cottage Farm on Wood Lane	MP2

Table 2.1 References for NSR’s

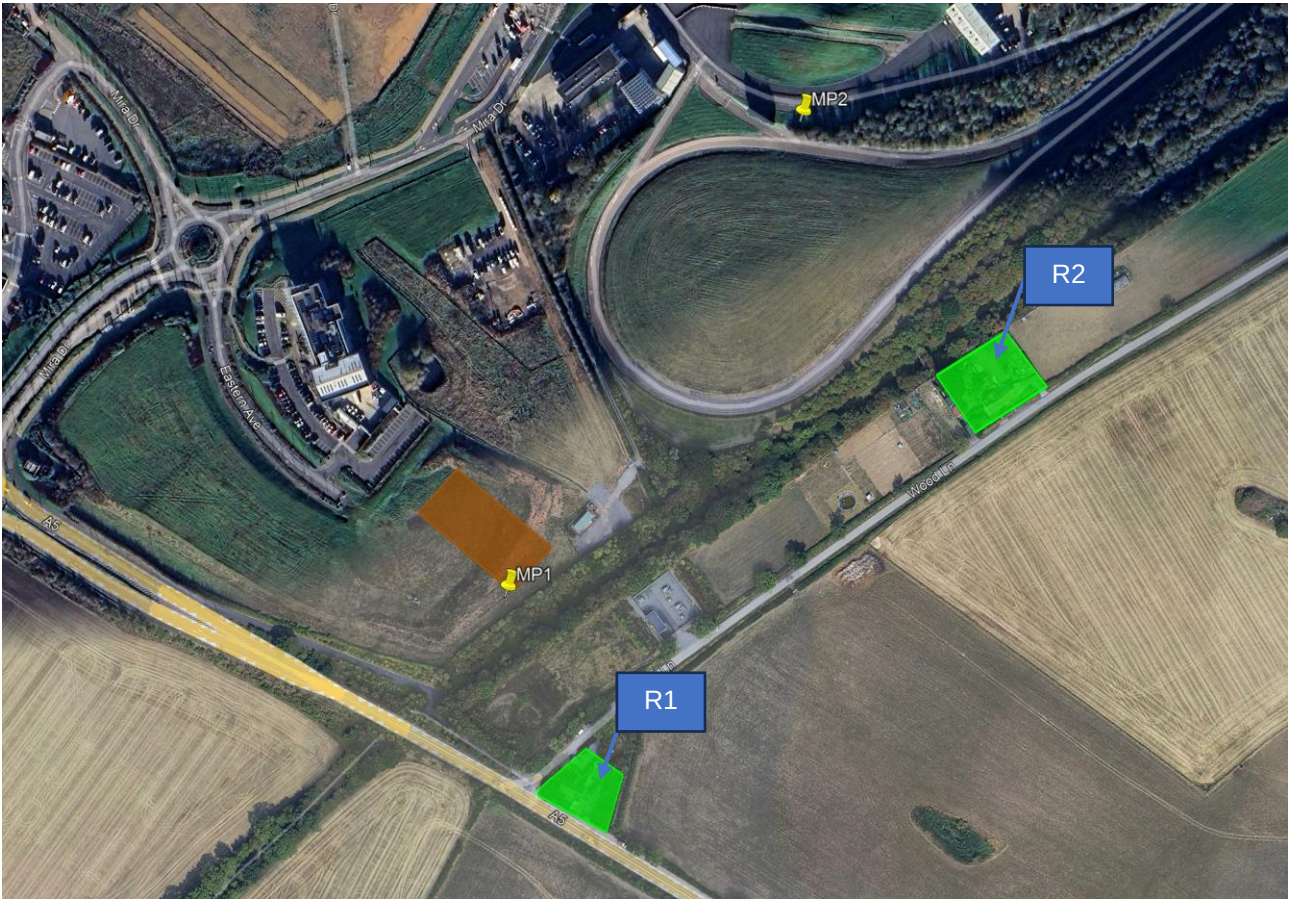


Figure 2.1 Unattended monitoring locations in the context of the nearest sensitive properties (green outline) and the proposed development (brown outline)

2.2 Survey Equipment

The noise measurements were undertaken using the following equipment:

Location	Equipment	Make / Model	Serial number	Calibration date
MP1	Sound level meter	01dB / Fusion	14921	27/11/2024
MP2			15192	01/06/2023
MP1 & MP2	Acoustic calibrator	Rion / NC-74	34557136	12/07/2024

Table 2.2 Monitoring equipment

Measurements were logged in continuous 15-minute integration periods (with supplementary 100 millisecond data) and obtained using a combination of broadband indices (L_{Aeq} , L_{A10} , L_{A90} and L_{Amax}) and one-third octave frequency bands.

2.3 Weather Conditions

Weather conditions during the unattended monitoring period were obtained from Wunderground (www.wunderground.com), using the weather station closest to the measuring location (with available historical data). This was judged to be:

- Bresser (INUNEA20), approximately 2.7km from site.

This weather data is summarised in Table 2.3.

Date	Temperature range (°C)	Total precipitation (mm)	Wind speed range ^[1] (m/s)	Max gust speed ^[1] (m/s)	Prevailing wind direction
10/12/2024	5-7	0	1-5 (3)	6 (3)	NNE
11/12/2024	5-6	0	0-4 (2)	6 (2)	NNE
12/12/2024	5-7	1	0-4 (1)	4 (1)	N, NNE
13/12/2024	5-6	1	0-2 (0)	2 (0)	N, NNE
14/12/2024	5-8	0	0-4 (1)	4 (1)	SW
15/12/2024	8-13	0	0-5 (2)	6 (2)	SW
16/12/2024	8-11	0	0-4 (2)	5 (2)	SW
Notes					
[1] Average speed given in brackets.					

Table 2.3 Summary of weather data during the monitoring period

The weather conditions are generally considered suitable for the survey, in accordance with BS 7445, except for some periods of gust, and rain.

Gusts above 5m/s were noted on the 10th, 11th, 15th and 16th December 2024. Noise measurements during these periods were further investigated to determine if the data had been affected. From analysing the data, it is found that measurements between 10/12 and 11/12 indicate noise from gusts affecting location MP2, therefore these periods have been removed from the analysis. Other periods have been deemed suitable for determining background levels as the measured levels were not affected significantly. Excluded periods have been shown in the time history graphs in Section 3.

Short periods of rain were noted between 12 and 13 December 2024. The time history analysis during periods of rain showed no significant increase in noise attributable to the weather. Therefore, these periods have been included in the background analysis.

2.4 Noise Environment

Observations of the acoustic environment were made at the monitoring locations during the installation and removal of the noise monitoring equipment.

Location MP1 was noted to be dominated by road traffic on the A5, with some contribution from Wood Lane. The bund that runs along the eastern boundary was noted to not provide much screening from the road noise.

Location MP2 was noted to be dominated by unidentified noise sources to the west (most likely to be vehicles travelling at high speed on the track). Noise from some form of engine or fixed plant was also observed to the west.

3 Baseline Survey Results

3.1 Background Noise Levels

Statistical analysis has been conducted for the noise levels obtained in order to determine the representative background levels at each monitoring location (excluding any data affected by weather or extraneous noise sources).

The selected representative background noise levels, considered appropriate for the assessment of noise from the fixed plant at the nearest receptors based on the analysed levels are summarised in the table below.

Receptors	Representative monitoring location	Representative Background noise level, $L_{90,T}$ dB(A)	
		Daytime	Night-time
R1	MP1	48	35
R2	MP2	40	34

Table 3.1 Representative background noise levels at the nearest noise sensitive receptors

Detailed L_{A90} statistical analysis is shown graphically in Figure 3.1 to Figure 3.4 below, corresponding to the background levels presented above. The representative L_{A90} background levels chosen for each period and location has been highlighted in green within the graphs.

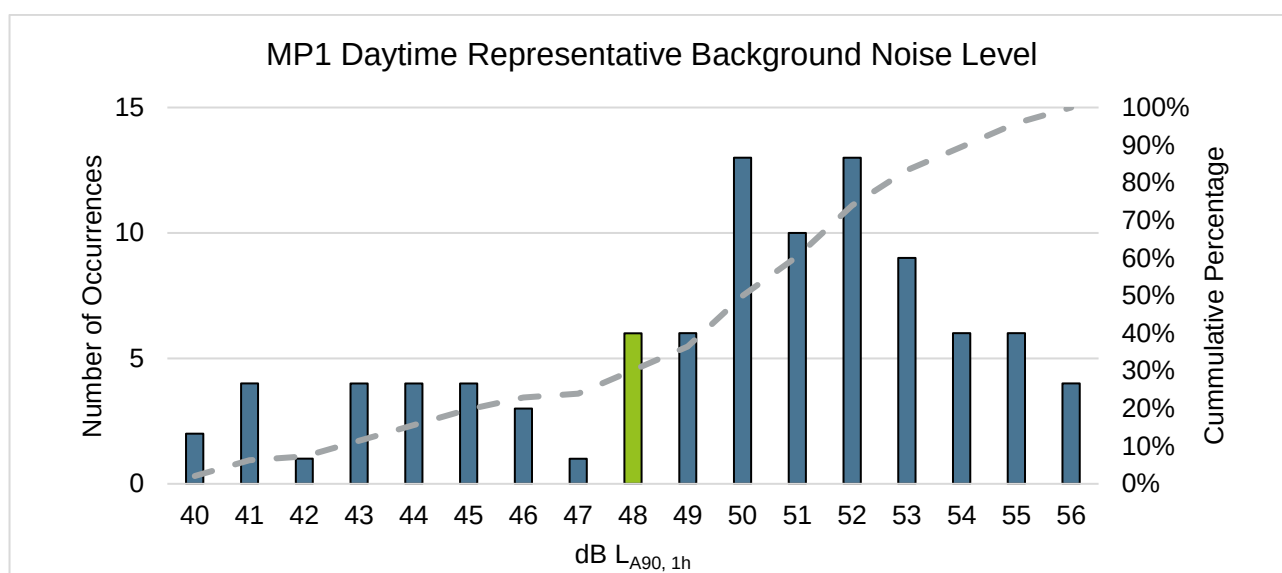


Figure 3.1 Statistical Analysis of Daytime Background Noise Levels for MP1(10/12/24 to 16/12/24)

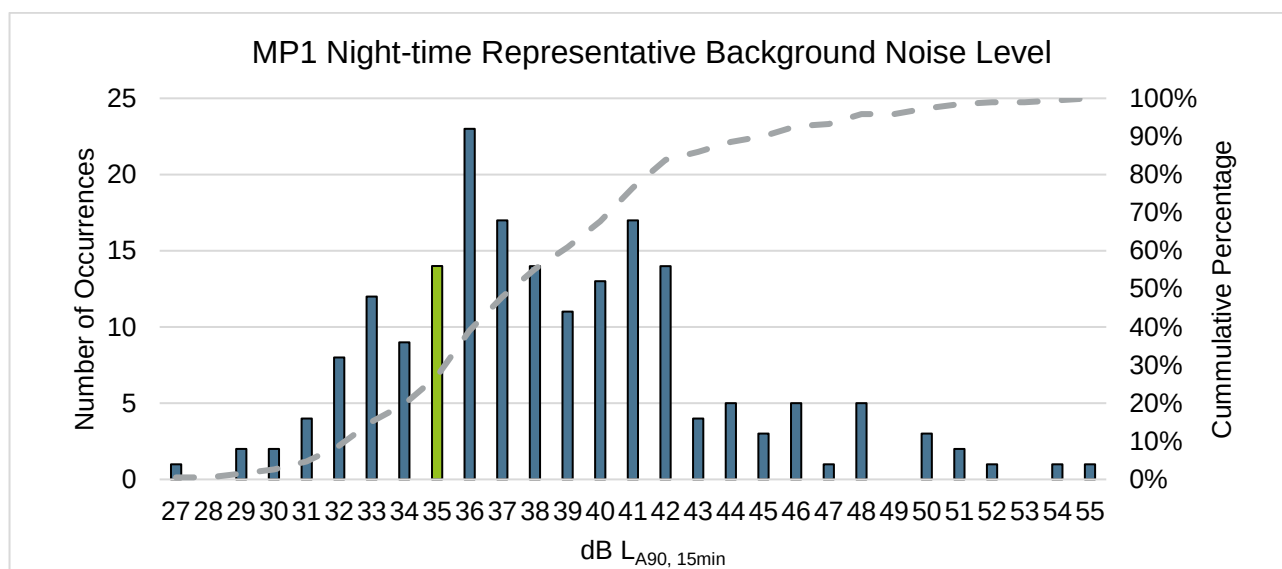


Figure 3.2 Statistical Analysis of Night-time Background Noise Levels for MP1 (10/12/24 to 16/12/24)

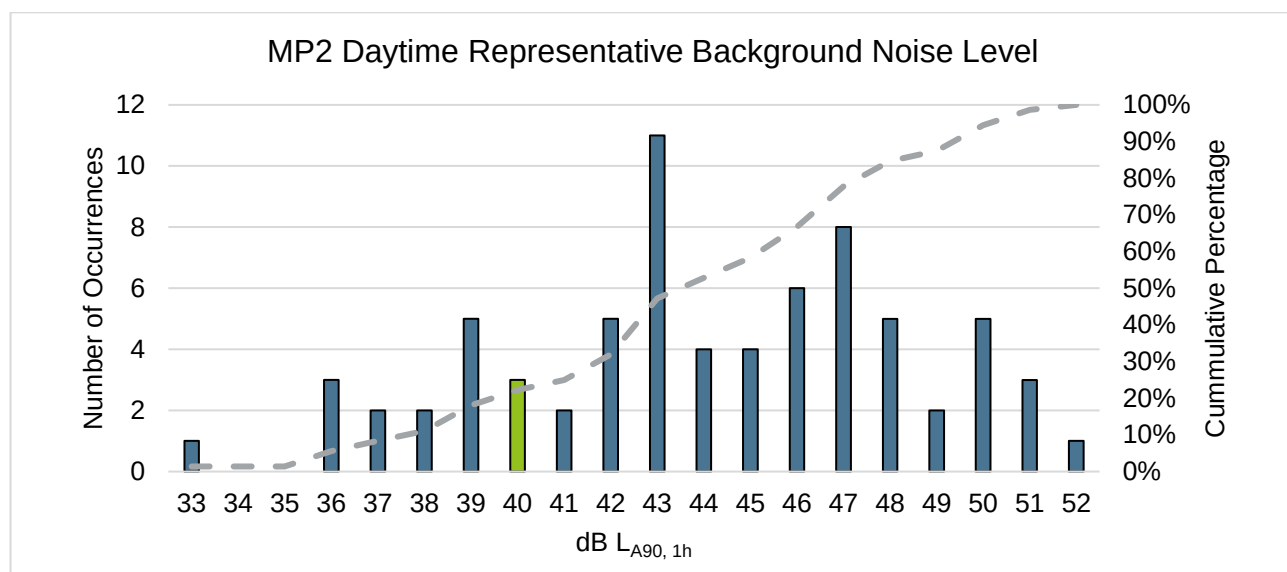


Figure 3.3 Statistical Analysis of Daytime Background Noise Levels for MP2 (12/12/24 to 16/12/24)

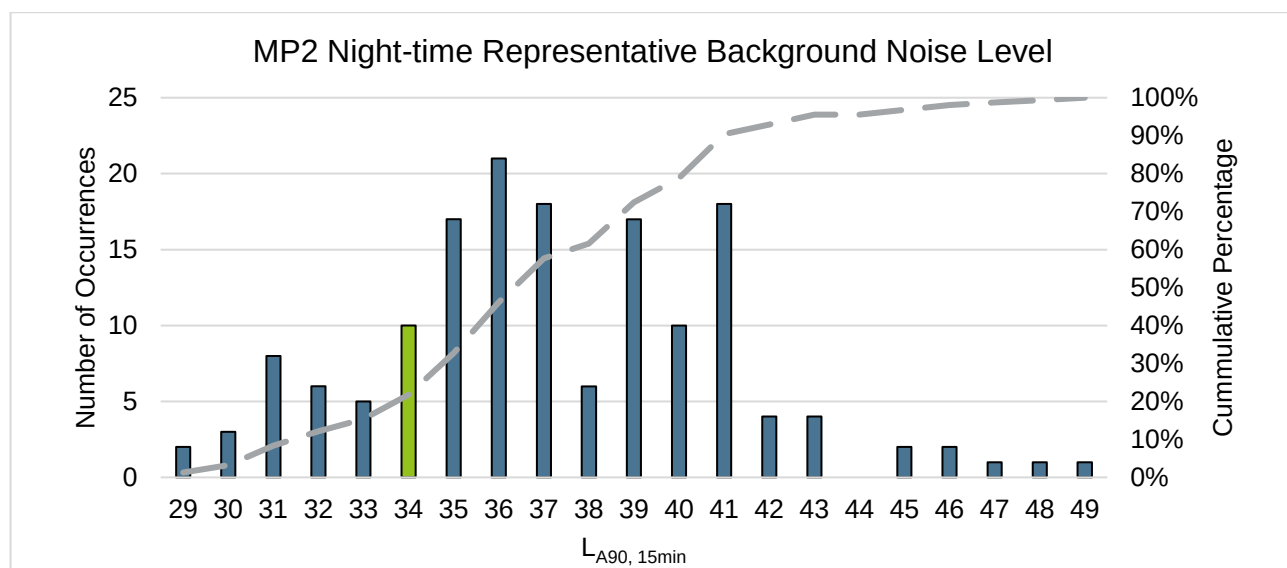


Figure 3.4 Statistical Analysis of Night-time Background Noise Levels for MP2 (12/12/24 to 16/12/24)

3.2 Time History Graphs

Time history graphs for the monitoring period is shown graphically in Figure 3.5 and Figure 3.6 below.

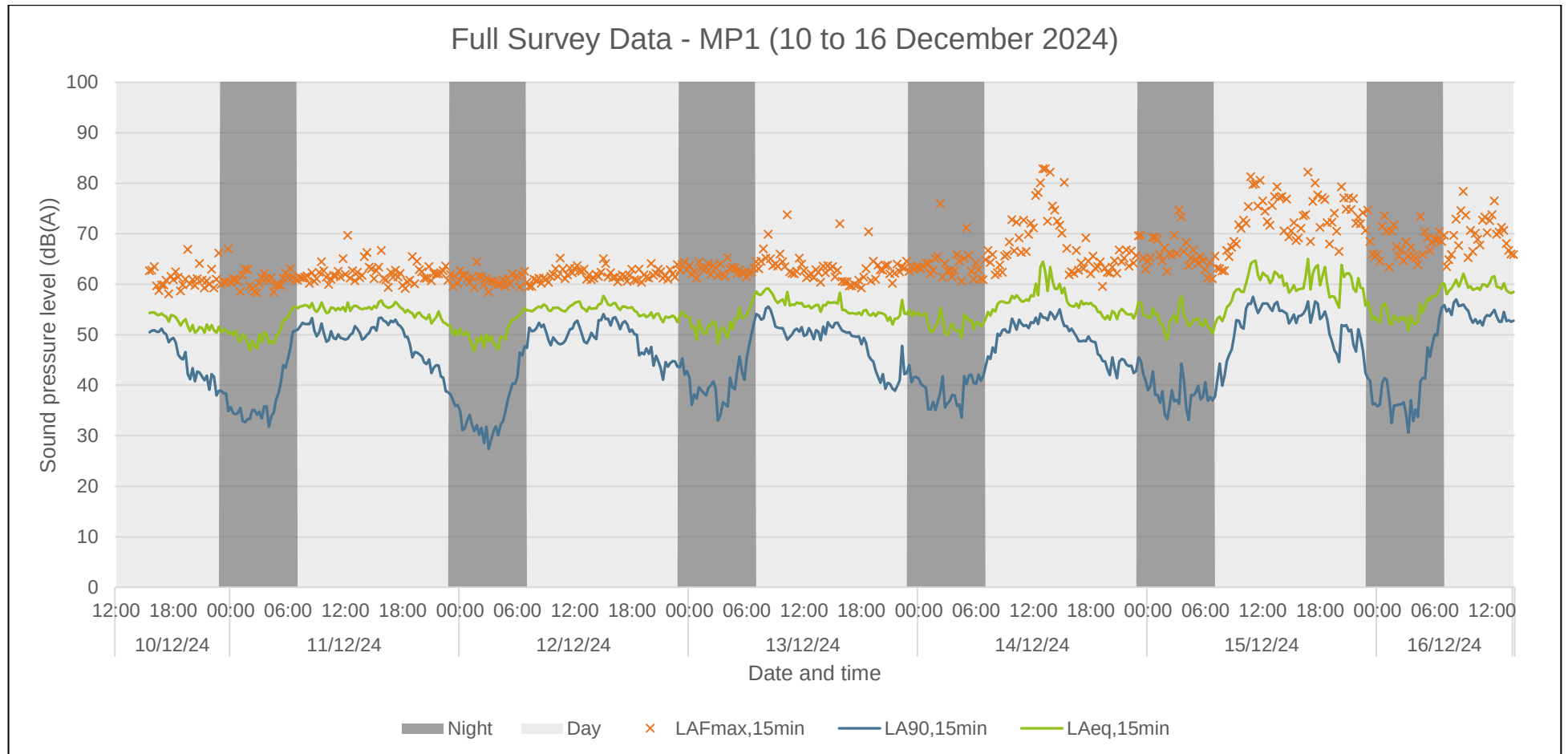


Figure 3.5 Time History Graph for MP1

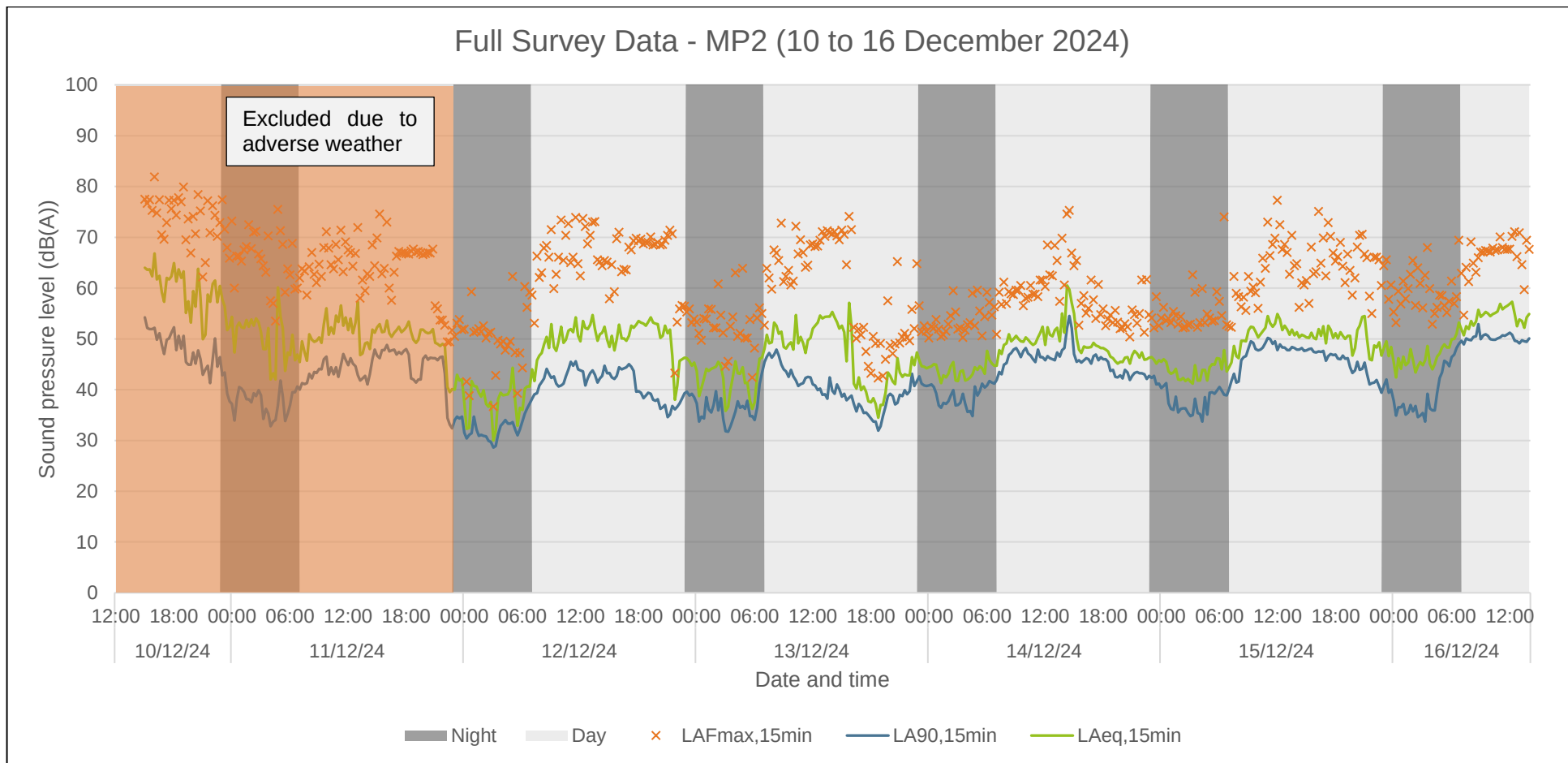


Figure 3.6 Time History Graph for MP2

