

APPENDIX L – BASELINE NOISE SURVEY DETAILS

The baseline noise survey measurement were undertaken using the equipment set out in Table L.1 below:

Table L.1 - Noise Survey Equipment

Equipment description	Manufacturer & Type No.	Serial No.
Sound Level meter	Rion NL-52	821104
Sound Level meter	Rion NL-52	821129
Calibrator	B&K 4231	2705904
Weather Station	Outpost COBRA2-3G	op40470

The Type 1 sound level meters have been calibrated to traceable standards within the preceding two years and the portable calibrator within the preceding 12 months. The sound level meters were calibrated both prior to and upon completion of the survey and no significant drift was observed.

Figure L.1 and **Figure L.2** presents photographs of the sound level meters in-situ at Measurement Position 1 (MP1) and Measurement Position 2 (MP2) respectively. **Figure L.1** also shows the weather station

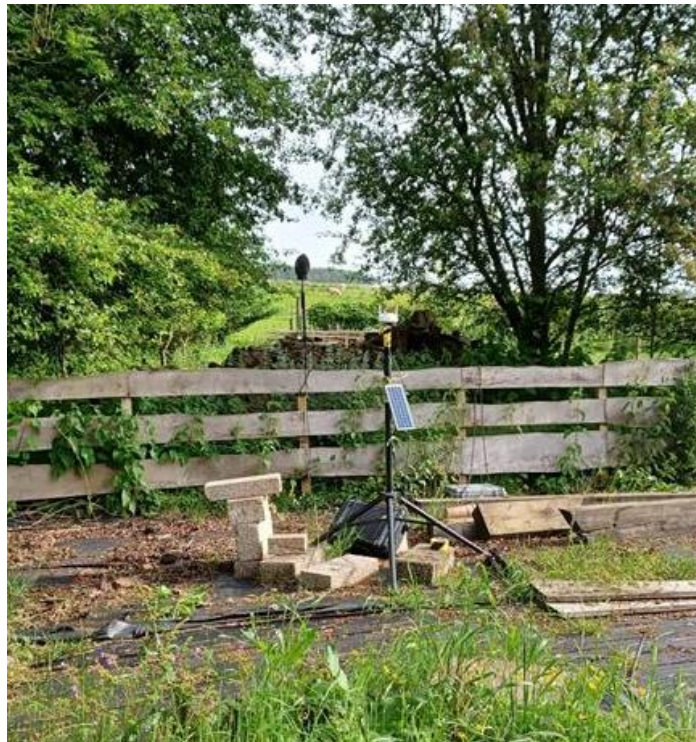
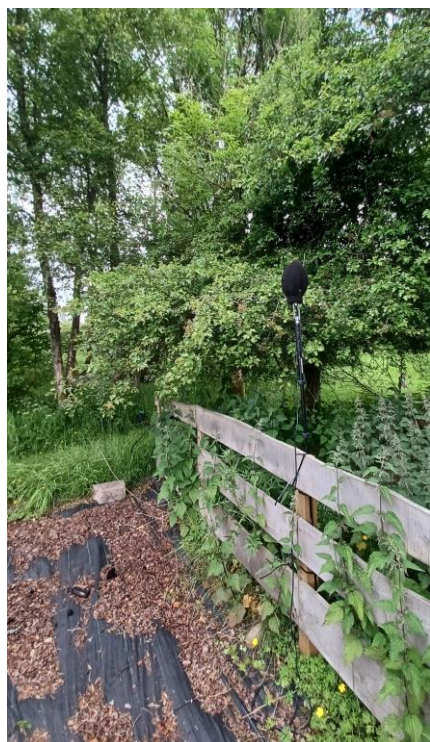


Figure L.1 – Sound level meter in-situ at MP1



Figure L.2 – Sound level meter in-situ at MP2

Figure L.3 and **Figure L.4** show a summary of the day and night-time measured noise levels at Measurement Position 1 (MP1) and Measurement Position 2 (MP2) during the survey. It also shows the periods where the weather conditions were unsuitable for sound level measurements. These periods have been omitted from the data used in the assessment.

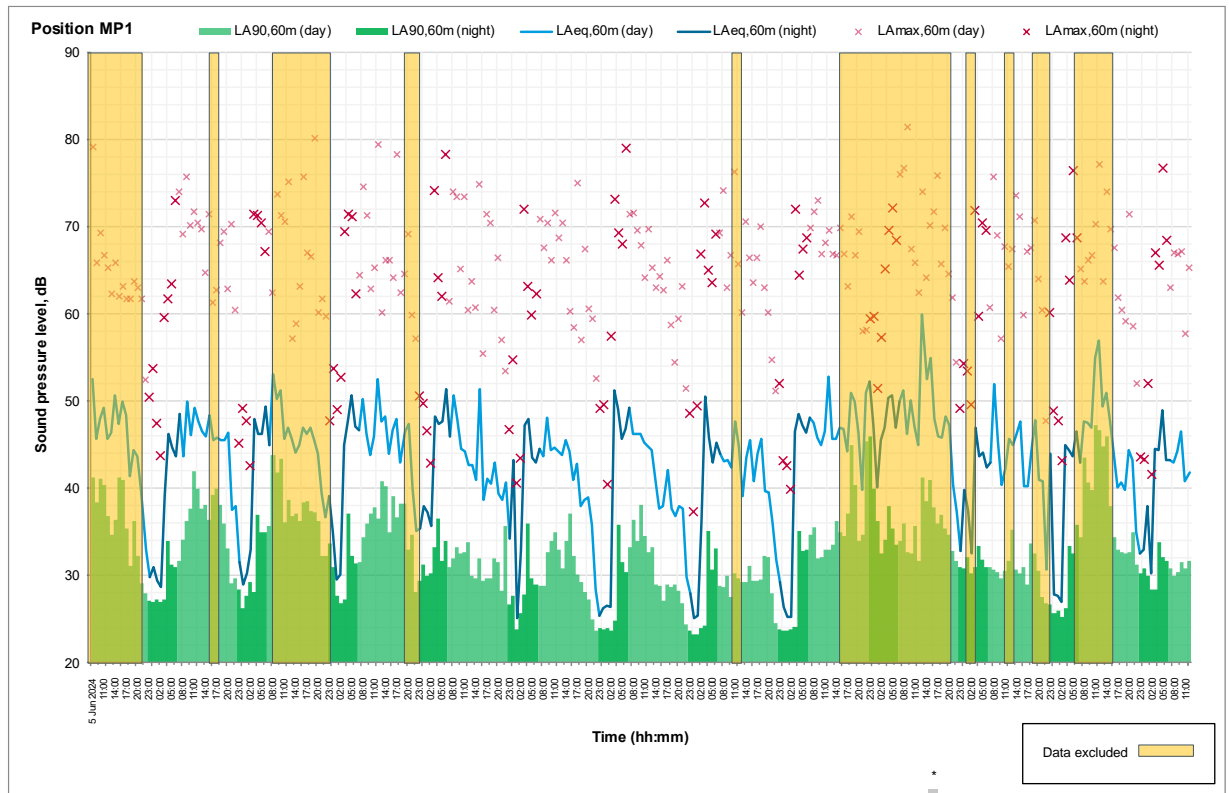


Figure L.3 – MP1 Noise Levels dB

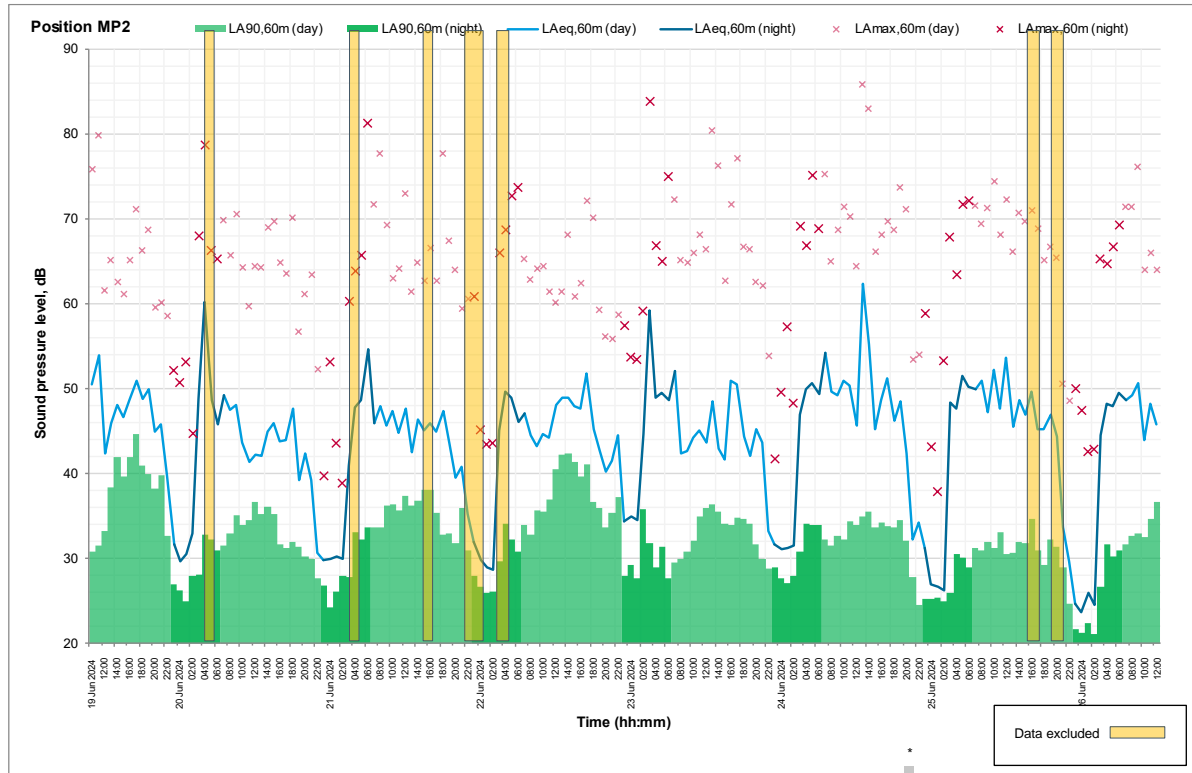


Figure L.4 – MP2 Noise Levels dB

Background Sound Level Data Analysis

The measured noise levels have been analysed to determine the day and night-time background sound level. The methodology used follows the statistical approach presented in BS 4142.

The measured levels in conjunction with the spread of noise levels, are used to determine the representative background sound level. Histogram charts showing the spread of the background noise levels over the measurement period are shown in **Figure L.5** to **Figure L.8**.

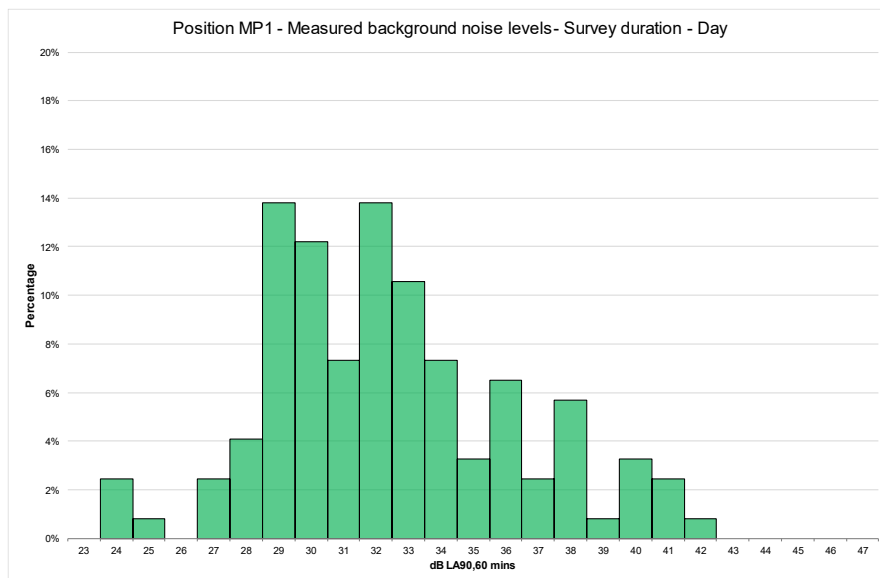


Figure L.5 – MP1 Daytime (07:00 – 23:00) $L_{A90,15min}$ Histogram

As seen in **Figure L.5**, 29 dB $L_{A90, 60mins}$ is the most commonly occurring daytime background sound level at MP1 for the duration of the survey period. However, the background sound levels of 32 dB and 30 dB also commonly occur. Therefore, to be robust, a background sound level of 29 dB $L_{A90, 60mins}$ has been considered as the representative daytime background sound level for this assessment.

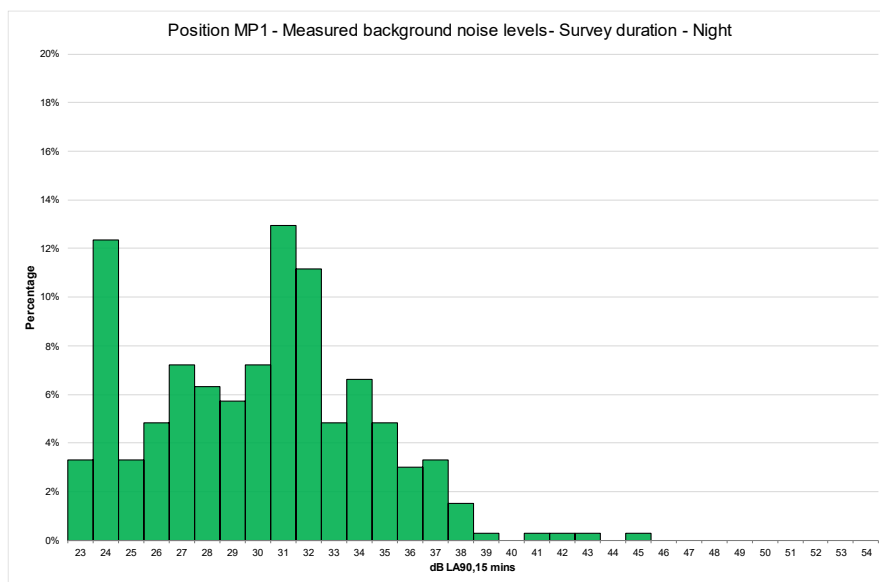


Figure L.6 – MP1 Night-time (23:00 – 07:00) $L_{A90,15min}$ Histogram

As seen in **Figure L.6**, 31 dB $L_{A90, 15min}$ is the most commonly occurring night-time background sound level at MP1 for the duration of the survey period. Therefore, this is considered as the representative of the night-time background sound level for this assessment.

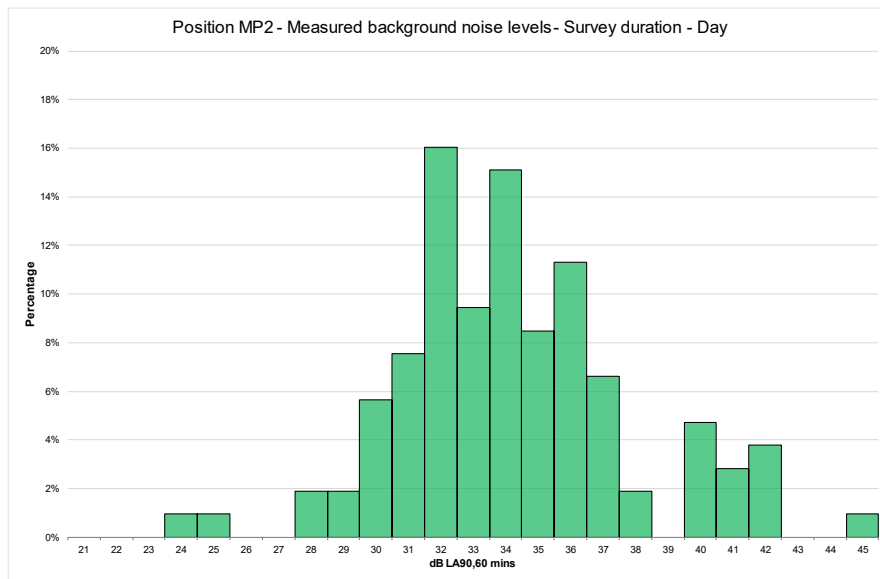


Figure L.7 – MP2 Daytime (07:00 – 23:00) $L_{A90,15min}$ Histogram

As seen in **Figure L.7**, 32 dB $L_{A90, 60mins}$ is the most commonly occurring daytime background sound level at MP1 for the duration of the survey period. However, the background sound levels of 34 dB and 36 dB also commonly occur. Therefore, to be robust, a background sound level of 32 dB $L_{A90, 60mins}$ has been considered as the representative daytime background sound level for this assessment.

60mins has been considered as the representative daytime background sound level for this assessment.

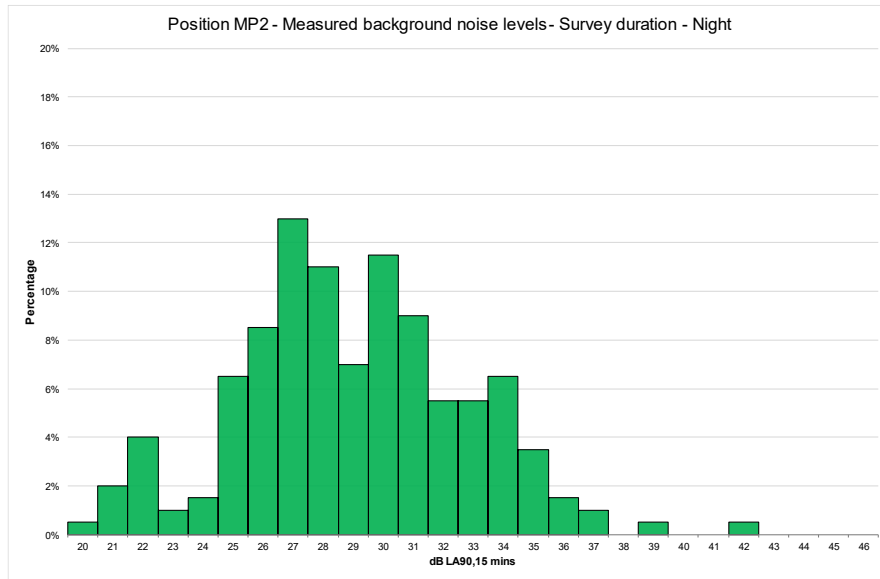


Figure L.8 – MP2 Night-time (23:00 – 07:00) $L_{A90,15min}$ Histogram

As seen in **Figure L.8**, 27 dB $L_{A90, 15min}$ is the most commonly occurring night-time background sound level at MP1 for the duration of the survey period. Therefore, this is considered as the representative of the night-time background sound level for this assessment.