Noise and Vibration Appendix 10.1 Baseline Noise Monitoring

1.1 Instrumentation

1.1.1 Sound level meters with Class 1 specification were used as set out in BS EN 61672-1:2013 'Electroacoustics. Sound level meters. Specifications'. The sound level meters are calibrated every two years by a UKAS Accredited Calibration Laboratory to BS EN 61672-3:2013 'Electroacoustics. Sound level meters. Periodic tests. UKAS calibration certificates are available on request.

Table 1.1 Survey Equipment Details

Equipment	Model	Serial number	Laboratory calibration date	Monitoring Locations
Type 1 Sound level meter	NL-52	743081	13/10/2023	LT1
Type 1 Sound level meter	NL-52	809414	22/10/2024	LT2
Type 1 Sound level meter	NL-52	809413	22/10/2024	LT3
Type 1 Sound level meter	NL-52	420765	12/09/2024	LT4
Sound level meter calibrator	B&K 4231	2545421	03/09/2024	All locations

1.2 Sound Monitoring Survey

Monitoring Location LT1

1.2.1 Unattended sound level measurements were taken at the Site. The sound level measurements started at 11:15 on 31/01/2025 and finished at 10:30 on 06/02/2025. The microphone was placed at a height of approximately 1.5 m from the ground.

1.2.2 During the setup and collection, the sound environment at this location was characterised by (from most dominant to least dominant):

- Intermittent bird song (approximately 10 m);
- Continuous road traffic (approximately 100 m).

1.2.3 The noise monitoring results are presented in Table 1.2. A time history graph is presented in Figure 1.1.

Table 1.2 LT1 Noise Monitoring Results

Monitoring Period	Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)		
	$L_{Aeq,16h}$ dB	$L_{A90,15min}$ dB	$L_{Aeq,8h}$ dB	$L_{A90,15min}$ dB	L_{AFmax} dB
31/01/2025	58[1]	55[1]	57	51	77
01/02/2025	60	57	60	55	82
02/02/2025	60	56	58	51	81
03/02/2025	60	56	57	50	82
04/02/2025	58	54	57	49	82
05/02/2025	57	53	60	56	76
06/02/2025	63[2]	61[2]	-	-	-
Average	59	55	58	52	81

1. Data exclusions due to weather. Data starts from 7pm.
2. Incomplete measurement period. Data excluded.

Monitoring Location LT2

1.2.4 Unattended sound level measurements were taken at the Site. The sound level measurements started at 19:00 on 31/01/2025 and finished at 10:15 on 06/02/2025. The microphone was placed at a height of approximately 1.5 m from the ground.

1.2.5 During the setup and collection, the sound environment at this location was characterised by (from most dominant to least dominant):

- Intermittent HGV plant (approximately 20 m);
- Continuous distant road traffic (approximately 100 m).

1.2.6 The noise monitoring results are presented in Table 1.3. A time history graph is presented in Figure 1.2.

Table 1.3 LT2 Noise Monitoring Results

Monitoring Period	Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)		
	$L_{Aeq,16h}$ dB	$L_{A90,15min}$ dB	$L_{Aeq,8h}$ dB	$L_{A90,15min}$ dB	L_{AFmax} dB
31/01/2025	54[1]	52[1]	54.4	50	73
01/02/2025	57	54	56	53	76
02/02/2025	57	55	57	52	78
03/02/2025	61	56	57	51	81
04/02/2025	60	57	58	54	79
05/02/2025	58	56	57	54	75
06/02/2025	64[2]	60[2]	-	-	-
Average	**59**	**56**	**57**	**53**	**78**

1. Data exclusions due to weather. Data starts from 7pm.
2. Incomplete measurement period. Data excluded.

Monitoring Location LT3

1.2.7 Unattended sound level measurements were taken at the Site. The sound level measurements started at 12:00 on 31/01/2025 and finished at 11:00 on 06/02/2025. The microphone was placed at a height of approximately 1.5 m from the ground.

1.2.8 During the setup and collection, the sound environment at this location was characterised by:

- Continuous road traffic (approximately 10 m).

1.2.9 The noise monitoring results are presented in Table 1.4. A time history graph is presented in Figure 1.3.

Table 1.4 LT3 Noise Monitoring Results

Monitoring Period	Daytime (07:00 – 23:00)		Night-time (23:00 – 07:00)		
	$L_{Aeq,16h}$ dB	$L_{A90,15min}$ dB	$L_{Aeq,8h}$ dB	$L_{A90,15min}$ dB	L_{AFmax} dB
31/01/2025	60[1]	55[1]	55	49	74
01/02/2025	59	56	60	54	81
02/02/2025	60	55	57	52	76
03/02/2025	58	55	54	49	76
04/02/2025	57	54	58	52	78
05/02/2025	60	57	61	57	71
06/02/2025	65[2]	62[2]	-	-	-
Average	**59**	**55**	**58**	**53**	**76**

1. Data exclusions due to weather. Data starts from 7pm.
2. Incomplete measurement period. Data excluded.

1.3 Time-History Plots

Figure 1.1 LT1 Time-history

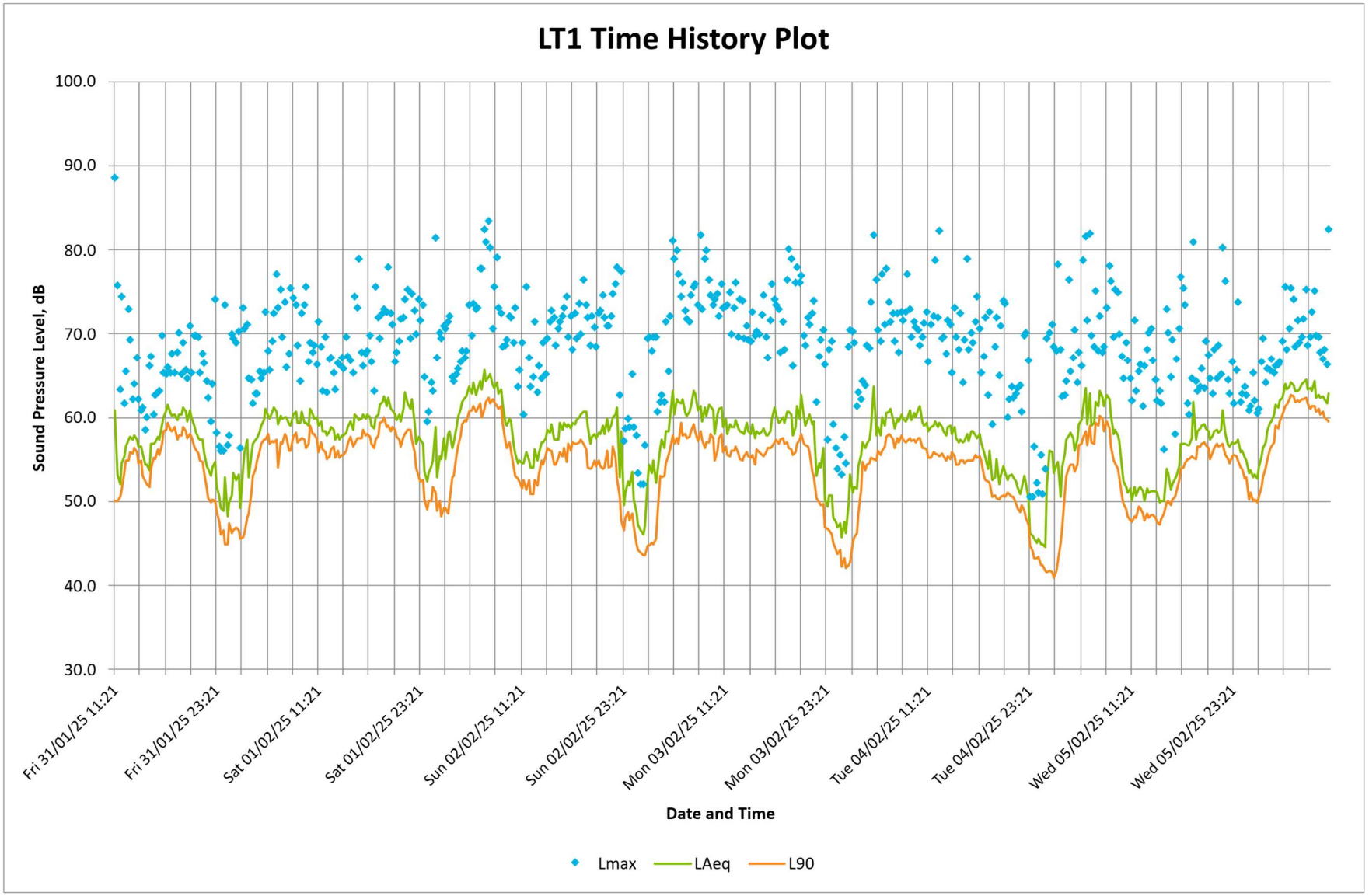


Figure 1.2 LT2 Time-history

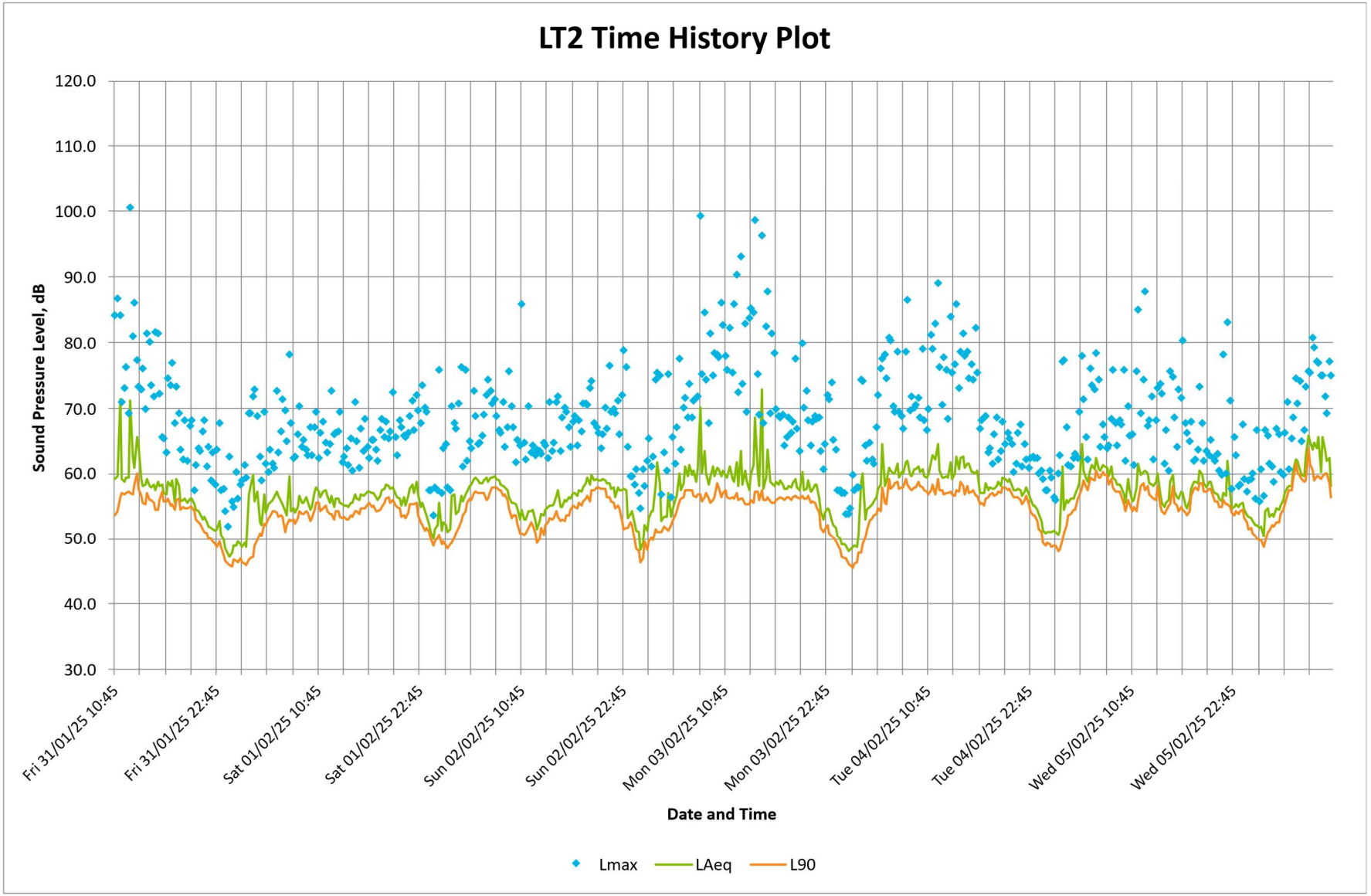


Figure 1.3 LT3 Time-history

