

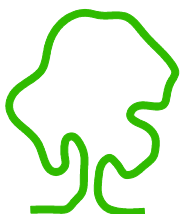
CRAIG CONSTRUCTION SERVICES



10-20 MARINE PLACE, WORTHING, WEST SUSSEX, BN11 3DN

Noise Impact Assessment

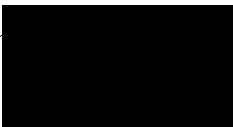
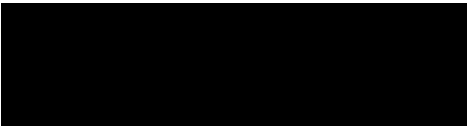
March 2026



eas ltd

Environmental Assessment Services Ltd

REPORT DATA SHEET

Requirement	Data
Report Ref	883/MMEPlanning/MarinePlace/Noise
Date	March 2026
Client	Craig Construction Services
Report type	Noise Impact Assessment
Purpose	Planning
Revisions	-
Prepared by	Daniel Milford BSc (Hons)  Signed
Approved by	Eur Ing Malcolm McKemey BSc (Hons), CEng, CEnv, MICE, MCIWEM, MIEEnvSc  Signed

PAUL CRAIG

10-20 MARINE PLACE, WORTHING, WEST SUSSEX, BN11 3DN

Noise Impact Assessment

March 2026

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PAUL CRAIG

10-20 MARINE PLACE, WORTHING, WEST SUSSEX, BN11 3DN

Noise Impact Assessment

March 2026

1. THE SITE AND BACKGROUND

- 1.1. The site comprises a disused warehouse building to the north and a yard/parking area to the south. It is located in an urban location to the north of Worthing seafront, West Sussex. The site is bordered to the north by a commercial building - no 22 Marine Place (Just Yoga), to the east by an alleyway and residential properties, Bedford Row on the far side, to the south by a commercial property - 10 Marine Place (Turning Tides Community Centre) and to the west by Marine Place public highway with residential properties on the far side (currently under construction). The site is accessed from Marine Place to the west. The site area (redline boundary) is approximately 0.08 ha. The Ordnance Survey map reference for the centre of the site is TQ 15000 02495. The site elevation for the centre of the site is approximately +5 m OD. See Appendix A Figure 1 for the site location plan.
- 1.2. It is proposed to redevelop the site after the demolition of the existing building, into a three-storey residential building comprising 27 one-bedroom apartments with communal areas. Access to the site is via an existing entrance from Marine Place to the west. See Figure 2 in Appendix A for the proposed site layout.
- 1.3. To ensure that the building can be considered suitable for residential occupation a noise impact assessment is to be carried out.
- 1.4. A noise impact assessment has been carried out in accordance with Professional Practice Guidance (ProPg): Planning & Noise (May 2017) and with reference to the recommendations given in the *National Planning Policy Framework* (NPPF) March 2024 and *Noise Policy Statement for England* (NPSE) 2010. Reference has been made to the British Standard Guidance on Sound Insulation and Noise Reduction for Buildings (BS 8233:2014) and the World Health Organisation publications Night Noise Guidelines for Europe 2009 and Community Noise Guidelines 1999. The site was initially visited on 24 March and again on 31 March 2026.

2. DEFINITIONS

2.1. Noise assessment terms used in the report are defined and described below:

dB_(A) – the unit of noise measurement that expresses the loudness in terms of decibels (dB) weighted by frequency for human sensitivity to sound (A).

L_{(A)90} – A-weighted sound pressure level exceeded for 90 % of the measured time; defined as ‘background noise level’.

L_{(A)eq} – equivalent continuous A-weighted sound pressure level over a given period of time; defined as ‘average noise level’.

L_{(A)max} – equivalent maximum A-weighted sound pressure level over a given period of time; defined as ‘maximum sound level’.

L_{(A)10} – A-weighted sound pressure level exceeded for 10 % of the measured time; a measure frequently referred to relating to traffic noise.

3. THE ASSESSMENT

3.1. The assessment comprised:

- The selection of suitable noise monitoring stations, reasonably representative of the exposure of the proposed receptors.
- The installation of the noise monitoring apparatus for suitable monitoring periods.
- Additional short-term noise monitoring around the site.
- General observations of factors affecting noise around the site.
- A review of the results of the monitoring.
- Recommendations regarding noise attenuation options, where indicated.

3.2. The continuous monitoring was carried out at the site between Tuesday 24 March 2026 to Tuesday 31 March 2026. Noise levels at the site during the monitoring were considered to be reasonably representative of the ambient noise climate currently at the site for the weekend days (mostly comprising cars passing the on the nearby Marine Parade). However, during the weekdays there was significant noise disruption due to the ongoing construction at the development site on the opposite side of Marine Place. The monitor was positioned on the second story walkway of a temporary site office unit; the microphone was mounted on a 1.5 m pole and fitted with a weather shield. Recordings were taken at the eastern boundary of the site adjacent to the alleyway separating the site from the residential receptors in Bedford Row. Additional short-term noise monitoring was carried out at the western boundary with Marine Place with an SLM monitor on a tripod 1.5 m above ground level. See Figure 4 in Appendix A for the monitoring locations.

- 3.3. The monitoring was carried out using a CEL (Casella) Type 490C Precision Sound Level Meter (SLM) and CEL-110/1 field calibrator (both calibrated to national standards on 19 March 2026 – see certificates in Appendix B). The SLM was field calibrated before and after each monitoring session and no measurable drift was observed. Calibration readings before and after the monitoring sessions were all 113.9 dB.
- 3.4. The site was not impacted by adverse weather conditions during the monitoring, and the results recorded on the weekend days are considered reasonably representative of the ambient noise levels at the site, as existing. As previously mentioned, the results from the weekday monitoring were impacted by construction noise, from the adjacent site. Appropriate consideration has been given to this during the interpretation of the results.

4. RESULTS OF THE MONITORING

- 4.1. The site was not impacted by adverse weather conditions during the continuous or short-term monitoring, and the results are considered representative of the ambient noise levels at the site, as existing. The SLM traces from the continuous noise monitoring are shown in Appendix C and the monitoring locations are given in Figure 4 in Appendix A. The results of the continuous noise monitoring are summarised in Tables 4.1 and 4.2 below:

TABLE 4.1
AMBIENT DAYTIME NOISE LEVELS

Date	$L_{(A)eq}$ dB _(A)	$L_{(A)90}$ dB _(A)	$L_{(A)10}$ dB _(A)	$L_{(A)max}$ dB _(A)
Tuesday - 24/3/2026	62.06	55.48	63.90	81.27
Wednesday - 25/3/2026	60.49	49.68	62.74	81.78
Thursday - 26/3/2026	59.64	47.67	61.59	83.07
Friday - 27/3/2026	59.47	49.04	61.87	81.07
Saturday - 28/3/2026	52.24	43.70	54.42	73.70
Sunday - 29/3/2026	52.54	47.29	54.62	70.35
Monday - 30/3/2026	61.37	47.76	64.39	81.78
Tuesday - 31/3/2026	69.17	59.65	73.22	86.20

TABLE 4.2
AMBIENT NIGHT-TIME NOISE LEVELS

Date	$L_{(A)eq}$ dB _(A)	$L_{(A)90}$ dB _(A)	$L_{(A)10}$ dB _(A)	$L_{(A)max}$ dB _(A)
Tue 24/3 – Wed 25/3	48.22	44.77	49.61	65.46
Wed 25/3 – Thu 26/3	44.50	40.22	45.22	62.70
Thu 26/3 – Fri 27/3	42.73	37.68	43.12	61.13
Fri 27/3 – Sat 28/3	45.47	38.72	45.68	65.55
Sat 28/3 – Sun 29/3	45.63	38.60	45.15	66.97
Sun 29/3 – Mon 30/3	45.26	41.21	44.86	64.95
Mon 30/3 – Tue 31/3	42.93	37.86	43.14	61.87

- 4.2. Professional Practice Guidance (ProPg): Planning & Noise gives a value of *risk of adverse effects* as part of an initial noise risk assessment in a range of Negligible to High based on the daytime $L_{(A)eq\ 16hr}$ and night-time $L_{(A)eq\ 8hr}$ exposures recorded at a site. See Figure 3 in Appendix A for the risk of adverse side effects scale. The initial noise risk assessment value for the exposure at the site is 'Medium', indicating good acoustic design process should be followed for the construction of the proposed dwellings, in order to maintain the WHO and BS acceptable levels.

- 4.3. See Table 4.3 below for the short-term monitoring results.

TABLE 4.3
ADDITIONAL SHORT-TERM NOISE MONITORING POSITION

PERIOD	24 March 2026 (15 Minutes)			
NOISE LEVELS $dB_{(A)}$	$L_{(A)eq}$	$L_{(A)90}$	$L_{(A)10}$	$L_{(A)max}$
	65.3	55.2	69.1	76.3
WEATHER	Overcast			
PRINCIPAL NOISE SOURCES	Traffic from Marine Place and construction work occurring on site and opposite.			

5. INTERPRETATION OF THE RESULTS

- 5.1. The meteorological conditions at the site throughout the continuous monitoring period were overcast with light winds and drizzle throughout the monitoring period. Throughout the short-term monitoring the meteorological conditions were overcast with no rain.
- 5.2. The results confirm that the site is currently exposed to 'Medium' levels of noise for daytime during the weekday and 'Low' for daytime during the weekend and night-time. Some noise attenuation measures will be required in order to maintain the desirable internal noise levels for residential use.

6. NOISE IMPACT ASSESSMENT

- 6.1. *Internal Noise Level Guidelines (Stage 2, Element 2).*
- 6.1.1. The World Health Organisation (WHO) recommends no more than 30 $dB_{(A)}$ $L_{(A)eq}$ to permit restful sleep. The same night-time guideline is given in BS 8233:2014. Night-time is classed as 23:00 - 07:00 hours. The permitted maximum daytime internal $L_{(A)eq}$ is given as 35 $dB_{(A)}$ in the British Standard.
- 6.1.2. The average night-time $L_{(A)eq}$ was recorded as 44.96 $dB_{(A)}$. With the current noise levels, in order to meet these guidelines, the windows in the residences in the proposed dwelling will have to provide at least 15 $dB_{(A)}$ of attenuation in their design.

- 6.1.3. The average $L_{(A)eq}$ daytime reading was 59.62 dB_(A). The attenuation incorporated into the design of the buildings should allow for up to 25 dB_(A) $L_{(A)eq}$.
- 6.1.4. It should be noted however that recordings taken during the weekend, when construction works were not taking place, produced a significantly lower average of 52.39 dB_(A). This aligns more closely with the average of 51.7 dB_(A) produced in the 2023 Noise Assessment of the site by Acoustic South East.
- 6.1.5. Standard external rendered brick walls would provide at least 50 - 55 dB of noise attenuation. The attenuation provided by a typical insulated roof structure is likely to be >35 dB_(A). Standard thermal double-glazed windows should provide 35 dB of attenuation. This will be enough to lower the internal noise levels to acceptable WHO acceptable levels.
- 6.1.6. An open window will provide approximately 15 dB_(A) of attenuation. Opening windows to permit cooling on hot nights will not result in internal noise levels exceeding the WHO and BS standards, however open windows during the day would result in an exceedance of WHO and BS standards by 10 dB_(A).
- 6.1.7. The WHO guidance states that the number of individual night-time noise events ($L_{(A)max}$) exceeding 45 dB_(A) within a bedroom should be limited. This is generally taken as not more than eight exceedances during a single night.
- 6.1.8. Accounting for attenuation provided by the design of the building and closed windows, there is one night-time noise event exceeding 45 dB_(A) across the weeklong monitoring period.
- 6.1.9. With attenuation provided by open windows, the number of night-time noise events exceeding 45 dB_(A) was more than eight on all monitored nights, indicating that some acoustic powered ventilation will be required to ensure that overheating does not occur whilst maintaining the night-time noise to within the WHO guidelines.
- 6.2. *External Noise Level Guidelines and Amenity Area Assessment (Stage 2 Element 3).*
 - 6.2.1. For external areas, the World Health Organisation (WHO) community noise guidelines suggest 55 dB_(A) $L_{(A)eq}$ as the threshold for annoyance, with the BS 8233:2014 stating that noise which does not exceed 50 dB_(A) $L_{(A)eq}$ to be "desirable". Weekend $L_{(A)eq}$ values exceed the "desirable" threshold but do not exceed the threshold for annoyance, whereas all weekday $L_{(A)eq}$ values exceed the threshold for annoyance. Discounting the disruption from the temporary construction activities at the adjacent site, the noise levels within the outdoor areas will not exceed the desirable threshold. This concurs with the data from the weekend and the 2023 Acoustic South East noise report in which no values exceed the threshold for annoyance.

- 6.2.2. During short-term monitoring, the highest peak ($L_{(A)max}$) noise level recorded was 87.7 dB_(A). During the continuous monitoring the highest daytime peak was 99.1 dB_(A). Discounting the disruption from the construction site, a more representative value would be from the weekend, with a value of 86 dB_(A). The highest night-time peak was 84.6 dB_(A). This suggests that at a worse-case scenario some occasional daytime and night-time noise disruption may be heard through the standard double-glazed attenuation (35dB_(A)) that exceeded the WHO and BS standards of 30-35 dB_(A).
- 6.2.3. The proposed dwelling is expected to produce some additional peaks when the outdoor areas are in use in fine weather. The levels of noise from the proposed dwelling is not expected to increase the overall ambient noise levels in the area when compared with the noise from the existing neighbouring houses and businesses; the noise levels at the site are likely to remain at similar levels pre and post construction.
- 6.2.4. The construction phase of the proposed redevelopment of the site will have some noise impacts. However, if construction work is restricted to normal business hours and good working practice employed, this should not be a significant concern with relation to noise impact on the neighbouring residential and commercial receptors. The Health and Safety Executive states:

Use absorptive materials within the building to reduce reflected sound, e.g. open cell foam or mineral wool. Keep noisy machinery and processes away from quieter areas. Design the workflow to keep noisy machinery out of areas where people spend most of their time.

7. CONCLUSIONS

- 7.1. The National Planning Policy Framework (NPPF 2024) states that:

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

In doing so they should:

- a) Mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.*
- b) Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.*

- 7.2. Professional Practice Guidance (ProPg): Planning & Noise Note 1 *risk of adverse effects* rating for the site is Medium. This indicates a requirement that some acoustic design process should be followed for the proposed development.
- 7.3. In order to achieve the <30 dB_(A) WHO night-time standard and <35 dB_(A) BS daytime standard L_{(A)eq} within the proposed residences, standard thermal double-glazing (which provides a minimum attenuation of 35 dB_(A)) and standard external rendered brick walls (which would provide at least 50 - 55 dB of noise attenuation BS 8233) will be recommended in the construction of the dwellings.
- 7.4. External noise levels less than the 55 dB_(A) L_{(A)eq} recommended as an annoyance threshold by WHO are likely to be achieved most of the time in the external areas of the residences (excluding the current construction noise). In the summer months, when the outdoor areas at the site would be used by the future residents, it is considered that the external noise levels will exceed 55 dB_(A) L_{(A)eq} very occasionally at the proposed dwellings.
- 7.5. The construction work relating to the proposed redevelopment of the site should not have significant adverse noise impacts on adjacent residential receptors as long as the construction work is restricted to normal business hours (Monday to Friday 07:30 – 18:30 hours and Saturday 08:00 – 13:00) and good working practice is employed.
- 7.6. The evidence of this assessment is that, subject to implementing the mitigation and attenuation measures recommended above, the proposed residents should not experience any significant adverse impacts on health and quality of life.



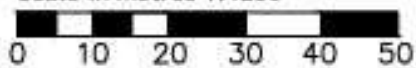
APPENDIX A

- Figure 1: Site Location
- Figure 2: Proposed Site Layout
- Figure 3: Pro Planning Risk of Adverse Side Effects Scale
- Figure 4: Monitoring Locations



+LP Location Map 1:1250

Scale in Metres 1:1250



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Scale as shown

10 - 20 Marine Place, Worthing,
West Sussex BN11 3DN

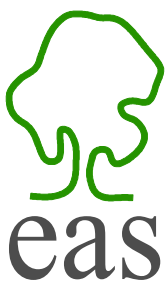
Figure 1: Site Location Plan

March 2026

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Drawings not for construction.

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— Site outline = 731m²
 Proposed Building footprint = 536 m²



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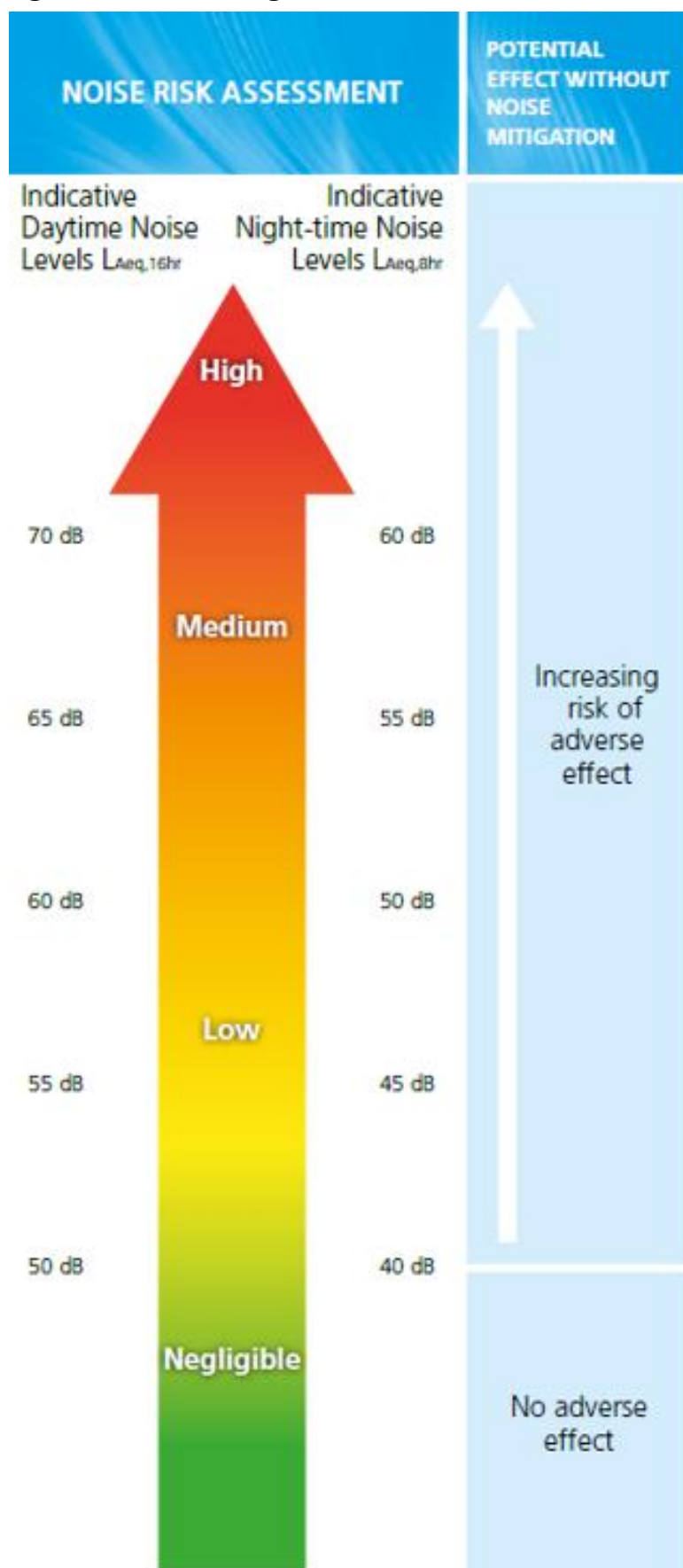
Scale as shown

10 - 20 Marine Place, Worthing,
West Sussex BN11 3DN

Figure 2: Proposed Site Layout

March 2026

Figure 3: Pro Planning Risk of Adverse Side Effects Scale



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— Site outline = 731m²
 Proposed Building footprint = 536 m²



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Scale as shown

10 - 20 Marine Place, Worthing,
West Sussex BN11 3DN

Figure 4: Monitoring Locations

March 2026

APPENDIX B

Noise Monitor Calibration Certificates

Acoustic Calibration Services Limited
Unit 6H Diamond Industrial Centre
Works Road Letchworth Garden City
Hertfordshire SG6 1LW
Tel: 01462 677 197 Mobile: 0771 886 4944
Email: trevjohnlewis@aol.com



or
cal@acousticcalibration.co.uk
web: www.acousticcalibration.co.uk

CERTIFICATE OF CALIBRATION

Model: Casella CEL-110/1 **Serial Number:** 119427

Organisation: Environmental Assessment Services Ltd, Unit 4b, The Courtyard
Holmsted Farm, Cuckfield, West Sussex, RH17 5JT

Job Number: 3022

Customer Order Reference: SLM Calibration

The acoustic calibrator was run for a period of time until a stable level was achieved. The output level was compared to the certified level of the laboratory measurement references. The calibrator was applied to the meter, removed, then reapplied to provide five separate readings, with the average value of these measurements recorded and certified.

The ambient temperature during calibration was **24.1 ± 1°C**.

The barometric pressure was **102.2 to 102.3 kPa**.

The relative humidity was **30 to 40 %**

The sound pressure level output from the Acoustic Calibrator was measured in its half inch configuration using a B&K 4134 microphone. The mean level output of the acoustic calibrator was 114.1 dB at the reference setting and 94.1 dB at the -20dB setting.

The output frequency signal of the acoustic calibrator is 1000Hz.

All ACSL's calibration instrumentation is fully traceable to National Standards. The acoustic references are calibrated by laboratories which are UKAS accredited for the purpose.

Certificate No: 16431

Date of Issue: 19th March 2026

Signature:

Print Name:

Trevor Lewis

Acoustic Calibration Services Limited
Unit 6H Diamond Industrial Centre
Works Road Letchworth Garden City
Hertfordshire SG6 1LW
Tel: 01462 677 197 Mobile: 0771 886 4944
Email: trevjohnlewis@aol.com



or
cal@acousticcalibration.co.uk
web: www.acousticcalibration.co.uk

CERTIFICATE OF CALIBRATION

Model: Casella CEL-490.C1 **Serial Number:** 129580

Organisation: Environmental Assessment Services Ltd., Unit 4b, The Courtyard
Holmsted Farm, Cuckfield, West Sussex, RH17 5JT

Job Number: 3022

Customer Order Reference: SLM Calibration

The SLM was assessed for conformance with International Standards IEC 60651 and IEC 60804 using test procedures described in BS 7580 Part 1. The manufacturer claims Type 1 accuracy conformance and it was against these requirements that all the results were evaluated.

The sound level meter was fitted with a **GRAS 40AE** measurement microphone Serial No. **100742** and a **CEL-495** preamplifier Serial No. **001597**. The microphone was replaced with a suitable input device in order to apply electrical signals to the preamplifier.

A **Casella CEL-110/1** Acoustic Calibrator Serial No: **119427** was supplied with the meter and utilised in establishing the initial acoustic calibration setting.

The sound level meter passed all applied tests with no deviations from Type 1 specification, in accordance with IEC 60651 and IEC 60804. Accordingly, the meter meets the requirements of BS 7580 Part 1.

The sound level meter should be set to read **113.9dB** when used with the associated acoustic calibrator, microphone and preamplifier, as detailed above at reference atmospheric pressure.

All ACSL's calibration instrumentation is fully traceable to National Standards. The acoustic references are calibrated by laboratories which are UKAS accredited for the purpose.

Certificate No: 16432

Date of Issue: 19th March 2026

Signature:

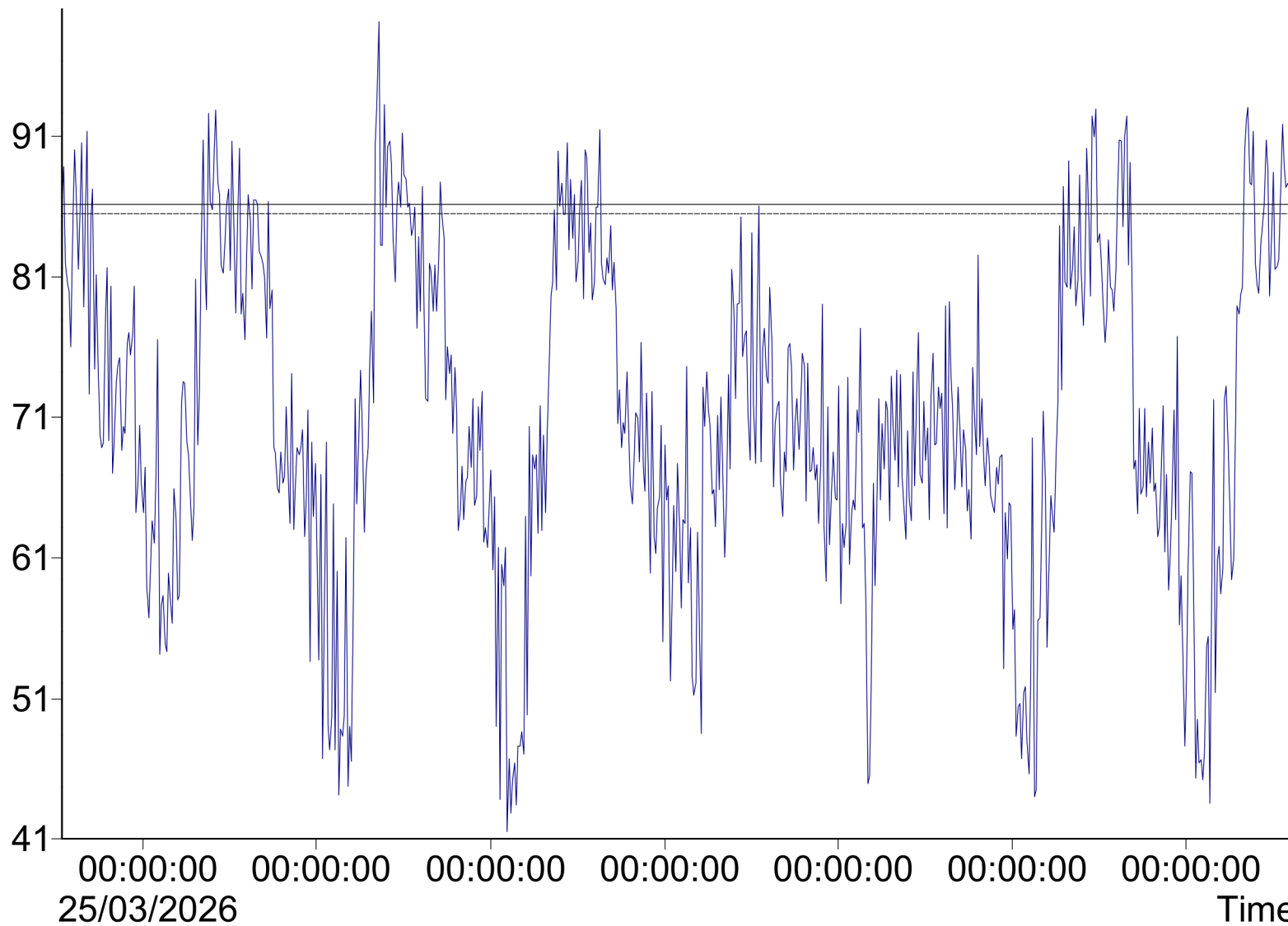
Print Name:

Trevor Lewis

APPENDIX C

SLM Data

dB



LFmx

Band = Broadband

Overall profile duration = 170:57:31 (683 samples)

Function order = LZFMx dB

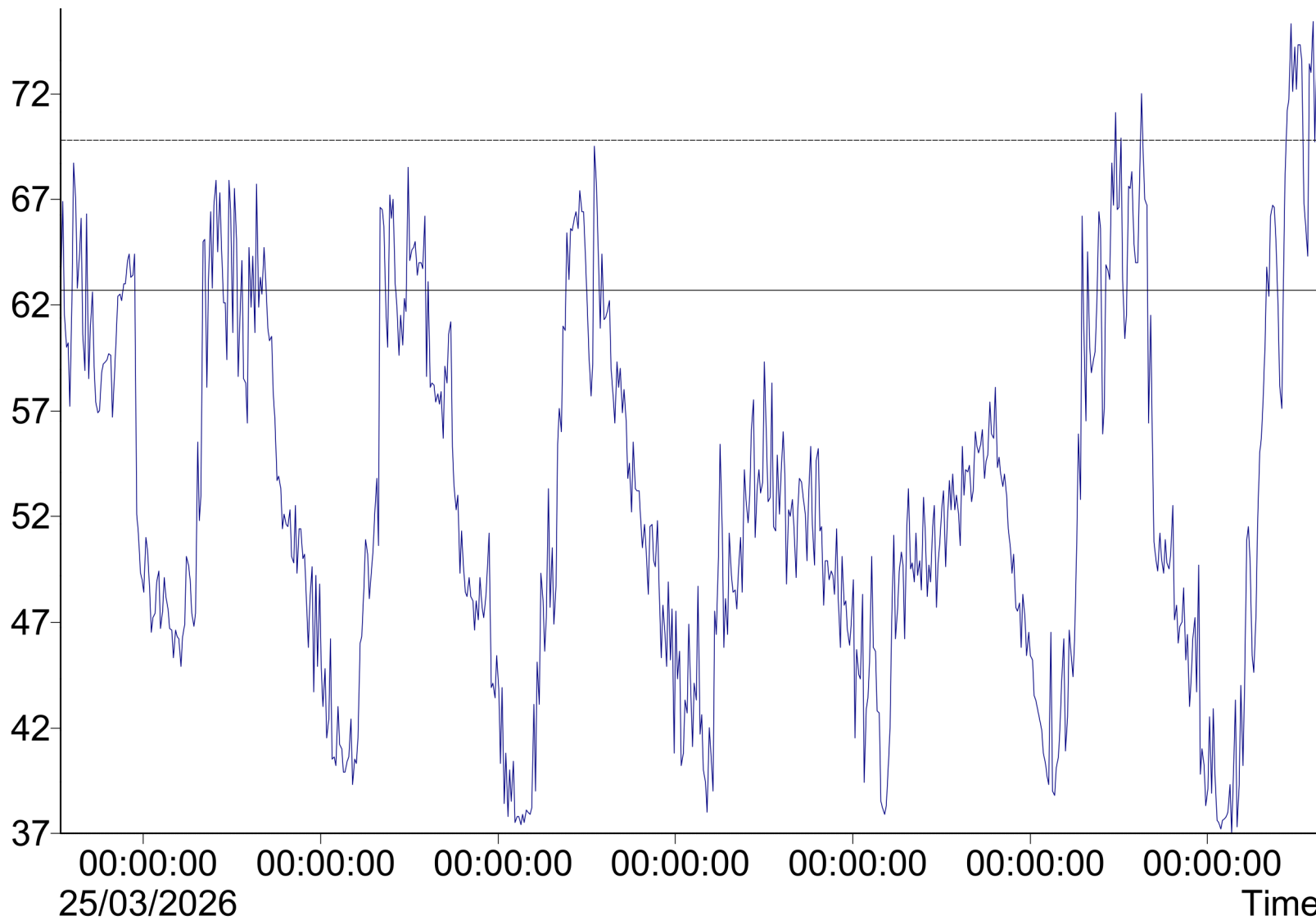
Cursor 1: Time = 24/03/2026 12:45:1, Level = 86.1 dB, Flags: -----

Cursor 2: Time = 31/03/2026 15:15:1, Level = 85.5 dB, Flags: -----
Duration on / between the cursors = 170:57:31, Flags: , Scale: 1:1

- LZFmx -

Minimum LZFmx = 43.5 dB, On / between the cursors. Time of minimum = 31/03/2026 03:15:1
Maximum LZFmx = 93.0 dB, On / between the cursors. Time of maximum = 31/03/2026 08:30:1

dB

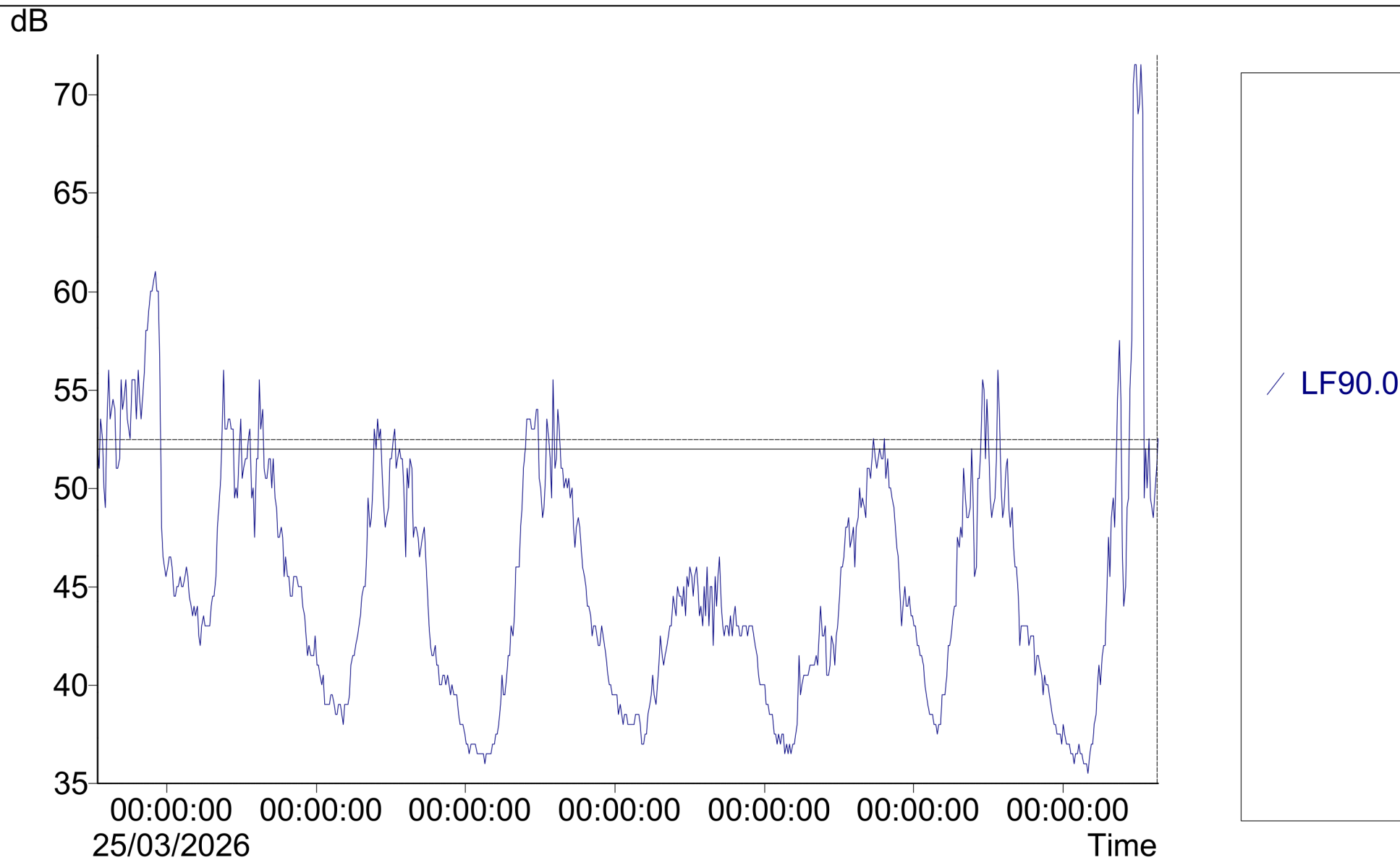


Band = Broadband

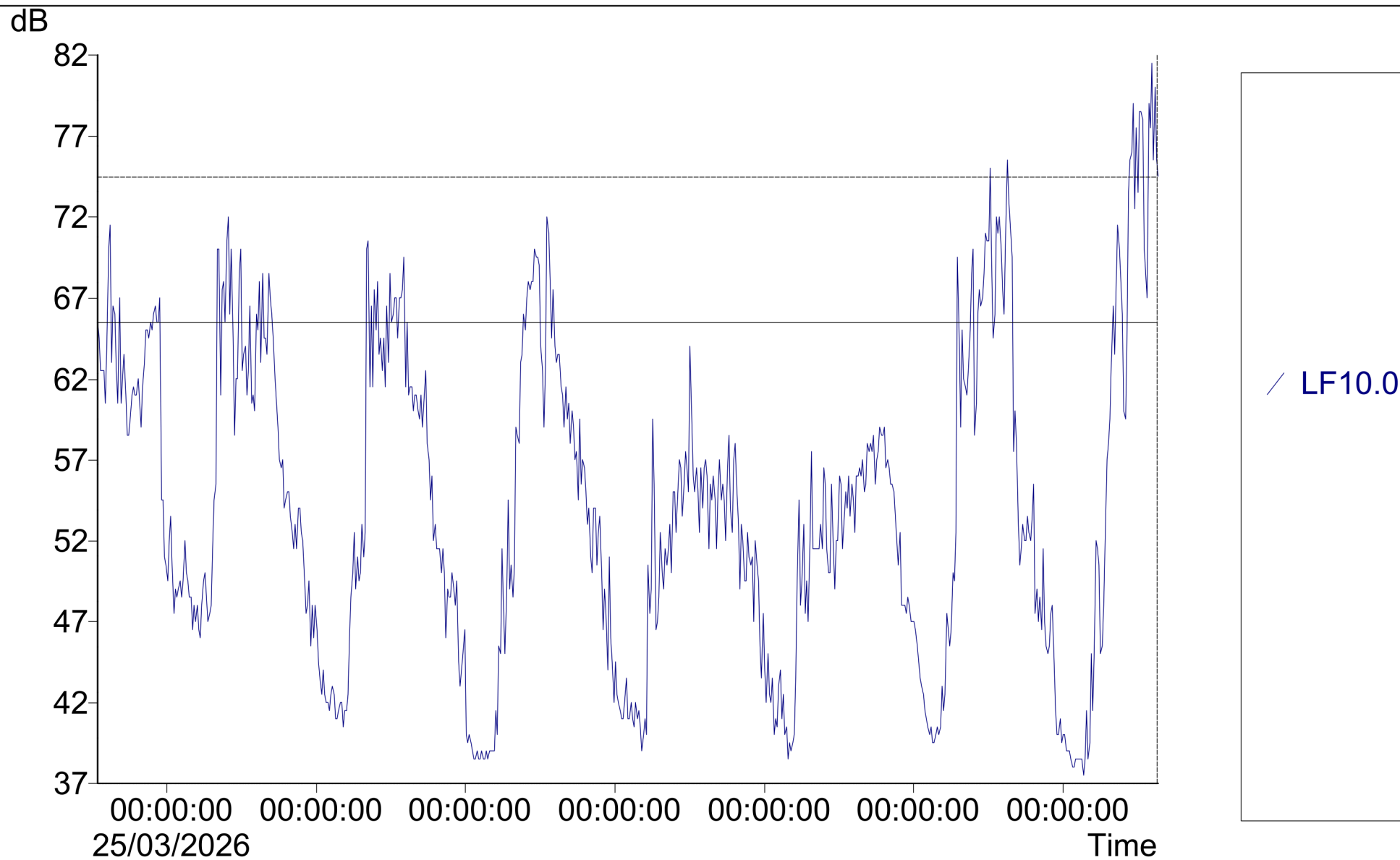
Overall profile duration = 170:57:31 (683 samples)

Function order = LZeq dB

Cursor 1: Time = 24/03/2026 12:45:1, Level = 62.7 dB, Flags: -----



Band = Broadband
Overall profile duration = 170:57:31 (683 samples)
Function order = LZ90.0 dB
Cursor 1: Time = 24/03/2026 12:45:1, Level = 52.0 dB, Flags: -----



Band = Broadband
Overall profile duration = 170:57:31 (683 samples)
Function order = LZF10.0 dB
Cursor 1: Time = 24/03/2026 12:45:1, Level = 65.5 dB, Flags: -----

Cursor 2: Time = 31/03/2026 15:15:1, Level = 74.5 dB, Flags: -----
Duration on / between the cursors = 170:57:31, Flags: , Scale: 1:1

- LZF10.0 -

Minimum LZF10.0 = 37.5 dB, On / between the cursors. Time of minimum = 31/03/2026 03:15:1
Maximum LZF10.0 = 81.5 dB, On / between the cursors. Time of maximum = 31/03/2026 14:15:1

Calculated average LZF10.0 = 54.3 dB, On / between the cursors

APPENDIX D

Photographs

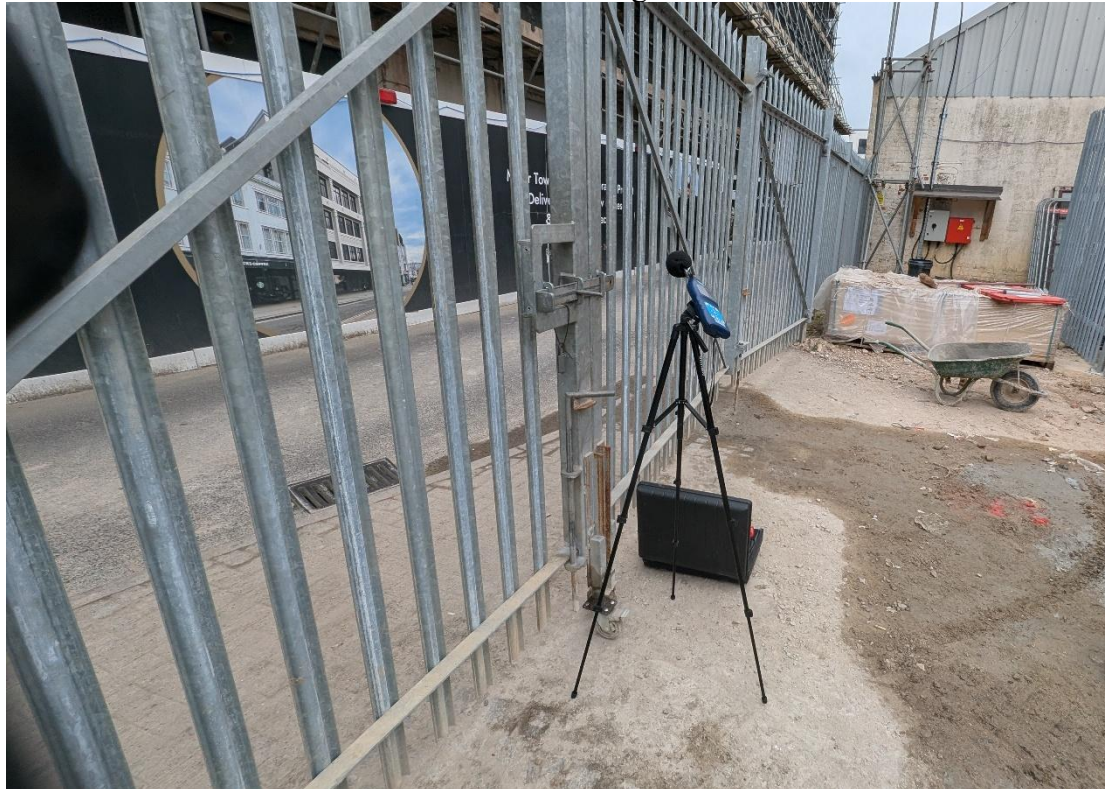
Existing site



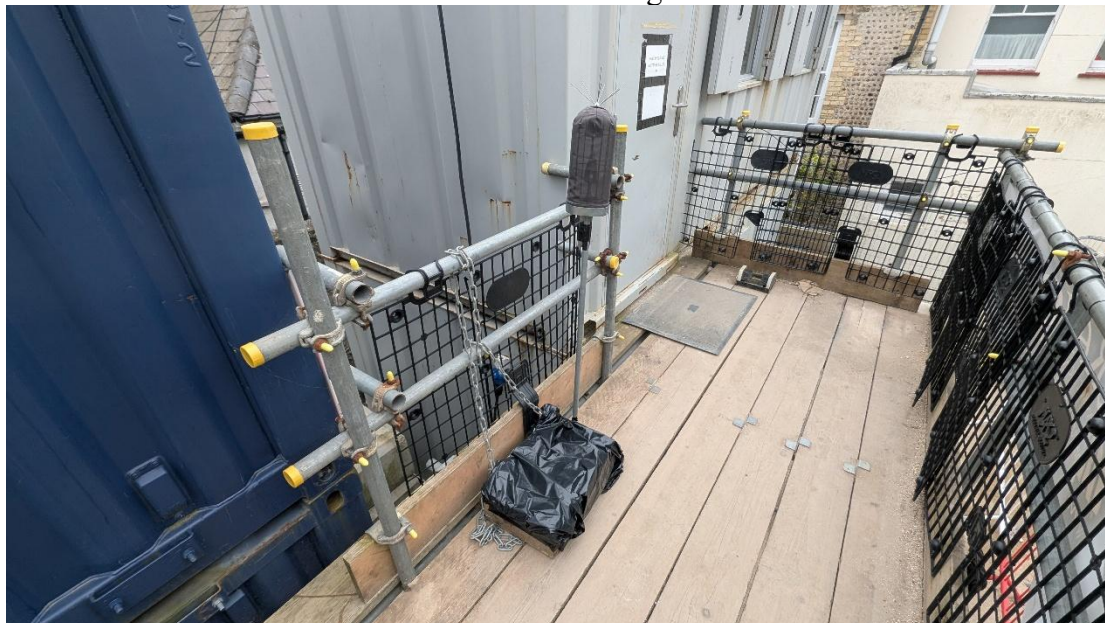
Existing site cont.

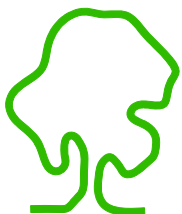


Short term monitoring location



Continuous monitoring station





eas ltd

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