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Sent: 15 September 2025 13:21
To: Tucker Matt: H&F <Matt.Tucker@lbhf.gov.uk>
Subject: Fulham FC hearing in 17th

Matt

The club has had a noise assessment survey carried out and I attach a copy of the most recent report for inclusion in the papers.

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**Experience
Studios.**

Fulham FC, Craven Cottage Riverside Stand Noise Survey

Document Info

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Revision	Date	Description of Issue / Revision	Author	Review	Approve
00	12/09/2025	For issue	HC	BD	MM

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1. Introduction

Experience Studios has been commissioned by Fulham FC to undertake a noise survey to measure sound levels associated with the operation of the newly developed Riverside Stand at Craven Cottage.

Unattended noise monitoring was conducted at locations considered representative of the nearest noise-sensitive receptors to the Riverside Stand. In addition, attended measurements were carried out during weekend periods, when evening activities at the stand are expected to generate the highest noise levels.

This note focuses primarily on noise emissions during non-matchday periods. The document outlines the survey methodology, presents the results, and includes a subjective review of noise sources originating from the site.



Figure 1 Stadium render

FULHAM FC, CRAVEN COTTAGE - RIVERSIDE STAND NOISE SURVEY
Site description

2. Site description

2.1. Site location

Craven Cottage is situated within the London Borough of Hammersmith & Fulham (LBHF). The surrounding area is predominantly residential, comprising terraced houses and low-rise apartment buildings. The Riverside Stand is positioned on the western side of the stadium, bordered by the River Thames to the west, Stevenage Park to the north, and Bishops Park to the south.

2.2. Nearest noise sensitive receptors

The closest noise-sensitive receptors to the Riverside Stand include:

- Residential flats located to the north of the stadium.
- Residential dwellings along Stevenage Road

These receptor locations are referenced in Figure 2 alongside the Riverside Stand.

2.3. Riverside stand / Fulham Pier operation

The Riverside Stand is a newly completed mixed-use development, officially opened in June 2025, and operational for football matches from the 2025–26 season. The development integrates a range of commercial, leisure, and hospitality functions within the stadium environment.

The stand includes a variety of commercial units such as restaurants, bars, and other leisure-oriented spaces, which contribute to activity beyond matchdays. On the western elevation, the structure accommodates a hotel and serviced apartments.

Externally, the stand features several amenity areas, including rooftop terraces and a swimming pool located on the southern side. Adjacent to the stand is a riverside pier and walkway, which is also understood to function as a flexible event space.

It is understood that some of these amenity areas may host amplified music, particularly in relation to the Riverside Market. Music may be played via a small-scale PA system during the following periods:

- Thursdays (16:00 – 22:00)
- Fridays (16:00 – 22:00)
- Saturdays (16:00 – 22:00)

2.4. Local authority engagement

It is understood that since the commencement of operations at the Riverside Stand, complaints have been received regarding music noise associated with non-football event day activities.

The following statement was provided by a councillor from the London Borough of Hammersmith & Fulham (LBHF) via email on Monday, 11 August 2025:

“There are being concerns raised about the noise that is emitting from Fulham Pier riverwalk entertainment at night. Neighbours have complained of a bass sound that is vibrating into their flats. Given its proximity to the river this will add to the sense of vibration and noise.”



Figure 2 Noise sensitive receiver locations

- Riverside stand - - - - -
- Flats to the north of the site - - - - -
- Residential houses to the east of the site - - - - -

FULHAM FC, CRAVEN COTTAGE - RIVERSIDE STAND NOISE SURVEY

Site description

2.5. Riverside stand planning conditions

Experience Studios was not engaged during the design or planning stages of the Riverside Stand. However, following a review of the planning decision notice (Ref: 2017/04662/FUL), it is understood that the following conditions were imposed in relation to external noise emissions from the development:.

“27. Prior to the commencement of the development (save for works of site clearance, demolition of existing buildings and below ground works), details shall be submitted to and approved in writing by the Council, of sound insulation of the building envelope and other mitigation measures, as appropriate. Details shall demonstrate that noise from uses and activities is contained within the building/ development site and shall not exceed the criteria presented in Chapter J of the Environmental Statement (November 2017) at neighbouring noise sensitive/ habitable rooms and private external amenity spaces. Approved details shall be implemented prior to occupation of the development and thereafter be permanently retained. Page 10 2017/04662/FUL To ensure that the amenity of occupiers of the development site/ surrounding premises is not adversely affected by noise, in accordance with Policies CC11 and CC13 of the Local Plan (2018).

29) Prior to occupation, a fully detailed noise survey and report on the noise impact of the public address system including full technical details of the design and operation of the system, shall be submitted to and agreed in writing by the Local Planning Authority. The survey shall provide

details to minimise the transmission of airborne sound beyond the stadium boundaries with neighbouring residential/ noise sensitive premises. The approved details shall be implemented and thereafter be permanently retained whilst a public address system in the Development is in use. To ensure that the amenity of occupiers of the surrounding properties are not adversely affected by noise, in accordance with Policies CC11 and CC13 of the Local Plan 2018

30). Prior to the occupation of the development hereby approved, the sound barrier surrounding the terrace at fifth floor level shall be implemented and thereafter be permanently retained. To ensure that the amenity of the occupiers of the development site and surrounding properties is not adversely affected commercial noise sources, in accordance with Policies CC11 and CC13 of the Local Plan (2018).”

Condition 27 references the Noise and Vibration Report (Chapter J) submitted by WSP as part of planning application (Ref: 2017/04662/FUL). This document includes an assessment of noise from external function spaces, identifying the following areas as key external noise sources:

- Roof terrace at Level 05 of the new stand, with a maximum expected occupancy of 500 people.
- Riverside walkway during large events, with a maximum expected occupancy of 1,935 people.

The assessment considered patron noise but does not consider the use of temporary external PA systems. A noise propagation study was

undertaken considering patron noise within the report, and a design criterion was established (referenced in Figure 3), which is understood to be linked to Condition 27. It is important to note that the criteria provided by WSP only address crowd noise and do not include emissions from temporary PA systems.

The following mitigation strategies were recommended by WSP to reduce the potential for significant adverse effects on residents of Eternit Walk (a block of flats located north of the site):

“In order to mitigate the potential for significant adverse effects, such as disturbance to resting or activities requiring concentration, the following mitigation measures should be adopted:

- Noise from the roof terrace could be reduced by ensuring that the parapet barrier surrounding the terrace is solid (i.e. not post and rail), with a minimum mass per unit area of 15 kg/m². This parapet would then act as an acoustic barrier and re-duce the transmission of noise from the terrace occupants to the Eternit Walk properties.
- Noise from the riverside walkway could be managed through effective crowd management, by ensuring that occupants move away from the Eternit Walk proper-ties during the more sensitive evening hours.
- Signing could also be used to highlight the residential nature of Eternit Walk and to remind the occupants to be quiet.

- Where considered absolutely necessary, the number of people using these external function areas could be restricted during the most sensitive times of day. This should form part of discussions with the LBHF licensing department.”

Regarding Condition 30, Experience Studios was not involved in the technical design or commissioning of the Riverside Stand and therefore cannot verify whether the sound barrier on the fifth-floor terrace was implemented in full compliance with the planning condition. However, given that recent complaints have specifically referenced music noise, it is considered unlikely that the fifth-floor terrace is the primary source. Instead, the areas where PA systems are actively used, such as the riverside market and walkway, are more likely to be responsible for the reported disturbance. These external areas will therefore form the primary focus of this report.

Table J5.8 Estimation of Significance of the Effects of Noise from External Function Spaces, dB LAeq,T

Source of Crowd Noise	Crowd Noise External Level Criterion	Crowd Noise Internal Level Criterion	Crowd Noise Impact and Significance
Regular events	Equal to baseline LAeq	≤35 dB LAeq,1hour during any one hour in which the areas are occupied	Neutral to Minor (Insignificant)
	Exceeds above criterion by 3 dB or more (i.e. a perceptible difference)		Moderate to Major Adverse (Significant)
Less frequent, larger events	Equal to baseline LAeq plus 5 dB	≤40 dB LAeq,1hour during any one hour in which the areas are occupied	Neutral to Minor (Insignificant)
	Exceeds above criterion by 3 dB or more (i.e. a perceptible difference)		Moderate to Major Adverse (Significant)

Figure 3 External crowd noise criteria established by WSP.

3. Site surveys

3.1. Unattended measurements

An unattended noise survey was undertaken onsite at two measurement locations, positioned towards the identified nearest noise-sensitive receptors.

Position 1 - The first measurement location was situated near Stevenage Park and the Riverside Garden residential flats to the north of the site. The noise monitor was installed on a tripod placed on top of a flat roof near the site boundary, at a height of at least 1.5 metres above roof level.

Position 2 - The second measurement position was located towards the southeast site boundary, adjacent to the residential properties on Stevenage Road. Here, the noise monitor was mounted on fencing, at a height of at least 1.5 metres above ground level.

Both measurement positions are considered to be free field. Measurements were conducted between Thursday 21st August and Saturday 6th September 2025. It should be noted that monitoring was paused briefly on 30th August and 4th September to allow for power equipment replacement within the monitoring kits.

It should also be noted that a Premier League football match took place during the survey period on 24th August (Fulham vs Manchester United). As the noise data captured on this day does not represent typical daily operations of the site, it has been presented separately from the rest of the dataset.

Additionally, weather conditions unsuitable for environmental noise measurement were identified on specific days during the survey period. Noise data recorded during these times has been omitted from further analysis. The measurement positions are shown in Figure 4.

3.2. Attended measurements

Attended measurements were proposed to be undertaken on Saturday 30th August and Saturday 6th September 2025, between the hours of 16:00 and 22:00, to capture periods when music was expected to be operational.

While engineers attended the site on 30th August during the proposed timeframe, weather conditions were not suitable for environmental noise measurement, and therefore no data could be collected.

Measurements were successfully undertaken on Saturday 6th September, between 17:20 and 22:10, under suitable weather conditions. The attended measurement locations are referenced within Figure 4.

Measurements at the various attended positions were undertaken using a noise monitor on a tripod, at a height of at least 1.2 metres above ground level. All attended measurement positions are considered to be free field.

During the attended measurements, a DJ and small commercial PA system were installed at a central location on the Riverside Walkway. This is understood to be the most common setup for amplified music on non-matchday events.

3.3. Measurement parameters

The unattended monitoring consisted of continuous fifteen-minute measurements at both positions, and the attended surveys consisted of a series of individual fifteen-minute measurements at the various measurement positions. Both unattended and attended measurements captured the following acoustic parameters:

- $L_{Aeq,T}$
- $L_{A90,T}$
- L_{AFMax}

3.4. Equipment details

The following equipment was used to undertake the survey onsite:

- | | |
|----|--|
| 2x | B&K 2250 G4A Sound Level Analyser |
| 1x | B&K 4231 Calibrator – Acoustic – Class 1 |
| 2x | GA 80G1-00 Environmental Tripod 2 |
| 2x | B&K UA 1404 Outdoor microphone kit |
| 2x | GA 91E1-36 Outdoor meter enclosure |

The survey equipment was calibrated before and after the measurements were undertaken with no significant drift observed.



Figure 4 Measurement locations

Unattended measurement locations	●
Attended measurement locations	●

4. Results

4.1. Unattended measurements

A summary of the results of the unattended noise measurements are presented in Tables 1 and 2.

Table 1 summarises noise levels recorded during daytime and night-time periods. As previously noted, data from 24th August, when a Premier League football match took place, has been omitted from this analysis.

Table 2 presents measured noise levels during periods when amplified music is understood to have been played from the Riverside Walkway.

For comparison, levels recorded during the same time periods (16:00–22:00) on days without amplified music have also been included. Again, data from 24th August has been excluded.

The results of the attended measurements undertaken on 6th September are presented in Section 4.2.

Table 1 Unattended measurements - Daytime and night-time noise levels

Position	Time Period	Average L _{Aeq,T}	Typical L _{A90 15mins}	Lowest L _{A90 15mins}	Typical L _{AFMax}
1	Daytime (07:00 -23:00)	60	48	44	85
	Night-time (23:00 -07:00)	52	44	43	72
2	Daytime (07:00 -23:00)	61	46	35	83
	Night-time (23:00 -07:00)	54	36	35	80

Table 2 Unattended measurements - Measured noise levels between (16:00 - 22:00) on key days

Position	Time Period	Average L _{Aeq,T}	Typical L _{A90 15mins}	Lowest L _{A90 15mins}	Typical L _{AFMax}
1	Thursdays (16:00 - 22:00)	58	49	46	80
	Fridays (16:00 - 22:00)	59	50	47	82
	Saturdays (16:00 - 22:00)	55	47	46	81
	Non external music days (16:00 - 22:00)	61	48	44	80
2	Thursdays (16:00 - 22:00)	59	43	40	80
	Fridays (16:00 - 22:00)	59	46	37	81
	Saturdays (16:00 - 22:00)	53	46	39	74
	Non external music days (16:00 - 22:00)	61	45	39	79



Figure 5 Measurement locations

Unattended measurement locations

FULHAM FC, CRAVEN COTTAGE - RIVERSIDE STAND NOISE SURVEY
Results

4.2. Attended measurements

A summary of the results of the attended measurements undertaken on Saturday 6th September is presented in Table 3.

Spectral noise levels are displayed in Appendix C.

Table 3 Attended measurement results

Position	Time Period	L _{Aeq,15mins}	L _{A90 15mins}	L _{AFMax}
1	17:22 - 17:37	54	47	77
2	17:49 - 18:04	50	43	76
3	18:28 - 18:44	57	44	88
4	19:34 - 19:49	55	48	77
5	20:30 - 20:45	49	42	73
6	20:52 - 21:07	47	40	68
7	21:14 - 21:29	48	41	77
	21:29 - 21:34	44	41	60

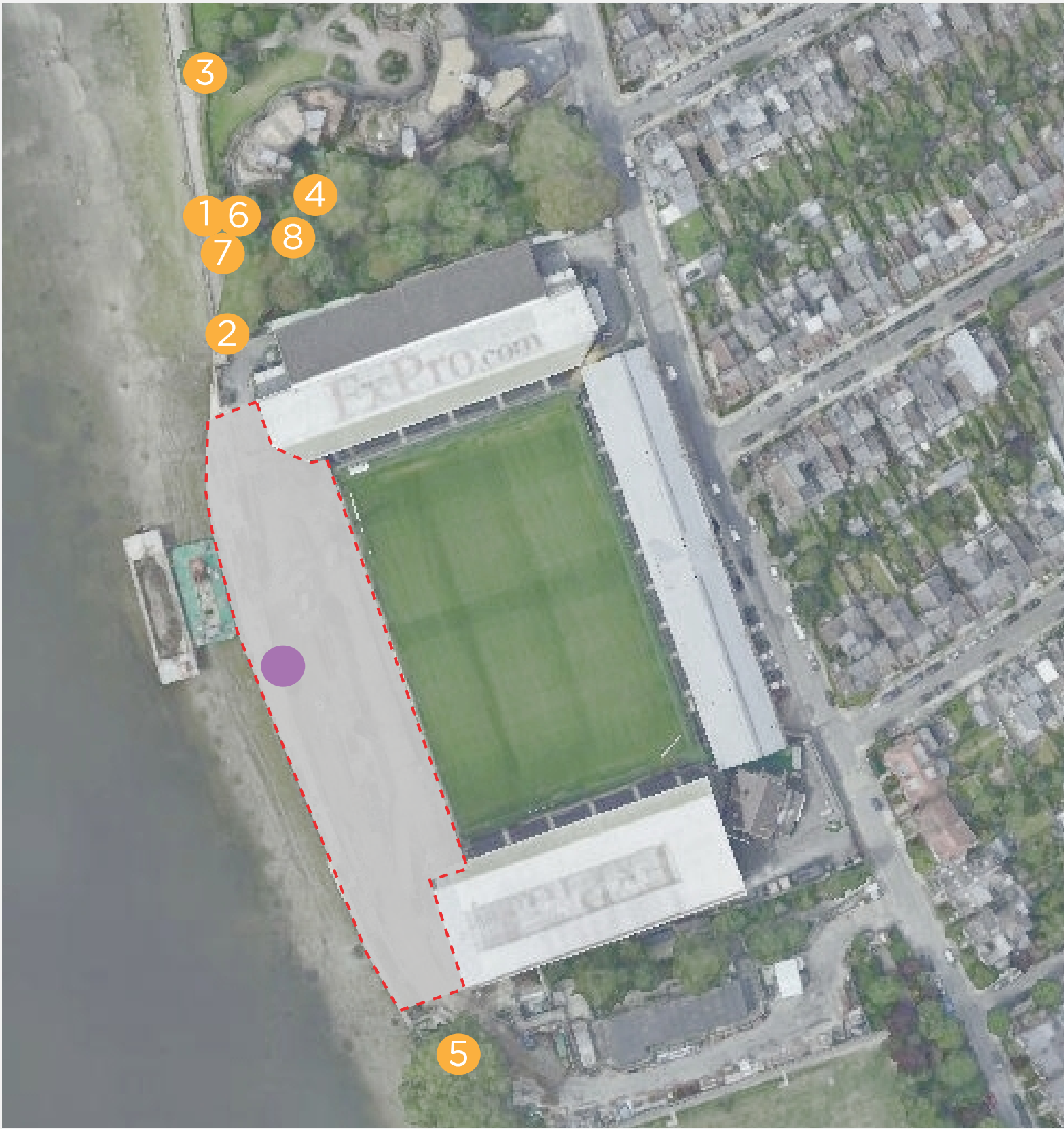


Figure 6 Measurement locations

- Attended measurement locations
- Approximate location of DJ and temporary PA system
-
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FULHAM FC, CRAVEN COTTAGE - RIVERSIDE STAND NOISE SURVEY
Results

4.3. Subjective review of the noise profile onsite

From a prior site visit undertaken before the operation of the Riverside Stand, it was noted that on non-football event days, the ambient noise profile around the site was consistent with a typical residential environment. The noise was generally low-level and dominated by distant traffic and intermittent aircraft movements.

During the attended survey on 6th September, a DJ and small commercial PA system were installed at a central location on the Riverside Walkway. This is understood to be the most common setup for amplified music on non-matchday events.

During the attended site visit, the dominant ambient noise sources were noted to be, pedestrians activity, aircraft and distant road traffic. To the north of the site, and around Riverside Gardens, low-frequency music from the use of the pier was not continuously distinctly audible and typically masked by other environmental noise sources, particularly aircraft noise.

At the Stevenage Road location, music was not clearly audible. In some northern locations, low-frequency music became slightly more noticeable later in the evening but remained faint and was frequently masked by other background noise. Overall, the noise profile was dominated by other noise sources such a people noise and aircraft, with music noise only occasionally audible and not a dominant source at the measurement locations.

While it is understood that the attended survey captured the most common setup for amplified music on non-matchday events, it is also understood that PA systems may occasionally be installed on terraces to the north and south of the site, as shown in Figure 7.

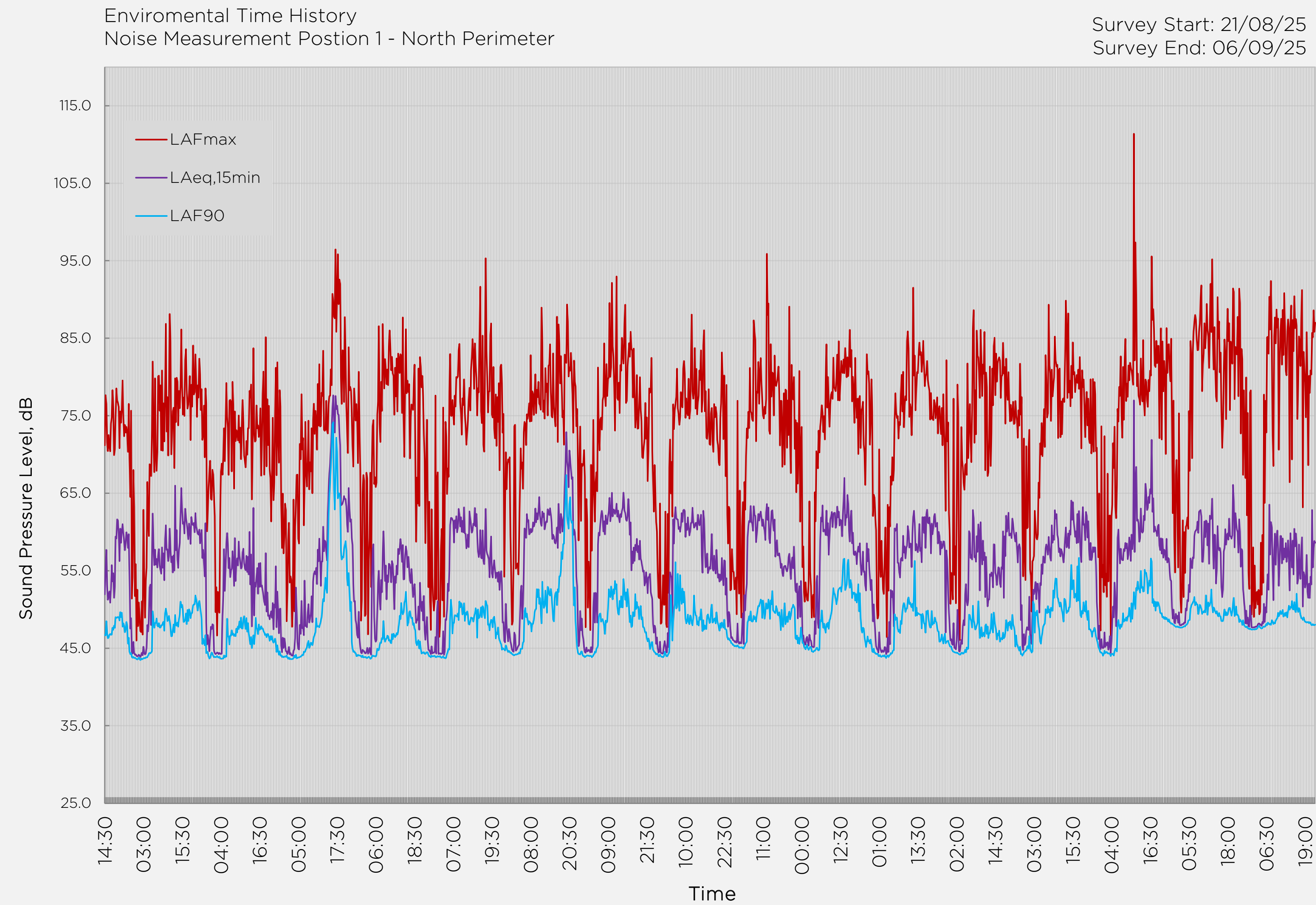
It is understood that these locations were not in use during the survey. As they are closer to the identified noise-sensitive receptors, the measurements taken may not represent a worst-case scenario, but instead provide a base-case understanding of noise emissions from the typical central setup.



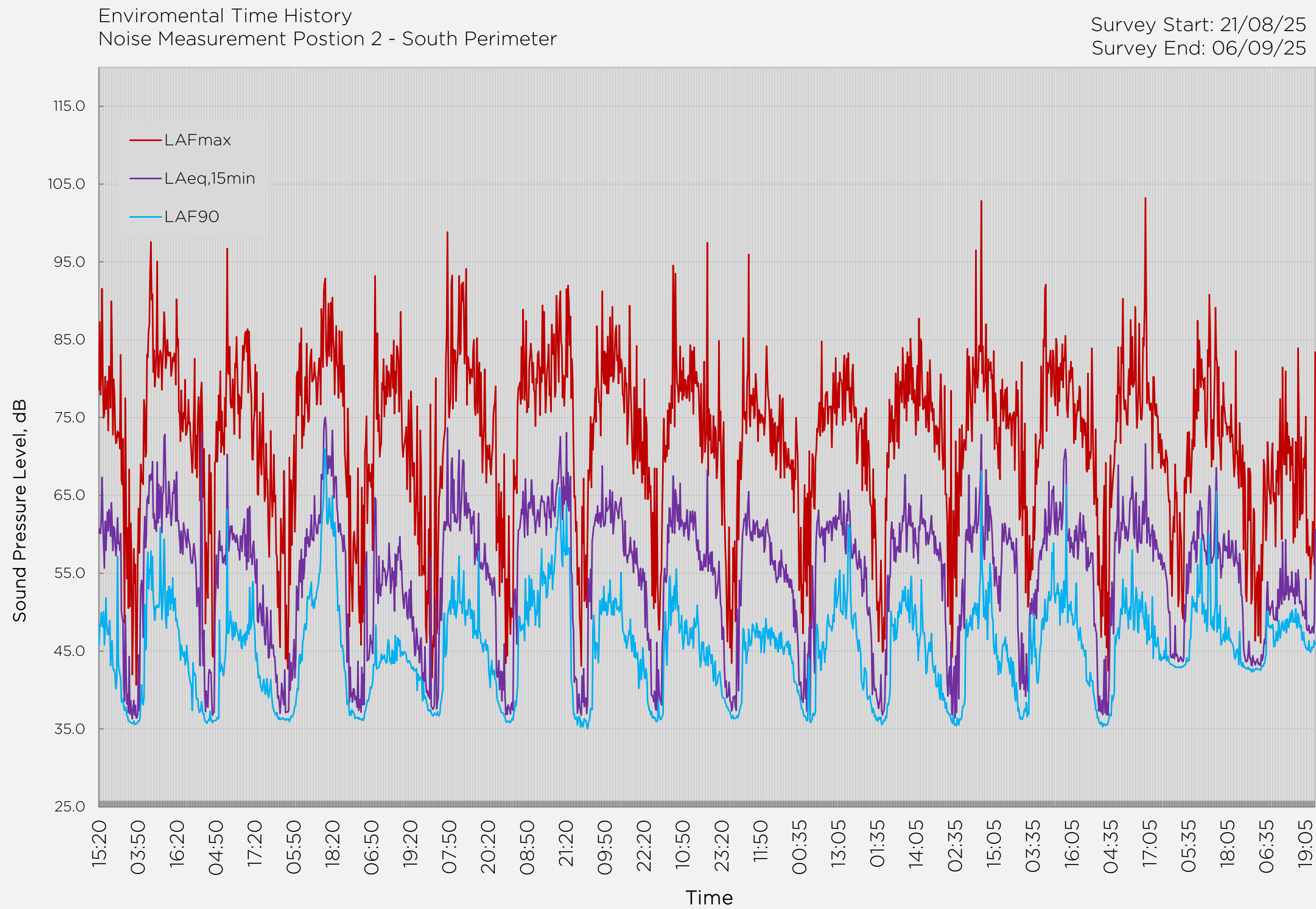
Figure 7 Terrace locations

Terrace locations

Appendix A - Measurement time history - Position 1



Appendix B - Measurement time history - Position 2



Appendix C - Attended measurement spectral noise levels

Position	Time Period	Octave Band Centre Frequency (Hz), L _{Zeq,15mins}							
		63	125	250	500	1k	2k	4k	8k
1	17:22 - 17:37	61	56	54	51	49	46	42	34
2	17:49 - 18:04	53	51	47	46	44	43	39	32
3	18:28 - 18:44	58	53	45	42	40	41	39	32
4	19:34 - 19:49	56	52	51	52	50	48	43	37
5	20:30 - 20:45	56	51	47	48	43	40	33	28
6	20:52 - 21:07	55	51	46	46	41	38	31	24
7	21:14 - 21:29	55	53	48	45	42	40	36	31
	21:29 - 21:34	56	52	46	42	38	34	30	24



Figure 8 Measurement locations

Attended measurement locations

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