

Christ's Hospital School

Noise Management Plan – Revision E

01/10/2026

The School = Christ's Hospital School, **NSR** = Noise Sensitive Receptor

1.0 Introduction and Event Overview

1.1 Introduction

The purpose of this Noise Management Plan is to detail the procedures the school aim to adopt to ensure, as far as possible, the minimisation of disturbance to local residents resulting from speech announcements made using external mobile PA speakers located immediately to the south of the athletics track.

The school accepts responsibility for managing noise disturbance and aims to adopt the best practicable options for mitigation.

This document presents a prediction of noise levels resulting from speech announcements made over the mobile PA speakers, an assessment of noise levels at sensitive receptors and a description of the noise monitoring and management scheme that will be put in place.

1.2 Type of Event

Christ's Hospital is an independent day and boarding school located near Horsham in West Sussex. From time to time, the school holds sports events at the athletics track with an audience principally consisting of parents, staff and pupils.

As part of the sports events, an outdoor mobile PA system will be used solely to convey speech announcements and commentary to the audience. The audience will congregate to the south of the athletics track between it and the adjacent carparking area.

1.3 Location

The school is located at The Avenue, Christs Hospital, Horsham RH13 0LJ. Figure 1 indicates the proposed location (and orientation) of the PA speakers, the audience and the nearest noise sensitive receptors (NSRs).

1.4 Operating Hours

All events will occur between 9am and 9pm. Events are not expected to last for more than 4 hours. There will be no amplified speech outside of the hours 10am and 7pm, Monday to Sunday.

There will not be more than 12 events in any 12-month period.

1.5 Attendance

The overall event attendance is not expected to exceed 1000 people. This number is expected to split reasonably evenly between participants and audience.

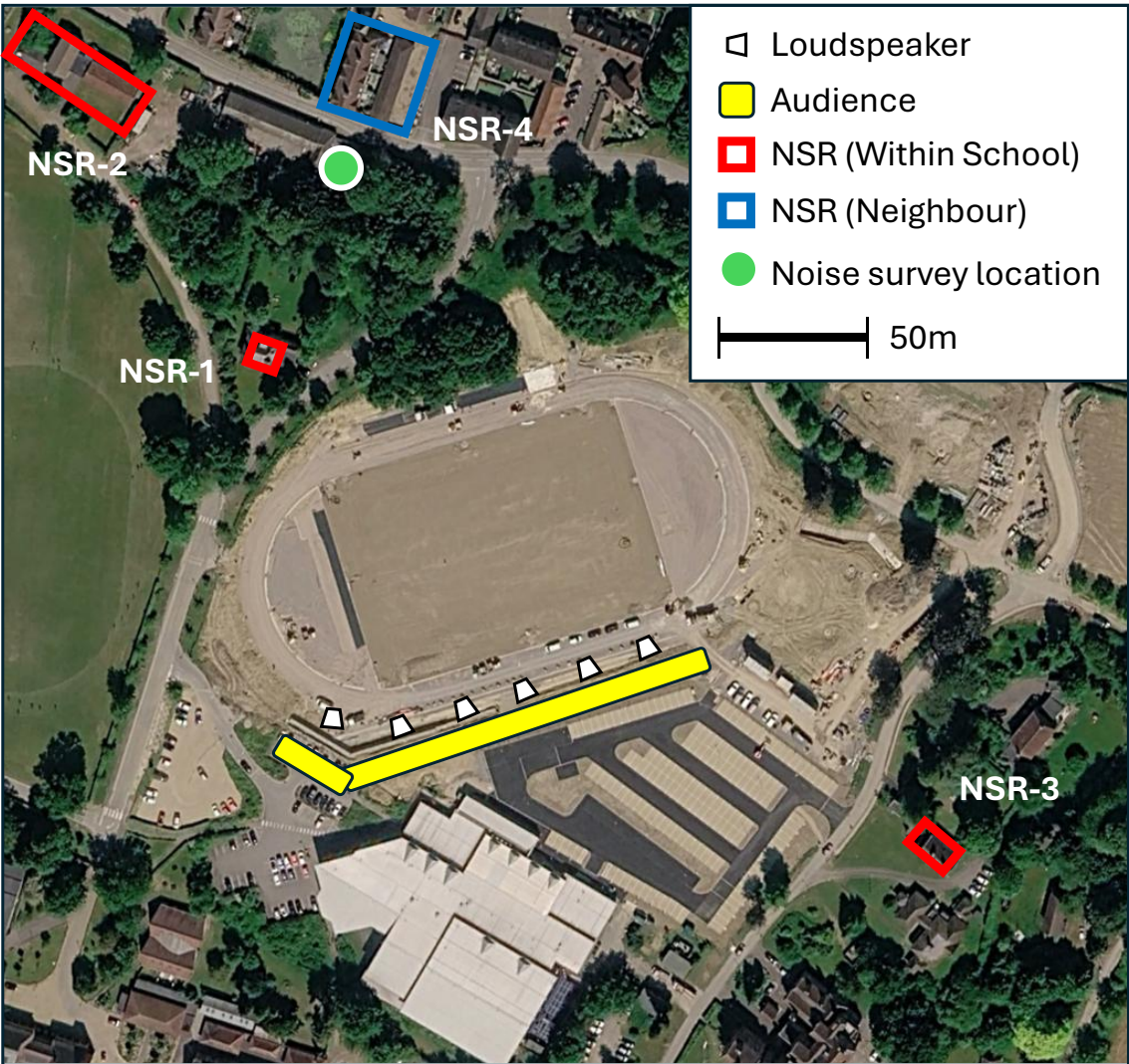


Figure 1: Plan showing the location of the mobile loudspeakers, the audience, the nearest noise sensitive receptors (NSRs) and the long-term noise survey.

2.0 Policy and Regulatory Context

The PA system will be used solely for amplified speech announcements and commentary. The noise controls in this plan therefore focus on limiting amplified speech levels at noise sensitive receptors and on maintaining suitable on-site sound levels.

For management purposes, amplified speech will be controlled against the background noise levels at the nearest noise sensitive receptors using the limits set out in Section 5.

The Noise Council's *Code of Practice on Environmental Noise Control at Concerts* (1995) provides guidance for controlling noise from outdoor concerts. Although the proposed PA system will be used only for speech announcements and commentary, the concert guidance provides a conservative reference framework for managing amplified sound from intermittent outdoor events.

For events held between 09:00 and 23:00, the Code recommends the music noise level limits summarised below, assessed over a 15-minute period at noise sensitive premises.

Venue category	Concert days per calendar year	Guideline music noise level
Urban stadia and arenas	1–3	75 dB $L_{Aeq,15min}$
Urban stadia and arenas	4–12	65 dB $L_{Aeq,15min}$
Other urban and rural venues	1–3	65 dB $L_{Aeq,15min}$
Other urban and rural venues	4–12	No more than 15 dB above the representative background sound level
All venues	More than 12	No more than 5 dB above the representative background sound level

Table 1: Summary of guideline music noise levels from the Noise Council Code of Practice on Environmental Noise Control at Concerts (1995).

This document also reflects the requirements described in Planning Condition 33 of the Decision Notice relating to planning application DC/21/1524.

3.0 Site Description and Sensitive Receptors

3.1 Site Layout

Figure 1 indicates the location (and orientation) of the PA speakers, the audience and the nearest noise sensitive receptors (NSRs).

3.2 Noise Sensitive Receptors

The relevant noise sensitive receptors (NSRs) are indicated in Figure 1. NSR-1, NSR-2 and NSR-3 are understood to be within the estate of the school and occupied by staff. The occupancy of these dwellings is understood to be within the control of the school.

NSR-4 is a residential property outside of the school bounds.

3.3 Distances and Relative Orientations of PA Loudspeakers

Table 2 summarises the distance and relative orientation of the PA Loudspeakers from each NSR.

NSR	Distance from nearest loudspeaker	Orientation of loudspeaker
NSR-1	117m	Away from NSR
NSR-2	216m	Away from NSR
NSR-3	112m	Toward NSR (roughly 30° off-axis)
NSR-4	171m	Away from NSR

Table 2: Distance and relative orientation of the PA Loudspeakers from each NSR

4.0 Noise Sources

4.1 PA System

Six mobile active PA speakers. The speakers will typically have 10" speaker drivers, for example QSC K10 or similar. The speakers will be mounted on stands and fed by a wired microphone for speech announcements and commentary only.

The speaker amplification will be controlled such that the sound power output of any individual speaker does not exceed the values stated in Table 3 during any 15-minute period.

	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8kHz	A
Axial Spectrum (dB)	98	98	96	95	95	94	94	94	102

Table 3: Loudspeaker A-weighted Sound Power (LwA) and frequency spectrum.

4.2 Generators and Plant

No generators or plant are required for events.

4.3 Crowd Noise

Crowd noise is expected to be significantly lower than that from the PA system and is not likely to result in any significant noise disturbance at NSRs that are at least 100m away.

4.4 Arrivals and Departure

Some or all audience members may arrive to the site by car. The school has an Events Traffic Management Plan (ETMP) for larger events (500-1000 people attending). Refer to ETMP - Bluecoat Sports Health and Fitness Club, Christ's Hospital, March 2025 produced by Reeves Transport Planning.

The ETMP includes the following features:

- providing route information that would minimise the traffic impact on any one route
- *providing signage and stewards at key locations on the approaches to the Club*
- providing on-site marshals to manage ingress/egress to carpark

These measures, whilst not reducing overall traffic, will likely assist in the reduction of queues and therefore engine noise at roadside locations. In addition, the risk of traffic noise from large events solely impacting any one noise sensitive receptor would be reduced.

4.5 Noise from Sports Activities

Noise from sports activities have been considered as part of the noise statement for planning and are not considered as part of this Noise Management Plan.

4.6 Set-up and Dismantling

The loudspeakers will be delivered in a van and set up and dismantled manually. No significant noise disturbance from set up and dismantling is expected.

5.0 Noise Criteria and Limits

5.1 At Noise Sensitive Receptors

Given that there will not be more than 12 events in any 12-month period, amplified speech noise at each noise sensitive receptor will be limited so that it does not exceed the Background Noise Level by more than 15 dB(A) in any 15-minute period.

Additionally, as a precaution against low-frequency impact, the amplified speech noise level in the 63Hz and 125Hz octave bands should not exceed the existing background noise level in that band by more than 15dB.

The existing Background Noise Level has been measured by a site noise survey between 4:15pm on 22nd January 2020 and 11am on 27th January 2020. The survey location (indicated in Figure 1) was in the school grounds, adjacent to (east of) the school groundskeepers' building, close to the site boundary fence. Approximately 2m from the building and 5m from Christ's Hospital Road. Figure 2 shows the full time history of the measured background noise levels (LA90) with the relevant period highlighted in yellow. Table 4 shows the representative lowest background noise level occurring between 9am and 9pm both as an A-weighted value and values in the low-frequency (63Hz and 125Hz) octave bands.

Table 5 shows the upper limits on amplified speech noise level ($L_{eq,15min}$) when assessed at Noise Sensitive Receptors (NSRs). These values are 15dB above the values in Table 4.

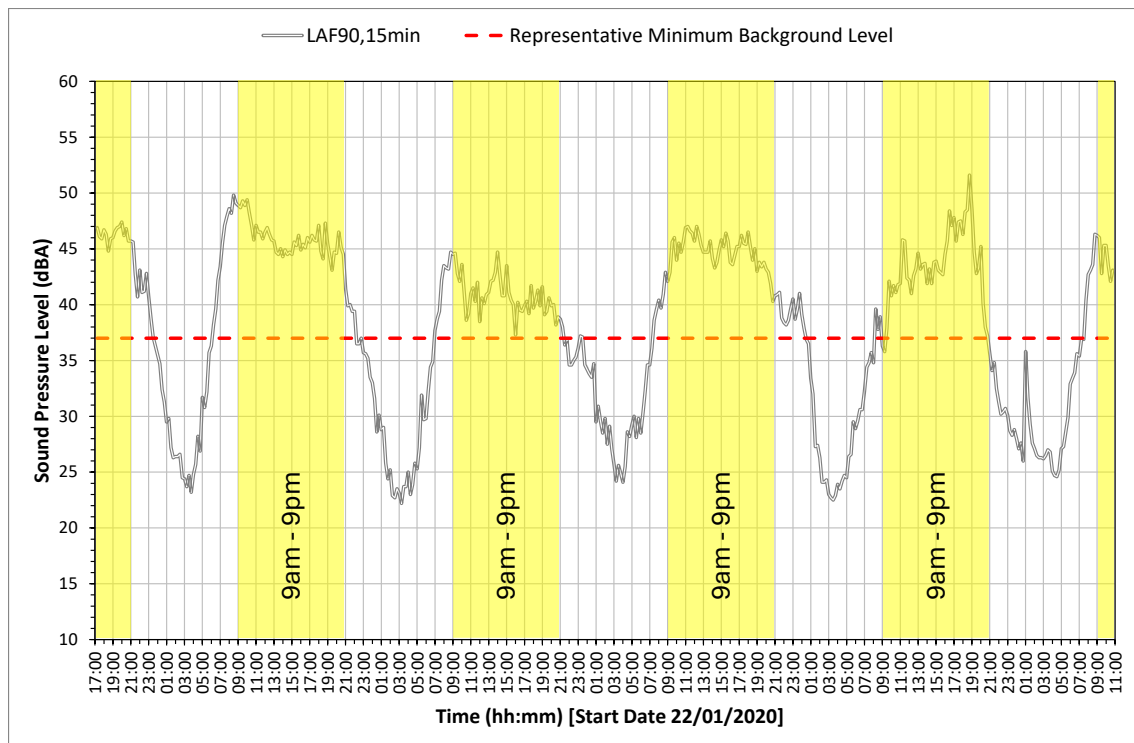


Figure 2: Survey graph showing background noise (LA90) levels for the entire survey period. The time periods (9am-9pm) relevant to the event are highlighted yellow. The representative lowest background noise level for this period is indicated by the dashed red line.

		63 Hz	125 Hz	A
Background Noise Level	LAF90,15min	45	40	37
<i>Note that the values shown are those that are exceeded for all by eight individual 15 minute periods (i.e. a total of two hours) during a 54 hour survey. These values are considered to be representative of the lowest typical background noise level occurring between 9am and 9pm. Refer also to Figure 2.</i>				

Table 4: Existing background noise level measured at the site.

		63 Hz	125 Hz	A
MNL Limits at NSRs	Leq,15min	60	55	52

Table 5: Amplified speech noise level limits at Noise Sensitive Receptors (15dB above existing background)

5.2 On Site

Noise levels on site must not result in any audience or staff member experiencing:

- A personal daily noise exposure exceeding 85dB $L_{EP,d}$. This is equivalent to limiting noise exposure to 88dB $L_{Aeq,4hours}$ for an event with a duration of up to 4 hours.
- A peak sound pressure level exceeding 137dB $L_{C,peak}$.

6.0 Noise Control Strategy

6.1 Layout and Orientation

A commercial noise mapping calculation software (SoundPLAN) has been used to evaluate the noise dispersion from the mobile PA system. The calculated noise-map is shown in Figure 3. Table 6 shows the calculated amplified speech noise level at each NSR, the calibration point and three audience locations for a loudspeaker sound power of 102dBA (per speaker) and spectrum as indicated in Table 3.

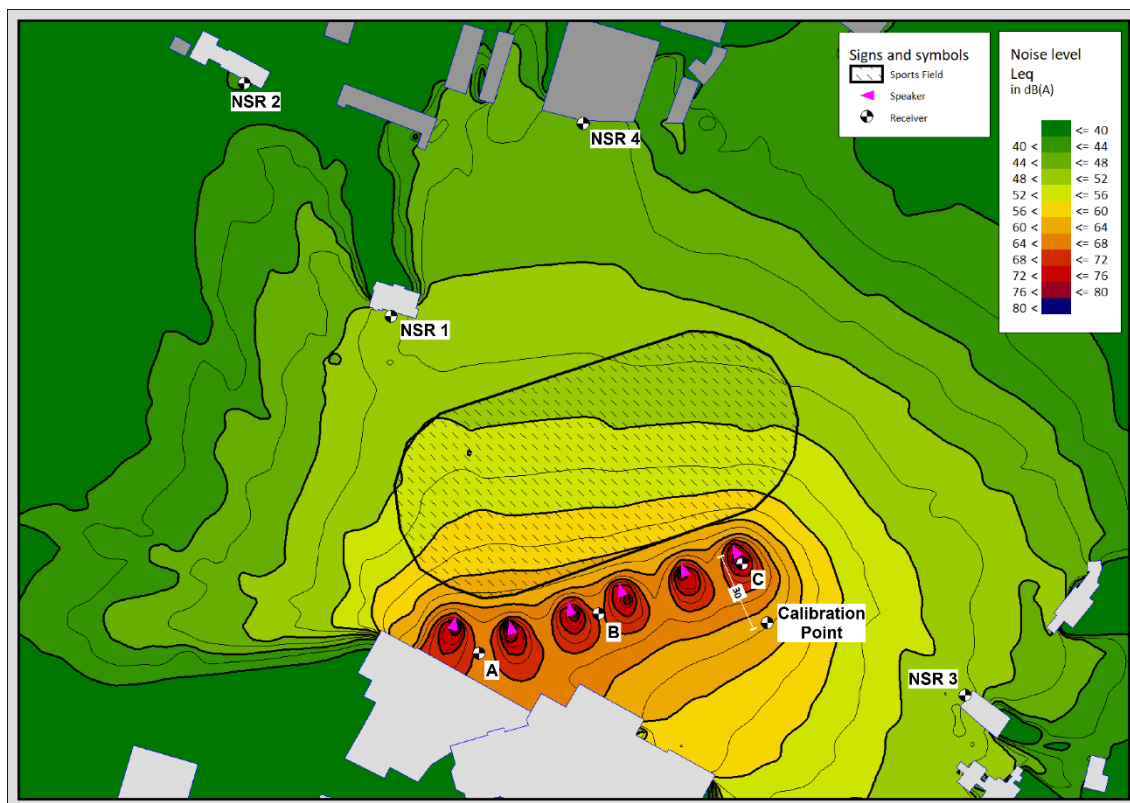


Figure 3: Calculated noise-map showing propagation of sound from the mobile PA system.

Location	63 Hz	125 Hz	A
Calibration Point	63	61	62
Audience A	69	68	67
Audience B	71	70	68
Audience C	75	74	78
NSR 1	53	52	51
NSR 2	45	43	41
NSR 3	58	53	52
NSR 4	50	49	47

Table 6: Calculated amplified speech noise levels at audience locations, the calibration location and NSRs.

6.2 Source Control

Comparison of the values in Table 6 with the targets set out in Table 5 indicates that managing loudspeaker sound power to the values described by Table 3 provides an appropriate approach to minimising disturbance to local residents. Disturbance from bass frequency characteristics is given due account by the fact that targets at 63Hz and 125Hz are also met at all NSRs.

It can also be seen that the predicted amplified speech noise levels at audience locations are comfortably within the on-site exposure targets described in Section 5.2.

At the time of installation, a sound level test will be carried out at a specified calibration location (see Figure 3) to set the maximum amplification of the PA System. The test will use representative live or pre-recorded speech samples over a duration of 15 minutes.

By limiting noise levels during the test period at the calibration point to the values in Table 7, it has been shown by the noise mapping in Figure 3 and Table 6 that the values described in Table 5 are expected to be met at all NSRs.

Limit	63 Hz	125 Hz	A
SPL	63 dB	61 dB	62 dB

Table 7: Calibration sound pressure level limits for amplified speech.

6.3 Calibration Location

The system is to be calibrated at 30m, on axis, from the speaker closest to NSR 3. Refer to Figure 3.

6.4 Measurement Equipment

Measurements will be made with a suitably calibrated Class 1 sound level meter with data logging capability with a calibrator test device to verify before reading.

6.5 Measurement Parameters

- LA90,15min

7.0 Noise Management

The School will identify individuals to act as Noise Control Officer and Sound Engineer for each event. The two roles may be performed by the same person if practical. Either or both roles could be performed by the person making the announcements if practical.

7.1 Calibration on Set-up

At the time of installation, a sound level test will be carried out at a specified calibration location and speaker amplification adjusted accordingly. Refer to Section 0 through 6.5 for details.

7.2 During Event

Should any noise complaints be received during the event, the Noise Control Officer will immediately notify the Sound Engineer. Where appropriate, noise levels will be reduced in response to complaints.

8.0 Community Engagement and Complaints Handling

8.1 During Event

- Any noise complaints should be directed to Christ's Hospital School Office on 01403 211293. This number will be manned during events.

8.2 Post Event

Within 2-weeks of the conclusion of each event, the School undertakes to review the following:

- A summary of the monitoring measurements (provided by the Noise Control Officer)
- Review a record of complaints received and resulting actions taken.
- The effectiveness of noise mitigation measures.

Based on the above, recommendations for future events will be recorded.

if appropriate, provide a post-event response to complainants where they have provided contact information and expressed a preference to be contacted.

9.0 Management Structure

The School will identify individuals against each of the following roles:

- Event Director
- Noise Control Officer
- Sound Engineer
- Stewards (where appropriate to manage traffic at larger events)