SAMPLE · Visit of 15 November 2026

System condition at a glance

Sample House (fictional site)

57 items were inspected. 48 are in good order, 3 are of concern, 4 need urgent attention and 1 is critical. 1 test deferred.

A deferred item is a gap in coverage, not a fault: its ratings describe the risk while it stays untested.

Good · Of concern · Needs urgent attention · Critical · Deferred

Where the attention goes

One square per item, numbered with its finding, coloured by its condition. Longer rows have more items; nothing is scaled.



What was measured

8 battery blocks measured finding 3.02
4 to 5.6 mΩ

5 sound-level positions measured finding 5.01
77 to 91 dBA

2 loudspeaker circuits measured finding 8.01
118 to 212 Ω

Reading this page. Good, of concern, urgent and critical are the four bands every item falls into after inspection. Performance, integrity and compliance are rated question by question in the findings and are not averaged.

Understanding this report

This report removes clutter so you can quickly assess the risks in your system. Each aspect of your system is covered by a question, and by testing and inspecting your system we answer those questions.

UK and European laws now make individuals accountable as well as organisations, when people using a venue are harmed.

Life safety should never be balanced against cost, but budgets are a commercial reality. This report states the risk you carry if nothing is done about each finding. It does not carry prices. Tell us the finding numbers you want dealt with and we will send you a quotation for those. The decision, and its consequences, rest with you. Please remember that this is a safety critical system.

Questions that do not apply to this system are not printed, so finding numbers are not always consecutive.

How to read this report

Each question is rated from 1 (best) to 4 (critical) for Performance (P), Integrity (I) and Compliance (C), and O combines the three into one overall rating, coloured from green through amber to red. The answer beside each question says what the test found.

A maintenance visit tests and inspects the system as found on the day; tracing and repairing the faults it finds is separate work, arranged and quoted separately.

The full explanations are in the appendices at the back of this report: how the ratings and answers work (Appendix A), the scope and limits of this visit (Appendix B), how this report refers to standards (Appendix C), and the listening assessment (Appendix D).

Summary

This summary highlights the key outcomes from our visit. They will mostly be related to work that needs to be done urgently, or work we did during the maintenance that fixed a serious life safety or system damaging issue.

Action needed

Critical

Ref	The issue	Situation on leaving
AN1 9.03	With the buzzer off, a fault shows only as a light nobody may see.	Fixed on visit: Buzzer reconnected and tested; it sounds and re-triggers on a new fault.

Of concern

Ref	The issue	Situation on leaving
AN2	Four loudspeakers on the third floor were removed during the refurbishment and never reinstated (finding 8.01).	Zone 6 remains in service with part of the third floor uncovered. Reinstating the four loudspeakers is the work that closes this.
AN3	Earth fault on both cores of the Zone 3 loudspeaker circuit (finding 2.04).	The circuit remains in service with the fault present. Investigation is needed to locate it before it can be made good.
AN4	Three new meeting rooms on the second floor have no loudspeaker (finding 5.02).	Every other occupied area is covered. Adding loudspeakers to the three rooms closes this.
AN5	The batteries carry no fit date, and two blocks read high (finding 3.06).	The system ran its standby test today. A replacement date needs planning before the next service year.

Key information

Ref	The issue	Situation on leaving
KI1	Ambient noise was not measured: the building was empty on the day (finding 5.03).	It is the only check outstanding for this service year and needs a weekday visit.

Applicable Standards and Guides

- BS 5839-8:2023 Voice alarm systems (design, installation, commissioning, maintenance)
- BS EN 54-16:2008 Voice alarm control and indicating equipment
- BS EN 54-24:2008 Voice alarm loudspeakers
- BS 9999:2017 Fire safety in the design, management and use of buildings
- Regulatory Reform (Fire Safety) Order 2005 and equivalents

Recommendation

Recommended, a full intelligibility assessment: a routine maintenance visit cannot assess intelligibility under emergency noise conditions, as the standard asks, so we recommend a separate assessment, arranged and quoted separately. Appendix B sets out what it involves.

Findings

General

Finding 1.01	Is the logbook present, up to date and in order?	Partially	P	I	C
			-	-	2
The logbook is on site, but none of the three faults the panel logged since the last visit has been entered in it.				O	
Why is this an issue	Faults between visits are not being recorded, so nobody can show they were investigated and cleared.				
Risk if nothing is done	If the system fails, there is no record showing the faults were known and acted on.				
Outcome	Worth working through together at the next visit				
Standards	BS 5839-8 Cl 40.1(a), 40.1(f); BS 8210 Cl 9.8.1, 9.8.2				

Finding 1.02	Are all faults recorded in the site logbook by the responsible person since the last visit investigated and closed out or under action?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(a), 40.1(f)				

Finding 1.03	Is the cause-and-effect matrix available on site and current?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 5839-8 Cl 40.2(a), 40.2(b)				

Finding 1.04	Is the operation and maintenance documentation available and current?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 8210 Cl 9.7.1, 9.7.3; BS 5839-8 Cl 35.1(b), 42(f)				

Finding 1.05	Is a responsible person appointed and aware of their duties for this system?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 6259 Cl 13; Statutory Article 17(1)				

Finding 1.06	Are weekly user checks being carried out and recorded?	No	P	I	C
			-	-	3
Weekly checks are recorded for 19 of the last 52 weeks.				O	
Why is this an issue	The weekly user check is the only test between our visits.				
Risk if nothing is done	A failure could go unnoticed for months between visits.				
Outcome	No action needed here				
Standards	BS 5839-8 Cl 39.1; BS 6259 Cl 12.1				

Finding 1.07	Have occupancy load, ambient noise and equipment load remained unchanged since the last visit, with no change reported or observed that could affect sound levels or the standby battery sizing calculation?	Yes	P	I	C
			1	-	1
				O	
Standards	BS 5839-8 Cl 25.3.5; BS 5839-8 Cl 19.1, 13.2, 3.25				

Finding 1.08	Where the fire strategy relies on the voice alarm for means-of-escape variations, is that dependency recorded and has the client been reminded of it?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 9999 Cl 18.2, 18.4				

Finding 1.09	Have the premises remained unchanged since the last inspection: no new or relocated structures, no changes to room use or occupancy, and no alterations or extensions calling for additional loudspeakers, that could affect loudspeaker siting, audibility or intelligibility?	Yes	P	I	C
			1	-	1
				O	
Standards	BS 5839-8 Cl 40.1(b) to (e)				

Finding 1.10	Are there defined limits on how long the voice alarm system may be out of service, and interim arrangements, including for evacuation, for while it is?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 9999 Cl 10.4.1.2				

Electrical

Finding 2.01	Is the mains supply to the system healthy, dedicated and correctly labelled?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 10.1				

Finding 2.02	Does a simulated mains failure produce the correct changeover to standby, with the mains-supply failure indicated within the applicable time (BS 5839-8: within 30 minutes, 10.1.3 a)?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(n), 40.1(p); BS EN 54-16 Cl 8.1.3, 8.2.3; BS EN 50849 Cl 5.3				

Finding 2.03	Are the power supply units operating within specification with normal indications?	Yes	P	I	C
			-	1	1
				O	
Standards	BS EN 54-16 Cl 8.1.3, 8.2.3; BS EN 50849 Cl 5.3				

Finding 2.04	Is the system free of earth faults, with leakage detection operating at the declared threshold?	No	P	I	C
			-	3	3
Earth fault measured on both cores of the Zone 3 loudspeaker circuit (second floor east).				O	
Why is this an issue	An earth fault can grow into a short circuit that silences the zone.				
Risk if nothing is done	Zone 3 could lose its emergency message without warning.				
Outcome	To be quoted, inspection (price to investigate and check)				
Standards	BS EN 54-16 Cl 8.1.3, 8.2.3; BS EN 50849 Cl 5.3				

Finding 2.05	Are protective devices intact, correctly rated, and are spare fuses available?	Yes	P	I	C
			-	1	1
				O	
Standards	BS EN 54-16 Cl 8.1.3, 8.2.3; BS EN 50849 Cl 5.3				

Secondary Power (Batteries and UPS)

Finding 3.01	Are battery terminal voltages within the manufacturer's limits?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(j), 40.1(l)				

Finding 3.02	Do the batteries pass the capacity test (discharge or impedance) against the recorded baseline?	Yes	P	I	C
			-	1	1
				O	
Measured	Block 1: 4.1 mΩ; Block 2: 4.3 mΩ; Block 3: 5.6 mΩ; Block 4: 4.2 mΩ; Block 5: 4 mΩ; Block 6: 5.4 mΩ; Block 7: 4.2 mΩ; Block 8: 4.4 mΩ				
Standards	BS 5839-8 Cl 40.1(k), 40.1(n); annual capacity test is ProAudium practice				

Finding 3.03	Is the standby duration basis correct for this site (24 hours; 6 hours with generator; 3 hours event basis at sports grounds; or twice the evacuation time), and does the standby calculation still meet it for the current system load?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 25.3.5; BS 7827 Cl 15; BS EN 50849 Cl 5.6				

Finding 3.04	Are battery terminals, casings, mountings and ventilation in good condition?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(k), 40.1(n); annual capacity test is ProAudium practice				

Finding 3.05	Does the charger restore the battery within 24 hours to the applicable capacity (BS 5839-8: to the standby capacity recommended in 25.3.5)?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 25.3.4; BS EN 50849 Cl 5.6				

Finding 3.06	Are the batteries within their expected service life, with a replacement plan in place?	No	P	I	C
			-	3	2
No fit date is marked on the batteries. Two blocks read 30 % above their neighbours' internal resistance.				O	
Why is this an issue	Without a fit date, nobody can plan replacement before the batteries fail.				
Risk if nothing is done	On a mains failure the system may not run for its required standby period.				
Outcome	To be quoted, estimate (budgetary price)				
Standards	BS 8210 Cl 5.6; BS 5839-8 Cl 40.1(m)				

Loudspeakers' Condition

			P	I	C
Finding 4.01	Are accessible loudspeakers undamaged, secure and unobstructed?	Yes	1	1	1
				O	
Standards	BS 5839-8 Cl 40.1(o), 40.2(d)				

			P	I	C
Finding 4.02	Is each loudspeaker the correct type for its environment (Type A indoor, Type B outdoor or harsh conditions)?	Yes	-	-	1
				O	
Standards	BS EN 54-24 Cl 3.1.20, 3.1.21, 5.18.3.3				

			P	I	C
Finding 4.03	Are any replacement loudspeakers EN 54-24 certified, with documentation retained and declared data matching the design?	Yes	-	-	1
				O	
Standards	BS EN 54-24 Cl 4.5.2, Annex ZA				

			P	I	C
Finding 4.04	Has the rotating detailed check verified every loudspeaker individually across the service year?	Yes	-	1	1
				O	
Standards	BS 5839-8 Cl 40.2(c), 40.2(d) (ProAudium rotation practice); BS 5839-8 Cl 40.2(i), 40.2(j)				

Sound Coverage

Finding 5.01	Do sample sound level measurements meet the applicable criteria for the emergency signal (BS 5839-8: at least 60 dBA generally), with the applicable margin above ambient and never above 120 dBA?	Yes	P	I	C
			1	-	1
				O	
Measured	Ground floor reception: 82 dBA; First floor open plan: 79 dBA; Second floor east: 77 dBA; Third floor stair core: 84 dBA; Basement plant room: 91 dBA				
Standards	BS 5839-8 Cl 19.1, 13.2, 3.25; BS EN 50849 Annex C; BS 5839-8 Cl 40.2(a) NOTE 2 (conditional)				

Finding 5.02	Are the partitions, finishes, furnishings and fit-out observed at this visit unchanged since the last visit in any way that could affect coverage?	No	P	I	C
			3	-	3
Three meeting rooms built on the second floor since the last visit have no loudspeaker.				O	
Why is this an issue	The new rooms were not added to the voice alarm when they were built.				
Risk if nothing is done	People in those rooms may not hear the evacuation message.				
Outcome	To be quoted, estimate (budgetary price)				
Standards	BS 5839-8 Cl 19.1, 13.2, 3.25				

Finding 5.03	Do the measured ambient noise levels still match the levels the system was designed against?	FYA	P	I	C
			2	-	2
FYA (For Your Attention)				O	
What prevented the test	Ambient noise has to be measured with the building in normal use; the visit was on a Saturday with the offices empty.				
Risk while untested	Until it is measured, we cannot confirm the message is loud enough over today's working noise.				
Outcome	The measurement requires specific site conditions and will be taken when those conditions occur.				
Standards	BS 5839-8 Cl 19.1, 13.2, 3.25				

Finding 5.04	Subjective, in each zone or area listened to, are the coverage, sound pressure level, sibilance, transients and intelligibility of the broadcasts satisfactory, allowing for the acoustic environment and for how the area will be occupied?	Yes	P	I	C
			1	-	1
				O	

Listening

Zone or area	Coverage	Sound level	Sibilance	Transients	Intelligibility	Acoustic environment
Zone 1	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 2	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 3	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 4	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 5	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 6	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 7	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory
Zone 8	Satisfactory	Satisfactory	Satisfactory	Satisfactory	Intelligible	Satisfactory

What each item and result means: Appendix D.

Standards: BS 5839-8 Cl 40.2(j); BS 5839-8 Cl 20.4; 20.2.2 b); BS 5839-8 Cl 3.8; BS 5839-8 Cl 19.1, 13.2, 3.25

Finding 5.05	Subjective, are the broadcasts free from distortion (equipment issues and failures are reported separately)?	Yes	P	I	C
			1	-	1
				O	

Standards: BS 5839-8 Cl 3.8; BS 5839-8 Cl 40.2(j)

Finding 5.06	Subjective, are announcements heard throughout the whole zone, including separate spaces such as offices, toilets and other isolated areas (individual loudspeaker failures are reported separately)?	Yes	P	I	C
			1	-	1
				O	

Standards: BS 5839-8 Cl 40.2(j); BS 5839-8 Cl 20.4; 20.2.2 b)

Finding 5.07	Were all areas requiring inspection accessible on this visit?	Yes	P	I	C
			-	-	1
				O	

Standards: BS 5839-8 Cl 40.2(j); BS 5839-8 Cl 20.4; 20.2.2 b)

Control and Announcement Points

Finding 6.01	Does every emergency microphone function correctly with the declared priority over all other sources?	Yes	P	I	C
			1	1	1
				O	
Standards	BS EN 54-16 Cl 12				

Finding 6.02	Do all-call and zone-select broadcasts route correctly from each announcement point?	Yes	P	I	C
			1	1	1
				O	
Standards	BS 5839-8 Cl 40.1(i), 40.2(a)				

Finding 6.03	Are microphone capsules and paths monitored, with faults indicated within 100 seconds?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 10.1; BS EN 50849 Cl 5.3				

Finding 6.04	Are access levels enforced so controls are only available at the appropriate level?	Yes	P	I	C
			-	-	1
				O	
Standards	BS EN 54-16 Cl 13.6 (Annex A informative)				

Rack Mounted Equipment

Finding 7.01	Do all amplifiers deliver their required output into their circuits without distortion or overheating?	Yes	P	I	C
			1	1	1
				O	
Standards	BS 5839-8 Cl 40.2(i), 40.2(j)				

Finding 7.02	Does a single circuit or amplifier failure affect no more than one zone, with the standby or redundant changeover operating and the fault indicated?	Yes	P	I	C
			-	1	1
				O	
Standards	BS EN 54-16 Cl 13.14; BS EN 50849 Cl 4.1				

Finding 7.03	Is rack ventilation clear, are filters clean, and is the internal temperature acceptable?	No	P	I	C
			-	2	2
Rack fan filters were blocked with dust; internal temperature 38 °C on arrival.				O	
Why is this an issue	Heat shortens the life of amplifiers and batteries.				
Risk if nothing is done	Early failure of amplifiers and batteries.				
Outcome	Fixed on visit. Filters cleaned; internal temperature 29 °C on leaving.				
Standards	BS 5839-8 Cl 40.1(o), 40.2(d)				

Finding 7.04	Does the message store pass its integrity check and do all stored messages replay correctly?	Yes	P	I	C
			1	1	1
				O	
Standards	BS EN 50849 Cl 5.3				

Finding 7.05	Is the system clock correct so event and fault log timestamps are reliable?	Yes	P	I	C
			-	-	1
				O	
Standards	BS 7827 Cl 18				

Finding 7.06	Has the equipment's own event and fault log been reviewed, with anomalies investigated?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 7827 Cl 18; BS 5839-8 Cl 40.1(a), 40.1(f)				

Finding 7.07	Does the voice alarm condition re-establish within 20 seconds after a manual reset?	Yes	P	I	C
			-	1	1
				O	
Standards	BS EN 54-16 Cl 7.7.2				

Field Cabling

Finding 8.01	Do loudspeaker circuit impedance measurements match the recorded baseline within tolerance?	No	P	I	C
			-	3	3
Zone 6 circuit impedance is 41 % above its recorded baseline. Four loudspeakers on the third floor were removed during the refurbishment and not reinstated.				O	
Why is this an issue	Part of the third floor no longer has loudspeakers connected.				
Risk if nothing is done	People on that part of the third floor may not hear the evacuation message.				
Outcome	To be quoted, quote (firm price for us to fix)				
Measured	Zone 3: 118 Ω; Zone 6: 212 Ω				
Standards	BS 5839-8 Cl 40.2(i), 40.2(j)				

Finding 8.02	Are fire-resistant cables, glands, terminations and supports in good condition?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.2(f)				

Fault Monitoring

Finding 9.01	Does a simulated loudspeaker circuit fault (open and short) indicate at the control equipment within 100 seconds?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(p); BS 5839-8 Cl 10.1; BS EN 54-16 Cl 8.1.3, 8.2.3; BS EN 50849 Cl 5.3				

Finding 9.02	Does a simulated amplifier failure indicate within 100 seconds?	Yes	P	I	C
			-	1	1
				O	
Standards	BS EN 50849 Cl 5.3; BS EN 54-16 Cl 8.1.3, 8.2.3				

Finding 9.03	Is the audible fault warning present, correctly timed, silenceable and re-triggering on a new fault?	No	P	I	C
			-	4	4
The panel's fault buzzer had been disconnected.				O	
Why is this an issue	With the buzzer off, a fault shows only as a light nobody may see.				
Risk if nothing is done	A fault could stay unnoticed until the system is needed.				
Outcome	Fixed on visit. Buzzer reconnected and tested; it sounds and re-triggers on a new fault.				
Standards	BS EN 50849 Cl 5.3; BS EN 54-16 Cl 8.1.3, 8.2.3				

Interfaces

Finding 10.01	Does activation from the fire detection system trigger the correct voice alarm response?	Yes	P	I	C
			1	1	1
				O	
Standards	BS 5839-8 Cl 40.2(a), 40.2(b)				

Finding 10.02	Does the full cause-and-effect test match the documented matrix?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 40.2(a), 40.2(b)				

Finding 10.03	Are interface path faults detected and indicated on both systems?	Yes	P	I	C
			-	1	1
				O	
Standards	BS 5839-8 Cl 10.1; BS EN 50849 Cl 5.3				

Completion

			P	I	C
Finding 11.01	Is the system returned to normal operation with all disablements and isolations removed?	Yes	-	1	1
				O	
Standards	BS 5839-8 Cl 40.1(i), 40.2(a)				

			P	I	C
Finding 11.02	Are all interfaces re-enabled and confirmed operational?	Yes	-	1	1
				O	
Standards	BS 5839-8 Cl 40.2(a), 40.2(b)				

			P	I	C
Finding 11.03	Has the logbook been completed for this visit?	Yes	-	-	1
				O	
Standards	BS 5839-8 Cl 40.1(a), 40.1(f)				

			P	I	C
Finding 11.04	Have all findings been reported to the responsible person?	Yes	-	-	1
				O	
Standards	Statutory Article 17(1)				

			P	I	C
Finding 11.05	Has the certificate been issued or its renewal recorded?	Yes	-	-	1
				O	
Standards	Green Guide Cl 16.18(g); BS 5839-8 Cl 40.4				

			P	I	C
Finding 11.06	Has the client been informed of any variations, limitations or outstanding risks from this visit?	Yes	-	-	1
				O	
Standards	BS 9999 Cl 18.2, 18.4; BS 5839-8 Cl 40.3				

Criteria definitions

P (Performance). Performance is about how usable the system is for your team and how well the system can be heard by those for whom the broadcasts are made. The rating is from 1 which means it performs well to 4 where it is seriously impaired meaning it cannot perform that function.

I (Integrity). Integrity tests look at how reliable elements of the system are, some tests will therefore check how an element that goes faulty impairs the operation of the system and whether it is correctly reported and logged. A rating of 1 means that this element functions correctly and 4 means it has failed.

C (Compliance). In addition to checking that the system meets your expectations these tests would also check that the system meets the requirements detailed in the relevant standards and guides which you have advised us you require the system to comply with.

Ratings are whole numbers from 1 to 4. The overall (O) indicator is the mean of the applicable ratings on the same 1 (best) to 4 (critical) scale, shown to one decimal with a severity word: Good to 1.5, Of concern to 2.5, Needs urgent attention above 2.5, and Critical whenever any single rating is 4. The colour runs from green (1.0) through amber (2.5) to red (4.0).

Appendix A: How the ratings and answers work

Every question is assessed against up to three criteria, each rated from 1 (best) to 4 (critical or failed). A dash means that criterion does not apply to the question.

- P: Performance
- I: Integrity
- C: Compliance
- O: Overall, combining the three criteria into a colour scale running from green through amber to red; the more red the indicator, the more severe the issue with that part of the system. The O column carries the colour alone, and the figure it stands for is stated with the item itself, together with its severity word.

Many of the tests will relate to more than one of these criteria. To the left of each test are the four rating columns, P, I and C followed by O.

O combines the P, I and C ratings into an overall severity on the same 1 (best) to 4 (critical) scale, shown to one decimal with a severity word: Good to 1.5, Of concern to 2.5, Needs urgent attention above 2.5, and Critical whenever any single rating is 4. The colour runs from green (1.0) through amber (2.5) to red (4.0). A dash in P, I or C means that criterion does not apply to the item.

The answer beside each question says what the test found:

Yes: carried out, and the system met the criterion.

Partially: carried out, and part of what it covers did not meet the criterion.

No: carried out, and the system did not meet the criterion.

FYA: for your attention: not carried out on this visit because it waits on something only the club or another party can provide. The outcome says what.

To quote: not carried out on this visit; the work is substantial and will be quoted separately.

Deferred: not carried out on this visit. The outcome says why.

Next visit: not carried out, and scheduled into the next visit.

Not applicable: the condition the question covers does not arise on this site, so there was nothing to test. The finding says why.

Appendix B: Scope and limits of this assessment

What a full intelligibility assessment involves: the standard asks for intelligibility to be assessed under emergency noise conditions, which a routine maintenance visit cannot provide. We therefore recommend one of the following, according to the premises. Where plant starts on a fire signal, a full assessment carried out with the system in its fire condition and that plant running. Where there is no smoke extraction or similar fire-driven plant, an assessment arranged during the day, with the offices, leisure areas, theatre spaces or retail units in typical use. In either case it helps greatly if you can give us the noise level in dBA that the extraction or ventilation plant produces in each affected area, since that figure lets the assessment be judged against the condition that matters without waiting for a fire. None of this is included in a planned maintenance visit; it is arranged and quoted separately.

Changes to the premises: the readings in this report reflect the premises as found on the visit date. We do not survey the building for structural, layout or room-use changes ourselves; we rely on the change register

you keep and on what you tell us. We assume you tell us before such work is carried out, so the affected areas can be measured first as a benchmark and re-tested afterwards. Changes made without that notice can reduce audibility or intelligibility without any fault showing on the system; responsibility for keeping the register and for reporting changes to the premises rests with you.

How to read our sound-level and intelligibility findings: our readings reflect the ambient conditions present during the visit. Maintenance visits often take place when the premises are quiet or unoccupied, so those conditions, and any intelligibility assessment made under them, may not represent normal occupied use. Nor do they represent the fire condition: plant that starts on a fire signal, smoke extraction and ventilation in particular, is not usually running while we are on site, and in some premises that plant is loud enough to dominate the space and overwhelm the sound system. Any assessment we make is therefore of the system as found, under the conditions prevailing at that moment.

What this report means by maintenance. A maintenance arrangement is a contract of at least a year with one or more planned visits in each year of it. Each visit tests and inspects the system to establish its condition and records the result, so that change between visits can be seen and the recommendations in each report build on the last. A single visit bought on its own establishes the condition of the system on that day. It does not provide the continuing record that maintenance depends on.

What keeps a system maintained. A maintained system is one in working order, able to perform its expected duties and not degraded. The planned visits find what has changed; keeping the system in that state depends on the recommended work in this report being carried out. Where recommendations are not taken up, the condition of the system falls behind what the visits have found, and later reports will record that. The decision to carry out the work, and when, rests with you as the owner of the system.

What a maintenance visit covers: a planned maintenance visit tests and inspects the system to establish its condition, within a time allowance agreed in advance. It is not a fault-finding exercise. Where this report records a fault we have identified it and stated its effect, but tracing it to its cause and putting it right is separate work, arranged and quoted separately. Where a system carries a number of issues, that work needs time dedicated to it: attempting it inside a maintenance visit would leave the planned tests and inspections undone, which is the one thing a maintenance visit must not do.

Appendix C: How this report refers to standards

The standards named in this report are of three kinds, and we cite each according to its kind.

Specifications (for example BS EN 54-16, BS EN 54-24 and BS EN 50849) set out requirements. A requirement can be checked objectively: a product or system either meets it or does not, and there is no provision for departing from it while still claiming compliance. Where we cite a specification, we say it "requires".

Codes of practice (for example BS 5839-8, BS 7827 and BS 6259) set out recommendations: what the British Standards Institution (BSI) and the committee that wrote the code regard as current good practice. Where we cite a code of practice, we say it "recommends". A recommendation is not optional in the everyday sense. Following it is how compliance is demonstrated, and anyone who claims compliance while departing from a recommendation is expected to be able to justify the departure.

Guidance (for example the Guide to Safety at Sports Grounds) sets out what the issuing body considers good practice. At a sports ground, the safety certificate can make parts of it, and the codes of practice it refers to, conditions of the ground's operation.

Departing from a recommendation

A code of practice is not in itself law, but departing from one is not a decision to take lightly. We would expect any departure to meet all of the following:

- it is agreed by the parties with an interest in the system, which normally include the responsible person for the premises, the system designer and installer and, where relevant, the fire and rescue service, the insurer and any certifying authority;
- it is recorded as a variation, with the reason for it, on the system's certificates and records (BS 5839-8 includes the record of agreed variations among the documents handed over to the user);
- it is supported by the fire risk assessment, which shows that the risk remains acceptable;
- where the recommendation exists to protect people, what it would have provided is replaced by another measure. For example, if a system is not designed with automatic fault monitoring, the faults that monitoring would have revealed still have to be found, typically by more frequent documented checks by trained staff. The cost does not disappear; it moves from the system into the running of the building.

Saving money is not on its own a justification. Under health and safety law, a measure that reduces risk can be set aside on grounds of cost only where the cost is grossly disproportionate to the reduction in risk, and a voice alarm or emergency sound system exists to prevent death and serious injury in an emergency.

The decision also carries personal responsibility. The Regulatory Reform (Fire Safety) Order 2005 requires fire safety systems to be maintained in efficient working order and in good repair (article 17). Where an offence under that Order, or under the Health and Safety at Work etc. Act 1974, is committed by an organisation with the consent or connivance of, or through the neglect of, a director, manager or similar officer, that individual can be prosecuted as well as the organisation (article 32(8) of the Order; section 37 of the Act). A departure that is agreed, documented and risk-assessed is the record that the decision was taken properly.

This section explains how we use standards in our reports. It is not legal advice.

All requirement text is ProAudium's paraphrase with clause references. No BSI or SGSA text is reproduced.

Appendix D: The listening assessment

At the annual visit the attending technician listens to the system in each zone or area, during the zone-by-zone test broadcast and the walk round already made at that visit, and records a judgement of six items. Our technicians are trained to listen with a critical ear. A trained ear picks up faults that a meter cannot reliably detect in a real space, where noise and reverberation vary from moment to moment, and it can judge the space and the system separately.

Coverage: whether the message reaches the whole area, with no dead spots and nowhere it falls away.

Sound pressure level: whether the message is loud enough to be heard clearly over the noise expected when the area is in use, without being uncomfortable. It is judged by ear because a quick meter reading in a noisy or echoing

space is a poor guide to how speech is heard.

Sibilance: the "s" sounds, which carry much of a message's clarity. Too much points to a poorly balanced gain structure; too little to a faulty connection or incorrect equalisation.

Transients: the sharp starts of words. Missing transients can mean the system is being overdriven; overly harsh ones may need controlling with compression.

Intelligibility: whether the words can be understood, recorded as intelligible or not intelligible.

Acoustic environment: how much the space itself helps or hinders the message, through its reverberation, background noise and furnishings. A basic system in a quiet, furnished office can outperform a far better one in a large, echoing hall. This item describes the space, not the system, and does not count against the system.

Satisfactory means good as it stands. Marginal means acceptable, but close to the limit or likely to fall short when the area is in normal use. Unsatisfactory means it falls short. Any result other than Satisfactory or Intelligible carries a note saying why.

Visits are often made when areas are quiet or empty. The technician allows for this, judging each area as it will be when in use: people add noise and absorb sound, changing both the background noise and the reverberation.

BS 5839-8:2023 recommends subjective intelligibility testing in all loudspeaker zones at the annual service (40.2 j), a recommendation new in the 2023 edition. It describes a subjective assessment as a simple listening test whose result is "intelligible" or "not intelligible" (20.4), carried out by a competent person (20.2.2) with no known hearing impairment, using varied messages at the emergency broadcast level (20.4.2), with every pre-recorded message assessed (20.4.4). It also notes that whoever maintains the system should be "fully conversant with clarity and audibility", so as to identify intelligibility issues (40.1 e), NOTE 1).

Two limits apply. The standard recommends that the assessment is made under emergency noise conditions where practicable (20.4.3), which a maintenance visit cannot provide; Appendix B sets out what a full assessment involves. And at design and commissioning it reserves the listening method for areas where the occupants know the messages or other mitigation is in place (20.4.1), and recommends a measured test in the event of a dispute (20.2.1). The listening assessment at a maintenance visit is the annual test in 40.2 j); it does not replace an assessment made at design or commissioning.