



Managing PA noise pollution

A Public Address (PA) system operating on above-ground station platforms can radiate sound towards nearby residential areas, causing nuisance during the day or at night.

Environmental noise legislation

If the noise level of PA announcements are deemed intolerable by local residents they can file complaints to the local authority, and proceedings may ultimately be dealt with by the magistrates' court, which can issue an order to abate, restrict or prohibit the cause of the nuisance.

The current legislation and literature related to intrusive noise pollution can be divided into three groups:

- At international level the World Health Organisation (WHO "Guidelines for community noise 1999") recommends noise levels that can be tolerated without causing health hazard.
- In the UK a number of documents provide guidance and recommended maximum noise levels designed to minimise noise pollution. These relate to residential & industrial sites (BS:4142), planning policy (PPG24), sound insulation in buildings (BS:8233) and any other noisy environment that can affect people's health and performance at work and at home.
- The Environmental Protection Act 1990 and the Noise and Statutory Nuisance Act 1993 recommend corrective administrative action and define legal procedures to be adopted in case of statutory nuisance.

Our expertise

- Full understanding of current environmental noise legislation and best practice
- Appreciation of the subjective, psychological and social implications of the problem
- Experience of undertaking PA environmental noise site surveys on station and in sensitive residential areas
- Ability to estimate PA sound spillage by using our specialist prediction tools
- Extensive experience of designing, installing and testing surface stations' PA systems
- Reporting and conveying clearly the problem and proposed solutions
- Audio and acoustic services team made up of qualified acousticians, members of IOA and ISCE

Our unique solutions

A satisfactory solution to PA environmental noise issues requires attaining the best compromise between low noise levels at residential premises and acceptable audibility on the station areas.

Achieving this challenging performance balance requires a full technical understanding of the site-specific environment, knowledge of the PA system operating on site, as well as an assessment of all possible modifications that can be implemented to current loudspeaker design and PA system settings. By fully understanding the problem we realise that the perceived annoyance is not merely related to the PA announcement sound level heard by local residents, but also to the perceived level of intelligibility (privacy).

Drawing on our extensive acoustic site survey and design expertise we have developed a range new approaches to PA environmental noise management solutions. These solutions are customised taking into account the specific site requirements and characteristics while liaising with the local authority and affected residents.



We can provide the optimum solution for the containment of sound typically within the station areas depending on the amount of sound spillage allowable towards residencies; in particular our 'Contained Sound Solution (CSS)' provides the following benefits:

- Optimum trade-off between clear and audible announcements in station areas and the level of noise spillage outside
- A significant level of noise reduction at residential premises, compared to a standard PA design
- A significant reduction in announcement intelligibility at residential premises compared to a standard PA design, increasing a sense of privacy
- Limited increase in existing or future system costs, and installation work

Our services

We provide the following environmental noise management services:

- Consultancy
- Corrective solutions for existing systems and future installation designs
- PA Environmental Noise Impact Assessment
- Site measurements in station and at residential premises
- PA system design, implementing selected solution
- Presentation and reporting of design and recommendations
- Liaison with local authorities and affected residents to ascertain the best solution

t0010_MT_D_03-2009

Point 3, Haywood Road
Warwick CV34 5AH
United Kingdom
Telephone: +44 (0)800 783 7761

www.telent.com

© telent Limited 2009. All rights reserved. telent and the telent logo are trademarks of telent Limited.