3. Signage is provided (in accordance with Section 7.5 Wayfinding information and signs) on the approach to and within rooms fitted with hearing enhancement systems.
4. Line input sockets are provided in accessible location in rooms or spaces used for presentations.
5. Monitoring equipment installed to enable the detection of microphone defects at an early stage.

TELEPHONES FOR PUBLIC USE

1. Where payphones are provided they are accessible to wheelchair users.
2. Keypads and other controls are positioned 750mm to 1000mm above finished floor level.
3. Are positioned so that they can be approached from the front and both sides and are located in a clear floor area of at least 1200mm wide x 1850mm deep. Where approach is not possible on three sides a knee recess 500mm deep and 700mm high is provided.
4. Keypad buttons incorporate large embossed numbers and have a raised dot on the number five.
5. The telephone includes volume control and an ear piece inductive coupler.
6. Fixed support rails are provided where seating is provided.
7. A shelf is provided adjacent to the phone to enable users to use their own portable text phones.
8. The location of accessible phones is highlighted with tactile signage in accordance with Section 7.5 Wayfinding, information and signs.

FIRE AND EMERGENCY ALARM SYSTEMS

1. A fire alarm notification is visible as well as audible to all users.
2. Additional notification systems are provided in isolated areas e.g. toilets and in noisy environments to alert people who have hearing impairments.
3. Visual and audible feedback is provided to indicate that an alarm call has been acknowledged and is being actioned.
4. There is no visual or audible confusion between a fire alarm and an emergency alarm.

8.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The comfortable use of a building should not be compromised by the poor design and • location of MEP services. The impact of services should be considered with respect to both airborne and impact noise and electromagnetic interference.
2. Communication systems should be considered at the start of the building design process taking into account the size and use of the relevant spaces and the needs of potential users.
3. The acoustic properties of a building are determined by the layout, spatial volumes and selection of materials all of which impact on the clarity and effectiveness of audible communications. The starting point should therefore be to provide an acoustic environment that does not have a detrimental effect on peoples' ability to communicate and is beneficial to the visually impaired in terms of providing acoustic clues that aid understanding of a space.
4. The provision of communication systems should therefore be primarily to provide people with information and / or additional functionality rather than dealing with problems associated with a poorly designed acoustic environment. • Regular testing and user trials of systems should be part of the building maintenance regime.

ASSISTIVE TECHNOLOGY

1. "Assistive technology is any product or service that maintains or improves the ability of individuals with disabilities or impairments to communicate, learn and live independent, fulfilling and productive lives." British Assistive Technology Association. It can also be beneficial to a wide variety of users who do not have impairments.

PUBLIC ADDRESS SYSTEMS

1. Poorly designed public address systems can render the information being provided unintelligible and/or uncomfortable. This is usually a result of incompatibility between the acoustic environment and the sound system with respect to the positioning of speakers and the volume level.
2. The design and installation of a public address system should be appropriate to the particular environment and circumstances in which it is heard.

HEARING ENHANCEMENT SYSTEMS

1. Hearing enhancement systems provide a direct link between sound amplification systems and personal hearing aid devices without interference from background noise or excessive reverberation.
2. Such systems are particularly useful where the level of background noise is high or where glazed screens are installed for security purposes.
3. Due to the wide range of systems, their limitations and benefits, specialist advice should be obtained at an early stage of the design process in order to identify the most appropriate system for each location. It is possible that a combination of systems may be required in order to meet a range of user needs. Commonly used systems include:

   a) Induction loops – can be either permanent or portable. Typically used at enquiry desks and service counters but can also be used in meeting rooms and auditorium. The potential for overspill' to hearing aid users in adjoining areas needs to be considered.

   b) Infrared systems – can operate through headsets or be linked to personal hearing aid devices. Ideal for use in controlled environments such as cinemas and lecture theatres and here confidentiality is important as the signal cannot be picked up outside of the source room.

   c) Radio systems – useful in situations where portability is important e.g. guided tours but can also be used in an education environment where children move between classrooms and carry the equipment with them. The use of different channels can prevent overspill issues but there is still the potential for electromagnetic interference and disturbance from other radio channels.

   d) Soundfield systems – are beneficial to a wide range of users by providing a consistent sound level around a room regardless of distance from the source. These systems should be linked to an induction loop, infrared or radio hearing enhancement system, where provided.

TELEPHONES FOR PUBLIC USE

1. Although the increased use of personal mobile phones has resulted in a reduction of the number of public phones there provision is still important particular for visitors to the country who may not have a local mobile phone and wish to avoid roaming charges.
2. The provision of talking signs, particularly in locations such as transport interchanges should be used to provide multi-lingual information points. Systems providing wayfinding assistance include the REACT system developed through the Royal National Institute of the Blind. Small personal radio trigger fobs activate pre-recorded messages from speakers positioned along a route. Remote infrared audible signage RIAS can be used externally or internally in conjunction with personal receivers and headsets to relay a wide variety of information.
3. The increasing use of personal mobile devices including GPS and mapping facilities offers further opportunities for the development of systems providing location based information direct to users.