

The British Association of Teachers of the Deaf

Classroom Acoustics - recommended standards

Unoccupied Ambient Noise Level	should not exceed	35 dB(A)
Reverberation Time	should not exceed	0.4 second across the frequency range 125Hz to 4000Hz
Signal To Noise Ratio	should exceed	20 dB across the frequency range 125Hz to 750Hz
	should exceed	15 dB across the frequency range 750Hz to 4000Hz

Early diagnosis of hearing loss together with good pre-school guidance and consistent appropriate hearing aid fitting and cochlear implants are making it possible for severely and profoundly deaf pupils to be educated in mainstream classes. The government policy of inclusion also encourages this situation.

It is therefore important to have realistic targets for acoustic conditions in schools in order to influence either existing provision or new building regulations. Good acoustic conditions benefit both hearing and deaf pupils. However, classroom acoustics is only one of many factors which will support or inhibit the successful inclusion of severely and profoundly deaf pupils.

Recommended standards need to be used sensitively and put in the context of other strategies used by pupils and staff. They would be one factor in the learning environment and the impact on individuals will be variable.

Background Noise Levels (BNL) and Reverberation Times (RT) can be improved by:-

- p acoustic treatment: carpets, curtains, doors (and closing doors), soft covers on display tables, ceilings etc
- p INSET to mainstream teachers re management of hearing loss, use of radio aids and attachments
- p Auditory Training Units (ATU), conference mics etc
- p good classroom management
- p provision of quiet areas
- p monitoring and evaluating the use of hearing aids (including modern technology eg digital hearing aids)
- p use of radio aid (RA) transmitter input adaptors and leads
- p ensuring that deaf pupils' classroom is located to preclude intrusive noise from playing fields, roads etc
- p use of visual clues and access through text
- p skilled use of radio aid by deaf pupils
 - knowing when it is working correctly
 - being able to assist in fault finding (when old enough)
 - being able to decide the situations when a radio aid is useful
 - using additional leads and adaptors with TVs, computers etc
 - having confidence to explain use to other pupils and teachers
- p provision of Soundfield FM System(s)

“Acoustic treatment to reduce background noise level (BNL) is likely to improve reverberation time (RT). If BNL is controlled then apparently high RT has a minimal effect when a radio aid (RA) is in skilled use and set up properly.”

Roger Wills, BAAS 29.01.98

The outcomes of severely and profoundly deaf pupils educated in mainstream, unit and resource settings, where BNLs and RTs have not been ideal need to be researched in order to demonstrate the value of the additional strategies that can be successfully used. There are numerous educational and social advantages in attending local mainstream schools and living at home. These should not be underestimated in the overall view of provision. It is important that young deaf adults, whether they communicate in sign or speech, can function in the hearing world as well as the deaf world.

