



Back to School Acoustics



Headteachers and their premises managers have been busy unfurling tape measures and studying plans to identify spare nooks around their buildings, to accommodate social distance guidelines for schools. Whilst the government deliberate on whether 2m is necessary for social distancing in the classroom, and further government guidance is awaited, schools, colleges, Academy Trusts and Local Authorities are already preparing in order to physically return all pupils to school as soon as it is safe to do so. What is certain is that students will need to be educated in smaller groups with more space.

A centrally funded budget for capital school improvement works seems unlikely, as does funding for extra teachers or assistants to meet safeguarding standards in remote or offsite buildings.

As school bodies do what they can to conjure new space for teaching and learning to happen, environmental conditions may become a secondary issue, and usually the last issue on the list is the acoustic conditions in these repurposed spaces.

Yet the importance of acoustic conditions on teaching and learning often goes unseen. Whilst teachers and children will likely be conscious of the most extreme and poor acoustic environs, the detrimental effects on learning for classrooms with even marginally substandard acoustic performance is [proven](#) with learning disadvantages apparent for both typical listeners and, more seriously, those with certain Special Educational Needs.

Here are our top tips to maintain accessible acoustic conditions when planning your temporary socially distanced teaching space for September 2020 and beyond, and to ensure students are not placed at a disadvantage.

Temporary Classrooms

If your school/college/university is fortunate to have spare capital funding for temporary classrooms, here's what to watch out for:

Modular temporary classrooms

Any 'temporary' classroom in place for longer than 28 days must comply with The Building Regulations and the acoustic performance standards in Building Bulletin 93 ([BB93](#)), in order to provide clear communication of speech and avoid distraction.

However due to tight margins and competition, it is rare for modular classroom suppliers to include acoustic treatment as standard to achieve compliance, and ventilation units which attenuate noise are only like to be included when specified by a specialist design team.

Lightweight temporary structures in place for more than 28 days also need to comply with Building Regs, and even short-term temporary classrooms need to comply with School Premises Regulations and Independent Schools Standards (including BB93 acoustic performance). Structures such as purposely designed marquees or inflatable classrooms can achieve full temperature control and good lighting, however achieving sufficient acoustic conditions can be very difficult on a noisy site. Even where the site is quiet, high noise continuous blowers for inflatable structures will disrupt speech communication.

Recommendations:

- Consider the site location of temporary classrooms carefully.
- Avoid reliance on open windows for ventilation on noisy sites.

- Make use of acoustic screening from other teaching blocks or boundary fencing where possible.
- A common misconception is that vegetation (such as trees and hedges) will reduce road traffic noise, but unfortunately it won't.
- Be aware that inflatable classrooms will be noisy and consider use of amplified speech/headsets.
- Check tender returns for sound absorption provision and insist on it. A suspended ceiling will normally suffice for most children but ask for Sound Absorption Class A to improve access for those with SEN.

Finding the extra space within your school

Breakout and shared spaces

Overspilling into shared central resource areas (such as breakout spaces, libraries or IT areas) is an obvious choice for temporary class bases but be aware that switching these spaces from breakout and resource to permanent class bases for formal learning can cause acoustic issues. Breakout spaces may be designed with an acoustic environment that is less appropriate for formal large group teaching, and problems will be exacerbated when soft furnishings need to be removed to control risk of infection. Spaces built prior to 2003 are unlikely to have acoustically rated doors which may be needed to control noise transmission between class bases operating independently.

Large central atria are a common feature of schools built between 2003 and 2013, and many of these spaces were designed for circulation and social use rather than for teaching. When schools have tried to repurpose atria for teaching spaces, common acoustic issues that occur include the need for extra sound absorbent finishes and/or acoustic separation. Also, the presence of rain drumming noise, which was not a problem for circulation and informal social use, quickly becomes a distraction and interferes with speech communication.

Recommendations:

- Check what sound absorbent surfaces are left once you have removed furnishings for infection control
- Consider temporary sound absorbent screens
- Avoid teaching in spaces with lightweight roofing such as ETFE pillows
- Support teachers newly operating within a shared breakout space to work and plan collaboratively to avoid noise conflict

Offsite accommodation

Where there is a local hall or other community space in the vicinity of your school which is lying empty, it may be an option for the premises to host overspill or catchup classes. Be aware that these types of spaces have no statutory or other regulatory controls on acoustics. Where acoustic treatment has not been afforded, it can become very difficult to understand speech in large halls with high ceilings.

Recommendations:

Providing fixed sound absorbent treatment for temporary use is unlikely to be affordable, and soft furnishings will be limited to prevent infection control, so:

- *consider use of temporary sound absorbent screens, or pods, and*
- *use [effective acoustic management techniques](#)*

Of course, it will be necessary to work within your available resources and it may be difficult to avoid substandard acoustic environments in many cases. Where you are faced with a noisy or reverberant environment, it is important to make reasonable adjustments ensure that children with special hearing and communication needs are not placed at a disadvantage in order to comply with [The Equality Act](#). Consider providing assistive listening devices, and/or ensure that spaces with better acoustic environments are reserved for children with these needs:

- Younger children (their auditory systems and listening skills are still developing)
- Hearing impairment and Visual impairment
- Autism
- ADHD
- Speech, Language and Communication Needs

Author: Emma Greenland

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