



# Bedfordshire Fire and Rescue Service

## **Measures to mitigate the spread of fire**

### **Fire detection/suppression**

The majority of arsons in schools occur out of school hours when the site is unoccupied. Prompt attendance by the Fire Service can make a significant difference in terms of reducing the damage, cost and disruption that can be caused by a fire if it is allowed to take hold. It is thus essential to have a system in place that can detect a fire in the school buildings out of hours and provide an alert to enable a prompt and effective response to the fire to be put in place.

Ideally the school buildings will have comprehensive mains powered automatic fire/smoke detector cover that will be linked to an alert system in the form of a monitoring service as this will ensure that the key holders and/or Fire Service get prompt notification of a fire in the school buildings out of hours. This may not always be consistent with the advice you may have received during a Fire Safety Inspection. The reason for this will be because the Fire Safety Inspection process assesses the extent to which fire safety measures at the school conform to legislative requirements. The legislative requirements are designed to ensure that the lives of those using the school are adequately protected and that they are able to evacuate to a place of safety if required. The recommendation above is made with a view to minimising the damage to the school buildings in circumstances where there is nobody on site to raise the alarm, for example during the night, at weekends or during school holidays which are the times when the majority of arsons occur.

If the fire/smoke detectors cannot be linked to a monitoring service then they should be linked to an external audible warning system that can be heard by neighbours. This is not the ideal as our experience is that neighbours do not always respond promptly to the sound of an external audible warning system. The resultant delay can significantly increase the damage, cost and disruption caused by the fire as it takes hold.

If the school buildings are not comprehensively covered by automatic fire/smoke detectors that are linked to an alert system that can provide a prompt response to any outbreak of fire it is likely that a fire in the school buildings out of hours will remain undetected until smoke and/or flames are rising from the building, by which time the fire has become well established and has already caused significant damage.

A comprehensive sprinkler system that automatically attacks any outbreak of fire as soon as it is detected is without doubt the most effective measure that can be taken to mitigate the effects of a fire within a building. The typical cost of installing a sprinkler system is in the range of 2% to 5% of building costs where extensions or new builds are concerned. I would thus recommend that you consider installing a sprinkler system or alternatively a water mist system which can be even more cost effective. Installing such systems should be seen as an investment that may save a lot of money by minimising smoke/fire damage in the event of a fire. Further details regarding such systems can be obtained directly from specialist suppliers.

### **Closing doors to prevent the spread of fire**

One of the most effective measures to prevent fire from spreading through a building and to reduce smoke damage is to ensure that all internal doors are kept shut, particularly out of school hours. A routine should be established to ensure that this is done when the school closes each day.

**Sealing gaps in the building structure to prevent the spread of fire**

Fire can easily spread through any holes and gaps in the building structure. All pipe and service ducts, and any other openings in the walls, floors, partitions and ceilings for the passage of building services should be adequately sealed with fire-resisting materials in order to minimise the danger of the spread of heat, smoke or fumes. Procedures should be put in place after works are completed to ensure that contractors have sealed any gaps created by their work, e.g. installation of additional pipes for heating or ducts for ventilation.