



# executive summary

## the impact of school fires

a study of the wider economic and social impacts on schools and the local community

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### Introduction

These findings are from a study undertaken by the National Foundation for Educational Research (NFER) commissioned by Local Government Analysis and Research (LGAR) on behalf of the Local Government Association (LGA) and British Automatic Fire Sprinkler Association (BAFSA). The study employed a desk review of primarily qualitative data and, as primary research, case study visits to four schools, all of whom had suffered fires in recent years. The focus of the study was to provide information about key issues, such as:

- What are the economic impacts of school fires for schools and the wider community, including the direct and indirect costs?
- What are the educational impacts of school fires for children and young people?
- What are the social impacts of school fires for schools and the wider community?
- What are the emotional effects of school fires for staff and pupils?
- What factors appear to be associated with the impact of school fires?
- What are the key factors that school staff, LA staff and fire officers take into consideration when examining fire prevention measures and mechanisms for minimising the impact of a fire in a school?

In this executive summary findings are presented in relation to the facts about school fires and fire prevention/response; the key findings from case-study visits as they relate to the background to the fires in the schools concerned, the impact of the fires and information about how schools approached fire prevention pre- and post- their experiences. Finally, we end with a brief conclusion.





## The facts and setting a context

### The impact of school fires

The review found that fires have large direct and indirect costs, for instance:

- each year in the United Kingdom there are estimated to be between 1400 and 1800 fires in schools
- over the ten years ending 2005, the cost of school fires has been rising, from £49 million in 1995 to £67 million by 2005, although there was a drop in cost between 2004 and 2005
- while the measurable cost of arson attacks on schools in 2001 stood at £65 million, the real cost of fires was nearer to £115 million
- a survey in 2006 by the Arson Control Forum of 938 schools found that 43 per cent had suffered at least one fire in the last three years
- proportionately, the highest cost of school fires occurs in the South East/London Region (representing 37 per cent of the cost of all school fires)
- metropolitan areas experience higher frequencies of school fires and correspondingly suffer the greatest total cost
- one in eight schools suffers a serious arson attack and 75 per cent of school fires are the result of a malicious fire
- nearly a third of all school fires start in school time
- damage can affect exam results, mean temporary accommodation is needed and result in disruption as a result of rebuilding and insurance cannot replace lost school work and lost school days
- it is estimated that the education of 90,000 children is disrupted by school fires each year and that those from the most disadvantaged backgrounds are more likely to be affected by such an occurrence
- 17 per cent of schools who had experienced a fire said that it had led to a drop in staff morale, six per cent to a drop in morale amongst pupils and seven per cent said that their fire had led to negative publicity about their school
- the increase in the number of extended schools (and the requirement for all schools to offer extended services by 2010) means that, increasingly, entire communities can be affected by a school fire.

### The response to school fires and fire prevention

The review looked at evidence about what can reduce the cost of fire and specifically, at evidence related to sprinklers systems and fire prevention generally, finding that:

- there are perceptions, especially among some education professionals that, for instance, sprinklers are 'too expensive', likely to cause more damage than the fire and are prone to malfunctions and therefore will lead to the unnecessary destruction of school property
- there is evidence to suggest that schools, specifically in relation to their consideration about installing sprinkler systems, are influenced by concerns about damage sprinkler discharge might do, about accidental discharges and about vandalism of the system once in place
- the costs of a sprinkler system can be recovered within five years through reduced insurance premiums, which would be reduced by installing sprinklers by around 65 per cent


- sprinklers incorporated in a new-build school are estimated to cost between 1.8 and three per cent of the total build cost (and if retrospectively fitted between four to seven per cent)
- losses in buildings with sprinklers equal 10 per cent of those in buildings without sprinklers
- sprinklers deal with a fire immediately, whereas smoke detectors only perform a warning function
- there are no false alarms with sprinklers
- water spray from sprinklers washes out heavier carbon particles increasing 'survivability' and means better visibility in the event of a fire
- one in 14,000,000 sprinklers discharge due to defects and modern systems are compartmentalised so that they discharge in the area affected by the fire – actual reliance on fire-fighting intervention would result in far more water damage
- *Wise Up to Fire* – the campaign by BAFSA – aims to assist schools to make a decision regarding fire protection and specifically to encourage schools to install water sprinkler systems
- there are several guides, toolkits and a series of teaching resources that have been produced that are intended to support schools in fire prevention, planning and management
- it would seem that it is schools that have suffered an arson attack that put fire safety management as a top priority, as they see the destruction that this causes
- many schools would welcome more guidance and supportive visits from the fire service.

## Case studies – school context

The background to the fires were explored in the four schools visited and the following was found:

- in two schools, although damage was extensive, it was confined to certain areas of the school, which enabled pupils to be brought back on-site quickly (within two weeks in one school and at the normal beginning of term in the other)
- the other schools were so badly damaged that alternative accommodation was needed long-term. One school re-opened last year (September 2006, after a fire in 2004) and the other has never returned to its original site (after a fire in 2004), although the situation here was very complex, due to a local reorganisation of educational provision
- the case studies were not typical of school fires, in that three out of four were caused accidentally. The fire which was caused deliberately occurred at a week-end
- several fire officers expressed concern about an increase in the number of school fires occurring during school time, with the potential to cause casualties among the school population
- the schools all emphasised the importance of morale-building immediately after a serious fire, by acknowledging loss, but looking to the future and ensuring that the whole school was kept together if a long-term accommodation move was necessary
- despite the substantial impact of the fires, all the school interviewees reported that adaptability on the part of pupils and flexibility and good morale amongst staff had contributed to dealing effectively with the crises

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- community support and sympathy played a significant role in boosting morale in the affected schools. Practical support from the local authority was also valued in the schools which felt that they had received this.

## Case studies – the impact of the fires

How the fires had impacted on the case-study schools was explored with all interviewees and the following was found:

- although senior leaders and staff sought to ensure continuity in teaching and learning, and minimising any impact, the schools had experienced some negative impact on teaching and learning and, consequently, on assessment outcomes
- the schools had strategically prioritised minimising any disruption for pupils who were in an assessment year (year 6 and year 11, for example) and yet they perceived a negative impact on assessment outcomes for these year groups, it is likely that the pupils in other year groups were also affected
- loss of facilities and the use of temporary accommodation, together with loss of teaching and learning resources and completed school work, were the main outcomes of the fire that impacted directly on teaching and learning in all four schools
- the hard work of teachers who improvised, compromised and sought alternatives was instrumental in maintaining teaching and learning provision
- the wider communities in the four case-study areas were considerably affected by the school fires; this was particularly the case for those groups who used the schools' facilities
- disruption and a sense of loss was also reportedly experienced in the wider community
- links between schools and their local communities were evidenced and emphasised in the support received by the schools through fund-raising, provision of resources and support of school governors
- the emotional impact of the fire on staff, pupils and the local community was one of the main impacts of the fire and was still felt years later
- in response school staff had focused on maintaining provision and on supporting pupils through including work on the fire in lessons and through special PSHE provision.

## Case studies – fire prevention

Interviews in the case study schools revealed the following about fire prevention, pre- and post- their experiences of serious fires:

- school staff had been satisfied with information and guidance they had received on fire safety and precautions, but three of the four had realised that they needed a more comprehensive incident recovery plan, as this would have saved time and extra work after the fires
- schools that had suffered major fires said they were much more aware of fire safety issues, such as not blocking fire escapes or hiding extinguishers and knowing exactly who was in the building
- school staff greatly valued the contacts they had with the fire service, especially visits and talks by fire officers, training in fire safety and fire risk assessments and audits

- fire and LA officers thought that all schools took fire safety seriously, but for some it was a lower priority because of other pressures
- staff in case-study schools warned against complacency and fire officers said that a serious fire in a school often acted as ‘a wake-up call’ to other schools in the area
- schools and LAs tended to see good security measures as ‘the first line of defence’ against fire, because most fires were started deliberately. As three of the case-studies showed however, this was no help when fires started accidentally and spread quickly
- sprinkler systems had strong support from fire officers, pupils, parents, community representatives and many school staff. Some school staff were less enthusiastic and LA officers generally had more reservations about them
- fire officers thought that opposition to sprinkler systems was based mainly on concerns about costs and misunderstanding of how they worked. This was confirmed to some extent by interview data from the schools and LA officers, who expressed concerns about expense, accidental operation of sprinklers, water damage and electrical fires
- some fire officers were optimistic that opinion was changing on the use of sprinklers, especially their use in new buildings, where the ‘economic sense’ argument was being won. Some LA interviewees confirmed that systems were now being installed more widely because of insurance company pressure and a risk assessment procedure
- two of the four case-study schools had sprinklers installed after rebuilding – in one school largely because of pressure from parents and the local community.

## Conclusion

The evidence indicates that despite a downward trend in the number of school fires (malicious and accidental), there remain a substantial number of fires in schools each year and the findings from the case-studies illustrate the significant impact of school fires on the social and emotional experiences of pupils, staff and the wider community and on teaching and learning in the affected schools. This evidence provides support for the urgent imperative of addressing fire prevention and management in schools emphasised by Zurich insurance recently who asserted ‘With three schools suffering from arson attacks every day, we cannot afford to be complacent and must continue to put measures in place to stop them.’ (Zurich Municipal Insurance, 2007b).

*despite a downward trend in the number of school fires there remain a substantial number of fires in schools each year*

The evidence suggests that there remain two key challenges for the future which are the need to:

- persuade all stakeholders of the importance of addressing the issue of schools fires through highlighting their impact, whether or not they have had or are likely to have a direct experience of fire
- ensure that school leaders and local authority decision makers are equipped with accurate and relevant guidance about fire prevention and management in order that they can make informed decisions.

Finally, the evidence reviewed in the literature suggests that, while there are some complexities in considering installing sprinklers in existing buildings, the advantages of doing so in **new buildings** is more clear. In *Counting the Cost*, LGA quote A House of Commons Select Committee Report that stated (LGA, 2004):



*... we strongly recommend in this year's revision of the Building Regulations, ministers introduce a requirement for sprinklers to be fitted to all new build properties of this type (including schools) as this would have more impact on public fire fighting safety than any other proposal in the White Paper ... .*

While new guidance, toolkits and encouragement may be planned, and toolkits may be designed to lead 'inevitably' to the adoption of sprinklers in new build schools, it does not make such installation compulsory. Hence, in line with current governance policy, LAs have the responsibility for decision-making. Therefore, given the programme of school building through Building Schools for the Future, it is perhaps timely for campaigns such as *Wise Up to Fire*, and for the LGA to ensure that decision-makers in local authorities and schools are fully informed about the impact of fires in schools and the effectiveness of sprinklers in minimising this impact.

## Further information

The full report, produced as part of the Local Government Education and Children's Services Research Programme, is available to download from the NFER website at [www.nfer.ac.uk/research-areas/pims-data/summaries/impact-of-schools-fires.cfm](http://www.nfer.ac.uk/research-areas/pims-data/summaries/impact-of-schools-fires.cfm). For more information contact David Teeman at [d.teeman@nfer.ac.uk](mailto:d.teeman@nfer.ac.uk) or on 01753 574123.

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