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Fighting the fire – 2005

Tackling the escalating problem of arson in schools

The current situation

The issue of arson (fire setting) in schools has claimed an increasing number of pages in the trade and national media over the past few years. Concern is also escalating as the number of fire incidents is also snowballing.

Malicious fire setting, general vandalism and theft in schools, are largely crimes of opportunity, as opposed to planned events. Research proves that, in the main, they are caused by children or youths who are often present or past pupils of the school concerned (see appendix). Schools are targets as the site and buildings are familiar to the miscreants and because the level of intruder protection and detection has traditionally been low.

Measures can, therefore, be put in place to educate pupils and local people, raise awareness and promote proactivity towards limiting the number of deliberate school fires and the impact they have.

After all, the affects of a school fire are not just about the financial costs, the disruption to lessons and the loss of school notes. It is also about the indiscriminate nature of fires, which can lead to loss of life.

What is the problem?

Perception v reality

An average of 20 schools a week are damaged or destroyed by arson, sometimes just a small bin fire that is put out in seconds. Sometimes a large inferno, which rages through the building, destroying years of scholarly dedication in a few minutes.

The physical damage costs more than £83 million in 2004, the approximate equivalent to the cost of building more than 80 new primary schools or employing more than 2,500 teachers. This is an increase of 13% on the previous year and an increase of 137% over a ten-year period.

However, many of the problems associated with school fires are not financial. It is estimated that the non-financial impact is between 30-50% of the material damage costs. The hidden effects can include disruption to education, breaking up of the school to enable the education process to continue, stress and additional work on all staff and disruption of extra curricular activities, as well as a far wider heartache, stress and worry on the community. If the school is seriously damaged resources have to be diverted to assist with the rebuilding or relocation of the building.

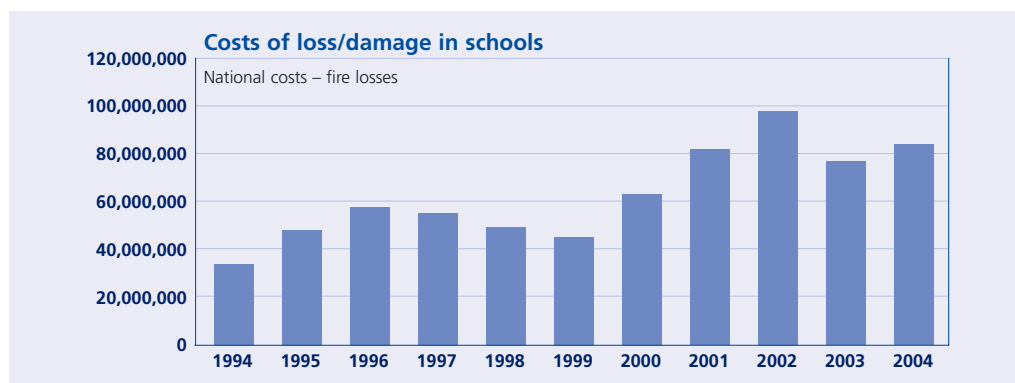
Add these facts and figures together, and consider the indiscriminate nature of fires, which can lead to loss of life, and the impact is clearly a difficult burden for the school community to bear.

On top of this is another startling figure; analysis of Zurich Municipal's own figures reveal that as many as 90% of school fire claims are a result of arson attacks.

When compared to other types of buildings, such as shops, pubs and warehouses, schools appeared to be particularly at risk. Research has shown that in the past school fires have accounted for more than a quarter of all building fires.

Data shows that more than 75% of all school fires are struck maliciously, and the perpetrators are invariably pupils, ex-pupils or friends of that peer group. An area of increasing concern is that more fires are being starting during school hours, increasing the threat of injury or even death. Within that context, such fires are generally bigger than accidental fires, but when this is coupled with inadequacies in the fire resistance in the majority of schools built prior to 1980, the issue becomes exacerbated. Lightweight constructions, particularly in the 1960s and 1970s, are particularly vulnerable to large spreading fires because of the absence of effective fire stopping measures in roof and ceiling voids.

Figure 1 shows historic costs i.e. not inflated for increased building costs



Protecting our school environment

In the past, action taken by Local Education Authorities (LEAs) has improved the school's vulnerability against attack, for example fencing and intruder alarms. Deciding on a method of protection must take into account the risks presented, the benefits of the protections and the location of the school to avoid money being spent unnecessarily or being wasted on incorrect and poor equipment.

Poorly specified systems will cost a school money but not necessarily reduce the risks. CCTV can present a good solution in the right circumstances but they are rarely monitored, often with poor quality imagery that means the footage cannot identify culprits. On the other hand, correctly installed and maintained security fencing and automatic fire sprinkler systems are extremely effective and pay for themselves over a couple of years.

Work has been done with some LEAs in terms of multi-agency risk management groups, risk assessments and training, but the nature of the threat is changing, and deterrent strategies need to reflect this. For example, in recent years, a substantial proportion of school fires have been struck externally, without intruders entering the premises. Also, a growing number of fires have been started during school hours increasing the threat to safety of pupils and teachers. A danger that needs to be kept in check.

It is essential that the physical environment of the school is safe and the design, materials and protection of the building are important challenges to consider.

A Zurich Municipal guidance document, The design and protection of new school buildings (available from <http://www.zurich.co.uk/Municipal/Schools/Publications/Guidance/Current+Articles.htm>), supported by HM Chief Inspector of Fire Services, was published to aid and assist with the design of new school

building projects. This is relevant for entirely new constructions, redevelopment of an existing location, and extensive refurbishment of existing buildings.

Historically, the way arson, vandalism and theft have been handled in UK schools over the past 30 years has, in many instances, been exacerbated by school building and site design. The design guide builds upon the lessons learnt from these failings.

The guide looks at improvements in the standards for fire resistance in the schools. It also covers various design and protection strategies as well as security issues. There is an unprecedented amount of funding currently being made available for school building projects from education authority budgets and increasingly through Private Finance Initiatives (PFIs). This approach provides the key to improving the school's infrastructure, and there is now a massive refurbishment programme in place, initially in secondary schools and then the primary sector.

This isn't a one solution fits all approach. Each school is different and requires tailored solutions, ranging from sprinklers, security fencing, alarms and guarding. However, many of these solutions have received little attention based on myths. For example, despite the benefits very few schools have an automatic sprinklers system as the cost benefits of sprinkler systems are often overlooked.

Example: An automatic fire sprinkler system

Today's technology can ensure sprinklers solutions are cost effective, tamperproof and discrete, but only approximately 200 schools are sprinkler protected.

Myth: Sprinklers are expensive.

Reality: Sprinklers installed in a new building typically cost 3% of the total building cost. If fitted retrospectively the cost is between 5-7%.

Myth: When there is a fire all the sprinkler heads go off at once, causing water damage.

Reality: Sprinkler heads are individually triggered by fire so only the head adjacent to the fire operates. Sprinkler heads discharge around 60 litres of water per minute. A fire-fighter's hose discharges more than 600 litres per minute.

Myth: Sprinkler systems in schools are attractive to vandals and could be set off accidentally.

Reality: Heads can be fitted above open grid ceilings making them inaccessible, or behind protective plates hidden in the ceiling. Zurich Municipal has never received a claim relating to vandalism to sprinklers.

Myth: Insurance premiums are not reduced if sprinklers are installed.

Reality: Zurich Municipal will reduce the fire element of an insurance premium on sprinklered schools by 65% and reduce the excess applicable, typically £100k, to nil.

Case study 1: Ordsall School, Salford

On Saturday, January 13, 2001, youths broke into a classroom and set fire to the furniture. The fire service was alerted straightaway but 18 classrooms were damaged by fire, heat and smoke. Five jets of water and eight fire service appliances were used. The school was closed and later demolished.

Case study 2: Haughton Mill School, Oldham

On Sunday, October 1, 2000, youths broke into the school and set light to cardboard boxes. The fire service was alerted straightaway, and one classroom was damaged. Two fire service appliances were called but no fire fighting equipment was required – this school had a sprinkler system. The fire triggered one sprinkler head, which controlled and extinguished the fire. The school was open to pupils on the Monday morning.

A joined-up approach to the problem is really the only way of ensuring solutions are adopted as widely as possible.

Zurich Municipal is involved in a special working group with the Department for Education and Skills (DfES) on School Security together with the emergency services, building control bodies, local authorities and other service providers. The group is producing a comprehensive guide on all aspects of school security, which will be posted on the DfES TeacherNet website <http://www.teachernet.gov.uk/> in the next few months.

Education – the grass roots approach

On top of dealing with the physical environment of school buildings, educating the fire starters themselves is an important aspect of combating the arson problem. Our research has shown that 75% of school fires are started deliberately, by pupils or ex-pupils of the school. Changing the behaviour of students is therefore a priority.



Arson Combated Together (ACT) is an innovative approach to educating children about the consequences and risks of arson attacks through a Theatre in Education programme. It has been developed by Zurich Municipal and is supported by the Arson Prevention Bureau (APB), the Chief Fire Officers' Association (CFOA), the ODPM-led Arson Control Forum and the National Community Fire Safety Centre (part of ODPM).

After a successful pilot in Nottingham in 2000 (after which there was almost a 20% decrease in property losses from malicious fire damage) and a regional launch in Scotland in 2003, the programme is now being rolled out nationally through Fire Services, with the launch of the ACT Fire Service Tool Kit. This provides Fire Services with a unique and comprehensive resource to teach students at school about arson and help combat fire setting in schools. The initiative was launched at Fire 2004 (the UK's leading fire event) and at the beginning of April 2005 all Fire Services across the UK received a free Tool Kit to enable them to implement the programme with schools in their local community.



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Arson Prevention Bureau



Aims and Objectives

- To raise awareness of the problem of fire setting – particularly in schools – and its consequences (emotional, social, financial) to the school, to all those involved with the school (pupils, parents, teachers, governors), to the neighbours and the local community in general.
- To educate all parties in how to reduce malicious fires and how to carry out regular risk assessment/arson prevention routines.
- To carry out an arson prevention programme, linked into the school curriculum and within school timetables.
- To encourage "good citizenship", a key part of the national curriculum, both within and outside the school environment, and to encourage the whole community to play its part in the prevention of arson.

Fire Services have excellent community links and have been crying out for quality educational resources. In addition, feedback from schools indicates that there is a shortage of material for citizenship lessons. The ACT programme links directly to this area of the curriculum, covering peer pressure, relationships, consequences and responsibility, how to be 'risk aware' and be good citizens.

Special tool kits have been sent, free of charge, to each fire service, to help them deliver this programme to local schools.

The Teachers' Pack is also available to download from our website, www.zurichmunicipal.com



Conclusion

By coupling solutions that deal with the school environment and the cause of the problem the opportunity now exists to have a direct impact on the increasing number, and cost, of school fires.


Tailored solutions can include influencing new builds and school refurbishment designs, whether under PFI or conventional budgets, educating potential arsonists and creating a joined up approach to a problem that affects our society on many levels.

Not since the school building programme of the late 1950s and early 1960s has there been such activity in this area and there exists an opportunity to learn from past mistakes and change the profile of school losses for the future. This is the right time to deal with the issue of arson – failure to do so will only lead to the number of fires increasing, at greater financial costs, disruption and risk to life.

Contact

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Appendix:

Fire fact file – the evidence

Cost of all arson in the UK

- Around £350 million a year. That is nearly £1 million pounds a day.
- Every week 1 or 2 people die in arson attacks and 55 people are injured.
- Approximately 25% of all major fires in buildings occur in schools.

National cost of fire in schools:	
2000	£65,000,000
2001	£93,000,000
2002	£96,600,000
2003	£73,400,000
2004	£83,000,000

A regional breakdown of the number of fires across the UK include:

Cost of school fires by region			
	2004	2003	2002
London & South East	13%	12%	5%
Midlands	57%	23%	43%
North	9%	26%	2%
North West	12%	13%	13%
Scotland	4%	20%	34%
Wales & South West	5%	6%	4%

Arson in schools

- Related costs incurred as a result of school fires have increased by more than 137% over the last ten years.
- More than 70% of all fires in schools are started deliberately.
- On average schools in the UK suffer three fire-setting attacks each day.
- An average of 20 schools a week are damaged or destroyed by arson.
- £83 million (2004 cost) is the approximate equivalent to the cost of building more than 80 new primary schools or employing more than 2,500 teachers.
- Only 200 out of 28,000 schools in the UK are fitted with sprinklers.
- Losses from fires in buildings with sprinklers are estimated to be a tenth of those in unprotected buildings.

Who commits arson?

Majority of arson committed by 10-19 year olds:

- 47% of all offenders found guilty of arson are aged 15-19
- 65% of all offenders cautioned for arson are aged 10-14
- 31% of all offenders cautioned for arson are aged 15-19

People cautioned or arrested for arson:

- Most are teenagers
- Many carry out the offence while under the influence of drink and drugs
- Come from deprived inner city areas
- Families are already vulnerable and have few resources
- Large proportion have had problems during childhood

Why do they commit arson?

- Reaction against social order
- Vengeance
- Jealous rage reaction
- Concealment
- Pleasure

Sources:

- The Prevention and Control of Arson, Adair Lewis, Fire Prevention Association
- Arson Prevention Bureau
- Zurich Municipal

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