

When Will They Ever Learn

Songwriter Pete Seeger had a popular Sixties song “Where have all the flowers gone?” with the immortal chorus line “When will they ever learn?” At that time the sentiment expressed in the song became synonymous with the emerging anti Vietnam War movement and since then the phrase has been used countless times to support arguments for or against some issue, cause or ultimately a cry of desperation after a repeated calamity. Now I want to use the phrase to promote safety in – schools – to protect arguably the most valuable citizens – children – using technology - life safety fire sprinklers.

Unfortunately we know that tragedy unfolds in every walk of life, and that includes education. There have been school fires that have resulted in numerous deaths. Most recently these have been in under developed countries but the past has also given other examples like the fire at Our Lady of the Angels School, Chicago in 1958. Although this happened nearly 30 years ago it remains an example of the toll extracted by poor fire safety arrangements resulting as it did the loss of 92 children and 3 nuns with many more injured after being forced to jump to safety when trapped on upper floors. It was also a school time fire occurring, just after lunch on a cold December day in a school exempted from improved fire safety standards.

Turning to the current education fire situation there is a clear and growing risk warning if we seriously consider what we are being told. The number of schools lost to fires are generally growing - we are told at least one school every month with over 1,500 school fires every year; the numbers of attacks on education premises is increasing - we are told that over 60-80% of school fires are deliberately set; the tremendous economic loss suffered by the publicly funded education sector– we are told 1 in 8 schools will have a fire and, since schools cost millions to build, the historic annual loss is in excess of £70 million, indeed over the past 12 months the estimate was £110 million; but most alarmingly, the number of school time fires, when the buildings are fully occupied, is growing – we are told this is over a third of all school fires.

Interestingly these facts are not in dispute, either by the professionals responsible for education or those concerned with fire safety, and surely suggest we are truly living on a precipice. A precipice where life safety sprinklers are increasingly being seen as an important part of the solution to this growing safety and economic risk.

But, as with most issues in today’s World, this is not just about undisputed facts but about perceptions and economics.

One perception is that schools are and, more importantly will remain, inherently safe. This perception is, in part, soundly based on the fact that thankfully school fire deaths are remarkably rare even though there are around 30 injuries each year. But we all know such perceptions can be sorely tested and the education sector is no exception since the safe school concept rests on the assumption that good construction, safe practices, good fire safety management and ultimately early warning will cheat tragedy.

Anyone who has ever inspected a school knows how easy it is for fire to overtake the envisaged fire safety arrangements, often because the fire safety management necessary to maintain the effectiveness of those arrangements is negated by ignorance.

Take treatments to ensure a low surface spread of flame in circulation and escape corridors that are made impotent by paper decorations; or penetration of roof void fire compartmentation barriers to allow cables; or fabric changes in the outdoor coats that hang in cloakrooms-the most common site of a school time arson attack. Think also of communities affected by social unrest and substance abuse, a factor still often excluded from contemporary design processes and unheard of in the fire safety designs of the previous decades.

In those circumstances, where fire safety is rendered ineffective as protection, means of escape become compromised or breached, then early warning worryingly becomes the first and last line of defence.

Conversely there is also another perception that perhaps needs fuller consideration - that of societal expectation. All societies, and not just human ones, demand protection for their young; even more so when the young are entrusted to the care of others. The stark reality of this perception and expectation is that this reason alone is sufficient to justify expenditure and legislation above that which is usually judged reasonably practicable.

We have already seen this happen following two modern school time tragedies of previously unimaginably horror that devastated both their local communities and remain today indelibly imprinted with great sadness on the national conscious. At Aberfan in 1966 144 people died including 116 children and 30 years later at Dunblane 16 children with a teacher were killed. Rightly both signalled fundamentally change in how we protect our children and were followed by immediate action to prevent repetition.

Although some argue the full circumstances that gave rise to those two disasters, a sliding colliery waste tip and an armed deranged individual, were not foreseen as threats that serves only to heighten rather than diminish our concern given what we already know of the threat arising from school fires.

And what about the second point-that of economics-often the deterrent factor in public life. Well like all estimates the cost of life safety sprinklers depends on whom you ask, the supplier or buyer! Quiet remarkably everyone agrees that the cost of installing sprinklers is not high, the owners saying around 2.5% of total build costs if installed during the build and the suppliers saying it could be as low as 1.5% especially if one major cost, the main water supply, is controlled. Equally there is little dispute that ongoing maintenance costs are low and performance reliability remains high through out the system lifetime.

However whatever the cost it is necessary for this to be offset or neutralised so demonstrating there will be no loss to the overall investment available from the global education capital allocation. Well so be it – but arriving at a reasonably accurate figure can be fraught. There are the obvious rebuilding and the transient disruption costs, used because they are known or at least reasonable to estimate and so are quantifiable. Less clear are the costs associated with the impacts of death, injury and future education although again there are normalised factors available from other activity sectors.

But today we are also expected to consider the cost to the environment, and make no mistake there are real sustainability costs arising from fires, whether in schools or any other property. Attempting to define these costs is no easy task since it means creating carbon footprints for schools, verifying how much monoxide came from the

actual school fire and from generating replacements. Fire is an ultimate destroyer and energy has to be used to create new resources and rebuild the premises.

Using energy in this way produces another carbon footprint to add to the assessment of global warming equation. Estimates related to the outputs of energy used in mining ore and clay, and then again in smelting steel or firing the bricks and the hundreds of other manufacturing processes necessary to make all the new materials needed. Finally there is of course the actual reconstruction programme with its demands for more energy; energy that creates carbon that is not a calculated cost in the goods and services.

Assessing all these environment sustainability costs may be a notoriously difficult task. But it is a task well worth completing especially if the combined environment and other known costs and reliable estimates, for death and injury, disruption and rebuilding, are then assessed against 2.5% or say the £50,000 needed to install sprinklers in a new £2 million school. It may turn out that there is already a cost neutral solution.

This might not be the end of the cost equalisation story of course. If, and accepting that presently this is a non-existent if, life safety sprinklers were a building regulation requirement in all new educational premises then there is no doubt this would stimulate a new sprinkler supply market sector. Developing a suppliers market would probably reduce overall installation costs, below even the 1.5% suppliers current estimate, by the simple expedient of encouraging innovation and competitiveness between suppliers.

So here we are at a time when billions of pounds are being invested in school buildings, mainly through Private Finance Initiative schemes, there remains within the education sector a known risk with a known solution that probably has acceptable costs, certainly if measured against the yardstick of societal expectation.

That suggests this is, if not unique time, certainly the right time for a cornerstone decision on fire sprinklers in new schools. A cornerstone designed to lower the risk from now on and well into the future by altering standards to make mandatory use of technology to confront a recognised hazard – installing life safety sprinklers in new schools.

What that means is this is the time to inform and clearly say to all those who look out for the safety of children - particularly our elected local and national representatives - we really must reduce this life and economic risk saying - we have learnt - and this time the stable door can stay closed.

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Dennis has for over 40 years been directly involved with the fire and rescue service and fire engineering. Recently appointed the Chairman of the Federation of British Fire Organisations he is an independent fire adviser. At Fire 2006 his contribution to UK fire was recognised when he received a Lifetime Achievement Award. As a former Chief Fire Officer in Cheshire, HM Chief Inspector for Scotland, President of CFOA and President of IFE and many national and international bodies connected with the advancement of fire safety and technical improvement he has extensive knowledge of many aspects of safety and public protection.