Plumis Automist

avoids disrupting student lives

Plumis Automist has been used in one of the country's larger independent boarding schools in Bromsgrove, Worcestershire by Mainpoint Fire Protection as a key part of an alternative fire protection scheme.

The innovative watermist fire suppression solution was installed in Housman Hall, a newly built, 2 storey accommodation block. The 500 year old school is set in 100 acres of grounds and educates 1500 pupils from 2 to 18.

The school had installed a common area at the end of each floor but Hereford & Worcester fire officers were not happy when they made their inspections because the areas had been part of a corridor where the access to the outside was via an open plan area. The conventional solution of providing a protected enclosed stairwell, would have restricted the available space for the students' recreation. The use of alternative compensatory measures, such as sprinklers was undesirable due to the danger of accidental discharge which could affect the fabric of the school and also disturb the students. Furthermore, installation of sprinklers would have been time consuming and costly.

The fire officers had seen a demonstration of Automist and had no hesitation in recommending its use to overcome the problem and called in Mainpoint Fire Protection, who specialise in the supply, installation and maintenance of fire protection equipment in the Midlands. Mainpoint had used Automist successfully in a number of similar projects and were confident that it would provide a solution.

Automist suppresses flames and limits smoke and heat which could have seriously affected the students, important considerations for a school where their welfare is paramount. It also uses significantly less water than traditional sprinklers minimising runoff and consequential water damage.

> *"The school was delighted with the installation and the fact that it took just 1 day during a busy term time and caused no disruption to the smooth running of the school or the students' day-to-day lives."*
>
> **Alan Gatenby**
> Fire Protection Consultant, Mainpoint.

The specification of Automist was approved by Worcester and Herefordshire Fire Brigade and was completed in December 2013.

For further information on this project or the Plumis Automist range of water-mist suppression solutions call Plumis on **+44 (0) 20 7871 3899**, visit **www.plumis.co.uk** or email **info@plumis.co.uk**

An awkward, and worrying, truth

When fire alarms sound many people stay put and wait to see what those around them do, even in small buildings.

Indeed, Notifier research found that while most people said they expected to hear a bell in the event of fire, only 13% would respond. In fact, more than a quarter of respondents said they would assume the activation was a false alarm until told otherwise.

Other research has revealed that very few members of the general public say they ever consider how to leave a building in an emergency, even one they visit regularly. Against this background it becomes more important than ever to ensure that the best possible solution is found to encourage staff, residents and visitors alike to respond promptly and correctly to a fire warning. The answer lies in a clearly spoken message over a public address/voice alarm (PAVA) system, directing a building's occupants away from danger as quickly as possible.

Fire alarm facts...continued

Bells and sounders may provide a warning of an emergency, but not always the nature of the emergency.
Many people also told Notifier that they reacted more quickly to a voice message than to a bell or sounder.

Sophisticated and intuitive PAVA systems will meet these challenges as they are suitable for buildings of all sizes, from the smallest business premises to medical centres and sports stadiums.

Cost-effective at any level, they can be custom-built and adapted to complex sites that may benefit from phased evacuation procedures and IP connectivity.

Day to day this technology operates like an advanced PA system, carrying background music and announcements. Yet in an emergency the system kicks in to broadcast appropriate spoken messages, directing people to safe exits.

Should the situation demand more specific responses, firefighters can easily use an emergency microphone to make their own announcements to ensure a quick and safe evacuation.

Advances in technology also mean PAVA systems now require fewer amplifiers and are much easier for staff to use – especially useful in a small organisation where personnel have multiple roles.

The technology can also carry messaging such as paging, advertisements and the provision of background music.

On larger sites, the best network systems can carry up to 200 audio channels on a fibre channel interface up to 30 kilometres between stations, while work is also underway with voice over IP (VoIP) networks to enhance the ability to link multiple buildings.

Developments in speaker design have also made announcements audible at sites with considerable background noise or difficult acoustics.

Such advances mean that buildings requiring the phased evacuation a fire safety solution should include an element of voice as part of a comprehensive detection and response strategy.

Without fully-integrated, properly installed and fully maintained PAVA systems a building's staff and visitors may disregard bells and sounders until it is too late.

For more information contact **www.notifierfiresystems.co.uk**

Fire Door Safety Week
Don't Forget Your Emergency Exit Doors too!

Although final exits doors are not fire doors in the true sense, they are very important in the ultimate evacuation of a building during a fire.
I know I'm stating the obvious here, but for good reason: we've encountered final exit doors during our site inspection work or fire-risk assessment audits where the door is locked for security purposes with no means of unlocking, or it is so warped or swollen that it either won't open or requires great force to open.

Reaching an ultimate place of safety in the event of a fire is the end goal; ensuring the safe and timely evacuation of all employees or visitors within the building is a requirement under UK fire-safety legislation.

Fire doors do assist in this safe evacuation where they separate those evacuating a building from the compartment of fire origin, thus providing time to aid evacuate of occupants – for example those with mobility impairment who may need assistance down evacuation stairs.

Without fire doors that do their intended job, most evacuation strategies would be compromised if there was any delay in evacuating people.

Imagine that upon hearing a fire alarm and making your way to the nearest final exit door that you find it is padlocked with no means of opening it or that it just won't open, no matter how hard you push the door.

What would you do? Return into a burning building?

Perhaps you may need to go back through a fire door and into the compartment of fire origin – into a developing fire!

What if the rest of your colleagues were heading your way expecting to escape through the same exit? How would they react to your bombshell – that there is no way out?

Several incidents of final exit doors not working have been documented in the press, most notably the Tantons hotel fire in 2011, where an elderly guest's final exit was blocked by a door that wouldn't open, forcing her to return in to the building to make an escape via another route. Thankfully the fire hadn't developed sufficiently within the building to make the conditions intolerable!

It is security precautions, such as padlocks and chains or padlocked deadbolts, that invariably make final exit doors unusable – even external metal security shutters being padlocked externally are not unheard of.

However, poor maintenance and an absence of inspections can also mean doors are difficult or impossible to open. Blocking final exit doors by storing items in front of the door is also all too common, preventing people's egress from the building.

With Fire Door Safety Week well underway (running from 15-19 September) I would urge building owners and operators to test their evacuation routes by walking through their fire doors (after checking them) and continuing through their final exit doors (if they can).

If you need to padlock doors when the building is totally unoccupied, you must have a fool-proof system in place to remove them when the building is occupied. This system must be risk-assessed and if the fire risk assessor is not happy with the arrangement then fail-safe security-door furniture can be purchased and fitted for a modest outlay.

Regular inspections and planned preventative maintenance will ensure that doors don't get stuck in their frame and can be opened easily during a fire evacuation, while alerting responsible persons to the need to keep escape routes unobstructed and clear to allows exit in an emergency.

Simon Ince
Strategic Alliance and
Partnership Manager for
Warrington Certification Limited

SMOKE who's in control?

New BS 7346-8, Components for smoke control systems. Code of practice for planning, design, installation, commissioning and maintenance.

Whilst Building Regulations Approved Document B, The Machinery Directive and The Construction Product Regulations, via the various parts of EN 12101, provide a relatively tight regulatory framework, until the BS 7346-8 Code of Practice, no single document existed that provided guidance for the industry from initial design, through installation to maintenance.

The over arching benefit of this new document is that by adhering to its guidelines designers, installers, commissioning engineers and maintenance teams can create, install and operate a fully compliant smoke control system.

Throughout BS 7346-8, there are some constant themes that are present. Not only does it deal with product quality, location, performance and operation, but also the key questions of assessment of needs together with the certification and verification by authorised bodies.

Interestingly, the development of the new Code of Practice was stimulated by a number of factors including the need for a consistent standard against which approving bodies could evaluate a system's performance.

Developing the standard

The Smoke Control Association (SCA), of which SE Controls is a long-standing corporate member and has been present on the British Standards committee for more than 15 years, recognised that there was a need to raise the standards across the industry.

A key driver in the early stages of the process was evidence suggesting that smoke control systems in residential high-rise developments were of variable quality, an issue created by a number of factors. For example, although there are several inter-related product standards governing individual components within smoke control solutions, nothing existed that encompassed the entire system.

In addition, while the Regulatory Reform (Fire Safety) Order 2005 (RRO) allows systems to be inspected, verified for performance and even condemned by the fire service, where necessary, this can only be undertaken after the building is complete and is occupied.

Clearly, there were gaps that required bridging, particularly in managing the quality and consistency of the design and installation process. Following an initiative and proposal made by SE Controls to the SCA, the association began the process of creating an installer certification procedure.

The resulting FIRAS accreditation scheme was created to ensure systems were consistently and safely installed, commissioned and maintained in accordance with the clear design criteria that are required to be set out on each project.

The development of the FIRAS accreditation scheme brought into sharp focus the urgent need for a common standard against which assessments could be made. This led to the formation of the British Standards 7346-8 working group, comprising key industry stakeholders, including manufacturers, regulators and the Fire and Rescue Service.

In practice

Some would say the standard is perhaps long overdue and, for some time, there has been a need to harmonise standards across the industry and ensure the systems perform effectively. In reality, as has already been explored, there is a diverse range of regulations and conventions in the UK and Europe that already ensure that the key elements of smoke ventilation systems perform to the highest standards.

By having a robust installer accreditation scheme, which is now in place, and BS 7346-8 as the recognised system implementation standard, there is now no justification for inferior quality installations. Ignorance cannot be an excuse.

BS 7346-8 builds on all of the regulations, procedures and processes that exist and combines them into a unified code of practice that is designed to make the entire procedure of designing, installing and maintaining a compliant smoke control system a much more straightforward task.

The code exists to ensure compliance and high standards, as well as making things simpler for all those involved. For example, the first chart within the standard is a block process diagram that not only covers the full path from identifying the system requirements to the details of frequency of maintenance, but also includes the key considerations that need to be observed throughout the entire process.

The scope and detail it contains is comprehensive and every aspect of the system design is covered along with key system design considerations dedicated to particular smoke ventilation products, such as SHEVs, smoke barriers and smoke shaft systems.

This same level of detail is carried through the entire document, covering core elements, such as cable selection and routing, while equally importantly providing templates for mandatory documents, such as commissioning, acceptance and inspection and servicing certificates.

In conclusion

There are no down sides to BS 7346-8, only positives. Within this single document that is barely 50 pages long, the entire smoke ventilation and control systems industry has come of age in terms of its integrity, performance, quality and compliance. Admittedly, the industry already had excellent standards, but BS 7346-8 has made it clear what needs to be achieved, how it can be done and what procedures have to be observed, without fail.

Overall, perhaps its most significant contribution is that it will help save even more lives, as the quality of smoke ventilation design will be even more consistent and will promote even higher standards throughout the industry, which is essential to maintain and enhance the professionalism that the SCA, SE Controls and other similar organisations have worked so tirelessly to achieve.

So be sure your installer is FIRAS accredited and your system complies with BS 7346-8.

More information is available from **http://www.feta.co.uk** and **SE Controls.**

What does arson cost us?

£53.8m a week

Arson is the single most common cause of fire in businesses and it's hitting the country's economy.

that's what!

Each week in the UK there are **2,213** arson attacks, with an average of two deaths and 53 are injuries.

Of those attacks 360 businesses or public buildings are damaged or destroyed. If you consider that after a serious fire 43% of businesses close and 29% close within three years, you ignore the threat of arsonists at your peril.

Deliberately started fires can be particularly dangerous and damaging because they generally develop faster than accidental ones, partly because the arsonist will sometimes use accelerants such as petrol and possibly block open fire doors to ensure rapid spread.

Of all of the fire risk reduction measures that can be taken, most benefit may come from the action taken to reduce arson.

Weak points

The vast majority of attacks are down to the opportunist arsonist. It is hard to predict an attack but you can make yourself less of a target. By conducting a suitable risk assessment you should be able to highlight the weak points in your property.

Being on the lookout for recent small fires in the area is a good indication that you may be at risk.

If graffiti or other forms of vandalism have not been cleaned up promptly it can make suggest your location is at more of a threat. Part of your staff training should also cover arson, remind staff of the dangers and ask them to report any suspicious immediately.

In a lot of arson attacks it has been found that everything a vandal needs to start a fire has been left within easy reach. Keep rubbish skips and waste bins clear of the buildings, preferably in a secure compound.

You should make sure all combustible rubbish is regularly removed and kept in a safe, secure area while awaiting disposal.

You should also ensure the outside of the premises are well lit and, if practical, secure the perimeter. Remember one of the best fire detectors is you.

You should make thorough inspection of your buildings windows and doors, ensure they are no easy ways to gain access. A good idea is to fit secure metal letterboxes on the inside of letter flaps to contain anything that may be pushed through.

Although in most instances arson is an opportunist attack there is also the possibility of an vindictive attack. Attacks may come from ex members of staff or resident's relatives with a grudge to bear against your business.

You should make sure you know the whereabouts of any keys to your property and if you have a key pad entry that the numbers are changed when a member of staff leaves.

An arson attack may come in the form of a simple outdoor bin fire or it may be a more vicious case of some breaking into the premises, wedging doors, disabling alarms and starting a fire in an area that is not likely to be found easily. Most attacks occur at night which is when you are most vulnerable.

This is where the importance of a suitable risk assessment is highlighted. Your fire fighting equipment should be in good working order, your staff trained competently in their use and your fire alarm should be giving an early warning.

You cannot completely cover yourself from the threat of arson but by keeping your fire risk assessment a "live" document throughout the year you will be able to strengthen your protection from it.

For more information on arson prevention contact your local fire authority or **www.community-safety.info/37.html**