

Keep fire contained

Passive or built-in fire protection is key to maintaining escape routes and fire-fighter access, says David Sugden, Chairman of the Passive Fire Protection Federation.

In a recent 'From the Editor' column in *Means of Escape*, Jim Creak made the point that when faced with a fire people don't behave rationally. He writes about a grandmother who, when her house caught fire, forgot her grandson was still in the house but remembered to rescue her pets. We have all heard anecdotes about the way people respond to a fire alarm in a public place; mild embarrassment, 'I don't want to be the first to leave', 'it must be a false alarm' and similar reasons for hanging back or doing nothing. In the same issue there was a report on BBC 5 Live's investigation into deaths in premises where there were smoke alarms; out of 340 deaths 157 were in premises fitted with alarms (not all of which were working). Matt Wrack, secretary general of the Fire Brigades' Union is quoted as saying "Smoke alarms don't prevent fires, they don't put them out and they don't rescue you."

So what can be done to keep people safe? If the smoke alarm goes off (if it hasn't been disabled), but people don't make for the exit immediately, if the building is burning and the human reaction is panic, how can lives be saved? By passive fire protection (PFP), building it into the fabric of the premises.

The basic principle of PFP is compartmentation which confines fire to its point of origin and stops the spread of smoke, heat and flames through the building, for a given period of time. By the use of fire separating elements such as fire doors, seals, fire-resistant glass, partitions and ducting, fire is separated from people. Escape routes are kept clear and the fire service can get in to fight the fire and get out safely. Although the means of achieving it will be different the same principle applies to all buildings, new or old, public or private, tower block or terrace. If fire starts it must not be allowed to spread unchecked. It must be confined to the 'compartment' of origin for as long as possible. In a domestic situation the best way to achieve this is simple - shut the doors. Even if they are not fire doors they can allow a few more minutes for escape.

In public buildings, including apartment blocks, the situation is more complex. Compartmentation should be well defined and maintained, but it is easily compromised. Whenever maintenance or refurbishment is done, there is the potential to breach the compartment - for example, if the building is rewired. New cables are run from one floor/apartment to the next. If the new and old channels are not sealed correctly with properly certificated fire-stopping materials smoke, gases and flames can spread un-noticed through the walls and break out in seemingly unrelated areas - a tragic example of this was the fire in Lakanal House in Camberwell, where 6 people lost their lives when fire spread through the building and broke out on several floors at the same time.

At the Passive Fire Protection Federation (PFPF) we recommend using Third Party Certified materials and tradesmen, or using a specialist company to complete fire-stopping where necessary. Third party certification is not a guarantee, but it is the best indication that fire safety measures will be observed. Which brings me to risk assessments.

There is a legal requirement for the owner or operator of every building open to the public (and places of work) to produce a fire safety risk assessment. Unfortunately there is a tendency to see this as a one-off document which is produced, filed and forgotten. But it should be a dynamic document, reviewed and updated whenever there is any change to the structure. There is no requirement that the risk assessor be qualified. In the Rosepark fire in Scotland, when 14 elderly residents of a care home were killed, one factor in the tragedy was that the risk assessor had based his report on the ability of the staff to escape, but had not taken the residents into account. There were many other breaches of basic fire safety measures. The owner of the home, speaking about the electrical contractors, said "I expected them to follow the details in the plans. I believed I had the "aptitude" to act as the overseer of the work, but with hindsight I didn't have the expertise to carry out checks on electrical work."

If the risk assessor had been endorsed by a recognised certification body it is possible the outcome would have been different. The PFPF website (www.pfpf.org) has a list of these organisations, and there are moves within the industry for a national register.

There is no way we can stop people panicking in the face of fire - it's a human instinct. But we can do our best to ensure that, even when terrified, there is a safe escape route. Built-in fire protection helps preserve lives - occupants' and fire-fighters' - and property.

For more information and guidance visit www.pfpf.org

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Editors' notes: The PFPF (www.pfpf.org) is the body for the built-in fire protection industry, and is dedicated to growing awareness on fire protection, and the Regulatory Reform (Fire Safety) Order 2005. Membership includes the Chief Fire Officers Association, the DCLG, Local Authority Building Control and the Fire Test Study Group (UK) Ltd.

The PFPF Strategy Group includes members who were involved professionally in previous disasters such as the Summerlands Leisure Centre, Kings Cross, write for the trade and fire service media and recently appeared on television commenting on the Channel Tunnel fire and the tragic fire at Lakanal House. **For informed, unbiased and professional comment please contact Jane Evans at MRA Marketing on jane@521621.com who will put you in touch with the relevant person.**