



London Road, Moreton In Marsh, Gloucestershire GL56 0RH

T: +44(0)1608 812500 F: +44(0)1608 812501

E: fpa@thefpa.co.uk www.thefpa.co.uk

Press Release

Lower cost domestic sprinklers: An FPA perspective

In 2005 the Fire Protection Association were invited by the Office of the Deputy Prime Minister (ODPM), now CLG, to compete for a project to seek out a practical suppression solution for the protection of vulnerable sectors of the community for which the presence of an operating smoke alarm alone would not be sufficient to protect them from the dangers of fire..

The commissioning of this work followed a study conducted for ODPM by BRE that concluded that in the many cases BS 9251 domestic systems could not meet cost benefit requirements. The FPA project's primary emphasis therefore, was on reducing system cost. It became clear at a very early stage that investigating the feasibility and effectiveness of a system that combined the cold water domestic supply and sprinkler system based on one developed in New Zealand by BRANZ would be a good starting point for the study. The project concluded that; subject only to the adoption of a second water supply loop in the roof space of a 2 storey house to reduce the long dead legs associated with side wall sprinklers, the BRANZ design had the potential to meet ODPM's (CLG's) pricing objectives.

The extensive technical report is available from the CLG website (<http://www.communities.gov.uk/publications/fire/developmentlowercostsprinkler>). A further project co-funded by CLG and the FPA provided a design guide for installers. The design guide has not been made publically available by CLG who retain exclusive rights to its distribution.

FPA, as developers and authors of the LPC Sprinkler Rules, wish to make it clear that as the UK's national fire safety organisation, we have and continue to promote and endorse the use of BS 9251 for the protection of domestic and residential dwellings. The lower cost sprinkler project was undertaken to ODPM (CLG's) remit to address a very special set of circumstances and FPA have made it clear in the report that many of the design features of the BRANZ system we would normally consider undesirable in the creation of robust sprinkler protection. However we accept the BRE findings that BS 9251 systems frequently prove cost prohibitive and so in this case have taken the view that some protection is preferable to none.

The report concluded that subject to the mains water supply providing appropriate water flow and pressure, the fire performance of the derived system was demonstrated and the hydraulic efficiency of the pipe network confirmed. It was recognised at the time that differences between New Zealand Water Regulations and those in the UK would mean that future effort would be required to address these issues. It is worth noting that the FPA employed a consultant from the water industry to advise during the project.

In designing to the lowest possible price, the BRANZ system investigated by FPA has the following properties:

- alarm is raised by smoke alarms
- a 32mm connection to the water main is essential
- the system will only be appropriate to areas where water pressures are above a critical value at the times of day when fire deaths are most likely to occur
- all elements and fittings in the water supply line must be very carefully considered in respect of preserving scant water pressure
- water is supplied around the household in loops
- small dead-legs exist at the sprinkler drop pipes though the ceiling
- failures are to be expected, but good risk assessment should keep these statistically low
- the system is not suitable for supporting trade-off of in-built fire protection measures



INVESTOR IN PEOPLE



There are of course many other design options that could be considered to mitigate any design objections that may arise but these will inevitably inflict a price penalty on the system. FPA recommended that large scale trials would be necessary to test the conclusions of the 2006 Project Report.

This statement has been prepared in response to the significant recent correspondence, emanating from various industry groups and organisations that appear to have combined to cause some confusion in the market. To enable this process to move forward FPA consider it important for CLG to declare exactly what they now believe an 'acceptable' system price might be, and for the UK Water Authorities to outline why they differ from the authorities in New Zealand who deem the system not to present a hazard to their domestic drinking water supplies.

FPA would like to make it clear that it remains highly supportive of the intent of CLG's initiative to protect the most vulnerable in their homes.

Jonathan O'Neill
Managing Director
Fire Protection Association

January 2009