LONDON FIRE AND EMERGENCY PLANNING AUTHORITY

Report title

Authority Sprinkler Position Statement

Agenda item

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Meeting	Date
Community Safety Committee	23 September 2010

Report by	Document Number
Head of Regulatory Fire Safety	FEP 1605

Public

Summary

This report proposes a position statement on sprinklers based on the work carried out by officers and the CFOA Working Group of which we are a member, on automatic fire suppression systems. The report recognises the change in emphasis recently articulated by the Fire Minister in his speech to the Fire Rescue Conference 2010 where he stated that it is the Government's expectation that Fire and Rescue services will promote sprinklers directly with the business community without more regulation if they consider them to be of benefit. The report however considers that in a number of circumstances there is still a need for a more regulated approach to be taken in some areas in order to protect certain types of buildings and to ensure the safety of occupants. It also recognises the important leadership role the London Fire Brigade can play by proactively informing the debate on the benefits of sprinklers from a range of perspectives and outlines a proposed position in each of the key areas of this issue.

Recommendations

That:

(a) The sprinkler position statement (Appendix A) becomes the Authority's position on sprinklers;

(b) The statement be proactively communicated to staff and key external stakeholders;

(c) In line with the position statement sprinklers are promoted at every opportunity, particularly following significant incidents where they could have made a difference.

Introduction

1. There is clear evidence that the installation of sprinklers can be effective in the rapid suppression of fires. The Brigade therefore uses every occasion to urge building owners and developers to install sprinkler systems where there is a risk-based case for doing so. This is because sprinklers can significantly help to:

    - Reduce death and injury from fire
    - Reduce the risks to fire-fighters
    - Protect property and heritage
    - Reduce the effects of arson
    - Reduce the environmental impact of fire
    - Reduce fire costs and the disruption to the community and business
    - Permit design freedoms and encourage innovative, inclusive and sustainable architecture

2. At present the Authority does not have a comprehensive document detailing its position on sprinklers and other automatic fire suppression systems (AFSS) in general, although there are brief references to sprinklers in the London Safety Plan[1] and the Brigade's Fire Safety Regulation Strategy[2]. In recent years the Authority also undertook a campaign lobbying for the installation of sprinklers in schools and has also lobbied for sprinklers to be included in new build domestic properties.

3. The purpose of the sprinkler position statement, attached as Appendix A, is to ensure that there is a consistent message being delivered by the Authority both internally and to external organisations. It links in with work which officers have been doing as part of a CFOA working party. The Authority's sprinkler position statement will be communicated internally and externally to key stakeholders and will be promoted at every available opportunity.

Head of Legal and Democratic Services Comments

4. The recommendations in this report are consistent with the Authority's duty under Section .6 of the Fire and Rescue Services Act 2004 to make provision for the promotion of fire safety. Section 6(2) requires the authority, to the extent that it considers it reasonable to do so, to make arrangements for:

    (a) the provision of information, publicity and encouragement in respect of the steps to be taken to prevent fires and death or injury by fire; and

    (b) the giving of advice, on request, about:

        (i) how to prevent fires and restrict their spread in buildings and other property;
        (ii) the means of escape from buildings and other property in case of fire.

Head of Finance Comments

5. The Head of Fire Safety Regulation advises that no new money is sought for these proposals and any costs will be contained within existing budgets.

[1] LFEPA Report FEP 1541 (Authority, 18 March 2010)

[2] LFEPA Report FEP 1290 (Authority, 20 November 2008)

Environmental Implications

6. Increasingly of concern when a fire occurs is the impact on the environment from both the fire and the fire-fighting action with toxic products entering the atmosphere, land and water courses. Containing a fire or even extinguishing it by installing automatic suppression can radically reduce these consequences.

Equalities implications

7. The impact of fire is grossly disproportionate in some communities. It is estimated that 30% of fire victims have limited mobility. In addition to smoke alarms, sprinklers would further reduce the risk to the most vulnerable.

Authority's Strategic Objectives

8. The sprinkler position statement supports the following main aims of the Authority:

- **Prevention** : Engaging with London's communities to inform and educate people in how to reduce the risk of fires and other emergencies;
- **Protection** : Influencing and regulating the built environment to protect people, property and the environment from harm;

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List of Appendices to this report:

Appendix A: London Fire and Emergency Planning Authority Sprinkler Position Statement

LOCAL GOVERNMENT (ACCESS TO INFORMATION) ACT 1985	
List of background documents 1. London Safety Plan 2010-13 (FEP 1541) 2. Fire Safety Regulation Strategy (FEP 1290)	
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Appendix A

London Fire and Emergency Planning Authority Sprinkler Position Statement

1. The London Fire and Emergency Planning Authority (LFEPA) is committed to reducing the impact of fire on people, property and the environment. There is clear evidence that sprinklers and other forms of automatic fire suppression systems (AFSS) can be effective in the rapid suppression of fires and therefore play an important role in achieving a range of benefits for both individuals and the community in general.

2. This is because sprinklers can significantly help to:

   - Reduce death and injury from fire
   - Reduce the risks to fire-fighters
   - Protect property and heritage
   - Reduce the effects of arson
   - Reduce the environmental impact of fire
   - Reduce fire costs and the disruption to the community and business
   - Permit design freedoms and encourage innovative, inclusive and sustainable architecture

3. We believe that LFEPA plays a key leadership role in promoting better understanding of the benefits of sprinklers and accordingly works to encourage building owners and developers to install these systems where there is a risk-based case for doing so. For example, where the risks to people are unacceptably high, or where there is a clear business case in terms of cost and benefit.

4. While sprinklers play a positive role in reducing the human impact and economic and environmental cost of fire in any building they are installed in, we believe that our focus should be directed to those properties where the most significant impact can be achieved, these are Schools, Residential Care Homes, Domestic Premises housing the most vulnerable and Commercial Premises that present a significant risk due to their size, construction or use.

   Schools

5. The importance of sprinklers in schools has been recognised for many years. The latest reports suggest that such fires are getting bigger and more costly. The impact of these fires is significant, not just in financial terms, but also in terms of the devastating effect on the communities they serve, the environment and the disruption to students, teachers and families. The effects on children's education are not confined to lost course work but often includes longer travelling times, disrupted social groups and poorer facilities.

6. If sprinklers were considered at the design stage of building a new school or the refurbishment of existing buildings, the costs can be kept to a minimum (as low as 1% of build costs). By engaging with designers and architects schools could be designed to inspire learning, address the broadening requirements being placed upon them as community resources and incorporate this essential fire safety system as standard.

7. To this end we continue to work with schools, colleges and education authorities to ensure that the benefits of sprinklers are fully considered. In new and refurbished schools we expect that the Department for Children, Schools and Families risk assessment tool and policy are used and that sprinklers are installed when recommended.

Residential Care Homes

8. Fire death and injury data indicates that those most at risk are younger people, older people, people with mental health problems and particularly those who have mobility problems who are unable to leave buildings easily. We therefore consider that all residential care homes should be fully fitted with sprinklers for the protection of residents from fire. In Scotland there is already a requirement within Building Standards for all new build residential care buildings to have automatic fire suppression systems installed and we strongly advocate that this should be the case in London.

Domestic Premises

9. Fires in the home still account for the greatest number of fire deaths and injuries each year and therefore the installation of sprinklers in domestic premises would have a significant impact in reducing these. While it would be ideal for all domestic premises to be sprinklered we realise that this is not practical or realistic. We therefore advocate that in those domestic premises where our most vulnerable residents live, in addition to smoke alarms, sprinklers should be fitted as this would further reduce the risks.

10. To achieve this we work in partnership with developers, the London boroughs and social housing landlords to encourage the installation of sprinklers in the homes of the most vulnerable people either by retro fitting them where possible or as part of the construction of new builds .

11. It is important that we use our influence to make sure that new housing and other social infrastructure projects consider the benefits of sprinklers. ,To this end we seek to work closely with the GLA and the Mayor and planning authorities in order to influence building, planning, design and development at every stage so that the benefits of automatic suppression can be considered before the design and costing decisions are so far advanced that it is too late to include sprinklers.

Commercial Premises

12. There are a range of thresholds which already require sprinklers to be fitted is some types of commercial premises by national building regulations. These are further enhanced in some parts of London where Section 20 of the London Buildings Act 1939 applies, e.g Section 20 requires a new hotel construction of 25 metres in height to be sprinklered if it has a floor area greater than 930 m^2, there is no requirement however to sprinkler this type of building of any height under national building regulations. In general however these requirements are still much greater than in other parts of Europe where sprinklers are required for much smaller sizes of building.

13. Irrespective of size however there is a compelling case to be made for sprinklers in any commercial premises on the basis of loss of production or interruption to business as this is a real impediment to business continuity and productivity. It is a recognised fact that 85% of small and medium businesses that suffer a serious fire either never recover or cease trading within 18 months. The installation of sprinklers in these types of premises will aid growth in the economy as fewer businesses will cease to trade, losses due to fire will reduce and fewer businesses will be forced to relocate often destabilising and affecting whole communities.

Other Considerations

Major new developments and future proofing

14. It is recognised that even with our best efforts we will not be successful in persuading developers to install sprinkler systems in every case, however there are still benefits to be gained in future proofing

the building by including basic sprinkler infrastructure (for example adequate supply pipework), so that sprinklers can be more easily retrofitted if there is a significant increase in risk.

New and Refurbished Buildings

15. Where new developments are being considered and when significant refurbishment and upgrade of an existing building is being planned, especially involving buildings with vulnerable people we strongly advocate the installation or retrofitting of sprinklers. In older buildings, built to an earlier standard, the level of risk may no longer be acceptable and in these cases we also advocate the retrofitting of sprinklers to overcome these risks.

Design Freedoms

16. Even where not required by building regulation guidance we strongly support the inclusion of sprinklers to achieve the many benefits they provide. We also encourage developers to use them to allow design freedoms, where it can be demonstrated that there is an equivalent level of safety and that the functional requirements of the regulations are met.

17. In today's challenging built environment, there is a will and motivation to construct innovative and aesthetically exciting buildings that often require design solutions that depart from traditional fire safety approved codes of practice. The application of a performance based approach, using more specialised building codes, for example, the BS7974 series, or BS9999 allows stakeholders to demonstrate that sprinklers can offer an equivalent level of fire protection & life safety, resulting in greater freedom to fulfil their overall vision for such buildings. The installation of sprinklers allows for such flexibility and includes such features as:

- Larger compartment sizes
- More open spatial designs
- Extending travel distances
- Reducing exit door widths
- Reducing periods of fire resistance to elements of structure
- Reducing space separation constraints for example, distances between buildings
- Reducing design fire size allowing for alternative smoke management strategies
- Overcoming fire fighting access constraints
- Allowing more flexible building management plans for the end user

18. We continue to encourage and support proposals for such design freedoms for both commercial and residential developments where it can be robustly justified that the functional requirements of the building regulations can be met.

Preventing damage to the environment

19. Sprinklers can increase the sustainability and life expectancy of buildings, by limiting fire development and significantly reducing the amount of smoke, CO_2 & other pollutants. Because only the sprinkler head or heads immediately above the fire actuate, less water is used and there is a significant reduction in the amount of water run off carrying pollutants into the water system.

Affordability of sprinklers

20. One of the perceived barriers to the more widespread use of sprinklers is the initial cost of the system, even when a cost benefit analysis has shown sprinklers to be beneficial through the lifetime of the building. Through our involvement in standard setting forums we support the development of new and innovative suppression systems and encourage the provision of cost effective water supplies.

Communication & Public Education

21. We are developing our communication methods in order to increase our influence with decision makers and stakeholders at every level about the benefits of the more widespread use of sprinklers based on the many benefits above, as well as educating them where misconceptions exist relating to the facts and performance of sprinklers. Our target audience will include:

    - Architects and designers
    - Developers and associated consultants
    - Researchers, trade associations, and manufacturers
    - Building control and approving authorities
    - National/ Local Government departments, policy makers, and forums
    - Social and private landlords
    - Insurers
    - Water authorities/ providers
    - Building occupiers/ users
    - The general public

22. By improving communications and working with these audience groups we continue to promote better understanding of sprinklers as an effective and reliable fire protection measure, be it from specific local development projects to national initiatives and legislative frameworks.