Automatic Fire Suppression Systems Procedure and Guidance

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Related Documents

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	Department for Children, Schools and Families, Building Bulletin 100.	

West Berkshire COUNCIL

Contents

1. Purpose

1.1. The purpose of this document is to offer information related to the procedures associated with achieving the requirements of the Automatic Fire Suppression Systems Policy.

1.2. This document also offers guidance on the suitable application of this policy.

2. Applicability

2.1. This Policy applies to:

2.1.1. All non-school based employees working for the Council, including those working from home or at non-Council locations.

2.1.2. Other persons including Elected Members, Consultants, Agency staff and Contractors working for the Council, external organisations working with the Council, whilst engaged on Council business .

2.2. It is the responsibility of each employee and other person mentioned in Section 2.1.2 to familiarise themselves with and adhere to this Policy.

2.3. Adherence to this Policy is a condition of working for the council or using its assets.

2.4. This document is published separately as well as being incorporated into the WBC Employee handbooks.

2.5. This Policy has had consultation with Heads of Service and Trade Unions and has been ratified by the Council's Corporate Board.

3. Roles and Responsibilities

3.1. The Head of Education (or nominated person) has overall responsibility for ensuring that the Automatic Fire Suppression Systems Policy is managed appropriately in accordance with these agreed standards.

3.2. The Property Service is responsible for the day-to-day management of the Automatic Fire Suppression System Policy including ensuring implementation of this standard.

3.3. All WBC staff are responsible for familiarizing themselves with, and ensuring that they comply with this standard.

4. Introduction

4.1. Following investigation by the Safer Select Committee into the need for a policy for the installation of automatic fire suppression systems in Council Buildings, the Executive, in January 2011 agreed the recommendations of the Safer Select Committee and resolved that a policy be implemented with immediate effect.

4.2. The Executive stated that the key elements of the Policy include:

4.2.1. The Head of Property and Public Protection (now Property Services) develop a policy in relation to the installation of automatic fire suppression systems in all new

buildings and buildings undergoing major refurbishment within the Council's property portfolio.

4.2.2. The basis of establishing the need to install automatic fire suppression systems is to be a fire risk assessment; the same or similar to that currently used for schools projects. The risk assessment process should include the ability to recognize the comparative savings that would be achievable with the installation of such a system, for example through altered building design or the use of different materials.

4.2.3. The policy is to indicate an assumption that automatic fire suppression systems will be installed unless the completed risk assessment provides sufficient argument against.

4.2.4. The policy is to state that consideration be given early in the design stages of a project as to where the components of an automatic fire suppression system would be located in order to reduce installation costs.

4.2.5. Further discussion is held with the Council's property insurers with the aim of achieving further savings.

5. When the Policy applies

5.1. The Automatic Fire Suppression System Policy applies to the following:

5.1.1. For the purposes of this policy, the term AFSS refers only to those systems subject to fully adopted national (British Standard) or fully adopted European or International (EN or ISO) design standards or draft national standards (British Standard DD) where full standards are unavailable, subject to approval of West Berkshire Council insurers and establishing 'fitness for purpose' of the Draft British Standards.

5.1.2. Buildings in the freehold ownership of West Berkshire Council or where sufficiently long leasehold exists to create a strong degree of ownership (where the leasehold agreement allows such installation).

5.1.3. New buildings, extensions or major refurbishments where legislation requires the installation of an automatic fire suppression system.

5.1.4. New buildings, extensions or major refurbishments which meet the definition of The Town and Country Planning Act 1990 section 55: 'Meaning of Development' and are *permanent* in nature.

The definition of permanent with regard to this Policy is to mean a new building, extension or refurbishment which is intended to offer operational use for a minimum of 10 years from completion and;

In the case of a building which is subject to Planning Consent, the test is to be where an application does *not* propose a temporary duration for consent with a stated end date within 10 years and thus may be reasonably deemed as being permanent.

5.1.5. In the case of a new building, extension or refurbishment (or combination of each), the following minimum floor areas apply:

For all Buildings/sites with a GIFA of buildings < 500 sq.m.		
Sq.m. of new/refurb		% of gross internal floor area
500 sq.m. or more	OR	50% of GIFA
For buildings/sites with a GIFA of buildings > 500 sq.m.		
Sq.m. of new/refurb		% of gross internal floor area
500 sq.m. or more	OR	20% of GIFA
NOTE: This policy applies based on the *lesser* of the above GIFA criteria. Example: A school with a GIFA of 400 sq.m. has a proposed extension totaling 130 sq.m. This is 33% increase in GIFA and thus the WBC sprinkler policy does not apply, whereas if the extension were to be 210 sq.m. the policy would apply.		

5.1.6. Refurbishment for the purposes of this policy is to be based on the Royal Institution of Chartered Surveyors definition of refurbishment:

'The extensive repair, renewal and modification of a building to meet economic and/or functional criteria equivalent to those required by a new building for the same purpose. This may involve the installation of current standard of building services,

access, natural lighting, equipment and finishes, using historic fabric as the carcass of what is, effectively, a new building.'

This indicates a level of refurbishment beyond that required by 'maintenance' or 'light touch' refurbishment.

5.1.7. The installation of a sprinkler system can represent a significant capital cost, particularly on smaller projects.

This policy is to apply to projects with a gross project value greater than £350,000.

5.1.8. The policy is to apply to AFSS whose estimated cost is less than 15% of the approved construction budget.

Early in the design the project team, are to consider the inclusion and design of an AFSS and the project cost consultant is to produce an estimated value for the AFSS installation to assess against the construction budget.

5.1.9. New schools, either as a new provision on a new site or re-provision on an existing site no matter what the size of building provision.

5.2. Additional considerations

5.2.1. Where a either a building project does *not* meet any of the criteria stated in 5.1 and the policy does not apply, or criteria in 5.1 do apply but the Sprinkler Assessment has assessed a system is *not* required, the design team are to give strong consideration in the design to the potential benefits of installing an automatic fire suppression system and the 'trade off' design available through codes such as BS9999: 2008 – Code of Practice for Fire Safety in the design, management and use of buildings and BS9991: - Code of Practice for Fire Safety in the design, management and use of residential buildings.

5.2.2. While it is expected the risk assessment process will capture the critical criteria, in all cases and particularly where the AFSS Assessment does *not* recommend the installation of an automatic fire suppression system, the design team should give strong consideration to the installation of a system where:

- Sleeping accommodation exists within the building.
- Users of the building are 'transient' and unfamiliar with the layout.
- The building is used by vulnerable people.
- Heritage loss.

6. The Risk Assessed approach

6.1. Where a new building, extension or refurbishment falls within the criteria for the Automatic Fire Suppression System Policy to apply, the need for the inclusion of a suppression system will be based on a risk assessed approach.

6.2. An AFSS Risk assessment is to be carried out by a competent Fire Risk Assessor. Such assessment is to establish if the proposed construction represents a *High Risk, Average Risk or Low Risk*.

Inclusion of a sprinkler/AFSS will apply where:

6.2.1. The AFSS assessment indicates a *High Risk* or *Average Risk*. Cases of *Low Risk* will not immediately require sprinklers.

6.2.2. The AFSS assessment is to give due regard to:

- Physical constraints preventing or impacting suitability of AFSS installation.
- Technical implications of introducing an AFSS.
- Impact on suitability of an AFSS through statutory requirements (Town Planning, Listed Planning, Building Control).

Where these criteria impact the recommendation within the AFSS assessment recommendation, this is to be clearly shown in the summary assessment report.

6.2.3. Where improved design standards are introduced, normally on the recommendation of or following consultation with the risk assessor, this may impact sufficiently on the original assessment score to bring it down to a *low risk* when reassessed. If such design amendments are not introduced or do not impact the score sufficiently to alter the risk, installation of AFSS will apply.

6.2.4. The recommendation for inclusion of AFSS rests with the Assessor, following detailed consultation with the Client/stakeholders, review of the design proposals and full assessment of the associated risks.

6.2.5. Each AFSS risk assessment is to consult the WBC insurance team within Assurance, as well as where required, consultation directly with WBC insurers.

6.3. In the case of schools projects, recommendation for the inclusion of automatic fire suppression is based on the Department for Children, Schools and Families, Building Bulletin 100 – Design for Fire Safety in Schools.

DCSF Building Bulletin 100 applies to nursery/pre schools, primary schools, secondary schools, academies, sixth form colleges, special schools and PRU's.

The purpose of DCSF Building Bulletin 100 is the design for fire safety in *new schools*. The principals and methods in BB100 are to apply to this policy for the construction of new schools, new buildings at existing schools, extensions at existing schools and major school refurbishments.

The level of risk is established through use of a risk analysis tool created by the DCSF. This analysis tool is to be completed by the risk assessor.

The following table offers the relevant score thresholds applied through the analysis tool.

Proposed overall scoring		***Proposed scoring Parts 1 and 2***		***Proposed scoring Parts 3 and 4***	
Low risk	**0 – 40**	*Low risk*	*0 – 20*	*Low risk*	*0 – 20*
Average risk	**41 – 100**	*Average risk*	*21 – 60*	*Average risk*	*21 – 50*
High risk	**101 – 230**	*High risk*	*61 – 85*	*High risk*	*51 – 145*

Low Risk - The fire safety and fire protection survey and risk assessment indicates the school is at a low level of risk. Sprinklers may be beneficial.

Average Risk –The fire safety and fire protection survey and risk assessment indicates the school is at an average risk. A sprinkler system is recommended.

High Risk - The fire safety and fire protection survey and risk assessment indicates the school is at a high risk. Sprinklers should be provided.

6.4. In the case of non school buildings, DCSF Building Bulleting 100 and its associated analysis tools are not designed for, or suited to these building types.

6.5. For non-school buildings the fire risk assessor is to offer their professional judgment on the low/medium/high risk grading of the construction and their recommendation having given regard to:

- Consultation with relevant Clients/stakeholders/building Responsible Persons/ design team members;
- In the case of existing buildings/sites, the review of existing Fire Risk Assessments or creation of a FRA where one does not exist;
- The fire safety measures within the design of the proposed scheme;
- All other mitigating factors, impacting the outcome of the assessment (eg: security, management systems in place);
- Relevant guidance and legislation.

7. Cost Benefit Analysis

7.1. For systems which represent a low level of cost commitment, a cost benefit analysis (CBA) is not required.

Where the estimated cost of an AFSS is no greater than 3% the system is to be included in the project without referral to CBA.

7.2. As noted in section 5 – *When the Policy Applies*, the policy only applies to those AFSS systems estimated by the project cost consultant as being no greater than 15% of the net construction budget for the project.

7.3. Where a building project has identified a proposed scheme which falls within the requirement for compliance with the WBC Automatic Fire Suppression System Policy and the assessment has recommended inclusion of an AFSS, a cost benefit analysis is to be undertaken to establish if the AFSS represents value for money.

7.4. In the case where design changes are to be implemented which may impact the outcome of any re-assessment, the cost benefit analysis is to be revised to reflect the new design.

7.5. Where the cost benefit analysis demonstrates the introduction of an AFSS represents poor value for money, the decision may be made to exclude the system from the project.

7.6. In the case of schools projects (schools as described in 6.3 above) the DCSF BB100 standard cost benefit analysis template is to be used.

The CBA tool is to be completed by the project Cost Consultant, having consulted the Fire Risk Assessor, design team members and client representatives/stakeholders.

7.7. For non school buildings the cost benefit analysis tool contained within DCSF BB100 is not designed for these projects.

In the case of non school building projects, the project Quantity Surveyor/Cost Consultant is to produce a project specific CBA based on the principals in DCSF BB100.

The CBA is to be completed having consulted the Fire Risk Assessor, design team members and client representatives/stakeholders.

8. Legislation and Guidance

8.1. When complying with this policy and through the design process, due consideration is be given to, but not limited to the following list of relevant legislation and guidance (note – this list is not exhaustive):

8.1.1. the Regulatory Reform (Fire Safety) Order 2005;

8.1.2. Building Regulations 2010 (particularly part B of schedule 1);

8.1.3. BS9999: 2008 – Code of Practice for Fire Safety in the design, management and use of buildings;

8.1.4. BS9991: - Code of Practice for Fire Safety in the design, management and use of residential buildings;

8.1.5. Department for Children, Schools and Families – Building Bulletin 100: Design for Fire Safety in Schools.

(Note: although now the Department for Education, the document remains in use);

8.1.6. Regulation 17 of the Education (School Premises) Regulations 1999

9. Design and Installation standards

9.1. The completion of the sprinkler/AFSS assessment and its recommendations as well as detailed design related to such systems are to ensure the design is based upon established technologies to identified current European/British standards, where available.

9.2. Design standards associated with, but not limited to system installation (note – this list is not exhaustive) include:

9.2.1. BS EN 12845: 2009 *Fixed firefighting systems – Automatic sprinkler systems – Design, installation and maintenance.*

9.2.2. BS 9251: 2005 *Sprinkler systems for residential and domestic occupancies. Code of Practice* (subject to outcome of expected major review)

9.2.3. BS EN 15004: 2008 Fixed firefighting systems - Gas extinguishing systems. Design, installation and maintenance

9.2.4. Loss Prevention Council recommendations and rules issued through Fire Protection Association: *LPC Rules for Automatic Sprinkler Installations* and associated Technical Bulletins (to supplement BS EN standards)

9.3. Where an adopted British Standard is available which complies with WBC insurers requirements and is suited to the proposed installation, it should be adopted in preference to a Draft BS (DD).

9.4. In circumstances where this is not available, an installation compliant with a DD may be selected, subject to WBC insurers approval and evidence of 'fitness for purpose'.

10. Selection of installers

10.1. Relationships with specialist sub contractors will be determined by the form of construction contract for each individual contract.

10.2. Specialist installers either employed directly by WBC or as a sub contractor to a principal contractor are to be selected from the following certification bodies:

- Loss Prevention Certification Board (LPCB)
- Warrington Certification Limited (FIRAS scheme)

10.3. Further indication of competency should be demonstrated through membership of relevant professional body, example being British Automatic Fire Sprinkler Association.

11. Maintaining systems

11.1. On accepting the requirement for compliance with this Policy and completion of the installation of a sprinkler/AFSS, the building owner accepts responsibility for the ongoing maintenance of the system to ensure its effective operation.

11.2. Article 17 (1) of the Regulatory Reform (Fire Safety) Order 2005, imposes significant liabilities on the 'Responsible Person' should they fail to maintain fire safety equipment (including sprinkler systems) intended for the protection of life from fire.

11.3. To maintain the validity of a Certificate of Conformity the system must be serviced and maintained by a sprinkler servicing contractor under a maintenance contract.

Example of definition of servicing contractor can be found in LPC Rules – Technical Bulletin TB 203.3.2.8

End of document.