Property & Infrastructure Support Policy & Guidance

Policy on Use of Sprinkler Systems

Key Document Information	
Document Owner:	
Job Title	Policy on Use of Sprinkler Systems
Team	Infrastructure
Created on / by	July 2013
Updated on / by	October 2017
Reference & Version Number	Version 2
Next Review Due	October 2018
Signed off by (SMT Manager)	Rebecca Spore

Document Audience & Classification

This policy is applicable to all Kent County Council Property and forms part of the formal corporate policy making structure.

This Document is NOT PROTECTIVELY MARKED, Anyone can view the information and it may be published on the web or on paper.

Key Audience is for:

- ✓ Internal Infrastructure
- ✓ Internal Kent County Council
- ✓ Internal and External users of Kent County Council Services

Contents

Contents 2
Policy Introduction 3
Related Legislation 3
Related Policies 3
Policy 4
Statement of Intent 4
Scope 4
Procedure / Process 5
1. Background 5
2. Schools 5
3. Other Buildings 6
4. What role, if any, is it appropriate for the planning process to play in this? 7
5. Conclusions 8
Further Reading / Related Information 8

Introduction

This policy provides general information on sprinkler systems, including current practices and legislative requirements. It makes recommendations as to the Council's future approach regarding the use of sprinklers within its existing estate and any new buildings.

The policy has been written and should be read with reference to the Asset Management Strategy. The policy directly relates to key themes within the strategy as shown below.

Related Legislation

BB 100 – Department of Education Website
Document B Building Regulations
Regulatory Reform (Fire Safety) Order 2005

Related Policies

This policy is linked and should be read in reference to the following corporate policies:

No.	Policy	Link
	N/A	

Policy

1. When the Council is constructing new buildings (non schools), consideration as part of the construction specification is given to the use of sprinklers as part of an overall fire management strategy to comply with guidelines and legislative requirements. Where the assessment indicates that it is appropriate, Sprinklers will be included.

2. When the Council is constructing new school buildings, consideration as part of the construction specification is given to the installation of sprinkler systems and assessed in accordance with Building Bulletin 100: design for fire safety in schools and other legislative requirements. Where this assessment indicates it is appropriate, sprinklers will be included. This policy can only be applied to schools for which the County Council is responsible.

3. In relation to the existing estate, the Council will continue with its fire safety inspection regime.

Process

1. Background

1.1 KCC currently considers the overall fire strategy when undertaking major capital projects. This includes an assessment as to the appropriateness of sprinklers having taken into account best practice guidance and legislative requirements.

1.2 A fire sprinkler system is an active fire protection measure, consisting of a water supply system, providing adequate pressure and flow rate to a water distribution piping system, onto which fire sprinklers are connected.

1.3 It is acknowledged that the use of sprinklers in ceilings is a good way of preventing fire spread and assisting building evacuation, but is neither the only solution nor always the most appropriate management method. In the most recent major school fire in Kent in 2006, the fire started and spread throughout the roof space, and the existence of (downward) water sprinklers in the ceilings would not have prevented the spread of the fire.

1.4 The nature of the activity to be accommodated in the proposed development will affect the choice of fire prevention measures. For example, in some cases water is not the best means of tackling fire such as areas with lots of electrical equipment and wiring, like school IT suites, which would become more dangerous if flooded with water.

1.5 KCC currently includes sprinkler systems where appropriate in new buildings. The benefit of sprinklers in major refurbishment projects is considered on a case by case basis. It should also be borne in mind that the existing building stock held by the Council may not have sprinkler systems but will have a fire management strategy in place that would have complied with the relevant legislation at the time that the building was constructed and been signed off by building control.

1.6 Sprinkler systems installed in buildings can reduce the risk to life and significantly reduce the degree of damage caused by fire. Sprinkler protection can also sometimes be used as a compensatory feature and can be tailored to suit varying environments and balanced towards life and property protection. There are no mandatory requirements from an insurance point of view although there are some cost benefits for the organisation such as reduced insurance premiums.

2. Schools

2.1 Building Bulletin 100: design for fire safety in schools gives guidance to the use of sprinklers within school buildings, and whilst there is a strong preference for the installation of sprinklers in new school buildings, it acknowledges that there are exceptions where it does not represent value for money.

2.2 The DfE expects that a risk analysis will always be carried out and new schools being planned that score medium or high risk using the risk analysis tool will have sprinklers fitted. The second tool is a cost benefit analysis tool. This tool helps users decide whether sprinklers represent good value for money.

2.3 Fire suppression systems can cover the whole school, as in the case of sprinklers, or be provided to a specific area using systems such as gaseous or water mist systems which will target identified hazards.

2.4 Although the expectation is clear, the measure is not compulsory.

2.5 Ensuring employee safety should always be top priority. Businesses should provide adequate measures for fire protection, fire prevention, firefighting and evacuation systems in an emergency. Under the Health and Safety at Work Act 1974, businesses must safeguard the health, safety and welfare of all its employees, especially in the case of fire where steps must be taken to help protect workers from hazardous conditions.

2.6 Any policy in relation to schools could only be applicable for those schools which are the responsibility of the County Council.

2.7 Kent Fire and Rescue Service have a policy in place that they no longer automatically respond to a fire alarm and will only respond when a fire has been confirmed or smoke is visible. This means that, particularly for schools in rural locations, there will be a delay in the response by the fire services outside of the school day, where the alarm cannot be easily raised. In these cases, sprinkler installations may prevent the spread of fire; however this would be targeted at property protection rather than life safety.

3. Other Buildings

3.1 In other Corporate and Kent County Council buildings constructed, the requirement for the installation of sprinklers is not mandatory for all buildings under Part B of the Building Regulations 2010 although it does make reference to installation in residential flats and buildings over a certain height.

3.2 For life safety, new residential blocks over 30m high must be fitted with sprinklers to meet Approved Document B standards. Similarly, an un-compartmented area in a shop or self-storage building over 2000 square meters now requires sprinkler protection. There are corresponding regulations applying to large single storey buildings for industrial or storage use, where the largest permitted non-sprinklered compartment is 20,000 square meters.

3.3 When sprinklers are installed, there may be significant benefits in respect of compliance with Approved Document B of the Building Regulations 2010 (as amended). For example, the installation of sprinklers can allow buildings to be built closer together (half the spacing is required) to adjoining premises. This is a major benefit where site space is limited. Other requirements in Approved Document B

regarding travel distances for escape may also be able to be extended and certain requirements in respect of access for the fire service may be relaxed. There may also be the possibility for savings in construction and building cost by relaxation of certain passive fire protection measures and the freedom to allow 'open plan' design in three-storey dwellings and apartments.

3.4 Although there is no legislative requirement in England, Part B does make reference to the installation of sprinklers in care homes and demands a fire detection and alarm system to 'L1' standard – (whole of the building covered by automatic detectors apart from minor exceptions).

3.5 The Regulatory Reform Order (Fire Safety) 2005 applies to virtually all buildings, places and structures other than individual private dwellings and requires that the workplace reaches the required standard and employees are provided with adequate fire safety training.

3.6 The order places the emphasis on risk reduction and fire prevention. Under the order, those who are responsible for commercial buildings i.e. the employer, owner, or any other person who has control of any part of the premises, are required to carry out a mandatory detailed fire risk assessment identifying the risks and hazards in the premises. It is recommended the assessment is recorded and it is mandatory for a total of five or more people are present in the building. .

3.7 The responsible person is responsible for ensuring a suitable and sufficient fire risk assessment is carried out which must focus on the safety (in case of fire) of all relevant persons. The assessment should pay particular attention to those at special risk, such as disabled people (including mobility or sensory impairment, and learning disability), those who are known to have special needs, and children; it must also include consideration of dangerous substances liable to be on the premises.

3.8 The guidance issued to interpret the Building Regulations now recognises the use of sprinklers for life safety and it is clear that future legislation will call for the increased use of sprinklers. For existing buildings, the Regulatory Reform (Fire Safety) Order 2005 replaced most existing fire legislation in England and Wales and requires employers and others (the Responsible Person in the Order) to consider whether the duties imposed by the order could be better discharged by fitting fixed fire suppression systems. The guidance documents published in support of the legislation recognises this. For example, residential care homes fitted with sprinkler protection can adopt a policy of delayed evacuation in the event of a fire alarm and the usual requirements to fit self-closers to all bedroom doors may be relaxed.

4. What role is appropriate for the planning process to play in this?

4.1 Fire prevention measures are not matters for control under the Planning Acts, but rather are under the control of Part B (Fire Safety) of the Building Regulations. KCC has no direct role in applying or assessing Building Regulations compliance, which is a separate control regime and the responsibility of District Councils. KCC can only implement a policy for its Schools and Buildings. Increasingly, as schools turn into academies they will be dealt with by districts through the planning process.

4.2 Nevertheless, KCC Infrastructure and their external development partners are fully aware of the need to comply with Fire and Building Regulations in the design and alteration of all KCC buildings, and routinely include such duties in their commissions and contracts for works to KCC buildings. It is neither necessary nor appropriate to duplicate these requirements within planning consents, and in particular Planning Authorities are required by Government to avoid imposing duplicate requirements where they are properly covered by other consent regimes. Moreover, many building works are increasingly becoming eligible for construction without recourse to planning consent, so reliance on the planning process would by no means address the perceived need.

5. Conclusions

5.1 How fire prevention and safety measures are best addressed in building design is a matter for careful consideration and assessment on a case by case basis, in liaison with the appropriate professionals including architects, surveyors, fire engineers and fire officers. However, the use of sprinklers can be effective where appropriate for life safety and property protection.

Further Reading / Related Information

Document B Building Regulations
Regulatory Reform (Fire Safety) Order 2005
Building Bulletin 100: design for fire safety in schools–