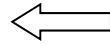


# Building Regulations and Fire Sprinklers

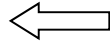
## An Overview

### Building Act (1984)



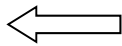
Primary Legislation. Gives the Secretary of State the power to issue regulations: these are the so called "Building Regulations."

### The Building Regulation (2000)



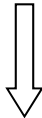
The Building Regulations (2000) are *brief* descriptions of the standards which must be met by new building projects. These Regulations have the force of law.

Approved Document A  
**Approved Document B**  
Approved Document C  
Etc...  
Approved Document N



To add clarity to the Building Regulations, the Secretary of State publishes "Approved Documents." A range of Approved Documents have been issued for the purpose of providing guidance with the respect to the requirements of the Building Regulations (2000). These documents range from a buildings structure, to ventilation and drainage. **Approved Document B (ADB)** directly concerns "Fire Safety" within buildings.

*Approved Documents ARE NOT the Building Regulations and they DO NOT have the force of law. When constructing a building you must comply with the Building Regulations (2000), but you are not required to take any notice of the Approved Documents.*



**Approved Document B: Fire Safety**  
(Latest Ed. 2009)

ADB is a prescriptive document, inflexible and rigid. This may suit basic and simple buildings such as town houses or flats, but cannot for example be applied successfully to complex builds e.g. the millennium dome.

**OR**

**BS 9999:2008 - Code of Practice For Fire Safety in the Design, Management and Use of Buildings**

This standard offers a more flexible approach to building design, incorporating fire engineer principles. BS 9999 recognises the fundamental benefits of BS 9251 and BS 12845 sprinkler systems and offers potential trade-offs as a result.

**OR**

**BS 9991:2011 - Fire Safety in the Design, Management and Use of Residential Buildings**

Aimed to complement BS 9999, which excludes individual dwelling houses from its scope. Standard gives conditional approval for watermist systems as a viable form of suppression as long as specific test data can be provided to an AHJ.

**Regardless of which design standard is adopted Building Regulations must always be complied with.**

## Fire Sprinkler Trade-Off Summary

### **Approved Document B: Fire Safety**

- ✓ An additional and separate staircase is not required in dwellings over 4.5m high from the ground, so long as they are fully fitted with sprinklers (2.7b).
- ✓ Relaxation in boundary distances between properties which have a sprinkler system (9.15)
- ✓ Residential care homes can increase the quantity of beds as well as negate the need for self-closing doors should a sprinkler system be fitted (3.52)
- ✓ Fire separate between a store room and a shop front can be relaxed (5.58)
- ✓ Fire fighting shaft requirements can be relaxed (17.9)

### **BS 9991:2011 Fire Safety in the Design, Management and Use of Residential Buildings**

- ✓ 3 storey house with open plan ground floor (6.3)
- ✓ 4 storey house with no second means of escape (6.4)
- ✓ Increased travel in common corridors from 7.5m to 15m and 30m to 60m (7.4)
- ✓ Open plan flats can be achieved (9.7)
- ✓ Increased travel distance can be achieved so long as fire service will arrive no later than ten minutes after the initial call - 90m for houses less than 4.5m in height and 75m for houses/flats not more than one floor above 4.5m. (e 19.1.2)
- ✓ Boundary distances can be reduced by half (29.4.2).

### **BS 9999:2008 - Code of Practice For Fire Safety in the Design, Management and Use of Buildings**

- ✓ Reduction in fire growth leading to a reduction in risk profiles.
- ✓ Longer travel distances – the 45m rule can be extended.
- ✓ Larger compartments – larger open spaces.
- ✓ Smaller doors
- ✓ Relaxed fire resistance between compartments
- ✓ Relaxation in heat detectors
- ✓ Sprinkler systems can allow for the reduction in the risk profile thereby increasing allowable travel distances (8.5.3).