

Key Fire Sprinkler Clauses Approved Document B:

Fire Safety Vol. 1: Dwelling houses

Residential Sprinklers

0.16: Sprinkler systems installed in dwellinghouses can reduce the risk to life and significantly reduce the degree of damage caused by fire.

0.16: Sprinkle protection can also sometimes be used as a compensatory feature where the provisions of this Approved Document are varied in some way.

0.17: Where a sprinkler system is recommended within this document it should be designed and installed in accordance with BS 9251:2021

0.17: Where sprinklers are provided, it is normal practice to provide sprinkler protection throughout the building. However, where the sprinklers are being installed as a compensatory feature to address a specific risk or hazard it may be acceptable to protect only part of a building. "The British Automatic Fire Sprinkler Association do not recommend partial protection and where this is to be provided, it is essential to obtain the written agreement of the AHJ or where there is no AHJ, the architect, developer or owner." ¹

0.18: There are many alternative or innovative fire suppression systems available. Where these are used it is necessary to ensure that such systems have been designed and tested for use in domestic buildings and are fit for their intended purpose.

Dwellinghouses with more than one floor over 4.5m above ground level

2.7b: Where a dwellinghouse has two or more storeys with floors more than 4.5m above ground (typically a dwellinghouse of four or more storeys) then a fully fitted BS 9251:2021 sprinkler system can be installed instead of an additional and separate staircase.

Work on Existing Houses: Loft Conversions

2.20b: Where a new storey is to be added by converting an existing roof space, the provision for escape need to be considered throughout the full extent of the escape route. For example, a loft conversion to a two-storey house will result in the need to protect the stairway where no protection may have existed. It may be possible to provide sprinkler protection to the open plan area, in conjunction with a fire resisting partition and door, in order to separate the ground floor from the upper storeys.

Space separation

9.15: If a building is fitted throughout with a sprinkler system it is reasonable to assume that the intensity and extent of a fire will be reduced. In these circumstances the boundary distance may be half that for an otherwise similar, but unsprinklered, building, subject to there being a minimum distance of 1000mm.

¹ BAFSA, Technical Guidance Note No. 2, Issue No. 1 Using Sprinkler Systems in Buildings and Structures; Compliance with Current Fire Safety Guidance (October 2011).

Approved Document B Volume 2 Vol. 2: Buildings other than dwellinghouses Sprinkler Systems

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0.16: Any sprinkler system installed to satisfy the requirements of Part B of the Building Regulations should be regarded as a life safety system.

Means of Escape from Flats 2.7

"Escape travel distances are limited by the prescriptive guidance in order to limit the time taken to reach an exit. Extension of escape travel distances may be facilitated by the provision of automatic sprinklers (among other considerations). This is because sprinklers have the ability to control fire growth and hence conditions can remain tenable for longer than if sprinklers were not present. This allows extra time for escape and therefore it may be acceptable to travel farther to an exit."

Internal planning of flats with more than one storey

2.16.d: To provide a protected stairway plus a sprinkler system is one method to design for a flat which does not have its own external entrance at ground level but has a floor at more than 4.5m above ground level. Residential Care Homes

3.52: Where a sprinkler system is provided in accordance with paragraph 0.16, the following variations to the guidance given in paragraphs 3.41 to 3.51 are acceptable:

- a.** Fire doors to bedrooms need not be fitted with self-closing devices.
- b.** Protected areas may contain more than 10 beds.
- c.** Bedrooms may contain more than one bed. Blocks of Flats

4.29.d: If the building has a storey with a floor over 30m (or 18m in Scotland) above ground level, the building should be protected throughout by an automatic sprinkler system. Note (8.14):

2 BAFSA, Technical Guidance Note No. 2, Issue No. 1 Using Sprinkler Systems in Buildings and Structures; Compliance with Current Fire Safety Guidance (October 2011).

Sprinklers need only be provided within the individual flats, they are not required in common areas such as stairs, corridors or landings.

Shop store rooms

5.58: Fire separation between a shop and a walk-in store room can be relaxed if the store area is fitted with a sprinkler system.

Portal frames

12.4: The recommendations in the SCI publication (P313 Single Storey steel framed buildings in fire boundary conditions, 2002) for designing the foundation to resist overturning need not be followed if the building is fitted with a sprinkler system.

Fire fighting shafts

17.9: If the building is fitted throughout with an automatic sprinkler system, then sufficient fire fighting shafts should be provided such that every part of every storey, that is more than 18m above fire and rescues service vehicle access level, is no more than 60m from a fire main outlet in a firefighting shaft, measure on a route suitable for laying hose. (17.10 if the building is not fitted with sprinklers then this distance is 45m).

Minimum periods of fire resistance

Table A2 sets out the minimum periods of fire resistance for elements of structure within six different purpose groups, many of which are referred to in the Table as 'not sprinklered' or 'sprinklered'. #UltrasafeFire

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