

Water for fire fighting systems

Introduction

This note provides information to developers of buildings where there is a requirement to design systems that use water to suppress or extinguish fire. The information is limited to the installation of fire sprinklers and private fire mains networks.

There are standards set by our regulator Ofwat in relation to the flow and pressure of the water we supply. These standards are specific to water supplied for domestic purposes. We are required to provide water at a pressure of 10 metres head with a flow of 9 litres per minute at the boundary of a property. There are no similar standards in relation to water used for fire fighting.

Flows and pressures will vary throughout the day and seasonally, and supplies may be interrupted at any time for a variety of reasons. There are times when we will need to carry out planned or unplanned maintenance and on rare occasions the network may be affected by the activities of third parties. These factors mean that flows and pressures cannot always be guaranteed.

It is important that designers of domestic sprinkler systems and private fire mains take these factors into consideration when designing a system that relies on direct mains flow, pressure and continuity of supply for their satisfactory operation.

Designers of fire fighting systems must ensure that the system complies with the Water Supply (Water Fittings) Regulations 1999. This includes all fittings, including any pumps and boosters.

Individual households - domestic sprinkler systems

For the purpose of this note we will define a “domestic sprinkler” as an individual sprinkler system designed to protect a single household. Domestic fire sprinkler systems can be fitted to new and existing residential properties.

It is our policy not to meter the supply pipe to domestic sprinklers. Here are some examples of supply arrangements for household properties fitted with domestic sprinklers:

- a) A newly built house/flat – we will install a 32millimetre (mm) communication pipe to feed a 32mm unmetered connection to the sprinkler supply and a 25mm metered branch supply to the dwelling.
- b) An existing house or flat – we will install a 32mm communication pipe to feed a 32mm unmetered connection to the sprinkler supply. The household supply will continue to be charged as it currently is. So once the sprinkler system is installed a previously unmetered property will have an unmetered sprinkler supply and will retain its unmetered supply to the dwelling. Where a property is currently metered, the dwelling will continue to be supplied on a metered basis whilst the sprinkler supply will be unmetered.

We consider a 32mm connection to be adequate to feed most domestic sprinkler systems. Should you require a larger connection, this will be metered.

Commercial and multi-occupancy buildings – private fire mains and sprinkler systems

For the purpose of this note we will define “private fire mains” as mains that are laid within the boundary of a property that are to be used solely for the purpose of fighting fires. They normally connect to privately owned hydrants and to hose reels inside the building.

Supplies for sprinkler systems and private fire mains designed to serve commercial or multi-occupancy domestic building (for example sheltered housing complexes or apartment blocks) will be metered. We may install a single connection with a meter that is capable of measuring both the domestic flow and water used by the fire system. Alternatively, we may provide separate metered connections for the domestic supply and fire system supply.

Additional information

BAFSA (British Automatic Fire Sprinkler Association)

www.bafsa.org.uk

Water UK

www.water.org.uk

Resident Sprinkler Association

www.firesprinklers.org.uk