

SOUTH EAST WATER POLICY FOR DOMESTIC AND RESIDENTIAL FIRE SPRINKLER SYSTEMS

1.1 INTRODUCTION

Domestic properties in England are not generally required by law to have fire sprinkler systems. However there are situations where insufficient fire protection is provided such as where open staircases are proposed or where access for fire engines is deemed inadequate in which local authorities will not grant building regulation approval without sprinklers. It is also possible that legislation imposed on Wales in 2011 will become effective throughout the UK. South East Water supports the provision of a water supply to well-designed domestic fire sprinkler systems whether or not it is a mandatory requirement. This policy outlines the Company requirements for the installation of pipework and fittings to supply water for fire sprinkler systems.

The document provides general guidance; however, there may be some situations where requirements are different from the guidance given in this policy. Such situations must be approved by the Asset Department.

1.2 OBJECTIVES OF THE POLICY

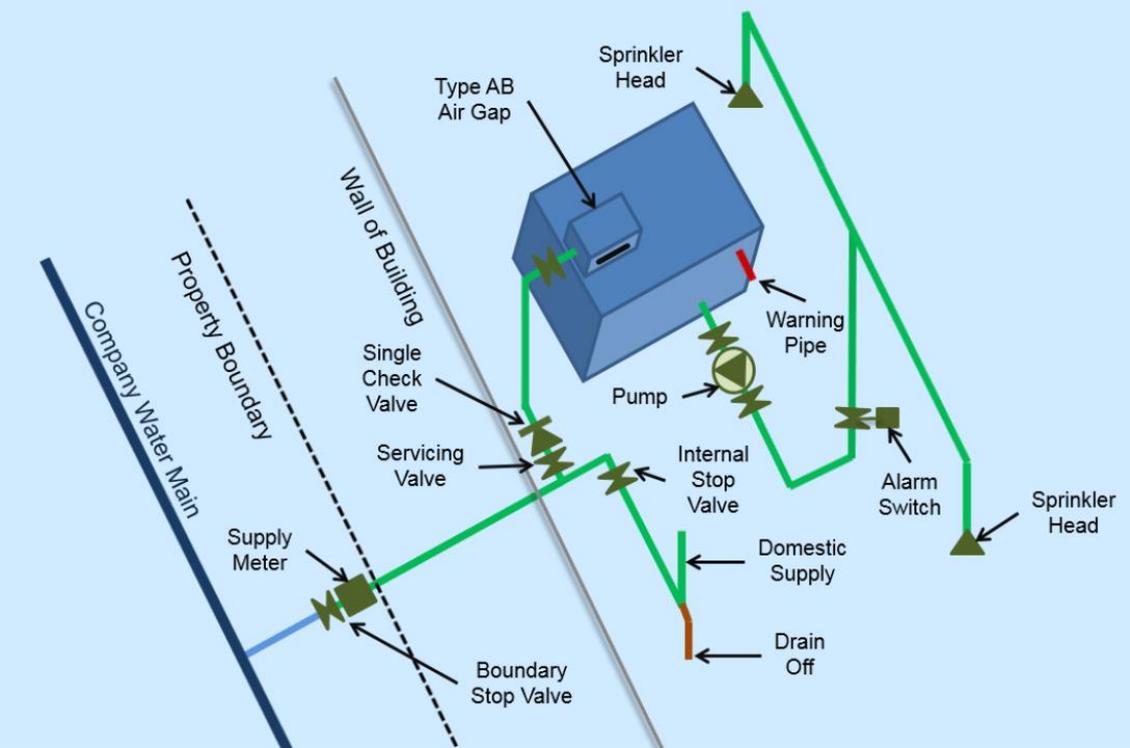
The objectives of the policy are as follows:

- To set out the responsibilities of all the parties involved in the installation of pipework and fittings to supply water to domestic properties and residential occupancies for use in fire sprinklers
- To ensure all works are carried out effectively and efficiently and in accordance with the code of practice BS9251:2005 - 'Sprinkler systems for residential and domestic occupancies – code of practice' SEW policy and industry best practice
- To ensure all new installations comply with the provisions of the Water Act with regard to new connections

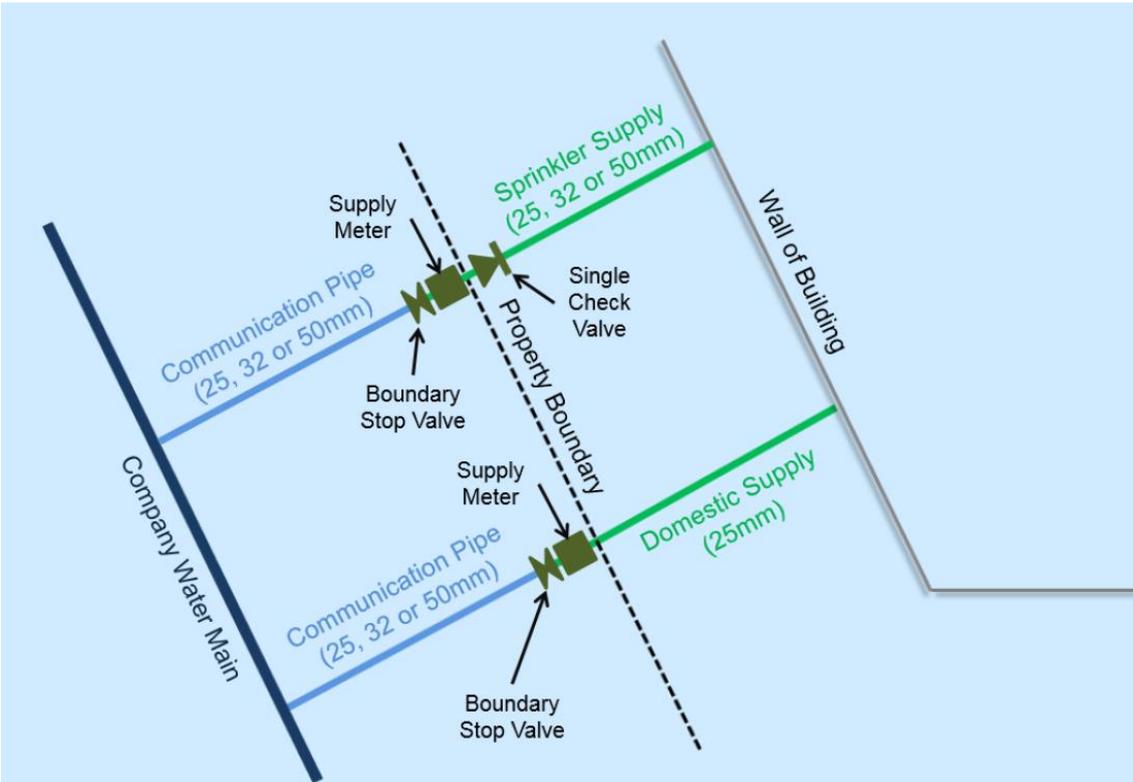
1.3 PREFERRED OPTION

Developers should be advised that SEW cannot guarantee flows or pressures due to essential maintenance or unavoidable operational issues and therefore on site storage is always recommended but particularly in conjunction with supplies for firefighting purposes. Please also be aware that the developer will be charged for any reinforcement required to meet a requested flow rate for a fire supply and SEW will also determine the point of connection going back to a location in the network where sufficient water is available as with all supplies for commercial purposes. Therefore the provision of storage that can be filled slowly in advance may reduce the overall cost of the fire supply.

Option 1 – Cistern fed (preferred)



Option 2 – Direct feed diagram (by agreement)



1.4 COMPLIANCE WITH WATER FITTINGS REGULATIONS

We have outlined two options available to developers to fit sprinkler systems that are practical and realistic and will be suitable for many household and communal developments. These are included at the end of this document. We will consider other proposed arrangements that meet our requirements to safeguard water quality and maintain adequate flows and pressures.

The developer will need to comply with the WRAS Water Supply (water fittings) Regulations when designing or installing their systems and provide adequate protection against contamination of our network.

Under these regulations the protection required is based on the risk we perceive.

For a dead leg of pipework without chemicals etc we would assume the quality of the water in the pipework would be a Fluid Category 2 so a single check valve would be acceptable protection.

If it was a dead leg with an antifreeze we would assess what the chemicals were and ask for a double check valve or if the chemicals were more potent an RPZ valve.

Our Water Fittings and Regulations Team would normally inspect the installation to ensure compliance prior to connection.

1.5 SINGLE CHECK VALVE

It is the developer's responsibility to provide the single check valve and chamber. It will usually be sited on private land.

It is the owner/occupier's responsibility to maintain the check valve and chamber. It is the owner/occupier's responsibility to ensure the system is maintained annually.

Maintenance agreements are often available from the sprinkler installation company. All options must comply with BS6700 Guidance for Backflow Prevention and BS9251:2005 Sprinkler systems for residential and domestic occupancies.

1.6 MINIMUM OPERATING FLOWS

It is recommended that the design and installation of a sprinkler system is carried out by a qualified designer and installer who must ensure there is sufficient flow and pressure available for the type of system proposed.

The quantity of water required for household and communal sprinklers as

recommended in BS9251:2005 will normally be available in the network but a standard 25mm or 32mm connection may not be capable of delivering the required volumes. Depending on individual requirements and circumstances larger connections may be desirable.

For household dwellings	60 l/min through any single sprinkler	42 l/min through each of two sprinklers operating simultaneously in a single room
For communal dwellings	60l/min through any single sprinkler	42 l/min for each sprinkler operating simultaneously up to a maximum of four sprinklers in a single room.

There are additional requirements for systems served directly off water mains. These are detailed in Section 5.2.6 of BS9251:2005

1.7 MINIMUM OPERATING PRESSURES

If it is proposed to fit a sprinkler which is supplied directly off the mains please note that the pressure in the mains varies between areas and throughout the day. Normally it is in the range 2 bar to 4 bar with a minimum of 1.5 bar but can reach 9 bar in certain locations.

The minimum operating pressure at any sprinkler should not be less than 0.5bar (5 metres head or 7.2 psi).

Developers /installers must ensure that there is adequate pressure for the proposed installation at each property.

1.8 CONNECTING DOMESTIC SPRINKLERS

For Domestic Sprinklers our policy reflects the Water Regulations guidance note which indicates it is acceptable, subject to certain conditions, for a supply for a fire sprinkler system to be connected to a standard domestic supply at the property and does not require a separate connection to our mains. However South East Water do not guarantee that a supply will always be available at any point in time for fire sprinklers and strongly advise that storage and a booster pump should be provided at the property for the sprinkler system.

Where a water storage tank is used for both sprinkler and domestic purposes the stored volume should be at least 110% of the sprinkler system. Where a booster pump is also used it should be:

- located such that it is unlikely to be affected by fire
- located where the temperature will be maintained above freezing
- protected electrically by suitable fusing
- protected against the effects of fire

2 METERING

There are no charges for water taken for firefighting purposes or for training or testing of the equipment but South East Water now requires all new supplies to be metered to enable monitoring for leakage. Charges will apply if water is supplied for any other purpose including losses within private plumbing systems.

2.1 NOTIFICATION AND CONSENT

All sprinkler installations to new premises or alterations to sprinkler systems in existing properties should be notified to the water supplier. This requirement also applies when a pump is fitted in any installation.

Notification must include:

- The name and address of the person giving notice and if different the name and address of the person to whom consent should be given
- A description of the proposed work
- The location of the premises to which the proposal relates and the use or intended use of those premises
- A plan of those parts of the premises to which the proposal relates
- A diagram showing the pipework and fittings to be installed
- Where the work is to be carried out by an approved contractor, the name of the contractor

Installation work should not commence without the consent of the water undertaker. Consent may be subject to conditions but should not be withheld unreasonably. Consent shall be deemed to have been granted if no notice is given by the water undertaker within 10 working days, but this does not alter the obligation of the installer to comply with the regulatory requirements.

An approved contractor is a contractor approved by the water supplier who is able by virtue of a recognised qualification to furnish a signed certificate confirming the installation complies with the requirements of the regulations.