

Company Fire Sprinkler Policy

Introduction

Whilst the Water Bill was recently making its passage through parliament the issue of water sprinklers came under scrutiny. Although an amendment to make it a duty to provide a supply of water for firefighting purposes was not carried following discussions between government officials and Water UK there is now an expectation that water companies will develop appropriate protocols. Lord de Mauley the Parliamentary Under Secretary of State for natural environment and science has written to water companies to make them aware that he is keen for the CEOs of water companies to produce clear and precise policies guidelines setting out their company policy.

Statutory Requirements

The Water Supply (Water Fittings) Regulations, Byelaws in Scotland, are statutory requirements relating to design, installation, operation and maintenance of mains supplied plumbing systems and water using appliances. Their purpose is to prevent contamination, waste, misuse, undue consumption and erroneous measurement of drinking water supplies.

The check list below has been produced to help ensure that these requirements are considered and accommodated when developing or reviewing water company fire sprinklers policies.

The check list also includes supplementary information which may aid this process.

It is strongly recommend that this document is read in conjunction with the Water Supply (Water Fittings) Regulations, your company Fire Sprinkler Policy and the national guidance developed by Water UK 'Guidelines for the supply of water to automatic fire sprinkler systems'.

Fire Sprinkler Systems and compliance with The Water Supply (Water Fittings) Regulations

The following check list has been developed as an aid to ensure that the requirements of The Water Supply (Water Fittings) Regulations, Byelaws in Scotland, are considered and accommodated in water company policies for fire sprinkler systems primarily, but the principles apply to other types of firefighting systems.

Activity	Topic	Statutory Requirement	Notes	Included YES/NO
1. NEW CONNECTION:- INSTALLATION OF A FIRE SPRINKLER SYSTEM (all new premises)	NOTIFICATION	Regulation & Byelaw 5: Notification Any person proposing to install a fire sprinkler system in a new building requiring a mains water supply shall give the undertaker notice of the proposed installation, shall not begin work until consent has been granted and shall comply with any conditions of consent.	It would be beneficial to provide a link to further information about notification requirements including company own publications (or those produced by WRAS), details about where to obtain and send completed, notification forms. Conditions of consent may include provision to accommodate:- <ul style="list-style-type: none"> • Site specific conditions e.g. flow rates • Company policy including that relating to design e.g. policy relating to mains connections, storage and the use of pumps 	
	WATER FITTINGS	Regulation 4: REQUIREMENTS FOR WATER FITTINGS Water fittings used within a fire sprinkler system supplied with water by a water undertaker shall:- <ul style="list-style-type: none"> • be of an appropriate quality and standard; and • suitable for the circumstances in which they will be used. [Regulation 4 (1)] To be considered of an appropriate quality or standard evidence that a fitting satisfies the requirements of Regulation 4(2) will be required. Water fittings must also be capable of accommodating 1½ times the maximum pressure to which the fire sprinkler system will be subjected in operation [Schedule 2 paragraph 5] .	Company policy regarding acceptable evidence of compliance shall apply.	

Activity	Topic	Statutory Requirement	Notes	Included YES/NO
<p>1. NEW CONNECTION:- INSTALLATION OF A FIRE SPRINKLER SYSTEM (all new premises) (cont.)</p>	<p>SYSTEM DESIGN</p>	<p>Regulation 4: REQUIREMENTS FOR WATER FITTINGS Regulation 4 (3) & (4): a fire sprinkler system supplied with water by a water undertaker shall be designed to fully comply with the requirements of the regulations/byelaws. This includes ensuring that:-</p> <ul style="list-style-type: none"> • fitting are immune to or protected from corrosion or galvanic action [Schedule 2 paragraph 3] • fittings are constructed and installed so as to prevent <ul style="list-style-type: none"> ○ ingress or permeation of contaminants ○ damage to or deterioration of the fittings due to freezing or other causes [Schedule 2 paragraphs 3, 4 & 8] • the system does not having a detrimental effect upon the quality or pressure of water in an undertaker’s asset [Schedule 2 paragraph 6] • provision is made to allow access to fittings for installation, repair and replacement [Schedule 2 paragraph 7] • sufficient servicing valves and drain taps are installed to minimise the discharge of water when fittings are maintained or replaced [Schedule 2 paragraph 11] • the fire sprinkler system has appropriate backflow protection to prevent backflow from occurring. Wholesite or zonal backflow protection may be required in addition to point of use protection [Schedule 2 paragraphs 14 & 15] 	<p>Company policy and local conditions will have a bearing upon the acceptability of a design.</p> <p>Company policy may require the installation of servicing valves either side of any backflow prevention device</p> <p>Defra Guidance identifies fire sprinkler systems containing additives as a fluid category 4 risk and those without any additives a fluid category 2 risk. The industry has developed guidance relating to the positioning of backflow prevention which is published by WRAS as interpretation B18</p>	

Activity	Topic	Statutory Requirement	Notes	Included YES/NO
<p>1. NEW CONNECTION:- INSTALLATION OF A FIRE SPRINKLER SYSTEM (all new premises) (cont.)</p>	<p>SYSTEM INSTALLATION</p>	<p>Regulation 4: REQUIREMENTS FOR WATER FITTINGS Regulation 4 (4) & (5): a fire sprinkler system supplied with water by a water undertaker shall be installed in accordance with the requirements of the regulations/byelaws. This includes:</p> <ul style="list-style-type: none"> • installing fittings in a workmanlike manner [Regulation 4(5)] • installing fittings so that they can be accessed for repair or replacement [Schedule 2 paragraph 7] • not installing fittings in a position or surrounding likely to cause contamination or damage to the fitting or contamination of the water supply [Schedule 2 paragraph 8] • marking a fire sprinkler systems so that it can be identified and distinguished from other water systems [Schedule 2 paragraph 14] • where appropriate pressure testing fire sprinkler systems to ensure that they are capable of withstanding an internal pressure not less than 1½ times the system maximum operating pressure[Schedule 2 paragraph 12] • Fire sprinkler systems are flushed and where necessary disinfected before use [Schedule 2 paragraph 13] 	<p>Workmanlike manner includes installation work that complies with an appropriate British Standard e.g identification marking in accordance with the requirements given in BS 1710 and domestic fire sprinkler systems designed and installed so as to conform to BS 9251.Evidence of compliance may be required.</p> <p>The identification codes given in BS 1710 must be complied with</p> <p>As company policy may include specific requirements relating to pressure testing as well as disinfection. It would be beneficial to provide further information e.g. what forms of evidence are acceptable and where these should be sent.</p>	

Activity	Topic	Statutory Requirement	Notes	Included YES/NO
1. NEW CONNECTION:- INSTALLATION OF A FIRE SPRINKLER SYSTEM (all new premises) (cont.)	Approved Contractors	REGULATION 6: CONTRACTOR'S CERTIFICATES An approved contractor will provide, on completion of their work, the person who commissioned the installation of a fire sprinkler system with a signed certificate confirming the certified work complies with The Water Supply (Water Fittings) Regulations (Byelaws in Scotland) . In the event this work contravenes these regulations the certificate can be used as a legal defence against prosecution.	It would be beneficial to provide information about approved contractors, WaterSafe and the scheme supported by company.	
2. EXISTING SUPPLY- NON DOMESTIC PREMISES: INSTALLATION, EXTENSION OR ALTERATION OF A FIRE SPRINKLER SYSTEM	NOTIFICATION	Regulation & Byelaw 5: Notification Regulation 5 & Paragraph 2 in the table: Any person proposing to:- <ul style="list-style-type: none"> • install a fire sprinkler system: or • extend or alter an existing fire sprinkler system in an existing non-domestic premises supplied with water by a water undertaker, shall give the undertaker notice of the proposed work, shall not begin work until consent has been granted and shall comply with any conditions of consent.	It would be beneficial to provide a link to further information about notification requirements including company own publications (or those produced by WRAS), details about where to obtain, and send completed, notification forms. Conditions of consent may include provision to accommodate:- <ul style="list-style-type: none"> • Site specific conditions e.g. flow rates • Company policy including that relating to design e.g. policy relating to mains connections, storage and the use of pumps 	
	WATER FITTINGS	Regulation 4: REQUIREMENTS FOR WATER FITTINGS Same requirements as those for fire sprinkler system installation in new premises (see above).	Same notes as those for fire sprinkler system installation in new premises (see above).	

Activity	Topic	Statutory Requirement	Notes	Included YES/NO
2. EXISTING SUPPLY- NON DOMESTIC PREMISES: INSTALLATION, EXTENSION OR ALTERATION OF A FIRE SPRINKLER SYSTEM (cont.)	SYSTEM DESIGN	Regulation 4: REQUIREMENTS FOR WATER FITTINGS Regulation 4 (3) & (4): Same requirements as those for fire sprinkler system installation in new premises (see above).	Same notes as those for fire sprinkler system installation in new premises (see above).	
	SYSTEM INSTALLATION	Regulation 4: REQUIREMENTS FOR WATER FITTINGS Regulation 4 (4) & (5): Same requirements as those for fire sprinkler system installation in new premises (see above).		
	Approved Contractors	REGULATION 6: CONTRACTOR'S CERTIFICATES Same requirements as those for fire sprinkler system installation in new premises (see above).		
3. EXISTING SUPPLY – DOMESTIC PREMISES: INSTALLATION, OF A FIRE SPRINKLER SYSTEM	NOTIFICATION	Regulation 5: paragraph 4 (k) in table (NORTHERN IRELAND & SCOTLAND ONLY): Any person proposing to install a fire sprinkler system in existing domestic premises with a mains water supply shall give the undertaker notice of the proposed work, shall not begin work until consent has been granted and shall comply with any conditions of consent. Although it is not a requirement to notify elsewhere in the UK it is recommended that those proposing to install a fire sprinkler system in a domestic property contact their local water supplier to ensure that the proposed system is compliant.	Customers are strongly advised to contact their water supplier to ensure that the flow rate achievable from the main is sufficient for the fire sprinkler to operate.	

Supplementary information

Suggestions relating to other content:

Design requirements included in individual company fire sprinkler policies cover the following key areas:

- direct mains connections
 - whether permitted or not acceptable
- use of storage cisterns:
 - whether or not required
 - where located , including whether external storage is acceptable
 - the inlet & outlet arrangements
 - use of booster pumps
- acceptability of specific designs
 - whether installation of an appliance at the end of a fire sprinkler system is acceptable e.g. the installation of a WC or washing machines
- acceptability of specific fittings
- whether the installation of pumps is acceptable and any restrictions that apply

Specific areas and topics to be consider when developing water company fire sprinkler policy :

Companies should look at (or create if needs be) their existing policy to ensure the following has been considered and included where appropriate

- Where the policy will be published and how accessible it will be
- Company procedure
 - Organisational arrangements , including who will be the lead contacts within the company
 - Resolution of disputes
 - Company specific policies
- Definitions including a definition of supply – domestic or non-domestic supply
- Charging arrangements, including infrastructure charges
- Metering arrangements
- Connections:
 - Clarification of the maximum size of connection provided
 - Type of connection provided – combined or dedicated

- Clarification of responsibilities & liabilities:

Responsibilities

- Water company level of service – guaranteed flow rates and minimum pressures
- In relation to impact on network/network analysis
- Clarification of the policy regarding water company pressure management
- Clarification of roles and responsibilities in areas related to communication

Liabilities

- Liability in areas related to interruptions to supply or reduced pressures
- Liabilities in relation to a failure of the sprinkler system – including changes in pressures that might affect the performance of the system
- Network water quality issues

Suggested text:

Examples of general introduction:

Example1:

This information is intended for housing developers or sprinkler installers who wish to install sprinkler systems in new or existing properties. In addition to the protection already achieved by appropriate building design and installation of smoke and/or fire detectors, fire sprinkler systems can be an effective method of preventing the loss of life and reducing damage to property.

The purpose of this information is to provide an approved set of design specifications for new connections to fire sprinkler systems.

Example2:

[Company] strongly recommend that these guidance notes are read in conjunction with our Water Fittings Regulations Enforcement and Fire Sprinkler Policies. The following aims to give an overview of “Can – Cannot Do” situations when installing fire sprinkler systems in [companies] area of supply.

Links to other sources of information:

- British Automatic Fire Sprinkler Association (bafsa)
- European Fire Sprinkler Network (EFSN)
- National Fire Sprinkler Network (NFSN)
- Residential Sprinkler Association (RSA)
- Water UK

Please note this information is provided for convenience. The accuracy, completeness and other aspects of the content provided by these third parties is not guaranteed.