

Installation guidance for commercial fire-fighting supplies

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This leaflet is a summary of our installation requirements for commercial fire-fighting supplies; it is not a design guidance for fire-fighting systems. Installers and designers must follow appropriate guidance that is applicable to non-domestic premises.

United Utilities will normally provide unmetered water for fire-fighting, including testing and training – Subject to the correct applications and notifications.

Warning marker tape and pipe ID requirements

BS1710:2014 provides the standards for pipe ID and includes colour coding requirements, guidance on labels and the contents of pipework.

The purpose of this requirement is to prevent accidental cross-connections that could lead to contamination of wholesome water in supply pipes or distributing pipes.

Warning marker tape

Warning marker tape denotes the presence of a water supply pipe below. The tape is placed above the pipe for the duration of the installation so that in the event of future excavation, the warning marker tape will alert contractors to the pipe below and reduce the potential for damage and waste of water/loss of supply.

Warning marker tape (warning of fire supply pipe below) to be laid along the whole length of the installation on top of approx. 300mm of back fill. Installer to use red tape with fire supply below stencilled on to it.

Warning marker tape to be colourfast (polyethylene).



Pipe ID

On 31st December 2014 the British Standard for identifying pipelines conveying water for fire-fighting was substantially updated. This means that just placing red marker tape above or spiral wrapping it around pipes carrying water for fire-fighting purposes no longer meets requirements set out in Schedule 2 Section 5 of the Water Fittings Regulations.

Installers must now confirm to the latest British Standard – BS1710:2014.

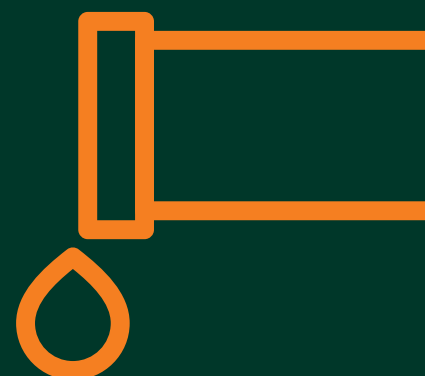
Pipe ID is required to ensure that contractors working on installations are aware of what supply pipes are conveying and the potential harm associated with the contents.

BS1710:2014 Pipe ID colour banding requirements for fire-fighting supplies:

Fire-fighting system supplied direct from the mains network



Fire-fighting system supplied via storage e.g. sprinkler tank



For a direct mains supply to a hydrant(s) the pipe ID tape with direction of flow arrows to be “spiral wrapped” around the pipe in compliance with BS1710:2014 – Colour banding **green blue red blue green** (with direction of flow and fire hydrant main mains fed stencilled on to the pipe ID tape) for fire supplies directly connected to the mains cold water supply (MCWS).

For a direct mains supply to a sprinkler tank the pipe ID colour banding for pipework upstream of the sprinkler tank is **green blue red blue green** (with direction of flow and supply to infill tank stencilled onto the pipe ID tape).

For a direct mains supply to a sprinkler system the pipe ID tape with direction of flow arrows to be “spiral wrapped”

around the pipe in compliance with BS1710:2014 – Colour banding **green blue red blue green** (with direction of flow and sprinkler main mains fed stencilled on to the pipe ID tape) for sprinkler supplies directly connected to the mains cold water supply (MCWS).

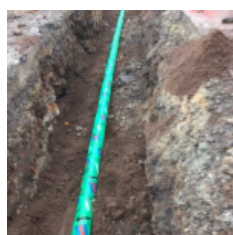
Where water is stored for fire-fighting for a tank fed hydrant, pipe ID colour banding changes to **green blue black red black blue green** (with direction of flow and fire hydrant main tank fed stencilled on to the pipe ID tape).

Where water is stored for fire-fighting for a sprinkler tank main, pipe ID colour banding changes to **green blue black red black blue green** (with direction of flow and sprinkler main tank fed stencilled on to the pipe ID tape).

Pipe ID tape to be colourfast (polyethylene). Examples of pipe ID tape conforming to BS1710:2014



Mains fed fire hydrant main installation example showing fire-fighting pipework that been installed in accordance with BS1710:2014



Tank fed fire hydrant installation showing fire-fighting pipework that been installed in accordance with BS1710:2014



Backflow preventer and chamber requirements for commercial fire-fighting supplies

You will be required to install a minimum of suitably tested and approved backflow preventer, generally a single check valve, but note that subject to risk assessments there may be a requirement for a higher level of backflow protection for some premises.

The backflow preventer should be housed in a self-contained chamber as close as reasonably practicable to the boundary with the adopted highway at the point of connection agreed with Developer Services; the chamber should be adequately sized to allow for maintenance and repair. United Utilities also recommend isolation valves (IV) are installed either side of the backflow preventer.

Installers are strongly advised to request certification to confirm the backflow preventer has been tested, appropriately certificated as a backflow preventer and is suitable for the circumstances in which it will be used.

Test points on all underground backflow preventers to be blanked off using the manufacturer’s blanking kit. Suitably approved backflow preventers are currently very limited in availability for larger diameter pipe sizes. Note: Only backflow preventers that conform to the “Regulators Specification” for backflow prevention arrangement and devices can offer assurance of compliance with the Water Supply (Water Fittings) Regulations 1999; BS EN 13959 is the British Standard for check valves suitable for drinking water systems.

It is the end user’s responsibility to maintain the backflow preventer. Please refer to Annex A in BS EN 806-5:2012 for guidance.



Note: United Utilities requires all non-standard (63mm O/D and above) fire-fighting supply connections to the mains network to be suitably hydrostatically pressure tested and disinfected to an industry recognised standard prior to connection.

Suitably approved backflow preventer installation