

Sprinkler Systems for New Domestic Developments Supplementary Requirements

Relevant Application Type: Water Connection/ Facilitation

Purpose of this Document:

This document outlines Scottish Water's standards for housing developers, including the specific requirements that must be met when installing private sprinkler systems. Please note, this document should be read in conjunction with the most recent Scottish Water policy version – **"Sprinkler Systems for Residential and Domestic Occupancies"** and most recent technical specification edition **"Water for Scotland"**. This guidance is effective from 1st July 2022.

Private Developments:

Scottish Water (SW) permit one connection to the public water network per domestic property. For fire suppression requirements, this connection should be upsized to 32mm diameter with a 28mm gun metal boundary stop-cock. This supply will split internally to feed both the domestic and fire suppression system. Any requirement for storage and/or pumps will be located within the building and be the responsibility of the developer to design the internal pipework and fittings accordingly, to meet all regulations and specifications. More than one connection per property will not be permitted.

For private housing developments:

- **No communal sprinkler systems will be permitted within publicly adopted footpaths or roadways.**
- **No communal sprinkler systems will be permitted to run from one property boundary through to another property.**
- **The use of a communal storage tank and pump set be will not be accepted in any circumstance.**

In private flatted developments, a communal system will be permitted where it is contained within the individual building. This will be restricted to one supply/storage tank/pump set to be permitted per communal entrance to the flats. Where there are multiple public entrances, or where a single tank and pump cannot be located internally, it must be located within the common factored land belonging to residents of the flats. The tank used for flatted blocks may be a combined potable and sprinkler system.

Social Housing:

Scottish Water recommends that the above applies to all Social Housing developments, whereby one 32mm connection is provided per property. The connection must be split internally to support domestic supply and fire suppression systems.

However, where a communal storage tank, pumps and a "Private Sprinkler Network" is deemed to be the most cost/technically effective option, Scottish Water will review this type of proposal **on a site-by-site basis**. The design must be based on one single 32mm connection from the proposed potable/public network to a Category 5 Backflow Prevention Compliant tank. Scottish



Water will only guarantee a minimum standard of service at point of connection for flows and pressure. Any related storage must also be separated by category 5 backflow prevention.

In addition, the site must comply with the following points:

- Any “Private Sprinkler network” should not encroach onto any privately-owned land and remain within land/properties owned by the Council / Housing Association (within front or back garden areas or communal ground). The Private Sprinkler Network must be a minimum of 1 metre within the garden/communal ground areas. This is to ensure an acceptable minimum clearance of 2m from the potable water network.
- Connections above 32mm will not be accepted. If required, the designer should increase the capacity in the storage or provide more than one storage tank/pump set.
- The service pipework from the point of connection to the storage tank must be wrapped in fire warning tape and be the same material as the site mains and services unless the potable supply material is normal PE but the service pipework for the feed to the sprinkler tank runs through parking/contaminated areas etc.
- Pipework from the tank/pump set to the entry point of the property (below ground pipework) should be Blue PE, Black PE with red stripes, or Barrier Pipe. We would advise that the chosen pipe material should be suitable for the ground conditions to reduce the potential for leakage. It must also be wrapped with fire warning tape and have a fire warning tape placed above the pipework during backfill, approximately 150mm from the top of the proposed pipe. This is to ensure that no confusion can be made with the potable water main / services and is clearly identifiable as a non-potable supply.
- Scottish Water will not divert any water mains or services or any foul/surface water sewers or connections to accommodate the “Private Sprinkler Mains”.
- The use of multiple smaller communal storage/pump sets is recommended to reduce the amount of “Private Sprinkler Network” that is laid within adoptable/non-adoptable footpaths/roads. This must be kept to an absolute minimum and all other “Private Sprinkler Network Infrastructure” must remain within garden areas or communal ground.
- Where the “Private Sprinkler Network” is located within an adoptable footpath or roadway, a written agreement from the Local Roads Authority, confirming their acceptance of a “Private Sprinkler Network” within their adoptable footpath/roadway, must be provided before approval of the water layout will be granted. Any pipework laid within the public footpath / roadway must be continuous and constructed with minimal joints.
- A “Private Sprinkler Main” on one side of the street with multiple supplies crossing to serve properties opposite, **will not be permitted**.
- A letter from the Housing Association confirming ownership/ maintenance/repair of the whole fire suppression “Private Sprinkler Network” must be submitted as part of the application submission.
- The “Private Sprinkler Network” (after the tank) if sized 63mm or above, must be pressure tested. The pressure testing must comply with **IGN 4-01-03 October 2015: Issue 2 Section 3.3** and these results must be provided to Scottish Water for records purposes.



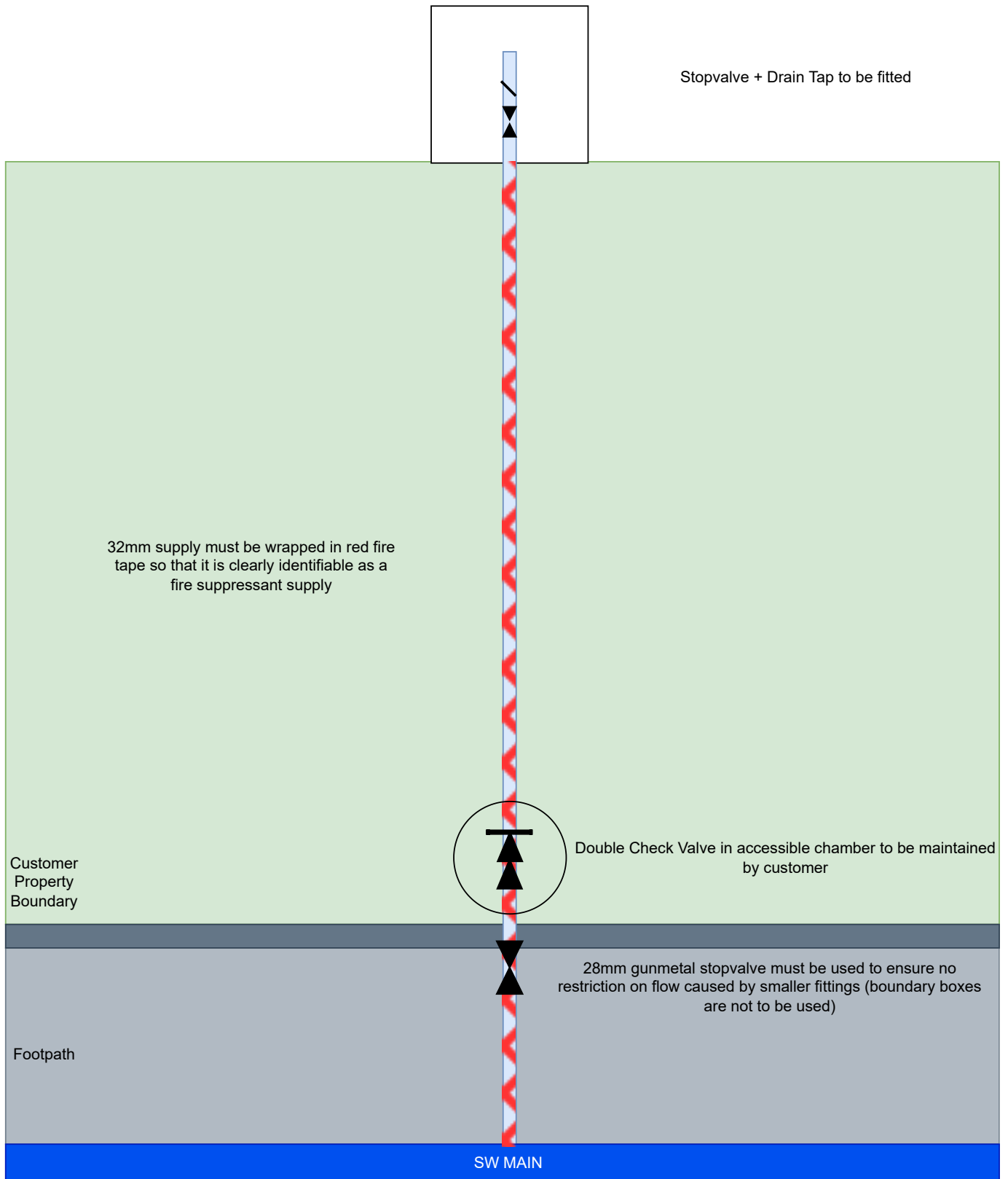
- Scottish Water recommends that the pipework be laid at a minimum depth of 750mm for up to 32mm diameter pipes and 900mm pipework above 32mm for frost/damage protection.
- Should the system be found to be leaking, at any time during its operational life, it must be repaired immediately by the Local Council/Housing Association. Failure to do so will result in a wastewater notice being served and the connection to the storage being isolated.

Please see Sprinkler Diagram (attached) for a schematic of Scottish Water's requirements for a 32mm supply to feed a communal sprinkler tank for Affordable/Social Housing developments. This also includes example pictures for chambers and fittings required.

For more information about Scottish Water and our services please call our Customer Helpline on **0800 0778778**.

32mm Inlet to Communal Sprinkler Tank

(COMMUNAL SPRINKLER TANK MUST BE FLUID CATEGORY FIVE COMPLIANT)





DCV External Chamber



28mm Gunmetal Stopvalve



Stopvalve Chamber