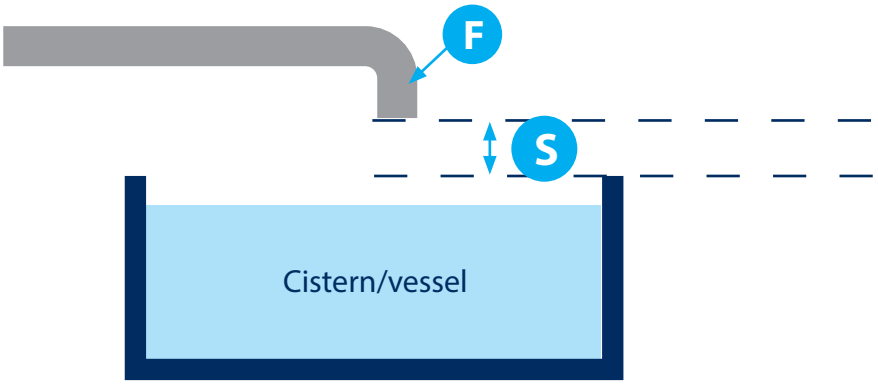
Water Supply (Water Fittings) Regulations 1999

Type 'AA' and 'AB' Air Gaps

South Staffs Water

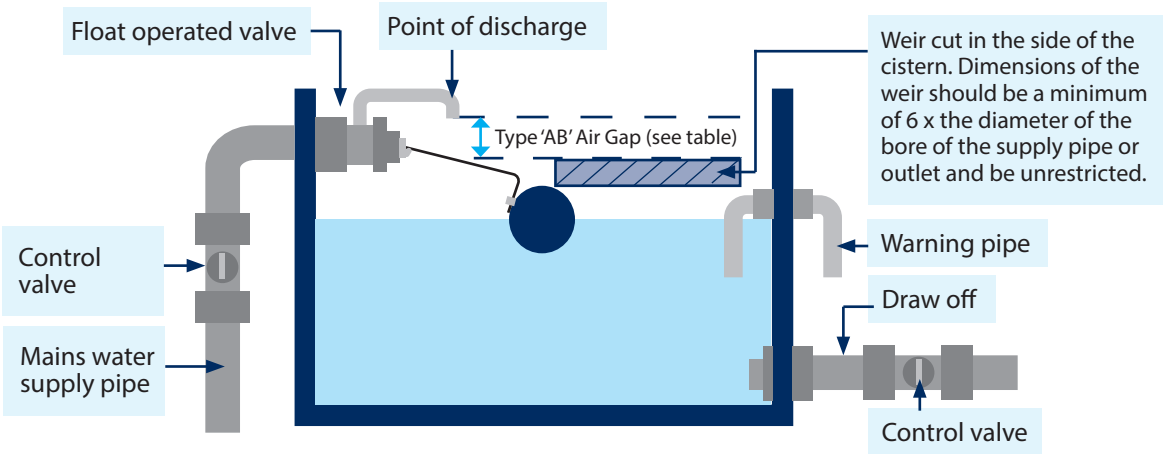
Note:
Both Type 'AA' and 'AB' are suitable protection against both back siphonage and back-pressure of fluid category 5 risks.

Type 'AA' Air Gap



Pipe size 'F'	Gap between 'S'
1. Not exceeding 14mm	20mm
2. Exceeding 14mm but not exceeding 21mm	25mm
3. Exceeding 21mm but not exceeding 41mm	70mm
4. Exceeding 41mm	Twice the bore of the outlet

Storage cistern with alternative 'AB' Air Gap (Non-potable)



Bore of pipe or outlet	Vertical distance of point of discharge above unrestricted spill-over level
1. Not exceeding 14mm	20mm
2. Exceeding 14mm but not exceeding 21mm	25mm
3. Exceeding 21mm but not exceeding 41mm	70mm
4. Exceeding 41mm	Twice the bore of the outlet

Water Supply (Water Fittings) Regulations 1999

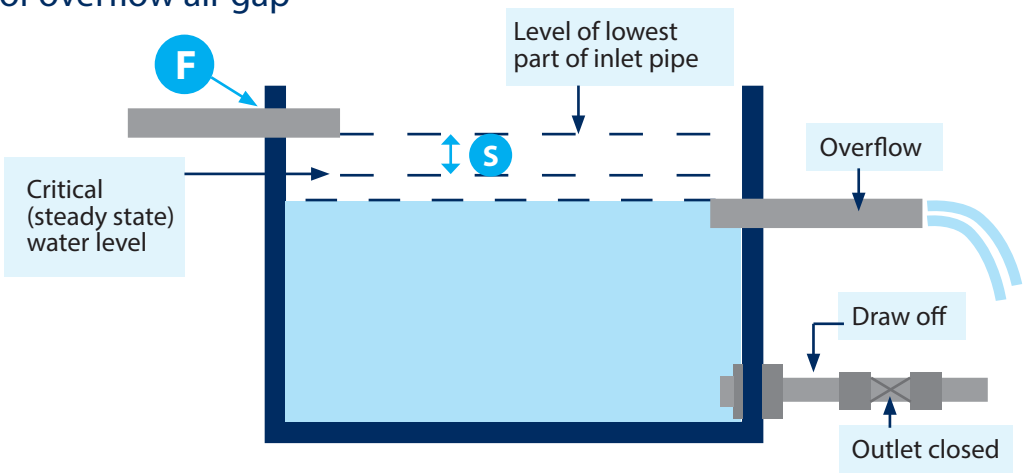
Type 'AF' Air Gap

South Staffs Water

Note:
Type 'AF' is suitable backflow protection against both back siphonage and back pressure at no greater than fluid category 4.

Type 'AF' Air Gap

Sizing of overflow air gap

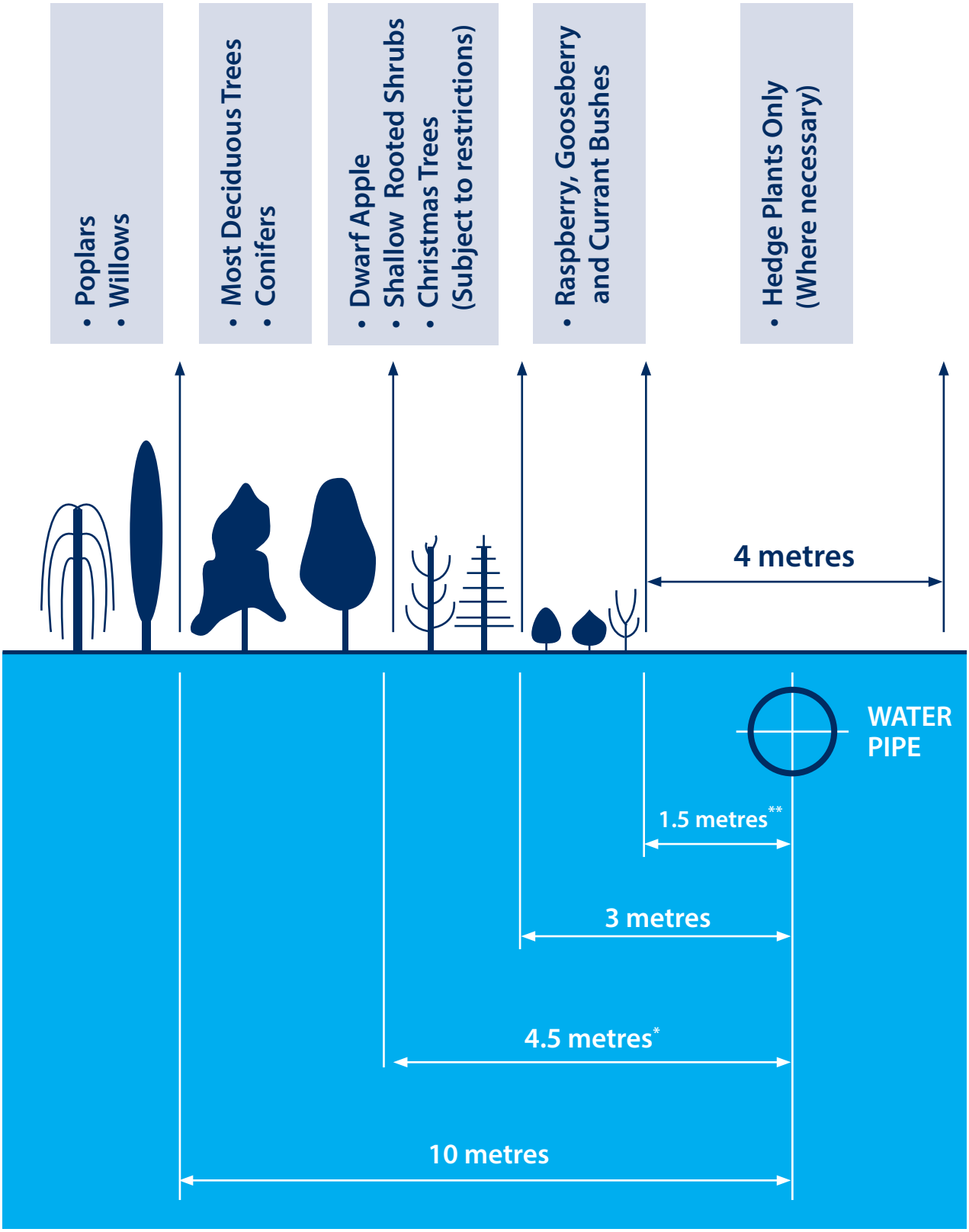


Pipe size 'F'	Gap between 'S'
1. Not exceeding 14mm	20mm
2. Exceeding 14mm but not exceeding 21mm	25mm
3. Exceeding 21mm but not exceeding 41mm	70mm
4. Exceeding 41mm	Twice the bore of the outlet

Water Supply (Water Fittings) Regulations 1999

Tree planting restrictions

South Staffs Water



* In wider easements increase distance to 6 metres
** In wider easements increase distance to 2.5 metres

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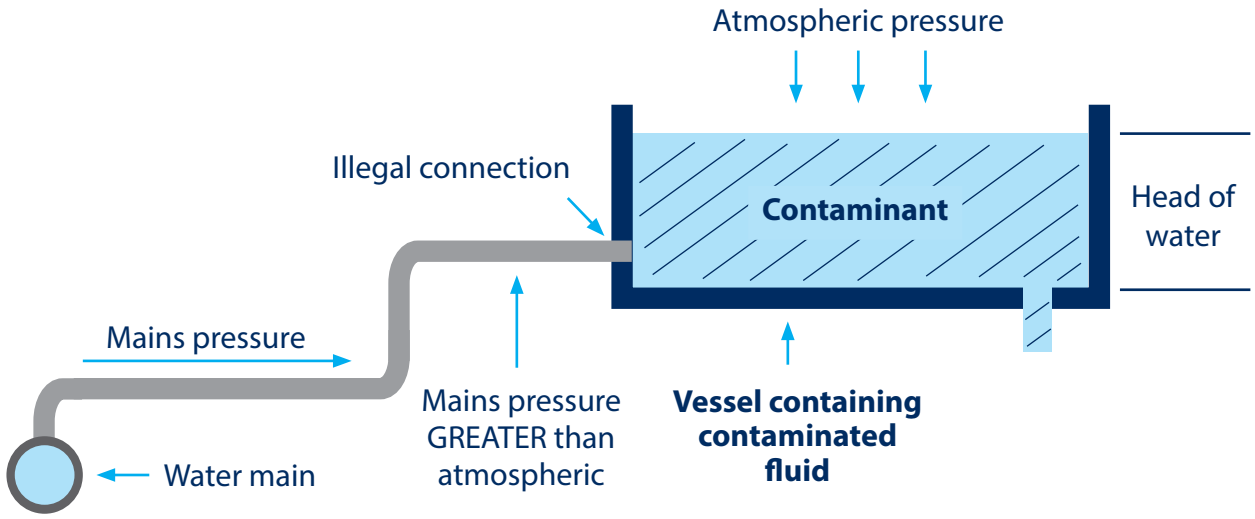
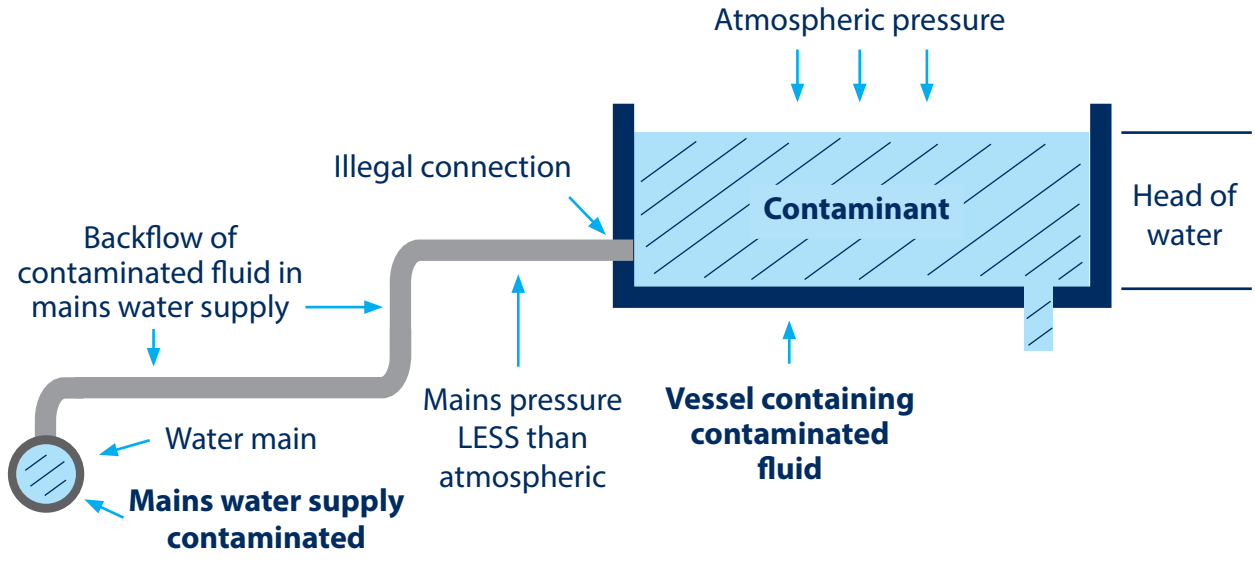
Backflow

South Staffs Water

Normal operating conditions



Conditions when mains pressure is less than atmospheric



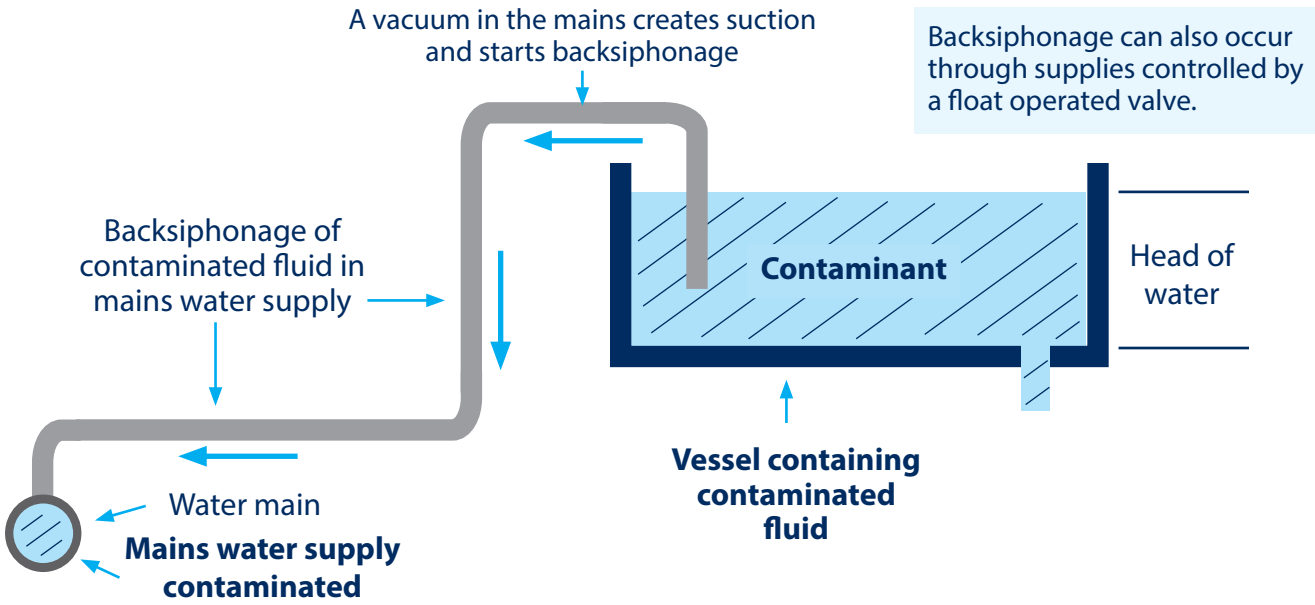
Note:
The diagrams shown above illustrate how 'Backflow' can occur when illegal connections are made to vessels containing contaminated fluids i.e. Acids / Chemicals. In order to prevent this the appropriate air gap must be maintained.

Water Supply (Water Fittings) Regulations 1999

Backsiphonage

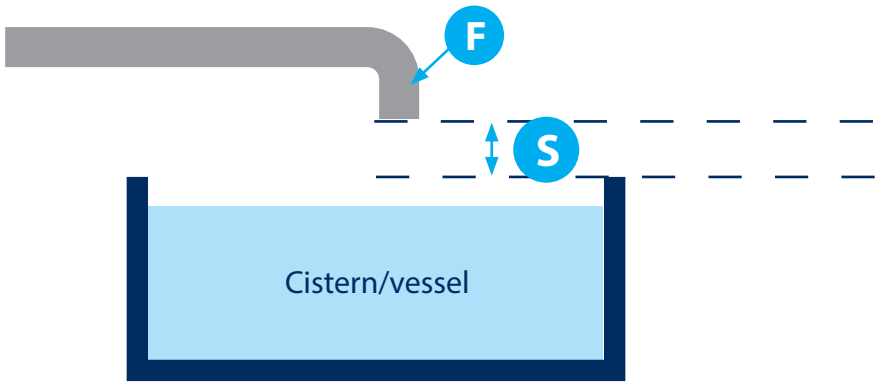
South Staffs Water

Conditions which arise when a vacuum occurs in the mains water supply



Note:
The diagrams above shows what can happen when a vacuum occurs in the mains water supply. A vacuum is caused when draw off from the main exceeds the supply i.e. Fire fighting, Burst mains, Illegal pumping or any interruption of the mains water supply. In order to prevent backsiphonage or backflow the appropriate air gap must always be maintained between the mains water supply and spill-over level of the receiving vessel. See diagram and table below.

Type 'AA' Air Gap



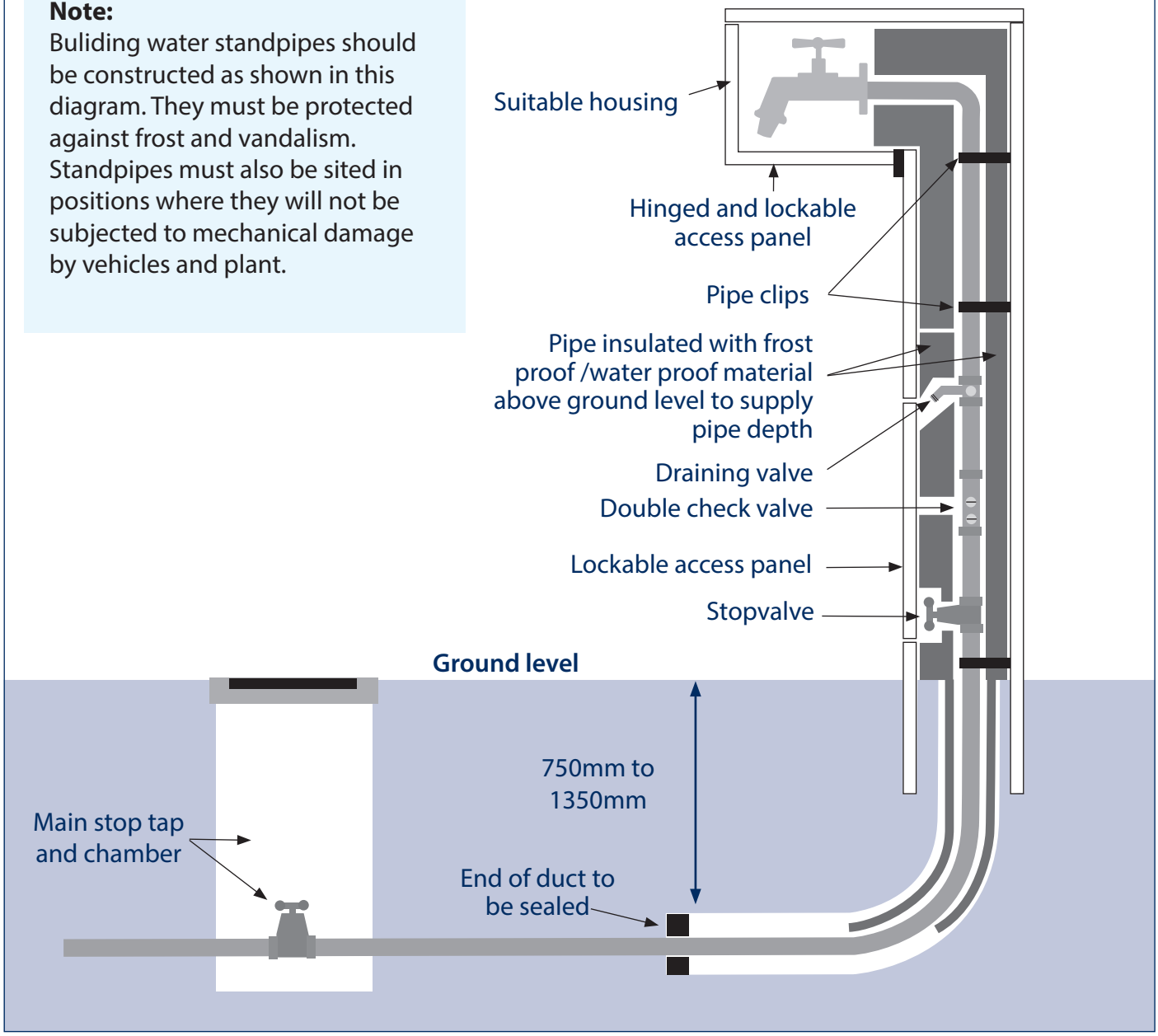
Pipe size 'F'	Gap between 'S'
1. Not exceeding 14mm	20mm
2. Exceeding 14mm but not exceeding 21mm	25mm
3. Exceeding 21mm but not exceeding 41mm	70mm
4. Exceeding 41mm	Twice the bore of the outlet

Water Supply (Water Fittings) Regulations 1999

Building water standpipes

South Staffs Water

Note:
Buliding water standpipes should be constructed as shown in this diagram. They must be protected against frost and vandalism. Standpipes must also be sited in positions where they will not be subjected to mechanical damage by vehicles and plant.



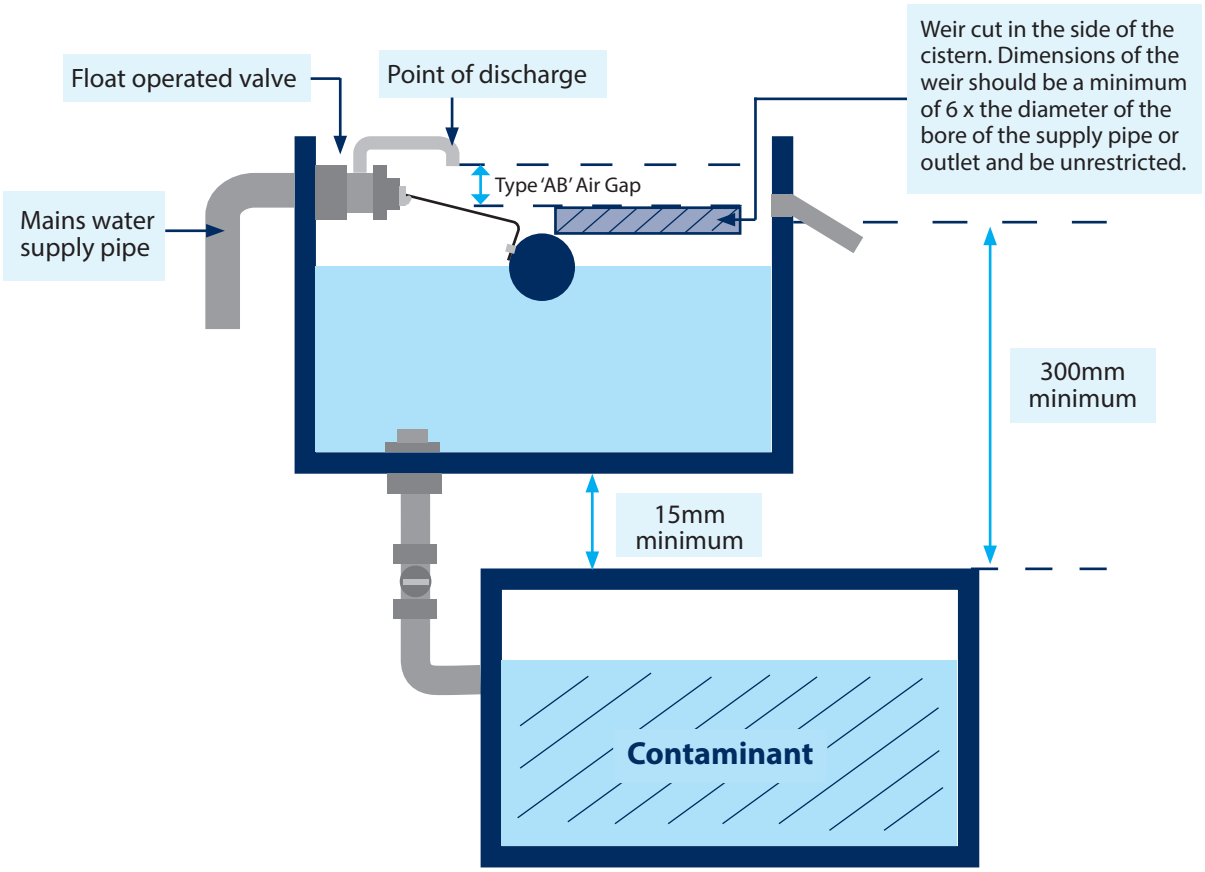
Water Supply (Water Fittings) Regulations 1999

Exemption for Type AUK 1 Air Gap

South Staffs Water

Note:
A Type AUK 1 air gap is rated by the Regulators as suitable backflow protection against back pressure risks no greater fluid category 3 and back siphonage risks up to and including fluid category 5.

Exemption for Type 'AUK 1' Air Gap (Interposed cistern)



Provided that:

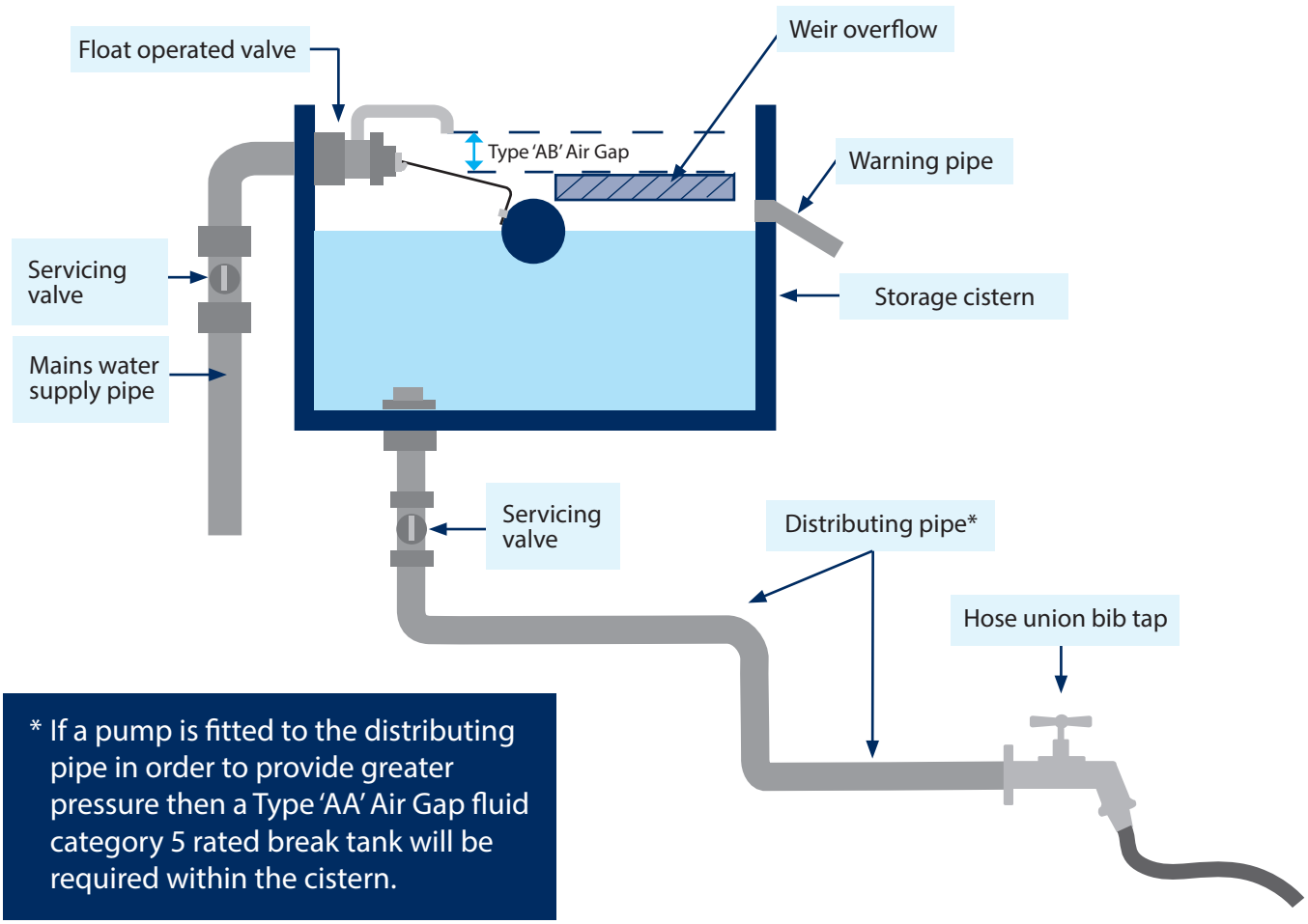
- Gravity flow from 'covered' cistern
- Top edge of contaminant not less than 15mm below cistern
- Top edge of contaminant not less than 300mm below overflow level of cistern
- Type 'AB' Air Gap, pipe interrupter or BS 1212 Part 2 or 3 float operated valve

Water Supply (Water Fittings) Regulations 1999

Connection of Hosepipes to Draw-offs in Non-domestic Premises

South Staffs Water

Note:
This prohibits the connection of a hosepipe to any tap or similar fitting unless that tap or similar fitting draws water by gravity from a storage cistern by means of a pipe which does not supply water to any other fitting at a lower level. This applies whether the tap is situated inside or outside the premises.



* If a pump is fitted to the distributing pipe in order to provide greater pressure then a Type 'AA' Air Gap fluid category 5 rated break tank will be required within the cistern.

If it is required to connect a hose union bib tap to a supply pipe and use a double check valve assembly for protection, then the written consent of the Company MUST be obtained before proceeding with the installation. The Company will not give consent for this type of installation if it is considered that this would not provide adequate protection in a particular situation.

Water Supply (Water Fittings) Regulations 1999

Animal Drinking Troughs and Bowls

South Staffs Water

Note:

Every pipe supplying an animal drinking trough or bowl shall be fitted with a float operated valve or other no less effective device to control the inflow of water and prevent any overflow. This valve must be accessible for repair, renewal etc.

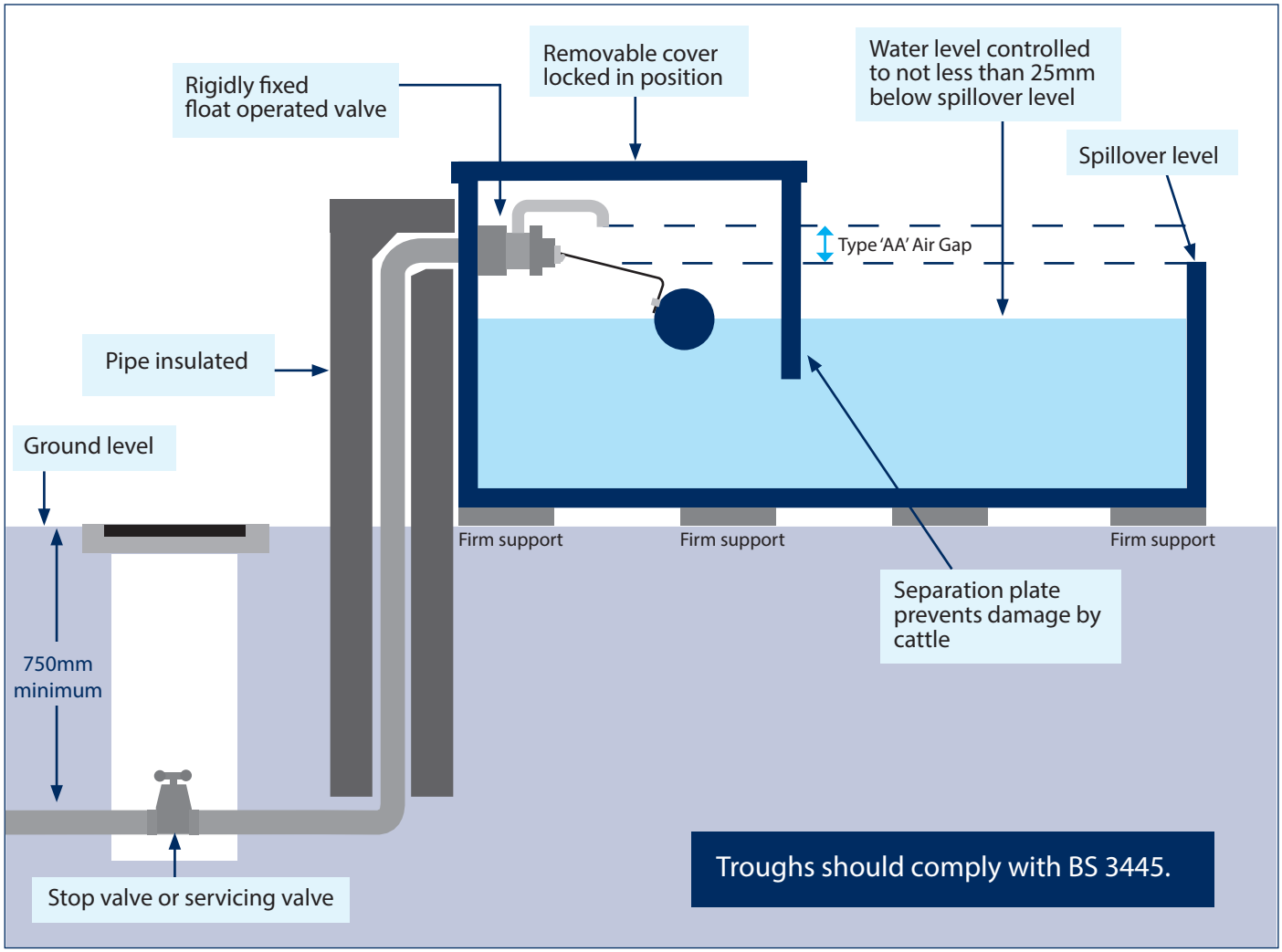
The inlet valve must be securely fixed to the trough or bowl, with the water inlet positioned so as to provide a Type 'AA' Air Gap.

The water level should be set at not less than 25mm below the spillover level in the case of troughs.

The supply pipe must be protected against damage by cattle etc.

A servicing valve must be provided for shut-off and repair purposes.

All troughs shall be adequately supported.



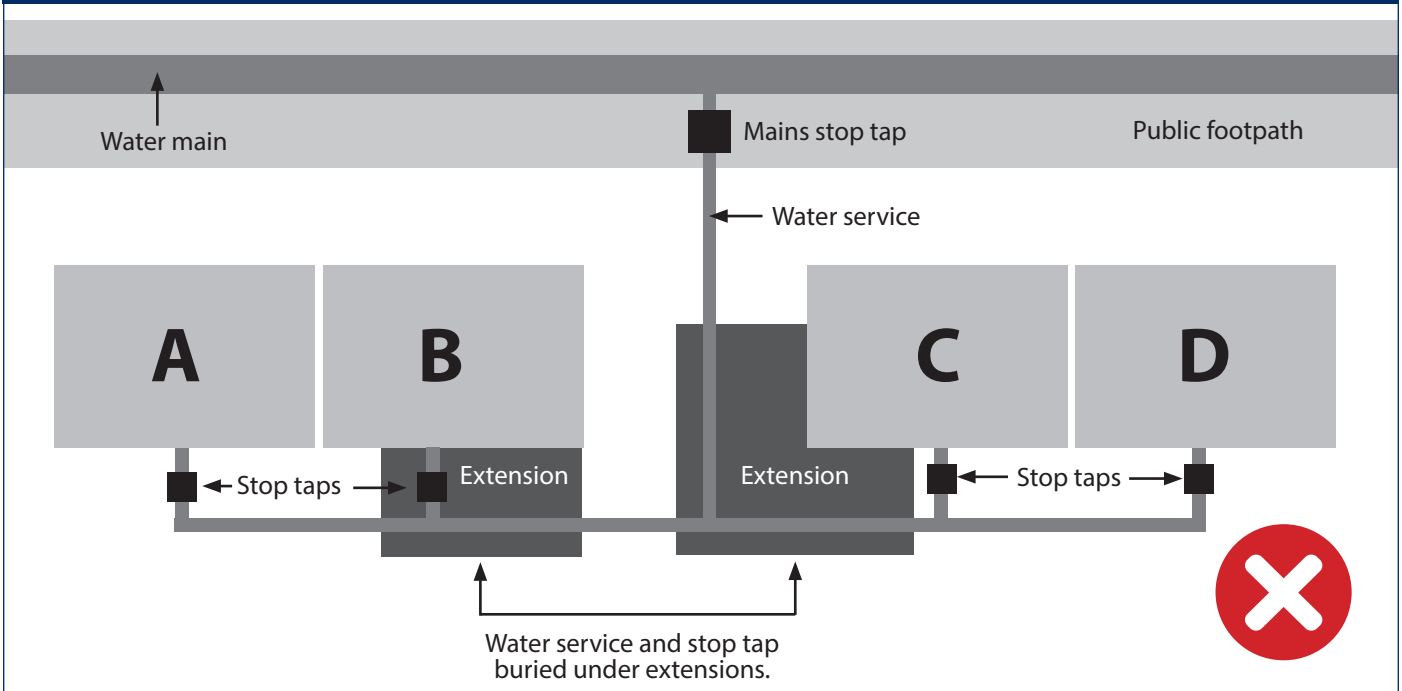
Water Supply (Water Fittings) Regulations 1999

Building Extensions and Alterations

South Staffs Water

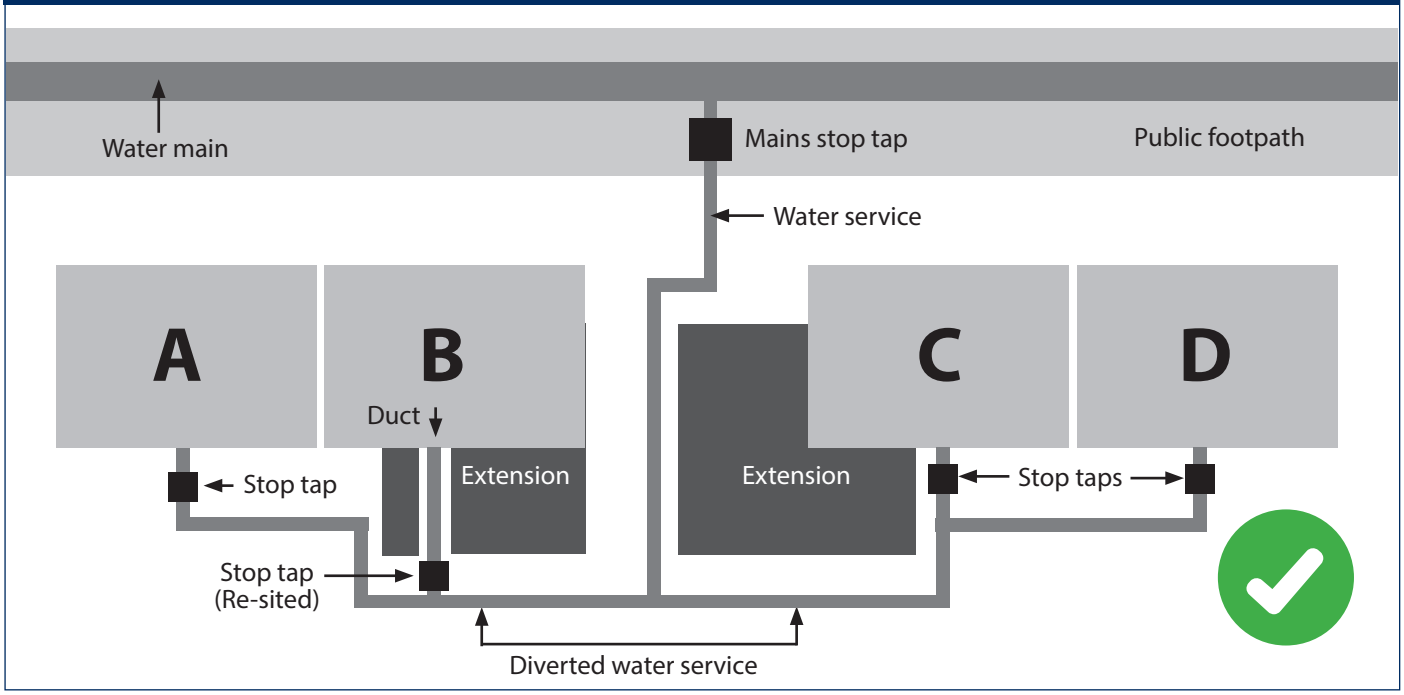
Incorrect

Extensions to houses B and C built over existing water services.



Correct

Water service diverted around building extensions.



Please note: Structural extensions or alterations must not be built over existing water service pipes. Where water pipes have to be laid under any building, then 'ducts' must be provided. Underground stop taps, branches and changes of direction must be clear of the building unless adequate access can be obtained.

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Water Supply (Water Fittings) Regulations 1999

Cold water storage cistern

South Staffs Water

Note:
Every storage cistern shall be so installed as to minimise the risk of contamination of stored water. The cistern shall be of an appropriate size, and the pipe connections to the cistern shall be so positioned, as to allow free circulation and to prevent areas of stagnant water from developing.