1 Laying a New Water Supply Pipe

This factsheet gives information on how to lay a new water supply pipe. It has been developed in line with the Water Supply (Water Fittings) Regulations 1999. Please read it carefully or pass it to your plumber, or whoever is carrying out the work on your supply pipe.

The Regulations require installers and customers (defined as the user, owner or occupier) to install underground pipework in a certain way. It is essential to install and maintain water systems to minimise the risk of contamination and avoid the waste of water, by the use of suitable fittings and materials.

What about my plumber?

The Regulations encourage suitably qualified installers to be accredited as Approved Contractors under the WaterSafe scheme. A WaterSafe Approved Contractor will provide a certificate stating that the work carried out satisfies the Regulations and we recommend that you ask your plumber about this before agreeing to any work.

Pipe inspection

An inspection will be required for any work carried out, except that carried out by an Approved Contractor. All works must fully comply with the requirements of the Water Supply (Water Fittings) Regulations 1999.

Pipe materials

For normal ground conditions, blue MPDE should be used. For contaminated ground other materials must be used. The pipe diameter should be 25mm; larger diameters are only permitted in exceptional circumstances. Blue MDPE plastic pipe is intended for underground use only as it can be damaged by exposure to light. Black MDPE pipework is suitable for above ground sections.

Ducting

Where a water pipe enters a building or runs underneath a building, it must be located inside a suitable duct for accessibility. The ideal ducting size is 100mm diameter. It is usually plastic but can be other materials if suitable. There must not be any markings for other utilities on the duct, such as gas, electricity, or telecom.

On a new build development, the ducting for a new water supply pipe should be laid before the foundations are completed to enable the new water pipe to be inserted inside the duct once the foundations are completed.

The duct should be laid at a depth of 750mm min and 1350mm max below the finished ground level of the property.

Sealing the duct

A readily removable seal or sealant should be used at each end of a duct. Do not use an oil-based sealant, expanding foam, or any other sealant that can damage the pipe. Some builders use a thin layer of sand or cement, but care is needed to avoid contact with the new water pipe. You should contact the supplier of the pipework and sealant before selecting a material. It may be better to use a 'blank cap end' with a purpose-made hole with a grommet to allow the water pipe to pass through.

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Trenches

These should be lined and backfilled with sand or selected soft earth, not rubble. They should also be wide enough for the pipework, with a minimum distance of 350mm from other services such as gas or electricity. Unless you have used an Approved Contractor, you must notify us when the pipework is complete so we can arrange an inspection. The trench should not be backfilled until this is done.

Joints

Joints or fittings cannot be used on the new water supply pipe when inside a duct. Joints should be of an approved material and not solvent-based.

Insulation

Where a pipe enters a building inside a duct it may need to be insulated – see Diagrams 1 to 3. Insulation should be of a water-resistant 'closed cell' tubular design with a suitable wall thickness. Within a property, the pipe does not need insulation unless it is located in an unheated area such as under floors, in loft spaces or in a garage.

Fitting a stop valve

Valves should be of a suitable standard – BS1010 for screw-down valves, BSEN1074 for lever valves and BS2829 for drain-off valves. The drain-off valve must be fitted as close as possible to the point where the pipe enters the building, with the drain-off point above the valve.

Removing old pipework

If you are replacing a pipe, once your new supply has been connected any old branches or tee pieces that used to supply your property must be disconnected. This is a requirement of the Water Regulations; it is illegal to leave such disused sections in place as the stagnant water could contaminate other water supplies in the area.

Water fittings laid underground

It is essential that pipes entering buildings below ground level are sealed against the entry of fluids, vermin and insects, as shown in Diagrams 1, 2 and 3.

Where the incoming pipe meets either of the conditions below it should be suitably insulated before being passed through the duct:

1. the pipe has less than 750mm of ground cover or it enters the building (at floor level) less than 750mm from the external face of the wall;
2. the pipe passes through an airspace below an internal suspended lower floor.

Where it is impractical for structural reasons to have a cover of less than 750mm or more than 1350mm, prior approval is required from us. It is essential that the water fittings are protected against damage from freezing or warming, but that they are still accessible.

Diagrams 4 and 5 show how pipes should be laid around an obstruction, with Diagrams 6 and 7 showing methods to supply a building below ground level.

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Diagram 1

Vertical pipe in duct greater than 750mm from external face of wall.

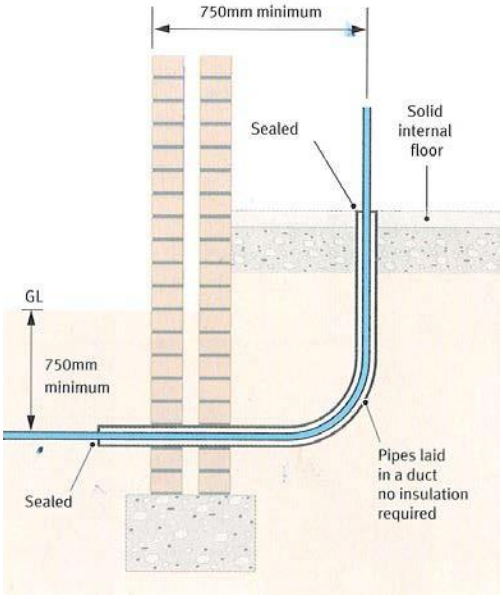

Diagram 2

Vertical pipe in duct less than 750mm from external face of wall.

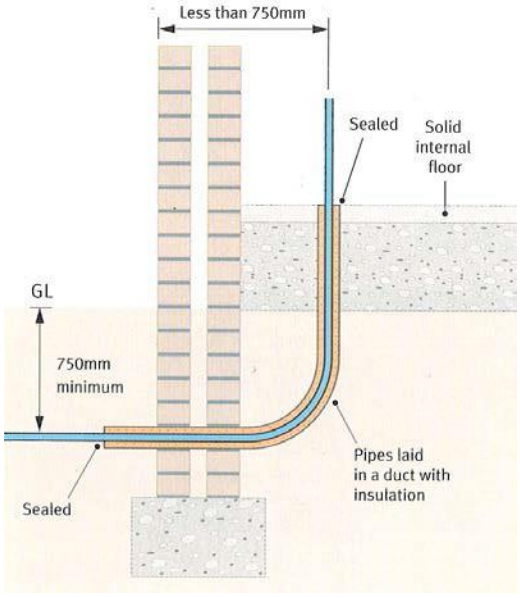

Diagram 3

Vertical pipe in duct any distance from external face of wall where entry to building is through a suspended floor with air void below.

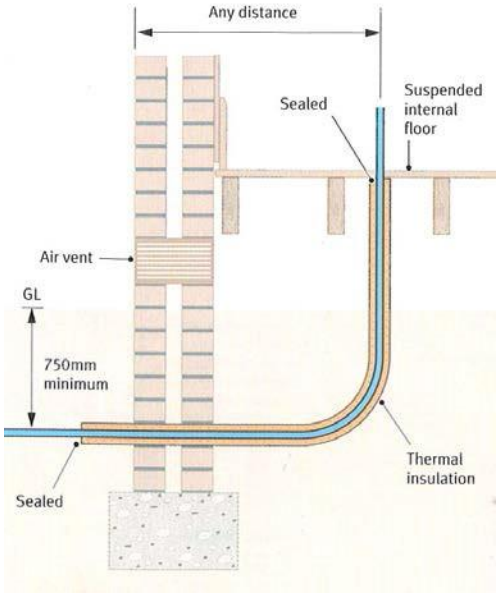

Diagram 4

Pipes laid over an underground obstruction.

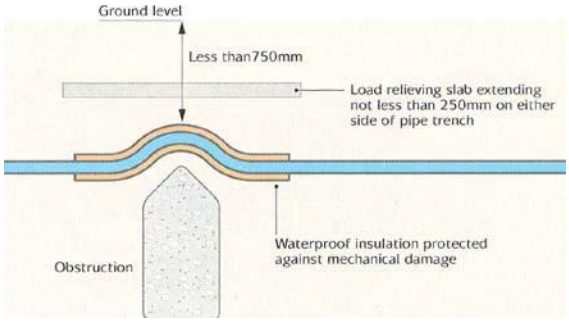

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Diagram 5

Pipes laid under an underground obstruction.

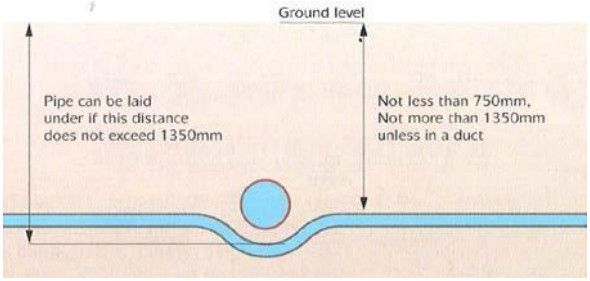


Diagram 6

Preferred method of supplying water to a building below street level

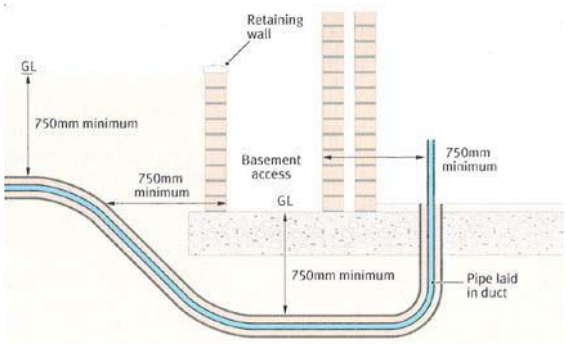
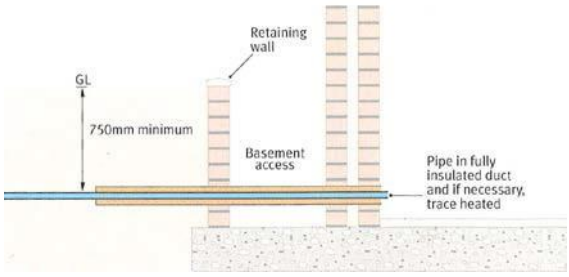


Diagram 7

Alternative method of supplying water to a building below street level



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