

Laying a New Supply Pipe



This fact sheet gives information on how to lay a new supply pipe. It has been developed in line with the Water Supply (Water Fittings) Regulations 1999. Please read it carefully and 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 suitable fittings and materials when making connections to a water network to minimise the risk of contamination and to avoid wasting water through leakage.

Appointing a plumber / contractor

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 MDPE pipe should be used. Where the ground is classified as contaminated (e.g. reclaimed land sites and vehicle workshop sites) or the supply pipe is close to a petrol or oil source, then a pipe material complying to BS8588 such as Barrier Pipe must be used. The pipe diameter should be 25mm as standard; larger diameters are only permitted in exceptional circumstances with permission from SES Water. Blue MDPE plastic pipe is intended for underground use

only as it can be damaged by exposure to UV light. Black MDPE pipework is suitable for above ground sections exposed to UV light. Both Blue and Black MDPE should comply with BS EN 12201.

Prevention of Contamination

The supply pipe must not be laid in, on or pass through any areas which will or are likely to cause contamination including: Foul soil, refuse areas, refuse chutes, ash pits, sewers, drains, cesspools or inspection chambers. The pipe must be diverted away from any situation that is a cause for a contamination risk.

Ducting

Where a water pipe enters a building or is laid underneath a building, it must be located inside a suitable duct for accessibility. The ideal ducting size is 110mm in diameter and we recommend nothing smaller than 65mm. It is usually plastic but can be other materials if suitable (Please refer to the insulation, ducting and capping factsheet for more information). There must not be any markings for other utilities on the duct, such as gas, electricity, or telecoms. The duct must be of solid construction with no holes.

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 minimum depth of 750mm and 1350mm max below the finished ground level of the property (point of entry). The ducting must run all the way through the property from the POE until the point where **the pipe exits the floor**. The internal stop valve will usually be located here.

Joints

Joints or fittings cannot be used on a new water supply pipe when fitted inside a duct. It is always best practice to use one continuous

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length of pipe without any joints when laying a new water supply pipe. If it is necessary to use a joint on the new water supply pipe in the trench, then we strongly recommend fitting a large chamber and lid over the joint for leak detection purposes and ease of repair. Any joints should be of an approved material and not solvent based. It should be noted that there must not be any joints on the internal pipe before the internal stop valve. The first joint will be the stop valve.

Sealing the ducting

The duct requires sealing both internally and externally to prevent the ingress from liquids, vermin and gases. 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. It is recommended to use a 'blank cap end' (made from plastic or rubber) with a purpose-made hole with a grommet to allow the water pipe to pass through.

Trenches

The water pipe should be laid at depth of 750mm (minimum) to 1350mm (maximum) to the crown of the pipe. Trenches should be lined and backfilled with sand or soft earth around the pipe. The trench should be wide enough for the pipework and to maintain a minimum distance of 350mm from other services such as gas or electricity (Diagram 9). Unless you have used an Approved Contractor, you must notify us when the pipework is complete so we can arrange an inspection of the work. The trench should not be backfilled until this is done.

Leave around 1m length of excess MDPE pipe that is sealed off at the end of the pipe by the boundary of the property so that it is ready for the connection to be made to our water main.

Insulation

Where a pipe enters a building inside a duct it may need to be insulated – see Diagrams 1 to 3. The insulation must be watertight and made from a closed cell construction to comply with BS5422. Within a property, the pipe does not need insulation unless, it is located in an unheated area such as under suspended floors, in loft spaces, cellars, or in a garage.

Fitting a stop valve

Stop valves must be reg 4 compliant and BS1010 for screw-down valves and BS EN107401:2000 for lever valves. The stop valve must be fitted very near to the point where the pipe enters the building from the ducting. It must be fitted in an easily accessible location approximately 300mm above floor level for ease of operation, repair and replacement. A drain-off valve must be fitted directly above the stop valve and there must not be any joint fitted before the stop 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 from a shared supply 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.

Notification

Under Regulation 5 of the Water Supply (Water Fittings) Regulations 1999, you will be required to notify SES Water where a water system laid outside a building is either less than 750mm or more than 1350mm below finished ground level, for example due to structural reasons.

Where the minimum depth of 750mm cannot be achieved, approval from SES Water is required. The water fittings will need to be installed as deep as practicable below the finished ground level and adequately protected against damage from freezing, warming of the water and any other causes.

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Point of entry difficulty:

On any new development the duct at the point of entry all the way through to the floor level where the internal stop valve will be positioned, must be fitted during the foundation construction stage to eliminate any depth problems. In situations where a new water supply is required for an existing property there are occasions when it is structurally difficult to achieve the 750mm minimum depth. In these situations and with approval from SES Water, it is possible to fit the duct and pipe as deep as is practicable below the finished ground level at the point of entry and adequately insulate the pipe within the duct and from the first point in the trench where the pipe is classed as shallow near the building. This insulation must be fitted in accordance with extreme conditions under Clause R4.11 of the Water Regulations Guide. The insulation must be watertight and made from a closed cell construction to comply with BS5422. It must be noted that the ducting must be fitted from the front of the building (point of entry) all the way to the floor level where the stop valve will be located inside the dwelling. The pipe in the trench must still be laid to the minimum depth of 750mm up to the shallow point of entry area.

Pipework Diagrams

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.

If you require any advice please contact the Water Regulations Department at waterregulations@seswater.co.uk

If your pipework requires chlorination, please refer to the chlorination factsheet or contact DeveloperServices@seswater.co.uk

Diagram 1

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

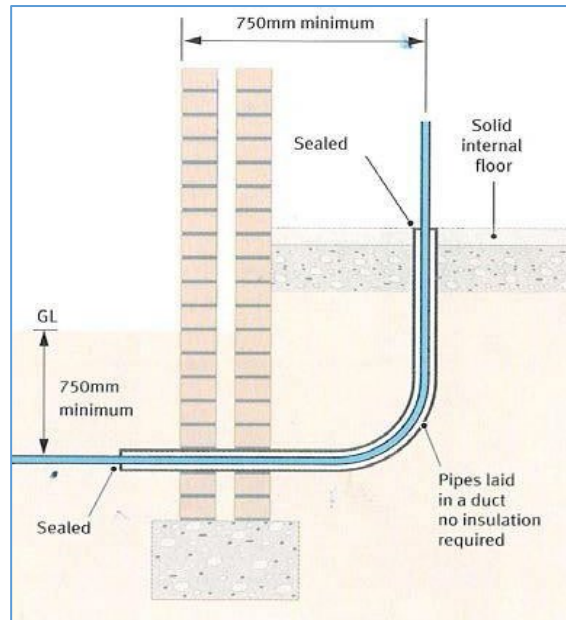


Diagram 2

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

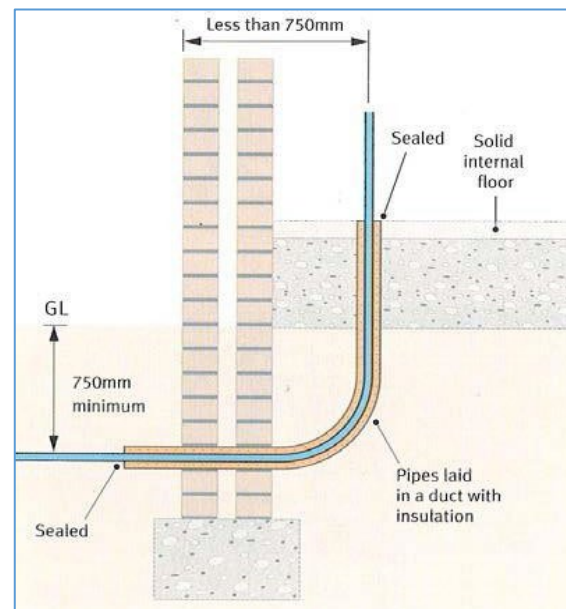


Diagram 3

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

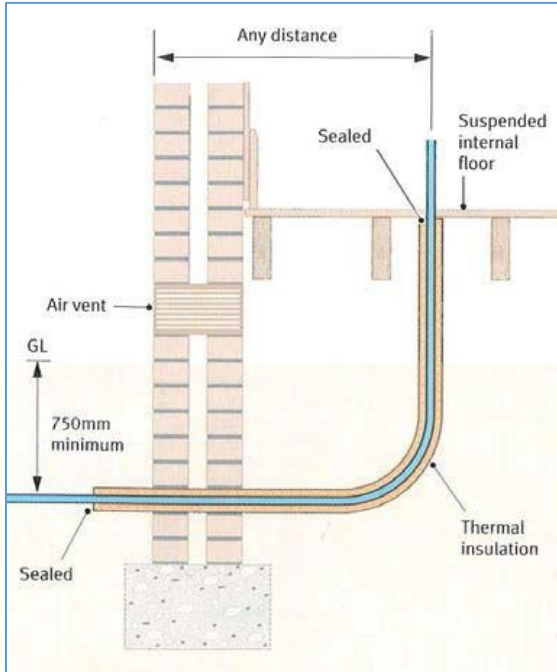


Diagram 4

Pipes laid over an underground obstruction.

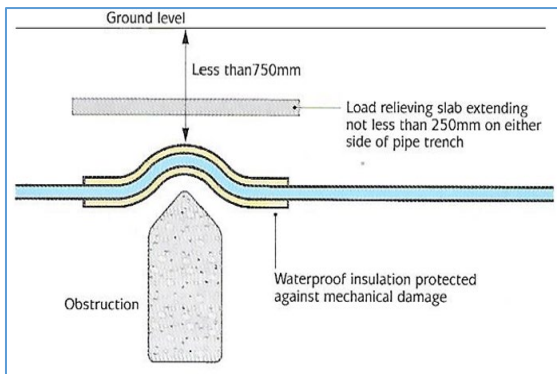


Diagram 5

Pipes laid under an underground obstruction.

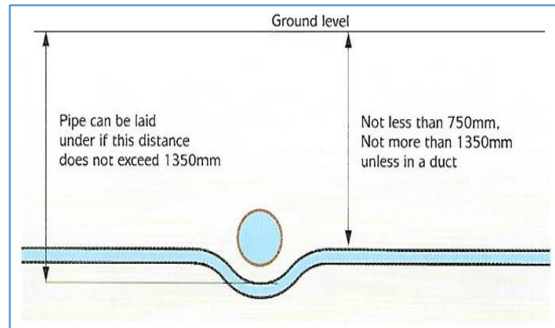
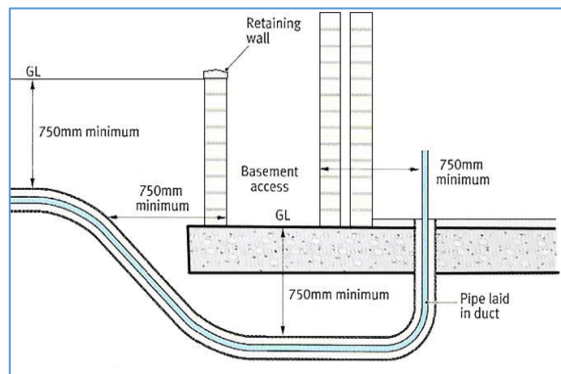


Diagram 6

Preferred method of supplying water to a building below street level.



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Diagram 7

Alternative method of supplying water to a building below street level.

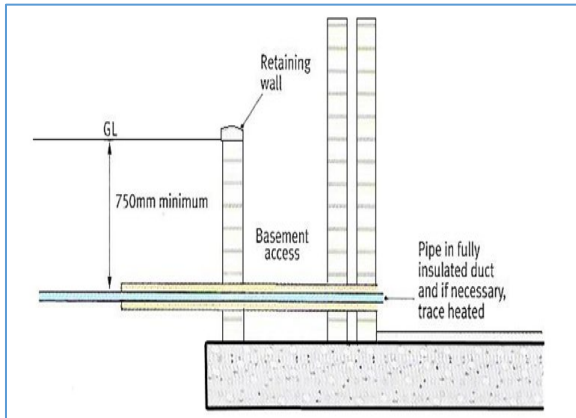


Diagram 9

Distance between utilities when installed underground.

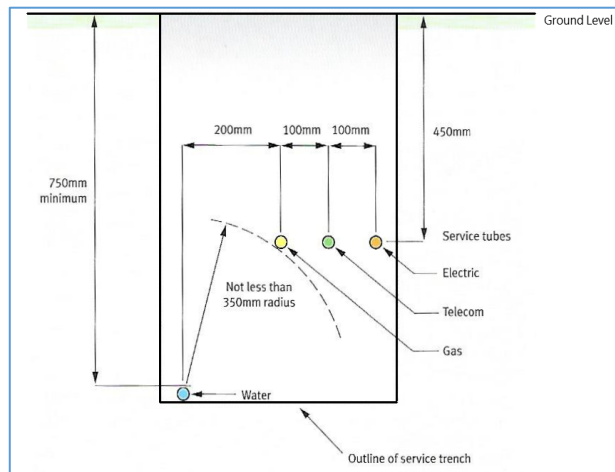
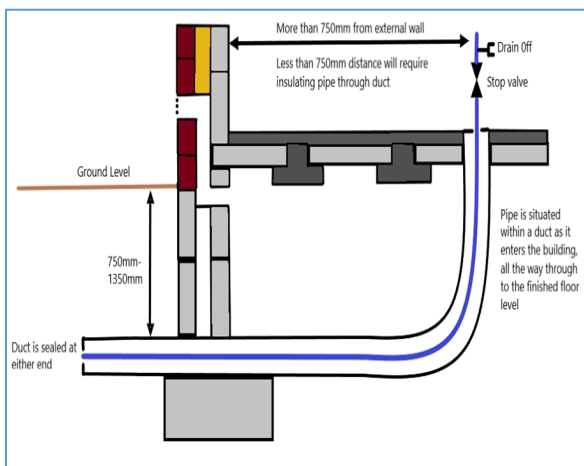


Diagram 8

Pipes laid through a block and beam type construction.



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