

Laying a New Supply Pipe

This fact sheet gives clear information for how to lay a new compliant water pipe. This information 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 doing the work to lay your new water 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 WIAPS Contractor:

The Water Regulations encourage suitably qualified installers to be accredited under the WIAPS Approved Contractor scheme. A WaterSafe Approved Contractor will provide a certificate stating that the work has been completed to comply with the Water Supply (Water Fittings) Regulations 1999, and they must also provide clear photographic evidence of all the work for SES Water approval. Just providing a WIAPS certificate will not be accepted. Approved contractors are registered at: www.watersafe.ork.uk.

Pipe inspection if the work is completed by a non-approved contractor:

An inspection will be required by a qualified SES Water Inspector for any work carried out by someone who is not an Approved Contractor. This may be a builder, customer, or somebody else. The trench must all be left open where possible for an inspection to be carried out. If any part of the trench requires back filling for safety reasons, then clear photographs are required for that section of trench. You must place a straight edge across the trench with depth measurement shown

against the straight edge in various places and provide a photo of that whole section of the trench.

The work must fully comply with the section 3 of the Water Supply (Water Fittings) Regulations 1999.

Example below of a clear depth photograph with tape and straight edge.



Pipe materials:

For normal ground conditions, blue MPDE 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.

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Prevention of contamination:

A water supply pipe must not be laid in, on or pass through any areas which will or are likely to cause contamination. This includes: inside foul soil pipes/pits, refuse areas, refuse chutes, ash pits, sewers, drains, cesspools, or foul drain 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 sized duct so that the pipe can be easily withdrawn and replaced. The ideal ducting size is 110mm twin walled (non-perforated) and we do not accept anything smaller than 65mm diameter. It is usually plastic but can be made from other materials if suitable. 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.

See our factsheet for Ducting and Capping for more detail.

On a new build development site, a 110mm duct must be installed as there is no reason why this size of duct cannot be installed. SES Water recommended that the ducting is laid before the foundations are completed to enable the new water pipe to be inserted inside the duct once the foundations are completed. This prevents issues with depth during the regulation's inspection.

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 and the ducting and cap terminate just above the finished floor level**. The internal stop valve will usually be located here. We do not want joints fitted before a stop valve. The stop valve must turn off all the water within the property.

Joints:

Joints or fittings cannot be fitted on any pipe inside a duct. It is always best practice to use one continuous length of pipe without any joints when laying a new water supply pipe which often means purchasing long coils of pipe. If it is necessary to use a joint on the new water supply pipe in the trench due to a long distance, then we strongly recommend using electro fusion joints rather than compression fittings. A large chamber and lid must be fitted over any joint for leak detection purposes and ease of repair. Any joints should be of an approved material and not solvent based. It is often better practice to use a stop-cock rather than a compression coupling.

Example of an accessible chamber and lid fitted over joints.



Unless you have used an Approved Contractor, you must notify our developer services team and arrange for an inspection. 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.

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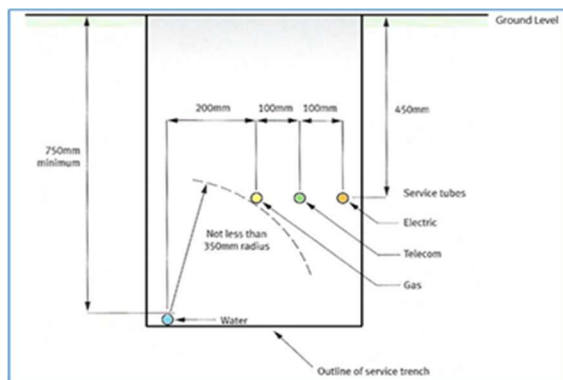
Sealing the ducting:

The duct requires sealing at both ends to prevent the ingress from liquids, vermin, and gases. A tight-fitting cap with the pipe hole drilled out for the correct pipe diameter must be used to give the required tight seal. Do not use any oil-based sealant, expanding foam, or any other sealant. It is recommended to use a 'blank cap end' (made from plastic or rubber) with a purpose-made hole drilled out to allow the water pipe to pass through. **See our factsheet for Ducting and Capping for more detail.**

Trenches:

The water pipe should be laid at depth of 750mm (minimum) up to 1350mm (maximum) and measured to the crown of the pipe. Trenches should be lined and backfilled with sand or soft fine fill earth around the pipe. The trench should be wide enough for the pipework to maintain a minimum distance of 350mm away from other services such as gas or electricity.

See diagram below showing distance between utilities when installed underground.



services team when the pipework and trench is all complete so we can arrange for an inspection of the work. The trench should not be backfilled until the inspection has been completed.

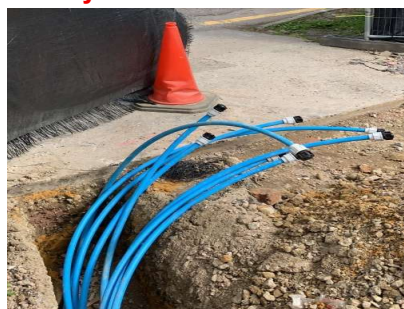


Example above showing depth markers and below showing new water pipes with sand backfill and water marker tape.



Leave around 1m length of excess MDPE pipe that is sealed off at the end of the pipe by the boundary of the property to prevent contaminants from entering the pipe. The pipe must be protected at the boundary to prevent any damage before it is ready for the connection to be made to our water main.

Example of how pipes sealed off and left at the boundary. Multiple pipes MUST be correctly labelled for the relevant plot.



For further information contact the Developer Services team at

SES Water, London Road, Redhill RH1 1LJ

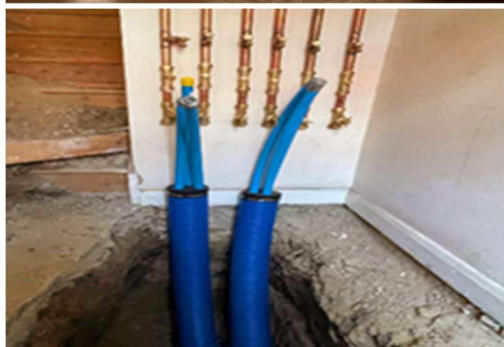
Tel 01737 772000, visit www.seswater.co.uk or email DeveloperServices@seswater.co.uk

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Laying multiple supplies to multiple occupancy dwellings:

Where there are multiple supplies being laid into a common area of a multiple occupancy building, each supply will need to be labelled at the boundary for the relevant property. The pipes will need to either be ducted in individually into the dwelling or fitted inside larger ducts with various holes drilled out of the ducting caps. See photo examples below:

Example below of multiple supply pipes in larger ducting entering a common area.



Example shown below with multiple pipes inside 110mm ducting. Each cap has individual holes drilled out for each pipe.



Example below shows each stop valve clearly labelled inside a common area accessible cupboard. They must be and clearly marked for the correct flat/apartment number.



Examples below showing individually ducted supplies into multiple occupancy dwellings and multiple supplies inside larger ducts.



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Insulation inside the duct:

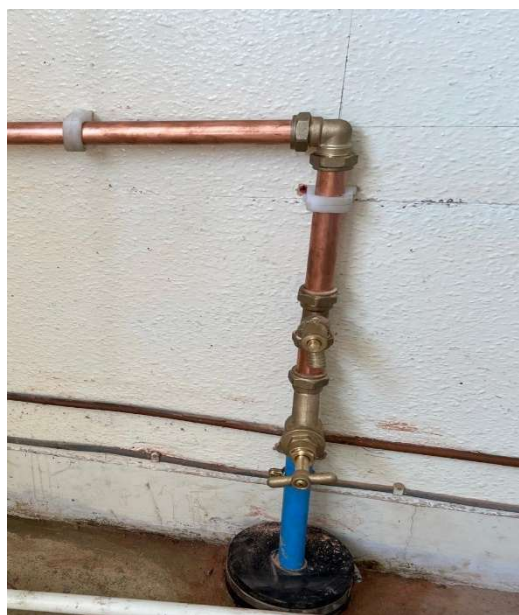
Where a pipe enters a building inside a duct it will need to be insulated inside the duct depending on different scenarios – see Diagrams 1 to 3. The insulation must be watertight and made from a closed cell construction to comply with BS5422. Within a property, the pipe does not need insulation unless,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

See our factsheet for Insulation, Ducting and Capping for more detail.

Fitting an approved stop valve:

Valves should be of a suitable approved standard – 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 easily located in accessible position for operation and maintenance, fitted at least 300mm above floor level and have a drain-off valve fitted above the valve.

Example below showing an approved stop valve and drain off arrangement.



Removing old pipework:

If you are replacing an old water pipe or coming off an existing shared supply pipe, it is imperative that any old branches or tee pieces that used to supply your property are disconnected to remove any dead legs after the new supply has been connected. This is a requirement of the Water Regulations. It is illegal to leave such disused sections of pipe in place as the stagnant water could contaminate other water supplies in the area.

Chlorination:

Service pipes 25mm, 32mm and 50mm in diameter where the distance is longer than 50m will require chlorination. Where the supply pipe is of diameter 63mm when it is longer than 10m in length. All pipe diameters above regardless of distance. **Please refer to our Chlorination Factsheet.**

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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SES Water, London Road, Redhill RH1 1LJ

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Point of entry difficulty:

On any new development the duct at the point of entry all the way through to just above the finished internal floor level where the internal stop valve will be located, should be fitted during the foundation construction stage to eliminate any depth problems. There are situations where a new water supply is to be relayed for an existing property and occasions when it is structurally difficult to achieve the 750mm minimum depth. In situations where the minimum 750mm depth cannot be achieved, you should contact SES Water for advice. It is possible to install 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. The ducting must be installed from the bottom of the trench at 750mm depth and rise towards the top of the foundation where it is classified as shallow towards the building. The insulation thickness around the pipe within the duct 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.

See our factsheet for Ducting and Capping for more detail.

Examples below of adequately lagged pipe inside ducting that has been correctly extended away from the foundations until it is 750mm minimum depth for full protection.



Pipework Diagrams:

Diagram 1 - Vertical pipe in duct greater than 750mm from external face of wall.

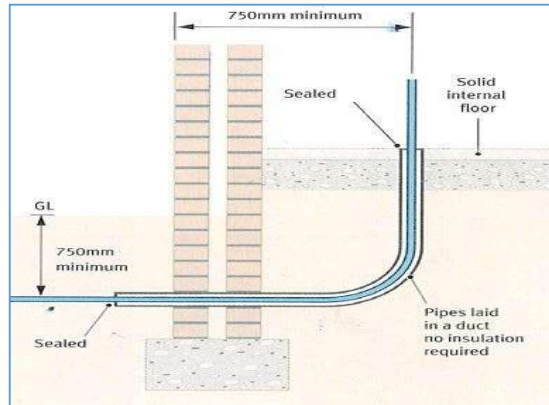


Diagram 2 - Vertical pipe in duct less than 750mm from external face of wall.

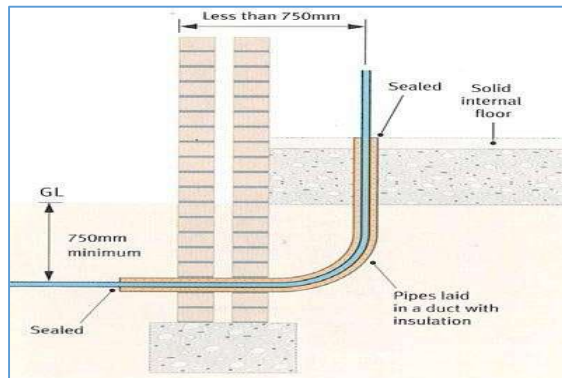
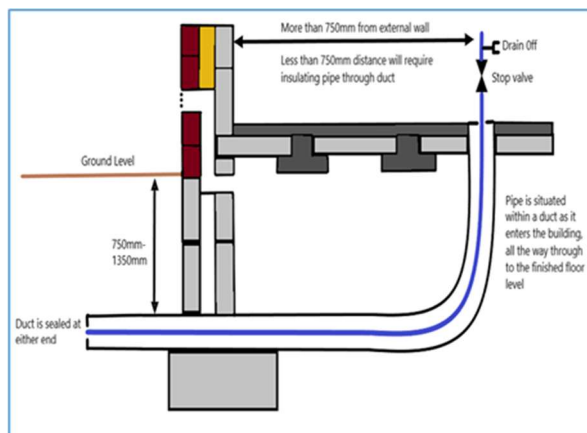


Diagram 3 - Pipes laid through a block and beam type construction.





The diagram illustrates a cross-section of a building's internal floor system. A vertical riser pipe, shown with horizontal segments, passes through a floor slab. It is labeled 'Any distance' at the top. The pipe is surrounded by 'Thermal insulation' and has an 'Air vent' near the top. The floor is a 'Suspended internal floor'. The pipe is 'Sealed' at the top and bottom. A horizontal pipe runs along the bottom, with a 'Sealed' joint and a '750mm minimum' height requirement. The ground level is marked 'GL'.

Diagram illustrating a trench crossing an obstruction (e.g., a foundation or wall). The trench is covered by a load relieving slab extending not less than 250mm on either side of the pipe trench. The ground level is indicated, and the slab thickness is noted as less than 750mm. The obstruction is shown below the trench, and the waterproof insulation is protected against mechanical damage.

Diagram illustrating the minimum clearance between a retaining wall and a basement access. The ground level (GL) is indicated. The retaining wall is shown with a basement access. The minimum clearance between the GL and the top of the retaining wall is 750mm. The pipe is shown in a fully insulated duct, and if necessary, it is trace heated.

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

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water

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