Lead in drinking water

Water Health Partnership for Wales

There are strict regulations(1) governing the maximum amount of lead allowed in drinking water. The existing limit for lead in drinking water in the UK is 10 microgrammes per litre (that is 10 parts per billion). Water leaving water treatment works will contain little, if any lead.

Where lead is found in tap water, it usually comes from old lead pipework connecting the property to the water supply or in the internal plumbing of the property. Up to the 1970s, lead was a widely used material for making water pipes and tanks and so can still be found in properties built before 1970 that have not been fully modernised.

Lead may also be present in water if lead solder has been used for jointing copper pipes in internal plumbing. The use of lead solder on drinking water plumbing has been illegal since 1988. If it is found that lead solder has been used illegally the water company will require the person responsible to remove all affected pipework which can be extremely expensive.

We hope that the following information will answer some of the questions you may have about lead and water.

Who is responsible for the pipework to my house?

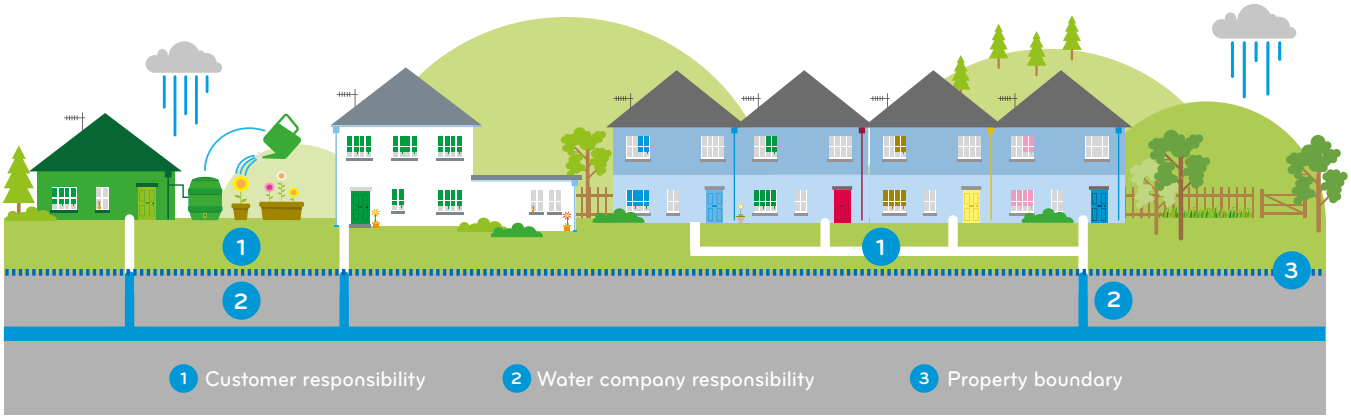
If your water is supplied by a water company a small diameter service pipe will connect your home to the water main in the road. The section of the service pipe from the water main to the boundary of your property is known as the communication pipe and is the responsibility of the water company.

There will be a stop tap on this pipe in a chamber near the boundary of your property, if you have a water meter this may also be in this chamber.

The section of pipework that leads from this stop tap into your property is known as the supply pipe and is the responsibility of the property owner. If you rent your home the supply pipe and internal plumbing are the landlord's responsibility (unless your rental agreement states differently).

For some older properties, especially terraced houses, a common supply pipe provides water to several houses from a single connection to the water main (as shown in the picture below). In this case the property owners have joint responsibility for the supply pipe.

For properties served by a **private water supply** the property owner is usually responsible for all the pipework from the supply point (2) to the tap.



(1) The Water Supply (Water Quality) Regulations 2018
(2) The supply point is either at the source e.g. a borehole or if you don't own the source, the point where it is agreed that responsibility for the pipework is transferred from the owner of the source to the property owner.

How do I know if I've got lead pipes in my house?

If your house was built before 1970 and it has not been modernised since it is possible that it may have lead pipes. If you are unsure, you can make a few simple checks:

- Find where the water pipe runs into your property; this is normally at the internal stop tap which is usually under the kitchen sink.
- Check along as much of its length as possible.
- Unpainted lead pipes are dull grey in colour and soft.
- If you gently scrape the surface with a knife, you will see a shiny, silver, coloured metal beneath.
- Lead pipes often have swollen joints.

How do I know if I've got lead solder in my house?

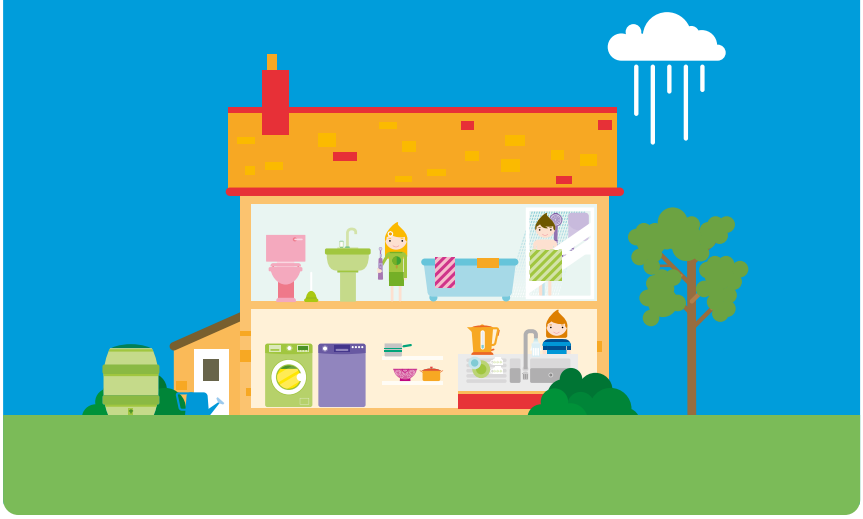
It is impossible to tell the difference between lead solder and non-leaded solder on pipework joints just by looking at it. The only way it can be done is to carry out a specialised test on the solder.

If you are concerned you can contact your water company and they will visit your property and carry out a test.

Prevention is best, always use a reputable plumber and check that they are using non-leaded solder on your water system.

But the only way to be absolutely sure that lead levels in your water are eliminated completely is to replace any lead pipes in your property with copper or plastic pipes that are approved for use with drinking water and by making sure that you or your plumber uses lead-free solder.

If you decide to replace the lead pipework to your property, please contact your water company who will ensure that the section of the service pipe that is their responsibility (communication pipe) is replaced if it is found to be lead.



What can I do to reduce levels of lead in my tap water?

If you are concerned about the lead pipes or lead solder, you may wish to have your water tested for lead content. Please contact your water company if you have a mains water supply, or your local authority if you have a private water supply. Some water companies, for example Dŵr Cymru Welsh Water, offer free lead tests to customers on request.

If you do find lead pipes in your property it is possible to reduce lead levels in the short term by following some simple precautions before using the water for drinking or cooking.

- Don't drink or cook with water that has been standing in pipes for a few hours such as overnight or if the house has been empty for the day. Run water from the cold tap used for drinking water until a washing up bowlful of water is collected. This should be enough to clear around 40m of pipe so if your house is more than 40m from the street then you may need to run the water for a little longer. This water need not be wasted, for example you could collect it for watering your plants.
- Always use water from the cold water tap for drinking water or cooking. Hot water dissolves lead more quickly than cold water and is therefore more likely to contain greater amounts of lead. If hot water is needed for drinking water or cooking, water should be drawn from the cold water tap and heated. Use only thoroughly flushed water from the cold water tap for drinking and when making baby milk formula.

What are the health effects?

The health effects associated with exposure to lead are well known and understood. Lead is a harmful toxic heavy metal; its toxicity most frequently results from ingestion or inhalation. Exposures to high levels of lead can have adverse effects on human health.

Short-term exposures to high levels of lead can cause a metallic taste in the mouth and symptoms of abdominal pain, sickness, loss of appetite, low blood pressure, kidney and liver damage.

Longer-term exposures can cause headaches, irritability, tiredness, muscle fatigue and can damage a child's developing brain. Pregnant women and young children are more sensitive to lead than adults.

Lead is a cumulative toxin meaning that concentrations of lead within the body, especially the teeth and bones, can build up over time. It is therefore sensible to ensure that exposures to lead are kept to a minimum.

If you are concerned about the health impacts associated with lead exposure and would like further advice, residents in Wales should contact your local Public Health Wales Health Protection Team.

Contact details can be found on the following website: **phw.nhs.wales**

Residents in Hereford and the Chester area should contact: **gov.uk/government/organisations/ public-health-england**.

What are water companies doing?

Water companies have spent considerable sums of money to install additional treatment at water treatment works to help minimise the amount of lead dissolving into water from lead pipes at customers' properties.

— They take thousands of samples of water at customers' taps to test for lead. Only a few fail the lead standard due to the condition or length of the lead pipe or the presence of lead solder.

— They are working with health professionals and local authorities to raise awareness of lead pipes with their customers.

— They offer lead testing of tap water to customers on request.

Where can I get more advice about lead?

Further information about lead can be found by:

— Visiting the website of your water supplier.

— Contacting your water supplier or local authority.

— Visiting the Drinking Water Inspectorate website at **dwi.gov.uk**

— Visiting the Water Regs UK website **waterregsuk.co.uk** for advice on the use of acceptable solders and fluxes and approved pipe materials.

— Visiting Public Health Wales **phw.nhs.wales**

— Residents in Hereford and the Chester area should contact: **gov.uk/government/ organisations/ public-health-england**