



**Lead in
drinking water.**

Lead in drinking water.

We've been working to eliminate the risk of lead in drinking water for many years, but it's a significant challenge. We estimate that around half of the pipes that connect individual properties to our network of mains are made from lead. This is approximately 1.24 million pipes, and it's even more complicated because the pipework is made up of two parts: the communication pipe which is our responsibility; and the supply pipe which is the responsibility of the property owner.

Background.

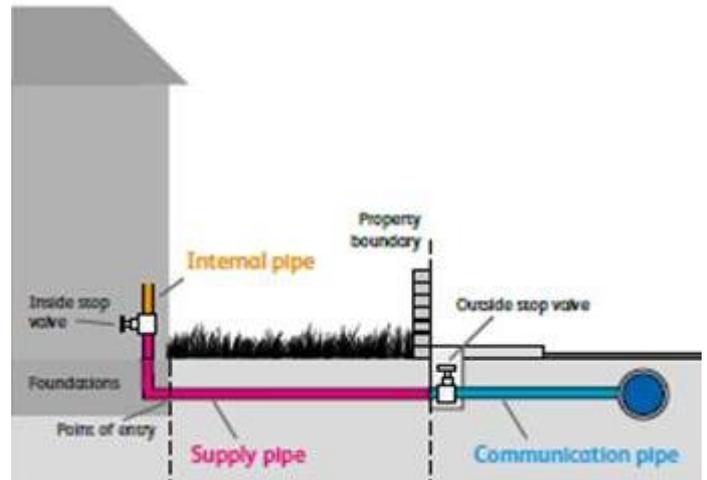
We supply drinking water to more than 9 million customers across London and the Thames Valley, and we aim to provide best-in-class customer service. The long-term interests of the communities we serve are central to our work, and protecting public health is at the very heart of this. Everything we do must be responsible and deliver sustainable solutions at an affordable cost for our customers.

There's a wealth of evidence that lead affects people's wellbeing, so it's been removed from many day-to-day products like petrol and paint. In drinking water systems, installing lead pipework was banned in 1970, and lead solder was banned in the following decade.

Lead pipework isn't used in our network of mains, but before 1970 it may have been used to connect individual properties to that network. If drinking water is allowed to stand in contact with lead pipework for a period of time (for example, overnight), lead may dissolve into the water.

We've been working hard over many years to mitigate the potential risk to public health from the presence of lead pipework, and the possibility of lead in drinking water.

- We're working to eliminate the risk of lead in drinking water.
- The number of samples above the current drinking water standard has fallen from 10% in 2001 to less than 1.5% in 2017.



Arrangement of pipework, made up of two parts

Protecting public health.

The government has set the maximum level of lead in drinking water as 10 micrograms per litre (10 parts per billion). This standard is based on advice from the World Health Organisation and is used across Europe.

We've introduced specific initiatives and programmes, agreed with our customers and approved by our regulators, which have been highly successful, significantly reducing the levels of lead in drinking water. The number of samples above the 10 micrograms per litre standard has fallen from 10% in 2001 to less than 1.5% in 2017.

Reducing lead levels.

We know there's still more to do to achieve our objective of completely removing the risk of lead in drinking water. This will require a long-term approach to ensure the best outcome for public health, our customers, and future generations.

To reduce lead levels further, we're working on a number of initiatives which we'll explain on the next page. These include:

- Using specific water treatment processes to reduce lead risk
- A substantial proactive programme of lead communication pipe replacement
- A programme targeted at primary schools and nurseries in London and Thames Valley
- Communicating with our customers and stakeholders

Using specific water treatment processes to reduce lead risk.

Since 2003, we've been adding very low levels of phosphate to the drinking water we supply, which has the beneficial effect of reducing the risk of lead dissolving from pipework. Phosphate produces a protective layer on the inside of the pipe which prevents water coming into contact with the lead. More than 90% of the drinking water we provide is now treated in this way.

A substantial proactive programme of lead communication pipe replacement.

For a number of years, we've operated a risk based programme, targeting lead pipe replacement in areas of our network where our monitoring has shown the highest levels of lead. When we find lead pipes as part of any other mains renewal programmes, we remove them then, too. By 2020, we'll have replaced at least 36,500 lead communication pipes.

A programme targeted at primary schools and nurseries in London and Thames Valley.

We recognise that primary-aged children are particularly vulnerable to lead because of its effect on neural development – so we've been actively targeting primary schools in London to see if they have lead pipework. When they do, we replace our lead communication pipes, and work with the local authority to ensure replacement of any lead supply pipes. . We'll be investigating around 1,800 primary schools and nurseries in London by 2020, before moving this programme into our Thames Valley region.



Examples of lead pipework.

Communicating with our customers and stakeholders.

Our customers have a part to play in reducing the amount of lead that gets into drinking water from pipes they own, so raising awareness of the possible risks of lead pipework is another important part of our work. We've been doing this in a number of ways:

1. Offering public health information about the potential risk from lead pipes
2. Giving advice on recognising and checking for lead pipework in a property
3. Providing guidance on who is responsible for the pipework at a property
4. Establishment of a scheme where customers can request free replacement of their lead communication pipe if sampling confirms an issue
5. Maintaining a list of approved plumbers who can replace lead supply pipes and internal pipework
6. Engaging with householders in areas where we're delivering a programme of lead communication pipe replacement. If we find a lead supply pipe, we inform the householder, and provide health advice and information about replacing the pipe

We're also working with our colleagues in the local authorities, Public Health England, Regulators and DEFRA to raise awareness of the risk of lead in general. Clearly, removing lead communications pipes won't eliminate the risk of lead in drinking water completely. So we'll continue to explore what else we can do to encourage replacement of lead supply pipes, to find the best solution for our customers. Options may include:

- Transferring responsibility for all supply pipes to water companies
- Providing grants to property owners for replacing their pipework
- Requiring all lead pipework to be removed before a property is put on the market, or leased to new tenants
- Devising innovative new technical and funding approaches to improve the range of solutions we can offer our customers

Our holistic approach.

We believe that all these elements of our approach, when they're taken together, will provide clear public health protection benefits for our customers, as well as all the future generations who will live in our region.

