



## ePipe – Lead Service Pipe Lining System

### Brief description

In the UK a significant number of properties are supplied using a lead service pipe. Lead is a cumulative poison that affects the nervous system and children are particularly vulnerable as it affects both their physical and intellectual development. Lead service pipes are the main contributor of dissolved lead in drinking water and on average about 75 – 80% of the lengths of those pipes are located on the private side and owned by the customer. Best endeavours in the battle against lead have historically been through plumbo-solvency control at the treatment source plus relatively small amounts of company side pipe replacement. The challenge now is to find new innovative techniques to meet the new standard for lead in drinking water that came into effect on 25<sup>th</sup> December 2013 (from 25µg/l to 10µg/l). The ePipe system is a new patented process that has been developed in the UK by Pipe Restoration Services (PRS) that involves applying an epoxy resin barrier coating on the inside surface of the pipe thereby preventing water from coming into contact with the lead.

### Benefits

Approval was gained to undertake a trial with PRS in the Lydney area of Stroud where high lead levels had previously been recorded at several properties during routine water quality sampling. Lead service pipes were lined using the ePipe system at sixty properties earlier this year and the comparison of pre- and post- sampling has indicated that the system is effective at significantly reducing lead levels at customer taps to well below the new 10µg/l standard. The results of the trial were presented to the New Products Group in August and the system was approved for use in STW as a water pipe renovation technique. The ePipe system is essentially a 'low dig' renovation process and as such uses minimum excavation to gain access and to line the existing underground pipes. It therefore saves time, causes

minimum disruption to both customers and highway users alike and significantly reduces surface reinstatement costs. The system comes into its own when the whole length of the lead service pipe is lined between the water main in the street and the first customer internal tap as the water/lead interface is totally eliminated. In addition to resolving water quality problems the system is also capable of sealing small pin-holes in copper service pipes thereby reducing leakage and property damage. In fact the ePipe system was originally developed in the US to prevent water damage caused by escaping water from internal copper plumbing in areas where the drinking water supply is particularly aggressive thus avoiding expensive insurance claims.



### Details

The ePipe system has Regulation 31 and WRAS approval. PRS can be contacted using the following link:

<http://www.piperestorationservices.co.uk/contact>



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