



Case study
ESEAL

Seals in savings, cuts disruption

We are always looking for innovative ways of replacing mains efficiently and in the least disruptive way possible.

One of the latest is ESEAL (Enhanced Stub End Abandonment Live), initially developed by specialist contractor Steve Vick International with Northern Gas Networks (NGN) in an NIA-funded project (NIA_NGN_088).



Approach

We're always keen to learn and seek out opportunities to build on past projects other networks have completed. So, we worked with Northern Gas Networks to understand their business case, before partnering with Steve Vick International, where we staged 16 trials of the technique to evaluate its effectiveness for our network and customers.

We found ESEAL to be an efficient alternative as it remotely seals the stub end under live gas conditions. It involves opening a small access excavation away from the main road or junction where the stub end is usually located. Engineers use CCTV inside the main to remotely insert an inflatable bag into the section being abandoned, then pump in expanding foam, turning the bag into a gas-safe plug. More foam is added to fill the rest of the pipe and completely seal the stub end.



FACT FILE

- ESEALs done since being launched: 21.
- Cost avoided: Almost £60k total, and approx. £3k average per job
- Speed/time needed vs conventional excavation: ESEAL has saved more than 60 days of customer disruption – and also the same number of days of traffic management avoided.



Need

Current mains replacement methods often leave behind a one-metre section, known as the stub end, where it joins the parent supply. To fully remove – or abandon – the stub end, we dig a long trench so it can be taken out.

This type of work means disruption for our customers and local road users. With the connection between the mains often under a major highway or junction, extensive traffic management is needed during the work.



OUR ENGINEERS AT WORK



Benefits

ESEAL is a valuable addition to our operational toolbox. It not only saves time and avoids cost compared with our previous method, it is also much less disruptive. As the remote technique can be carried out up to 60 metres from the stub end, it reduces the need for traffic management. It is also safer for engineers as they are not working in a high-risk location.