



## A Heavily Corroded Challenge

PLCS received a call from the Network regarding a heavily corroded fitting and weld located on a main at their gas works. Not only did the main supply thousands of properties in the local area but the actual fittings were within close proximity to the neighbouring main, making this an awkward and hazardous challenge.



To repair the escape and combat the corrosion, PLCS Technical Manager, Mark Perry, Director Darren Billington and Team Leader Ross Fairley, set about making templates so that a metal mould could be fabricated to encapsulate the fitting.

The team proposed an initial installation of a metal shroud with a foot plate similar in construction to our top box repair mould. Incorporated into the design of this mould was a vent tube assembly with a valve.

Due to the level of corrosion it was decided to avoid hand or blast cleaning the fitting thus avoiding any contact with the corroded weld and fitting. The shroud was carefully lowered over the fitting and bonded in place with our top box adhesive. The valve of the vent tube assembly was left open to prevent the build-up of pressure in the shroud whilst the adhesive cured.

The templates were measured and cut out to allow the design and manufacture of a secondary repair shell which would be installed in a more conventional method over the top of the shroud and filled with our encapsulate.



On day 3, the team returned to site. The shroud was applied, and the foot plate was fitted into place using metal bands, adhesive and encapsulate, ensuring that the heavily corroded fitting was secure.

Once cured, the team were then free to safely and conventionally repair the gas escape by placing the second shell over the foot plate. This was part filled and left to cure.

To complete the job, the second shell was filled, and counter pressure was applied to permanently seal the gas escape.

\*\*\*\*\*