CASE STUDY:
netrix™ and water pumping

The Coal Authority currently operates a number of mine water treatment schemes in order to remediate existing discharges and prevent new discharges from coal mine workings. This programme prevents 2,900 tons of iron discharging into the nation's water courses and has improved 120 kilometers of water course and prevented new discharges into approximately 200 kilometers of water courses

TCA have a widely dispersed and growing set of sites that they actively manage to ensure compliance with Environment Agency requirements

Gas-powered GE Jenbacher engines located at Maltby Colliery.

After consultation with **TCA,** their requirements were to initially focus on monitoring the amount of energy usage from each site, and providing an automated alerting system to better inform the different site operators of problems on site, so as to reduce the risk of penalty awards from the EA.

Finding a method to then optimize this process and better manage site operations all was considered to be the second stage of the project

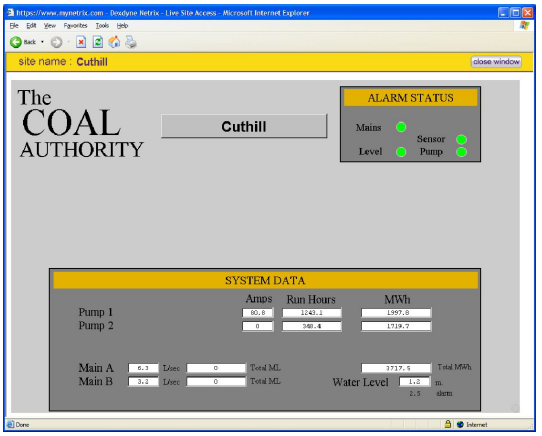
Energy usage on site is very important as this represents a large part of the operational cost. The installed system that was being used was simplistically programmed to start the pumps when the water levels reached an upper limit, and stop pumping when a lower limit was reached.

This was happening regardless of the time of day (and so charge rate), or pump capacity/inflow rate (so not actively mitigating the risk of discharge).

Helping to gather information on site power usage, and the pumping operation was specified as the first stage in optimizing the process.

With each site having a different build standard and configuration, **netrix** quickly showed its abilities in being able to adapt to each site as required.

Dexdyne's engineers worked with each of the system integrators to spec out the required signals for new sites, and worked with site contractors to interface **netrix** with existing installed equipment on existing sites



Web application designed for The Coal Authority giving real-time data and alarm details

Alerts were configured to send SMS messages to multiple handsets on various alarm conditions to appropriate staff when site process parameters strayed outside of operational norms.

With units being rolled out in stages to all sites, TCA can now determine the cost effectiveness of their pumping operation.