

CASE HISTORY

Application: **Mining Shaft Surveys**

Technology: **Temperature Conductivity, Water Sampler, CCTV**

Location: **Wharncliffe and various across the UK**

Robertson Geo Services were engaged to survey a number of disused coal mining shafts for The Coal Authority.

The Coal Authority is an executive non-departmental public body of the United Kingdom government which licenses coal mining and owns, on behalf of the country, most of the coal in Britain. The authority is also tasked with managing the effects of historical coal mining including dealing with mine water pollution and other mining legacy issues.

Requirement:

The objectives of the survey were to conduct a video survey of the whole shaft, making a definitive record of the structural condition of the shaft and to collect data and water samples to assess water quality and temperature.

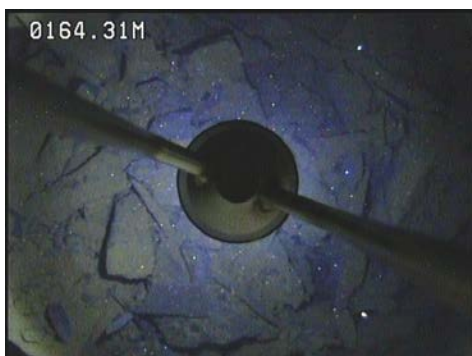


Operation:



The logging vehicle used was a customised van with a boom arrangement for deploying the probes. This provided great flexibility when setting up over the shafts where access was limited.

The CCTV camera used for the surveys had both downward and side looking capability which enabled details of specific areas of interest to be carefully examined and recorded. Of particular interest is the bottom shaft depth, as over time structural failures can cause blockages. Images of the shaft walls, adits and other features such as pipework and equipment remaining in the shaft were also recorded.



Temperature and conductivity profiles were recorded to assist with identification of flows within the shaft and sealed water samples were collected, using the Fluid Sampler probe, from prescribed depths for detailed laboratory analysis.

Challenges and Solutions:

Limited access to shafts – Van and boom arrangement provided options.
Possible presence of gas – The Coal Authority monitored gas levels prior to logging.

End Value to Client:

Presented with video images of the structural condition of the shafts, temperature conductivity profiles and water samples for analysis, the Coal Authority was better able to make informed decisions regarding the future of the shafts.