CASE STUDY **RESERVOIR RENOVATION**

INSTRUMENTATION UPGRADE

START DATE
February 2018

Instrumentation is vital for monitoring reservoir levels which supply potable water to local areas, which was the case when we were appointed to replace instrumentation within an enclosed reservoir.

SERVICES
3D CAD modelling
Instrumentation upgrade
Cabling
Mechanical civils work

CONTRACT LENGTH
6 Weeks

CONTRACT VALUE
£30,000

The level monitors at this particular site provide start and stop signals to the local boreholes that supply the reservoir as well as providing low level cut-off points for both the potable pumps and fire pumps.

OBJECTIVES

Having worked with this client for a number of years, we were instructed to evaluate current instrumentation monitoring at the reservoir and provide a solution for optimum efficiency.

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SURVEY

Steve Stone, director of Detectronic MEICA conducted a survey of the reservoir's instrumentation which revealed that 12 instruments had deteriorated and would need to be replaced to prevent any aluminium oxide finding its way into the reservoir.

> "It is essential that each of the instruments operates at its optimum efficiency to deliver reliable data and feedback"

The clients reservoir team subsequently instructed us to design, install and commission a brand new reservoir level monitoring system and integrate it within the existing control system for the site.

IMPLEMENTATION

The first element of the project was to deliver a design package incorporating single-line diagrams, termination drawings, cable layout & reservoir level drawings and panel schematics for the instrumentation refurbishment. We then delivered 3D CAD models of each of the stainless steel access hatches. Following approval, we removed existing instrumentation and installed new cabling, containment and junction boxes.

As part of the installation and commissioning of the new level instrumentation, we made changes to both panel hardware and software, manufacturing and installing new stainless steel access hatches and laying extensive cabling between the instruments, potable pump MCC and fire pump MCC.

We fit new stainless steel access hatches, which are a key component in this project from a health & safety perspective. The hatches are the only way into the reservoir that is a 4m drop below each hatch. They house the ultrasonic transmitter and pressure transducer both of which facilitate the level monitoring. It is imperative that this instrumentation can be accessed easily but safely and that nothing can ingress the reservoir from these points.

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