LLYN CELYN
RESERVOIR

Project Overview

Glenfield Invicta was awarded a contract to deliver valve maintenance & actuator upgrades at Llyn Celyn Reservoir. The scope of works included actuator and gearbox replacements, valve servicing and painting, and the relocation of selected actuator and gearbox assemblies to above-ground locations. A total of 11 valves were addressed across the site, including assets within the reservoir tunnel. Llyn Celyn Reservoir is operated by Dŵr Cymru, with all project deliverables managed by JN Bentley.

Reservoir Tunnel BEFORE

Reservoir Tunnel AFTER

Reservoir Tunnel AFTER

Specific Requirements

During the initial surveys, it was identified that the valves were coated with lead-based paint, increasing the risk associated with cleaning the surfaces back to bare metal. To mitigate these risks, enhanced control measures were implemented, including the use of increased levels of RPE and PPE, along with local extraction via vacuum systems. These measures enabled the works to be carried out safely while achieving the required outcomes.

Glenfield Invicta
Delivering Project Solutions

In addition, a proportion of the works were undertaken within confined spaces, which introduced further risk. All personnel involved were appropriately confined space trained and operated in full compliance with safety procedures, ensuring that health and safety remained the highest priority throughout the project.

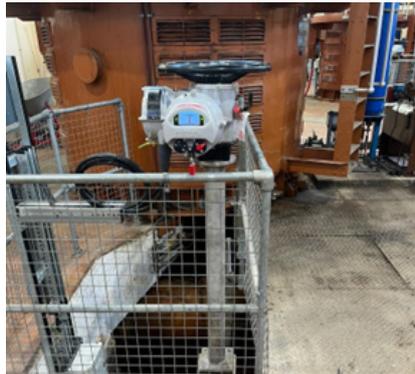Reservoir Tunnel Valve

Regulator Valve BEFORE/AFTER

Tasks

Four actuators had previously been installed within a small, confined space inside the turbine housing, requiring entry into the confined space for routine maintenance activities and electrical isolation. To eliminate this requirement, Glenfield Invicta relocated all actuators outside of the chamber by installing new shafting, pedestals, and support brackets, designed by our in-house engineering team.

Turbine House BEFORE

Turbine House AFTER