

## PROJECT CRITICAL ASSET REPAIRS



Earlier in the year, we began carrying out repairs to a failing reservoir which showed signs of severe water ingress. The original scope included 180 linear meters of crack repairs. However, following an inspection, this increased to more than 300.

Due to the ongoing Covid-19 lockdown, and several weeks of particularly warm weather, the demand for water had risen. The client requested that the asset was returned to service as soon as possible, as the reservoir was crucial for maintaining water supply in the surrounding area.

Given the increased amount of work and the critical requirement to put the reservoir back into service, we worked in collaboration with the product suppliers to change our working methods and reduce inactivity during curing periods. The works were still completed in accordance with the Drinking Water Inspectorates (DWI) 'Instructions for use' documents, however, it was accepted that the complete application would not be as neat as initially planned.

Works began with the removal of the existing repairs and bandage from the walls. During this stage, the teams also completed external repairs to the base of each upstand.

The cracks were then broken out to the required depth, and a fast-setting cement compound was used to plug areas showing heavy ingress. Three coats of a cementitious slurry were then applied to each wall, followed by a three-day misting period. Finally, a fast setting cement was applied to the cracks for a smooth, watertight finish. Taking an innovative approach, crystalline growth surface repair products were applied to promote crack healing and prevent future water ingress.

Thanks to our site teams who worked additional hours – while observing social distancing and other precautionary measures - we were able to put the asset back into service four weeks earlier than the original programme.

The delivery of this scheme is a fantastic example of how a severely failing asset can be repaired, removing the requirement to build a new 'high carbon' alternative, without compromising water quality. As we look to a net-zero carbon future, we must think differently about the existing asset base across the water sector and the need to maximise our asset capacity and availability, while minimising our carbon impact in the process.