



Companies within the Stonbury Group were enlisted to provide a chemical clean and baffle curtain modifications within a treated water reservoir to reduce the potential presence of bacteria and remove dead spots within the tank.

Stonbury Ltd, acting as principal contractor, completed baffle curtain modifications whilst Panton McLeod undertook a chemical clean within a service reservoir in northern England. The teams worked together to manage health, safety and efficiency to deliver the improvements within a four-week programme.

Repeat bacteriological test failures with detections of coliforms from the treatment works and reservoir led our client to investigate further with areas of improvements identified. Computer fluid dynamics (CFD) modelling of water flow within the tank highlighted several dead spots around the baffle curtains.

In the past, the tank had only been cleaned with jetting and chlorine solutions. Therefore, we recommended Panton McLeod's specialist chemical clean, offering a collaborative solution to deep clean the tank and, at the same time, eliminate dead spots and improve flow dynamics.

The chemical clean effectively removes biofouling and heavier staining that may facilitate bacterial growth on porous concrete surfaces. In addition, the chemical is tested to BS EN standards 1276 and 14476, which means it is an effective bactericide and virucide, including against chlorine-resistant microorganisms, like cryptosporidium.

Due to the critical nature of the tank, extensive planning was undertaken to ensure minimal disruption to services. For time efficiency, we divided the tank into sections and while Panton McLeod's team completed the clean, Stonbury's team undertook the baffle modifications. Weekly progress meetings and Stonbury's prior knowledge of the asset ensured that timescales were met smoothly.

To improve water transfer within the tank, Stonbury's team created slots in both baffle curtains as per an agreed drawing informed by the CFD analysis. A DWI-approved green Flagon baffle curtain strip was installed around each cut-out to strengthen the areas before stainless steel reinforcements were installed. Removing dead spots had the additional benefit of reducing the potential for trihalomethanes (THMs), which can form when natural organic matter, typically present at higher concentrations in stagnant water, reacts with chlorine.

This project highlights the benefits of collaboration between two specialist teams to deliver a highly effective and efficient solution for our client.