

MAINTENANCE REFURBISHMENT NEW BUILD

PROJECT ABANDONED RESERVIOR CONVERSION



Stonbury was contracted to repurpose a redundant 1950s-built raw water reservoir into a potable water service reservoir after increased demand called for urgent new capacity. Significant works were required in a short space of time to upgrade the roof, pipework, and internal surfaces to convert the reservoir for clean water use.

After works had commenced to clean the tank, seal 60 air vents, demolish and replace upstands, waterproof the roof, and replace internal pipework, a number of challenges occurred. An inspection from the Drinking Water Inspectorate (DWI) stipulated that all internal surfaces were to be coated, including the roof soffit, columns, walls, and floor in the main and overflow chambers.

During coating operations, the teams identified ingress in the reservoir floor which was not previously recorded. This became evident when teams noticed the polymer admixture primer on the floor surface was not curing adequately. In addition, a global shortage of a preferred Masterseal 586 coating that occurred during the programme posed a risk of significant delay.

To respond to the constraints and ensure that the asset could be brought into service on time, we deployed a series of specially trained teams to work 24 hours, seven days per week, and handovers were managed carefully by site supervisors to ensure consistency in work flow, safety and quality.

To seal the tank, the decision was made to overband the entire floor, wall joint perimeter and all floor joints. Throughout the night, this area was taken back to concrete and cross hatched and pull-off tested. Approximately 600 metres of overbanding was applied over two to three days.

To avoid delaying coating until Masterseal 586 was available, the roof soffit was double-coated using Masterseal 581 and Stonbury's expertise ensured another suitable drinking-water safe product, Flexicrete 851, was sought for the remaining internal surfaces consisting of the columns, walls, and floor.

The reservoir was kept at a consistent 15 degrees for a curing time of seven days, before data logger information was downloaded as a record of compliance with the manufacturer's Instructions for Use (IFU), along with other quality assurance records that form part of the Stonbury quality, testing and inspection plan (QTIP).

The newly restored asset was passed back to the client, who expressed their gratitude to the teams for their work in successfully adapting processes to overcome obstacles and delivering the project under a challenging deadline. This project is an excellent example of the potential to refurbish existing assets, significantly reducing both cost and carbon footprint.