PROJECT RESERVOIR ROOF REFURBISHMENT








Working for a client on an individual tender, Stonbury replaced a roof membrane and all upstands and hatches on a reservoir in the Southeast England.

The remit was to apply a Premseal sheet membrane to the reservoir roof. In addition, Stonbury removed the existing defected bitumen-based membrane and designed and built upstands to fit the spec of new techno-covers, aligning the asset to modern standards.

Removing the reservoir from service during the summer months was not feasible, therefore the refurbishment was scheduled within a 19-week window between November and May. The dedication and ingenuity of the site team ensures the project continues to run to programme.

Overburden was first removed by hand, as specified on the tender, before a structural engineer was consulted to ascertain weight-bearing capability of the roof. This enabled the use of specialist machinery to continue to expose the concrete tank, remove the existing coatings and prepare the roof for the new membrane.

Continuous rainy weather poses a challenge as the bonded membrane requires a dry surface on which to adhere.

To avoid delay, the team is employing wet-vacs, gas burners and a Bowdry roller sponge during dry periods to hasten the removal of surface water, drying and laying one area at a time and applying mastic immediately afterwards to ensure it remains watertight.

A gazebo was used to protect the working area during the re-building of all seven upstands. These works involved breaking away existing upstands and installing steel reinforcements, MEICA alarm elements, shuttering and concrete, followed by waterproof coatings and reinforcement strips.

During the project, Stonbury arranged 3D scanning to investigate puddling on the roof and prevent future issues. This showed that the existing drainage pipe wasn't sufficient to drain surface water, so a design has been drawn up for new drainage to be installed after the completion of the membrane.

To accelerate the programme, the team continues on a rota which includes out-of-hours and weekend working. To ensure the asset is returned to service as soon as possible, Stonbury has planned to reinstate the overburden once the asset is live.