



As part of a large multi impounding reservoir spillways programme, Stonbury was contracted to complete works to a historic spillway and head wall as part of both safety and maintenance requirements.

An impounding reservoir in the north of England required attention in several areas to enable inspection to take place and ensure it complies with the minimum standards set by the S10 inspection. Works included clearance of vegetation within the spillway, repairs to stonework, surface water drainage installation and removal of overburden and uprisings from the upstream stone face of the reservoir and wave wall structure.

To be able to assess the full extent of the works the teams initially cleared large vegetation from around the spillway with machinery - including trees, bushes, and overgrowth - before using high-pressure water jetting to clean and wash vegetation from within the spillway.

To protect the watercourse downstream of the spillway, straw bales and silt curtains were installed at the bottom end of the spillway to catch debris and filter water to prevent contamination. Once the spillway was cleaned, a full inspection with the client's reservoir engineer was carried out and the team completed extensive repairs to damaged stonework along the spillway channel and steps.

The ground surrounding the spillway was also waterlogged due to previous land drainage issues causing a concern from

hydrostatic pressure on the spillway walls. Stonbury was tasked to address this as part of the programme. Once the team had agreed a design with the client engineer, a trench was excavated along the entire southwest length of the spillway and a french drain was installed. The trench was then filled with stone until flush with the surrounding area. The drainage works showed immediate improvements to the ground conditions and this was evident within the flows of water from the outlet culvert.

To address sedimentation and overburden on the upstream face of the dam, temporary bog mats were installed to initiate safe access along the dam crest and machinery was used to remove most of the overburden. Potential damage to the stonework was minimised by installing a rubber tip to the excavator bucket and the last 50-100mm was removed manually. Once this was completed, repairs were made to underlying blocks that were damaged using an environmentally friendly, fast setting mortar.

Stonbury also carried out extensive tree and vegetation removal along the spillway and dam perimeter so that the reservoir was left in a state to allow the client to easily and safely complete S10 inspections in the future.

The project was extremely successful, and the team received positive feedback from the client throughout.