



A county council contracted Stonbury, to carry out a package of repair works to dams and watercourse at various locations. The repairs were required due to deterioration of the masonry, erosion, tree root damage and water ingress.

At the first site, a CCTV survey of the drainage system was required to allow the client to consider future repair works. Root mass was identified in one of the pipes, and a report was submitted to the client.

The team also dug trial pit holes in various locations behind the surrounding concrete and masonry perimeter wall. The trials were conducted to determine the integrity of the structure, which showed signs of movement. Several voids were identified along with water erosion and overgrown tree roots. This information was also presented to the client.

The second location required repairs to a porous dam wall that was allowing water through the masonry work. Following an inspection of the outlet structure - which highlighted several defects - the team also replaced some of the existing support steelwork. The new steel beams were coated with a two-part oxide primer, followed by a water sealant topcoat.

Once the area was drained down, a sand and cement mortar was used to re-point the wall and repair cracks and voids within the brickwork. Imported clay was puddled into a trench behind the wall to form a waterproof barrier and prevent further leaks.

Two further locations required repairs to the stone walls along the river, which showed varying degrees of collapse and were

failing to retain the embankments adequately. One of the walls was rebuilt to the same height, utilising as much of the original stone as possible. However, due to the downwards and rotational movement identified in the second wall, the installation of a gabion basket retaining wall was required.

Excavators were used to dig a trench along the rear of the wall, and a concrete foundation base was poured for stability. Gabion baskets were then fitted into place, filled with stone and the top and face of the baskets were compacted with clay and soil. Once the rebuild of both walls was complete, the bank areas were re-profiled, topsoiled and seeded.

At the final location, a section of riverbank had eroded over time and required the installation of another gabion basket retaining wall. The team were required to hand-dig a trench suitable for the gabion baskets to be fixed into place and again, poured a concrete foundation for stability.

Working under *Environment Agency Flood Risk Activity* permits, each site required the installation of a portable dam to impolder the working areas and create a dry working zone. The teams also carried out the works in accordance with the *Environment Agency Safety Health Environment and Welfare Code of Practice*, which included the use of bio-oils, plant nappies and drip trays. On completion of the works, each site was jointly inspected with the client prior to sign-off.