

EA Cheltenham - Flood Alleviation Scheme

The major culvert that takes the River Chelt underneath the Cheltenham shopping Centre had severe issues with its structural integrity and capacity being inadequate. To try and remediate this from the surface would be too expensive therefore we developed a design for a new foundation running longitudinally along the culvert constructed at a lower invert. We then reinforced the arch with structural mesh and sprayed concrete. Photos taken at key stages can be seen below.



← The existing culvert was no longer capable of sustaining the loads being subjected to it and an immediate repair solution was required.

Investigation works were undertaken to determine the condition of the culvert. Trial holes were undertaken to determine the safe ground bearing foundation loads.



Upon completion of the initial survey, hit and miss edge beam boxes were installed within the culvert to form the strength for the new arch.

Upon completion of the new foundation installation, structural mesh was pinned to the culvert and the sprayed concrete was applied throughout the length of the culvert.



The floor slab was then poured between the two edge beams to ensure that the newly reinforced culvert was completely structurally sound. This project was completed on time and within budget and was completed without accident or incident.