

PARAPET STRENGTHENING WITH PARATEC

CASE HISTORY - INCLINED PLANE BRIDGE, COALPORT



Spanning the river Severn at Coalport in Shropshire, the Inclined Plane bridge is a registered ancient monument and as such, any alteration to its appearance is unacceptable. The Archtec method of bridge reinforcement was chosen to increase the load bearing capacity of the structure, and a need was also recognised to strengthen its parapet walls.

A solution was achieved by the installation of Cintec 16mm studding anchors, of between 1.5 and 3 metres in length. These were designed with two individually inflated socks and were installed vertically at 1 metre intervals through the parapet walls and into the barrel of the arch. The lower (arch barrel) sock was then inflated and left to cure. The second sock was then inflated and placed under a tension of 10kN by using a tensioning plate. The grout was then cured and the tensioning plate removed.

Finally the sandstone parapet coping stones were replaced and two missing stones reproduced. The solution provided the necessary increase in wall strength without having any visible change to its appearance.

