

Precast Bridge Deck Construction and Pier Head Strengthening

Stratton Street Railway Bridge, Biggleswade

Client

Central Bedfordshire Council

Contractor

Osborne

Works Commenced

March 2016

The Stratton Street Bridge carries Biggleswade High Street over the East Coast Main Line. The deck had life-expired but the substructures could be retained with some strengthening.

Freyssinet won the initial package on the contract to strengthen the pier heads in five Saturday night possessions. This entailed coring horizontally into the end of the pier head beams, either three or five number 40mm diameter holes, 3m long. Stainless steel bars of 32mm diameter were inserted into each hole and bonded with Hilti HIT RE 500 resin. The end pocket was then made good with Resapol RBS Repair Mortar Cold Cure. There were 32 such bars to insert over eight locations.

Whilst on site, Freyssinet successfully negotiated two further packages associated with constructing the new deck - installation of the precast deck units and installation of the precast parapets.

The 13m wide deck consisted of two side spans of 5m length and a central span of 9m. Each side span consisted of four units with seven units making up the central span. After Osborne had demolished the old deck, Freyssinet landed the new deck panels on shims and mortar and constructed the insitu stitches over a series of Saturday night possessions.

This process was continued for the 16 precast "L" shaped parapet units which were lifted in by crane and stabilised with push-pull props prior to the insitu stitch being concreted.



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