

Tollbar Emergency works phase 1

Client: Bachy Soletanch & Galliford Try

Location: Tollbar Island

Designer: BSP



Summary...

The scheme was required to carry out remedial works on some CFA piles installed by the client, the piles failed due to concrete separation during installation. ATL had the solution of carrying out a heading along the existing line of piles to expose them at the location of the concrete fault. Following this the concrete in the piles was removed using hydro-demolition. ATL then shuttered the cages and re-poured the concrete to make the piles good. All the work was carried out from a 3m caisson shaft sunk by ATL to a depth of 13m.

Challenges and Solutions...

The heading dimensions were 1.2m internal width and 2.5m internal height, this meant the project needed a particular robust heading design.

A solution was reached by utilizing 150mm x 100mm steel frames bolted together to form the frame sets. C24 150mm x 50mm timbers were used for all other shoring works.

The borehole information was given at time of tender and showed mainly clays and mudstone. Ground water was present but was easily dealt with using a 3" high lift pump and discharged to an agreed outfall.

On completion of the piles being exposed along the full 25m length of the heading a specialist hydro-demolition company was employed to remove the faulty concrete and expose the cages of the piles.

Following numerous design issues, finally a shuttering design was agreed by all parties and this was constructed by ATL specialist carpenters.

On completion of this concrete was placed behind the shutter using a concrete pump. ATL managed to complete phase 1 of the scheme to enable new bridge decks to be tied into the top of the piles.

The client was extremely pleased with ATL solutions to minimize down time/ costs, whilst still working safely at all times.

A Note from the client:

Tollbar End wasn't an easy Job for you to manage and construct and thanks must go out to all your guys who made the job happen without injury or incident. They're mustard, and has been said by many who passed comment.