

Five Arch bridge, Aldershot

Location

London

Contractor

Dyer & Butler

Date

2013

Challenge

To provide safe access for bridge maintenance without interruption to bridge and rail traffic below

Solution

Suspended Cradles

Description

Bridge maintenance



A bespoke suspended access solution from Harsco Infrastructure is helping keep both road traffic on the bridge and rail traffic below the bridge on the move during a major bridge repair project in Hampshire. Harsco has designed and built a system which uses twin cradles suspended over the sides of the Church Lane East railway bridge in Aldershot. This provides safe and flexible access for refurbishment work.

Harsco's access solution is helping to renovate the five-arch, Victorian brick bridge that spans a main railway line to the south of Aldershot station.



"The client needed access to both elevations of the bridge for inspection and maintenance purposes, but minimising any disruption was a key requirement. A traditional scaffolding solution would have involved building up from the railway track below. Not only would this have disrupted the rail traffic, but it would have also added to both the costs and time required," explains Kevin King, Suspended access Manager.

Harsco's solution was to use a pair of 12m-long work cradles suspended from mobile headgear gantries, which were mounted on the road above. The cradles could be moved along the bridge as access to different areas was required.

The supporting headgear gantries were assembled on-site from aluminium roof jibs and other dedicated components. They were held in place by a sophisticated system of counterweights which eliminated the need for any mechanical fixing into the bridge itself, while also ensuring maximum levels of safety and stability. A pair of electronically-operated winches were used to control each cradle, which enabled them to move quickly and easily to give access to different parts of the bridge elevations.

"The cradles themselves have a modular design and this means we can assemble a cradle on-site and install it in just one day," adds Kevin. "The cradle lengths can be adjusted between 2 metres and 16 metres, and on this project each cradle can carry two people plus up to 300kg of equipment and materials. This makes them a very flexible solution that gives good, practical access to every part of the bridge facade."

Harsco was able to install the cradles from the top of the bridge, needing only to close one road lane and leave the other controlled by temporary traffic lights. This eliminated the need for access to the railway line below. The cradles were installed on one side of the bridge initially, and when work there is complete they will be transferred to the other.



We gave Harsco a brief to provide a reliable and modern access solution that would be simpler to install and use than a traditional scaffolding system. Harsco has taken on the challenge and provided our site operatives with an easy to use platform. This solution also avoided any disruption to rail traffic below and road traffic carried by the bridge.

Dave Gilding, Agent at Dyer & Butler