

CASE STUDY

WSP UK Ltd | Tees Viaduct Concrete Repairs and ICCP

Introduction

Tees Viaduct carries the main A19 trunk road north–south across the River Tees at Stockton on Tees. The structure comprises 54 spans supported by reinforced concreted cross-head piers. Major substructure refurbishment works are currently underway on 26 of the piers which had significant defects and deterioration. These works include concrete repairs and the installation of an Impressed Current Cathodic Protection (ICCP) to protect and extend the life of the piers.



Overview

WSP have been engaged by National Highways to monitor the progress of the works being undertaken by the A19 DBFO Concessionaires.

WSP's brief includes project management, technical support and provision of a site team to undertake construction technical assurance and other activities on behalf of National Highways (NH), and relating to the installation of ICCP and concrete repairs at Tees Viaduct.

Any concerns or unsafe working practices are reported to the DBFO Contractor and National Highways.



Challenges

- Interface with existing structure
- Hydro demolition - Noise/Debris/Exposure to hazardous materials
- Plant Machinery
- Working at Height
- Underfoot Conditions
- Weather / Tidal Challenges



"Keeping you safe and well is our number one priority"



Action Taken

Asbestos Refurbishment/Demolition Survey

During preparation for its site attendance role, WSP noted that the Asbestos Refurbishment/Demolition Survey provided by the DBFO contractor appeared to be limited in scope and vague regarding the detail of the survey. WSP had its specialist asbestos team review the survey report and a number of concerns regarding the survey and report were identified.

In particular:

- The extent of the survey scope.
- Caveated limitations.
- Areas from which samples were taken.
- Quality check signatures / references in the report.
- Whether inspection of ground level areas was undertaken.

Based on these concerns, our specialist concluded that the report was insufficient for the purpose of confirming whether or not asbestos was present at the areas which would be subject to intrusive works. Our asbestos procedures prohibit our employees attending site without the relevant surveys and reports being in place and we, therefore, were unable to attend site. Given WSP's non-contractual role on this project our concerns were passed to National Highways, as the asset owner, recommending that it raised these concerns with the DBFO contractor. This was communicated by National Highways to the DBFO contractor noting WSP's position that it considered works should not continue until appropriate surveys of the areas where work was planned had been completed and the absence of asbestos confirmed.



Contact:
Stuart Suttie
+44 13 1316 8287



Email:
Stuart.suttie@wsp.com

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General Site Activities

WSP inspectors attended a general project induction presented by AECOM (Principal Designer) and a site specific induction given by CRL (Principal Contractor). WSP staff are briefed on current activities on arrival at site and sign in with the responsible person on-site. WSP staff attending site have Full Site Safety Clearance in accordance with WSP H&S procedures.

All WSP staff are accompanied by a member of the site team and are escorted to each works location undergoing remedial works. The DBFO contractors staff indicate which piers are safe to approach. Access is not permitted to any areas during hydro demolition works.

Designated safe working routes are identified to reduce the amount of contact with plant and machinery. Equipment and material stores are also housed away from communal areas.

Many of the piers exceeded a height of 20m. To ensure safety and provide additional fall protection, fixed staircases and protective sheeting are installed to encapsulate the scaffold, provide fall protection and to contain arisings from hydrodemolition activities.

Areas of the site below the bridge structure are below the River Tees water table during high tides. Raised road and pathways have been installed and are regularly maintained to prevent staff and equipment from coming into contact with stagnant water.



Results

The DBFO contractor responded regarding its Asbestos Refurbishment/Demolition Survey report and addressing the specific concerns identified by WSP. The clarifications and the further information provided were deemed by our asbestos specialist to be satisfactory and in accordance with the regulations, and as such site attendance by WSP staff was permitted.

Through several simple and attentive safe working practices the undergoing repair works to the Tees Viaduct piers are progressing with no incidents to date.

The site and compound area are diligently managed with no obstructions.

Daily health and safety briefings are given to all members of the CRL team and annual induction refreshers are mandatory.