Case Study - Davies Street

PROTECTING A 120 METRE LONG VICTORIAN SEWER IN PREPARATION FOR CROSSRAIL GROUNDWORKS

PUSHING THE BOUNDARIES OF TRENCHLESS TECHNOLOGY

UKDN Waterflow overcame major installation challenges to protect the sewer from potential movement as a result of Crossrail tunnelling in Davies Street, London.

The team designed a custom-built flume to navigate a three-dimensional labyrinth of services, and unusually challenging conditions saw the first use of an inflation cage to install two large UV liners.

Two physical conditions made this project unusual and brought out the best in technical capability from the UKDN Waterflow team.

The first was an oversized four metre opening that allowed a lateral branch to flow into the egg-shaped sewer. To bridge the gap an innovative custom manufactured steel inflation cage forced the liner to maintain the egg shape.

The second was the difficulty of delivering the large liners into the sewer. The delivery shaft presented multiple services criss-crossing the shaft like dropped spaghetti. To slide the heavy liners through the maze of pipes a custom-built guide flume gently turned the liners and offset them to the sewer location.

UKSTT 2013 Award Winner Small Renovation

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UKDN WATERFLOW
TOTAL DRAINAGE SOLUTIONS

"The Davies Street works formed one of the largest sewer lining projects for Thames Water as part of Crossrail.

The project was a time sensitive, technically challenging job and the team at UKDN Waterflow came up with an innovative delivery solution that met that challenge"

Raj Kumar, Contracts Manager
Skanska

PROJECT MANAGEMENT

On time delivery - Clear targets from Crossrail for the minimisation of disruption and a strict 48-hour start-to-finish timeframe. Exceptional planning and on-site practises meant the job was delivered on time.

Cost control - A fixed cost was established at the outset and UKDN Waterflow delivered within this budget, with near zero wastage and no snagging problems.

Team working - Working closely with Skanska, Thames Water and Crossrail an hour-by-hour programme with key milestones was produced, agreed and implemented.

SPECIFICATIONS

Two UV liners within a 120 metre egg shaped sewer, bridging a 4 metre gap mid-way with an innovative custom manufactured steel inflation cage.

Custom built guide flume delivered UV liners to the sewer location through a maze of services.

32 engineers working around the clock, with the flow in the sewer halted for 20 hours.

Fifteen lateral connections re-instated after works completed.

ENVIRONMENTAL MANAGEMENT

Minimising disruption to the high-value businesses and residents in the immediate vicinity was a critical priority. A host of measures included noise and dust level monitoring, super-silenced generators and acoustic blankets, traffic marshalling, and maintenance of pedestrian access throughout the project.

THE RESULT

With minimal waste, no excavation, and short duration of works this solution showed UKDN Waterflow's ability to innovate and adapt to meet the client needs.

Total drainage solutions that keep Britain flowing

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