

Thames Tideway

Victoria Embankment, London

Thames Tideway is the new super sewer running through London to alleviate the pressure on the existing system.



The project

At Victoria Embankment, a new grout shaft is to be sunk into in the Thames prior to the tunnel boring works. This has led to the requirement for a real time monitoring system to provide the data for the localised movement on the River Wall.

The challenge

Working over the River Thames along a public walkway, adjacent to a cycle super highway and close to major tourist attractions. To install a real-time system which is water resistant and will be in situ for the remainder of the works sending data to the GEO-Instruments monitoring website QuickView allowing the site and project engineers to analyse the most up to date data.

The solution

Design, manufacture and installation of bespoke Hydrostatic Levelling Cells and Tiltmeters to provide accurate 3D data of the River Wall. The installation was carried out using a rope access abseiling team to install the cells over the wall with GEO-Instruments staff supervising the works.

Complex fibre optic arrays were installed in the existing adjacent sewers in order to monitor deformation and strain caused by the surface works. Whilst challenging to install, fibre optic solutions are well suited for use in an active sewer as they intrinsically safe and allow automatic data collection.

Project facts

Owner(s)

Thames Tideway

Keller business unit(s)

GEO-Instruments

Main contractor(s)

Ferrovial/Laing O'Rourke

Services

Software/web-based data presentation

Markets

Infrastructure Monitoring

Technologies

Hydrostatic levelling cells

Fibre optic sensors

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