

## Project Profile

### Thames Tideway Central Section - London UK

Maxwell GeoSystems provide MissionOS to Laing O'Rourke Ferrovial to manage instrumentation and tunnel process control in London's Super Sewer's most sensitive central section.



Image Courtesy of Thames Tideway

The UK Government is constructing a 25km tunnel under London's river that will prevent the tens of millions of tonnes of pollution that currently pollute the River Thames every year.

This GBP£4.2 billion investment is a necessary expansion of London's sewer network is due for completion in 2024, and is happening across 24 construction sites in London. These span from Acton in West London to Beckton in the East, and many are located on the river edge in the centre of the city.

The central section undertaken by Laing O'Rourke/Ferrovial is the most sensitive of all the sections passing the Houses of Parliament as well as beneath eight major bridges and a large number of cross Thames utilities such as sewers, power and rail.

LOR are relying on MissionOS to provide the platform for managing the large quantities of instrumentation data on the project and to link this through to the progress of the construction works. This is not so simple on this job, as the bridges, seawalls and adjacent utilities are all subject to tidal and seasonal movements. MissionOS provides the site staff with a variety of automated processes to evaluate when movements deviate from what might be considered normal. This data can be linked to TBM parameters and guide machine driving.

The infrastructure also has particular structural limitations which we are monitoring e.g. distortion, tilt, moment. LOR instrumentation managers design derived instruments in MissionOS to automate calculation to feedback to the production teams in minutes something which would have taken several hours previously.

The real time 3D interface also allows engineers to evaluate the spatial and directional relationships between many dimensions of data in near real time which aids better understanding and communication.



Image Courtesy of Thames Tideway

Sector	Tunnelling	Location	London, United Kingdom
Client	Laing O'Rourke/Ferrovial	Budget	USD\$5.3 Billion
Technical Summary	Instruments	2,500+	(30% in Real Time)
	TBM Drives	4	( Real Time Data Feeds)
	Shafts	11	
	Instrument Records	22 Million	(Increasing)
	Users	70	
Status	Ongoing	(Shafts complete, Tunnels started)	