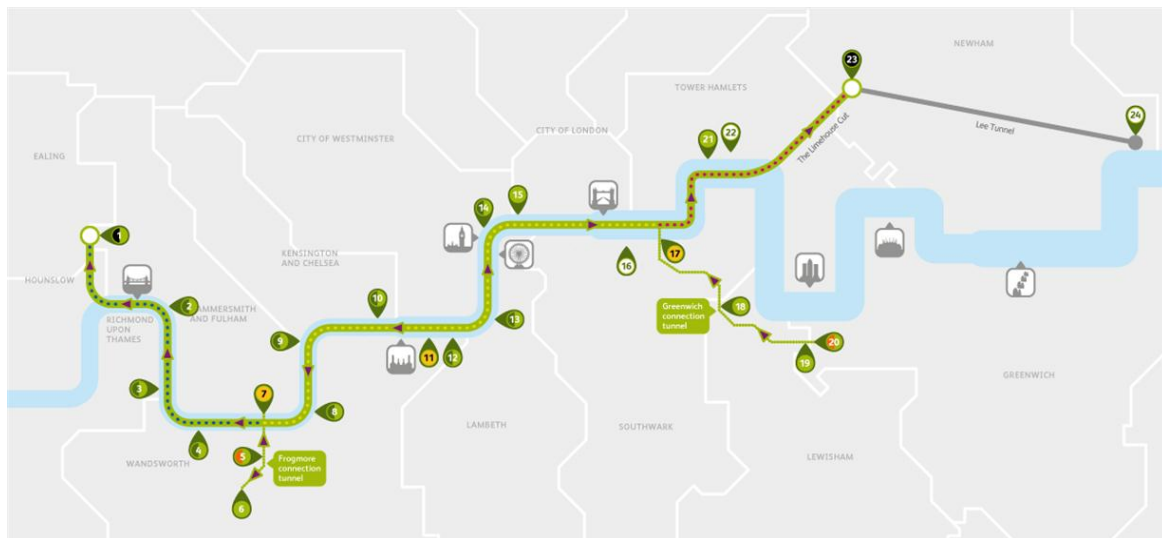


# Planning, designing and integrated operations to control Combined Sewer Overflows to the tidal Thames, London, United Kingdom.

David Crawford

The presentation will outline the many facets of the development of the Thames Tideway Tunnel (TTT) project (Figure 1), the final part of a programme to bring the London sewerage system into compliance of directives for both today and for at least the next 120 years. The main processes and topics for the planning, permitting, designing and procuring (both the financial mechanism to pay for the project and for construction) will be covered.

Figure 1: Thames Tideway Tunnel through central London: route and construction sites with connection to the Lee Tunnel



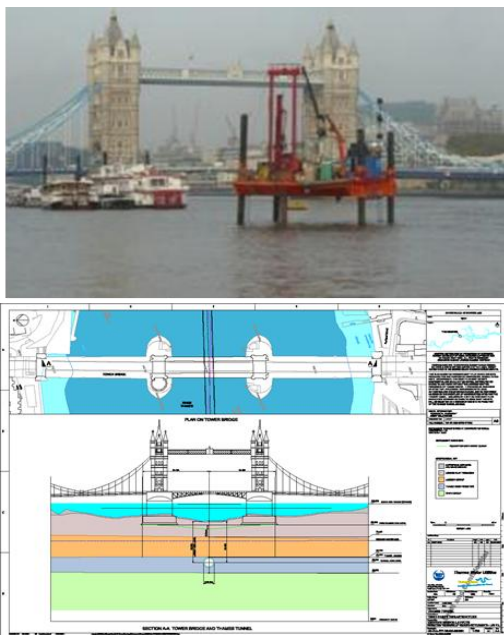
For each topic the paper will discuss the approach taken for the project and how the many challenges faced in gaining consents to build the scheme across central London (Figure 2) and designing such a complex hydraulic scheme (Figure 3) were successfully met: success is that now construction of the TTT is underway (Figure 4) with commissioning scheduled to start in 2022.

Our challenge is to build a new sewer for London, our vision is to reconnect London with the tidal River Thames.

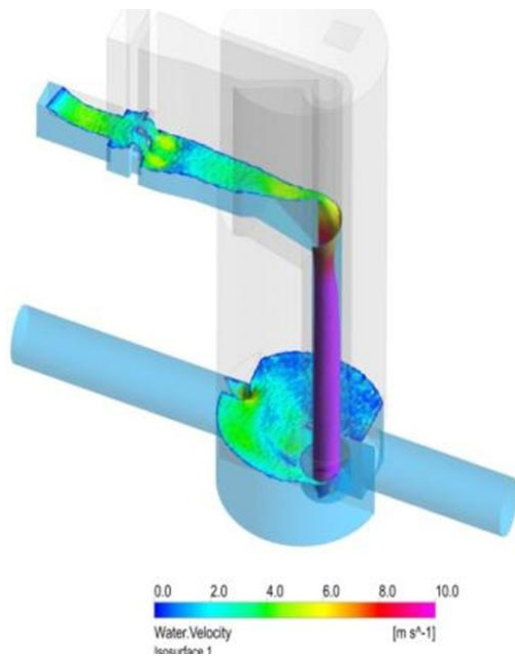
Figure 2: Planning hearings: submitted planning documents (>150,000 pages)



Figure 3: Challenges met: Geotechnical and hydraulic design



Example of geotechnical investigations and impacts (Tower Bridge)



Example of Computational Fluid Dynamic Modelling

Figure 4: Construction underway: Kirkling Street double drive construction site (August 2017)



