

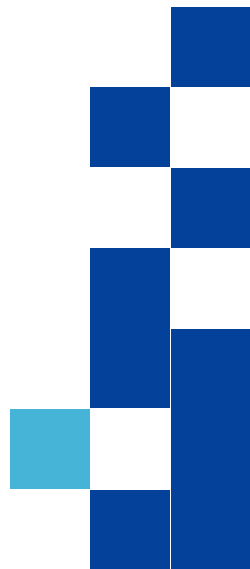


The Challenge of Congestion

Jerry England

Director, Water Operations

Thames Water





Perception vs Reality

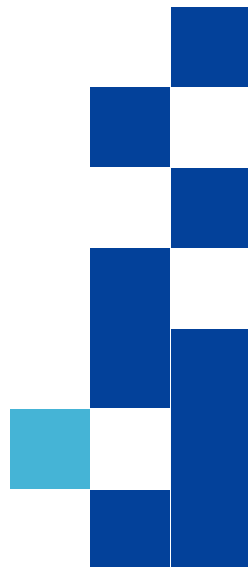
- Most traffic congestion is caused by Utility Streetworks
 - **Utilities' works only contribute to traffic congestion**
- Utilities spend far too long in the street
 - **Streetworks are very expensive, time is money**
- Utilities do not coordinate their activities
 - **Thames Water fully participate in coordination process**
- Utilities are not controlled
 - **Streetworks are heavily regulated**
- There are no dig solutions to all Streetworks
 - **No dig solutions are only suitable for a small proportion of work**



Scope of our Works



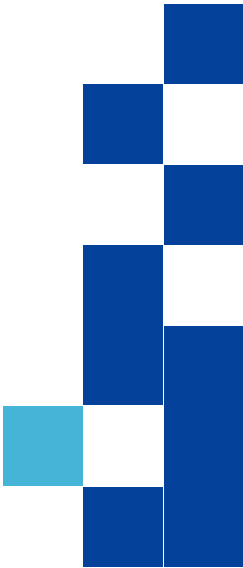
- Thames Water carry out 80,000 excavations in the street every year
- More than 95% short duration (average time 3.5 hours) typically...
 - Urgent works/minor works to repair burst mains and broken sewers
 - Customer driven works to provide new service connections and mains
- Major works
 - mains and sewer replacement and network growth
- Use no dig techniques where ever possible ... for example



London Water Ring Main



- Pumping Stations/Shafts
- Water Treatment Works
- The Thames Water Ring Main



Mains Rehabilitation Programme



- 5000 KM of Water Main Rehabilitated
- 95% completed with trenchless technologies
 - Epoxy resin lining
 - Pipe bursting
 - Directional drilling



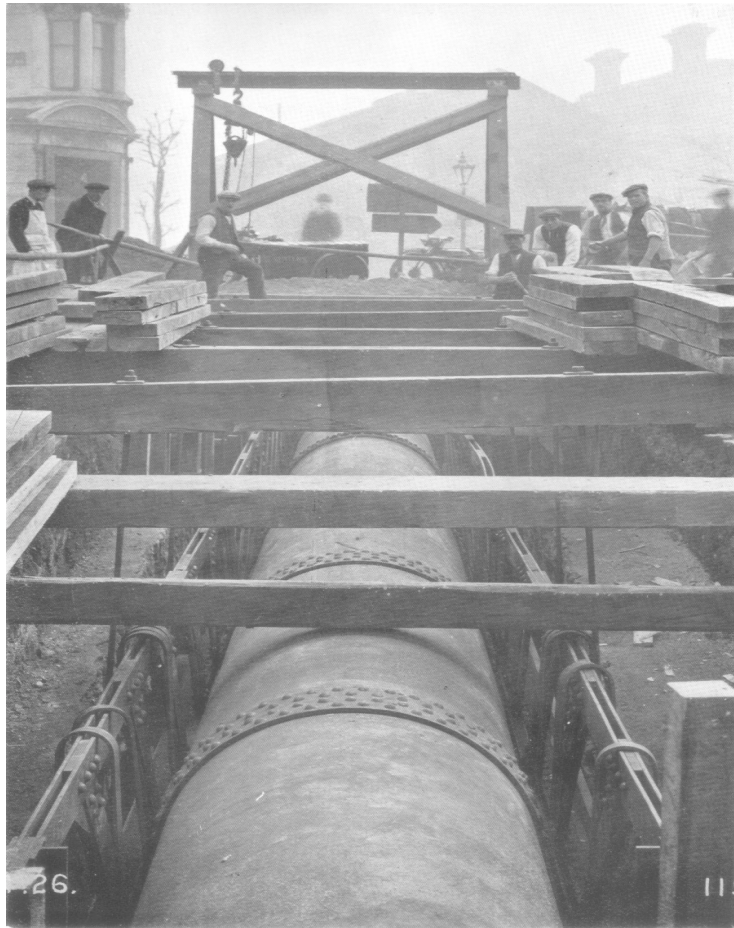
Lining Rig



Control Computer



The Need for More Mains Replacement



42-inch steel main, over Metropolitan Railway, Swiss Cottage.

- Large legacy water network (30,000km)
- Ageing pipes (50% > 100yrs old, 30% > 150 yrs old)
- 10 million joints
- Reported leakage around 30% of total into supply 
- London provides complex challenges:- ground conditions, traffic, age, customer lifestyle.....





Thames Water and Transco trench sharing



Network Upgrade Techniques, Bethnal Green



Insertion



Open Cut



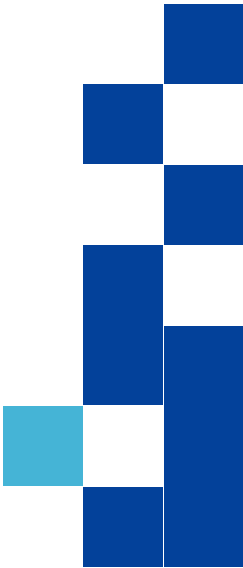
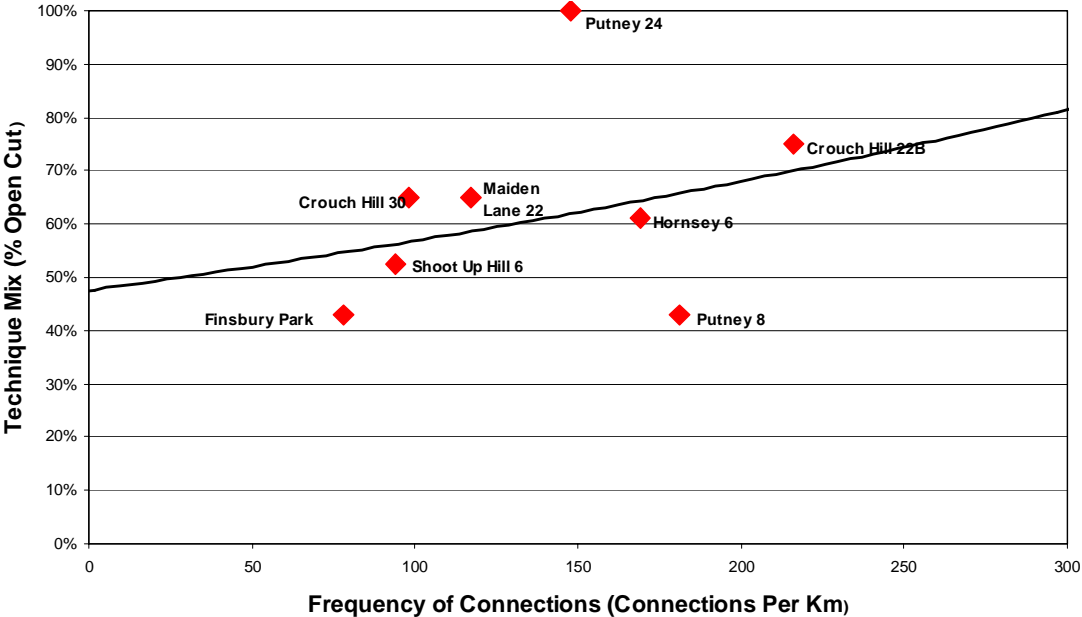
Directional Drilling



Congestion of Services



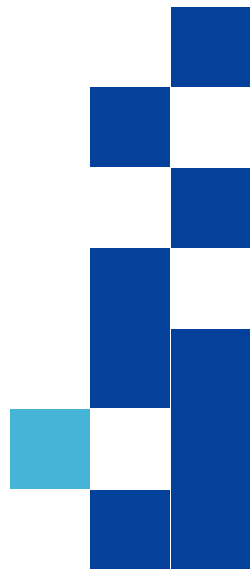
Network Upgrade Programme - Technique Mix Vs Connection Frequency



Control of Streetworks



- Regulated by Highway Authorities
- New Roads and Streetworks Act
 - Over stay charges
 - Reinstatement failure charges
 - Inspection by Highway Authorities
- Proposed Changes
 - Lane Rental
 - Full width reinstatements
- Coordination





Future Challenges – More mains replacement in busier streets

- Greater demand for water
- Greater stress on the system
- Water resource constraints
- More Mains replacement
- Innovative techniques to minimise surface disruption
- Flexible working to carryout repairs off peak



In Conclusion



Thames Water will remain committed to

- maintaining a continuous supply of water to our customers
- minimising the impact of our streetworks
- working with other Utilities and Highway Authorities to improve coordination.
- exploiting technology to support these aims

