Use of Private Finance to build London’s Super Sewer
EIX July 2018
The Problem
Bazalgette’s interceptor sewers
In 2014, 62 million cubic metres of sewage discharged to the tidal River Thames.  
50 discharges on average in a typical year.
CSO discharge
Thames Tideway Strategic Study conclusions

Two problems:

- Overloaded sewage treatment works
- Overloaded sewer network
London Tideway Improvements

- Sewage Works Upgrades
- Lee Tunnel
- Thames Tideway Tunnel

Locations:
- Mogden
- Acton
- Greenwich
- Abbey Mills
- Beckton
- Riverside
- Crossness
- Long Reach
Tunnel statistics

- Length: 25 kilometres
- Diameter: 7.2 metres
- Gradient: Falls one metre every 790 metres to be self-cleansing
- Volume: 1.6 million cubic metres (include Lee Tunnel)
Reconnecting London with the Thames
More than just a sewer

- Coping with population growth
- Jobs and skills
- Tourism
- Economic
- Ecological
- SMEs
- Public Health
- Environmental
- Increased river use
- Health and Safety
- Recreation
The Finance Challenge
Thames Tideway Owner

- Private Utility Company
- Monopoly provider of London’s water infrastructure
- Since 2007 has invested £1bn a year in infrastructure
- Has run a deficit in recent years
- Credit rating moved from Baa1 to B1 – no longer investment grade
Investment Programme

- Regulatory baseline cost of £3,144m (14/15 prices) was based on management’s detailed assessment of cost and made up predominantly of
  - Direct Works of £1,855m (Main Works Contractors, System Integrator and Programme Wide)
  - Indirects of £669m (resources, insurances, facilities, IT)
  - Contingency of £526m
- Annual profile reflects construction programme

Illustrative management build up to regulatory baseline cost 2014/2015 prices

- Central, £741m
- East, £605m
- System Integrator, £25m
- Programme Wide, £63m
- Handover and Acceptance period, £94m
- Indirects, £669m
- Contingency, £526m
- West, £421m
Thames Tideway funding: separate company
Thames Tideway funding option 1: Government Grant

£3bn as grant
Thames Tideway funding option 2: PPP

£3bn through PPP JV
Thames Tideway funding option 3: Project finance

**Step One:** Project finance for construction

**Step Two:** Thames Water operates Thames Tideway
Tideway Structure

- Debt
- Equity
  - Regulator (Ofwat)
  - Project licence
  - Tideway
    - PMC
    - EPC (x3)
  - 100% owned
  - Thames Water
    - Revenue collection
    - Operator post-build
Question One:

Today, you are the private finance. If you provided the capital, what risks would you worry about?
If you provided the capital, what risks would you worry about?

- Revenue Risks
- Operational Risks
- Political/regulatory Risks
- Construction Risks
- Extreme Event Risks
- Macroeconomic Risks
Question Two:

How could the following partners be used to reduce or share those project risks?

- Insurance
- Contract law
- Water Regulator
- Government support (not guarantee)
## Insurance Policies

<table>
<thead>
<tr>
<th>Policy Type</th>
<th>Coverage Details</th>
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<tbody>
<tr>
<td><strong>Construction insurance</strong></td>
<td>- Costs and expenses recovered by dropping boring machines – in event of collapse</td>
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<tr>
<td></td>
<td>- Cost and expenses of destroyed boring machine</td>
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<tr>
<td><strong>Indemnity insurance</strong></td>
<td>- Costs and expenses recoverable by buildings/businesses experiencing damage, with some exceptions (e.g. listed buildings)</td>
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<tr>
<td><strong>Contractor insurance</strong></td>
<td>- Costs and expenses recoverable if main contractor goes bankrupt, due to reasons unlinked to Thames</td>
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Contracts

Overspends

- Waterfall structure for cost overspend:
  a. Individual contractors
  b. Consortia share overspend
  c. Exceeds 30%, project suspended

Incentives

- Contractors given financial incentives for early completion

Project Management Contract

- Project management contract to oversee construction primes. Fined for delays.

Ring-fenced contracts

- Three construction primes contracted to complete individual sections
**Regulatory License**

<table>
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<tr>
<th>RCV Incentive</th>
<th>• Expenditure logged to RCV with no ex-post adjustment (project value = construction cost)</th>
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</table>
| Revenues      | • License allows Thames Tideway to collect revenues from Day one.  
• Adjustments to pricing allowed. |
| Customer Bad Debt | • Tideway allowed to recover customer bad debts directly |
### Government Support Package

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
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<tbody>
<tr>
<td>Insurer of Last Resort</td>
<td>• The Government acts as insurer of last resort</td>
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<td></td>
<td>• The Government provides cover for insurable events above the amount the market is ready to provide</td>
</tr>
<tr>
<td>Contingent Equity Support</td>
<td>• In the event of cost overruns above Threshold Outturn, the Government can be required to provide equity financing to fund the shortfall otherwise it must discontinue the project</td>
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<tr>
<td>Discontinuation</td>
<td>• In certain circumstances, the Government may elect to discontinue the project and pay compensation</td>
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<tr>
<td></td>
<td>• Compensation equal to 1 x RCV (with adjustment for break costs)</td>
</tr>
<tr>
<td>Market Disruption Liquidity</td>
<td>• £500m committed liquidity facility in case of market disruption</td>
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</tbody>
</table>
Thank you.