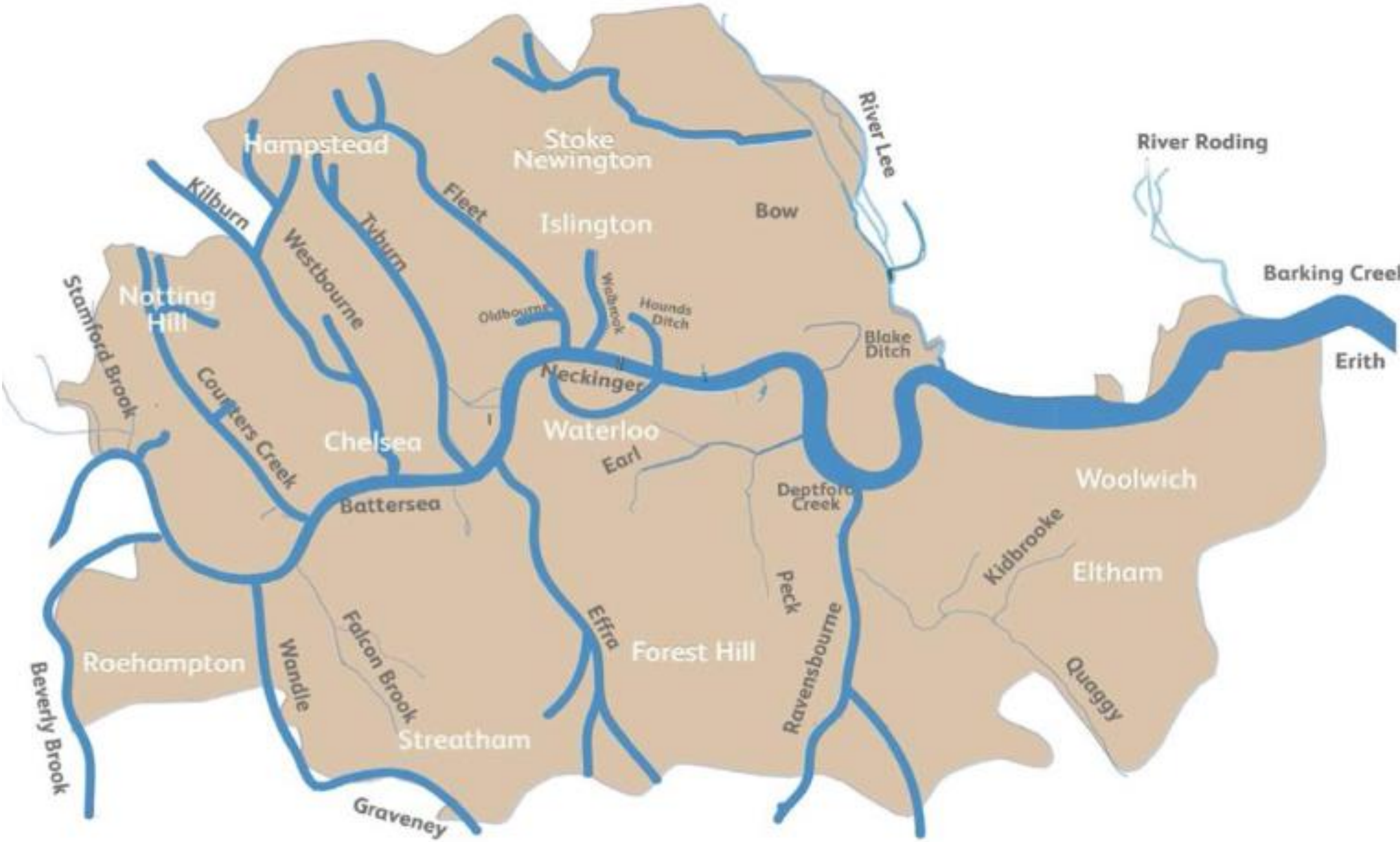
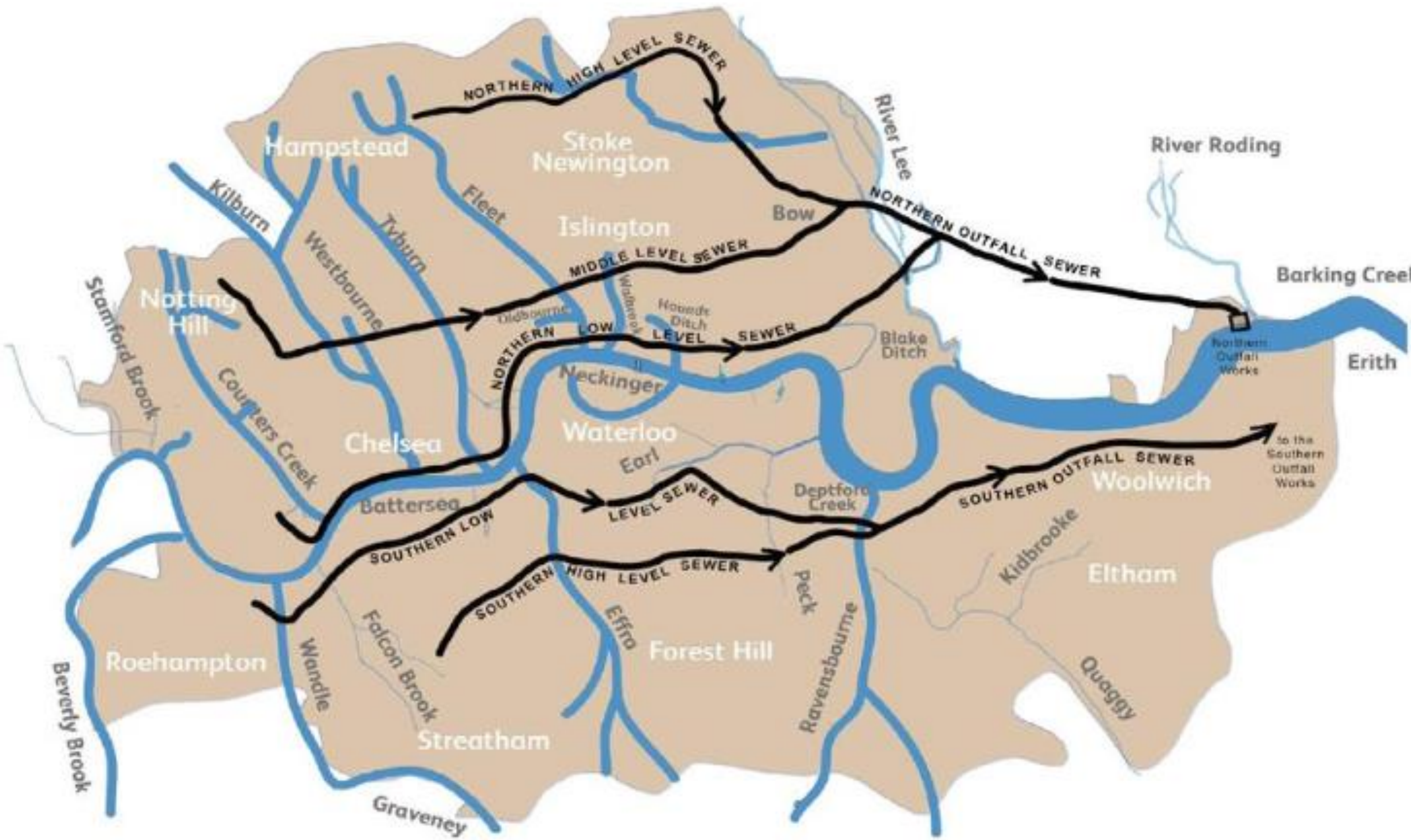
Use of Private Finance to build London's Super Sewer
EIX July 2018

The Problem

Lost 'rivers' of London



Bazalgette's interceptor sewers



Population of London

- In 2014, **62 million** cubic metres of sewage discharged to the tidal River Thames.
- 50 discharges on average in a typical year

CSO discharge

The Technical Solution

Thames Tideway Strategic Study conclusions

Two problems:

- Overloaded sewage treatment works
- Overloaded sewer network

Sewage Works Upgrades

Creating a cleaner, healthier River Thames

Lee Tunnel

Creating a cleaner, healthier River Thames

Thames Tideway Tunnel

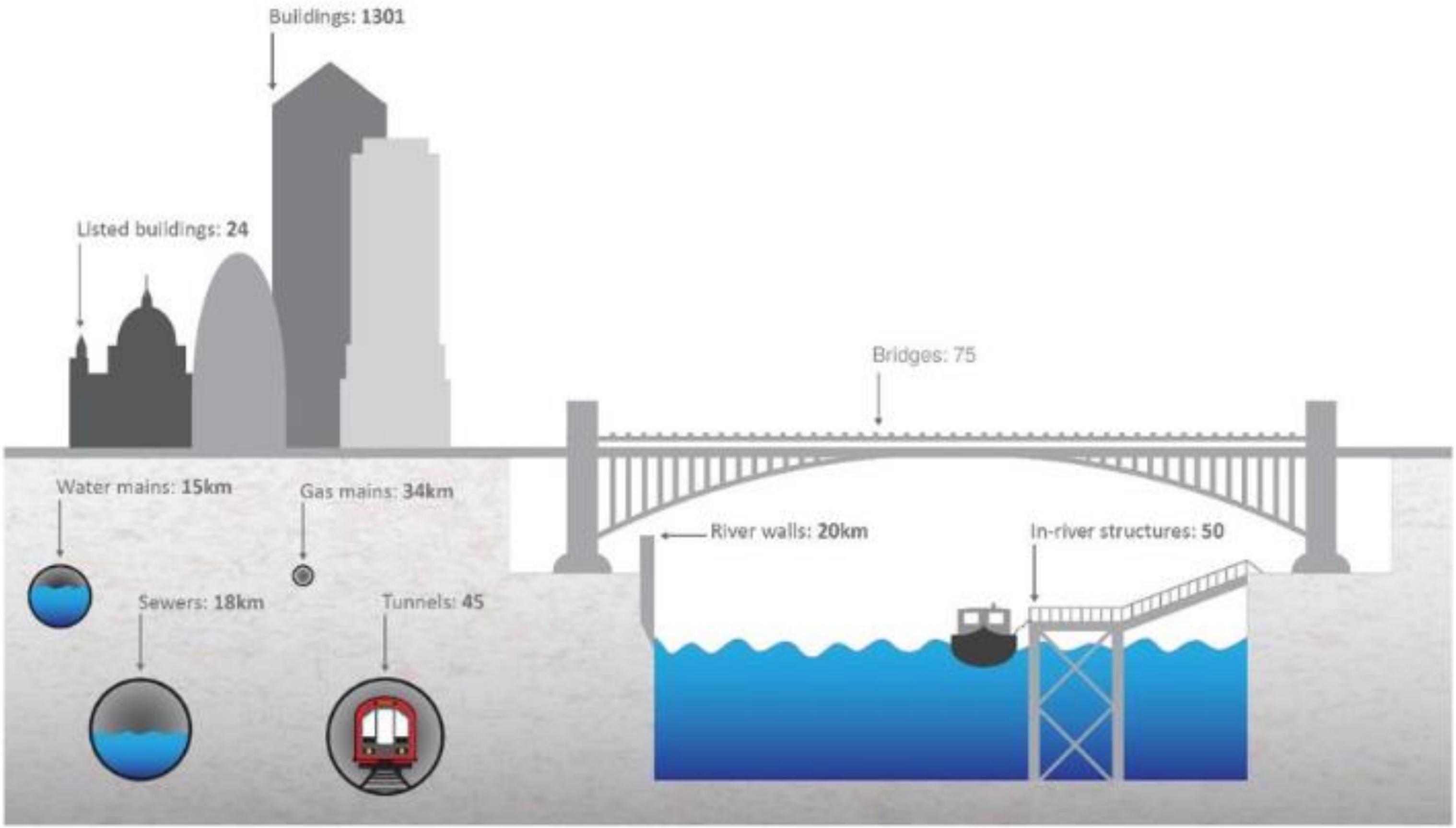
Creating a cleaner, healthier River Thames

London Tideway Improvements

Tunnel statistics

- Length: 25 kilometres
- Gradient: Falls one metre every 790 metres to be self-cleansing
- Diameter: 7.2 metres
- Volume: 1.6 million cubic metres (include Lee Tunnel)

Interfaces with existing infrastructure



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

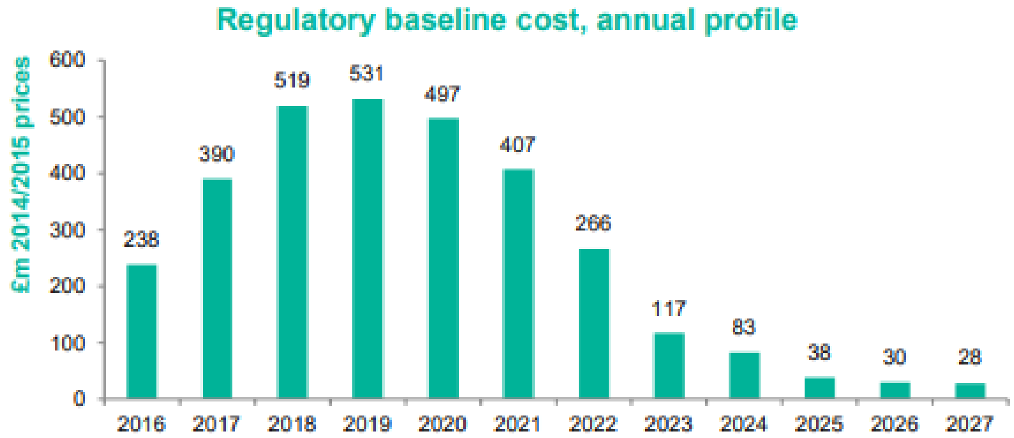
The Finance Challenge

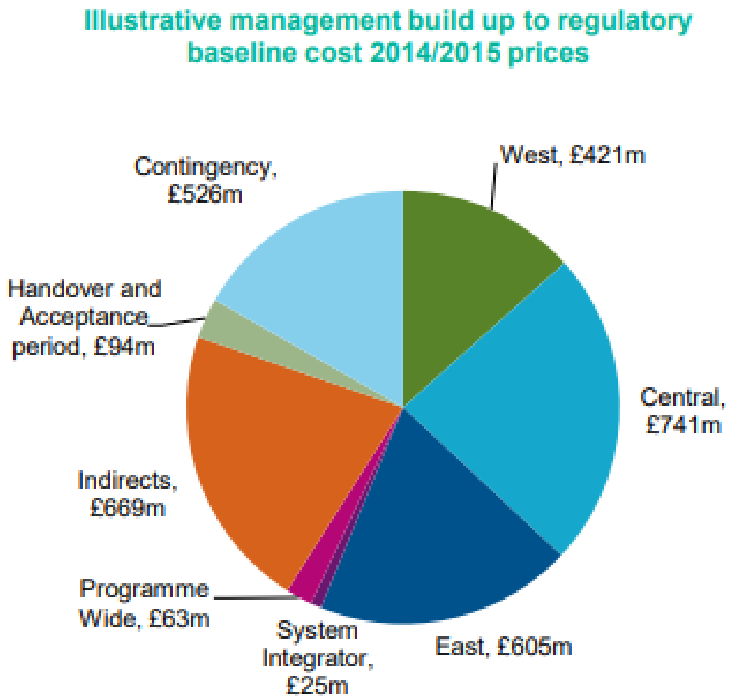
Thames Tideway Owner

- 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





Thames Tideway funding: separate company

Thames Tideway funding option 1: Government Grant

Thames Water

Tideway

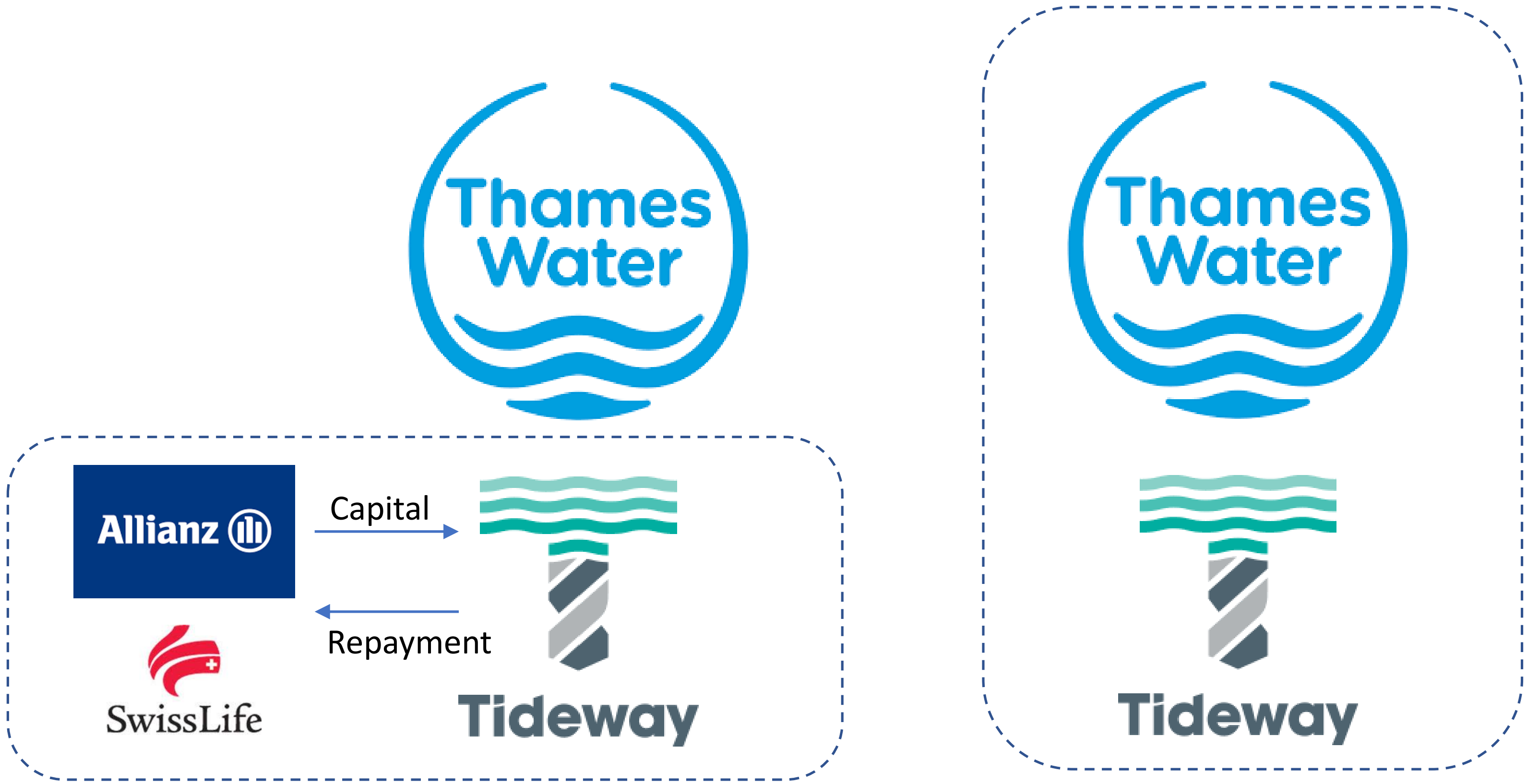
GREATER LONDON AUTHORITY

£3bn as grant

Thames Tideway funding option 2: PPP

£3bn through PPP JV

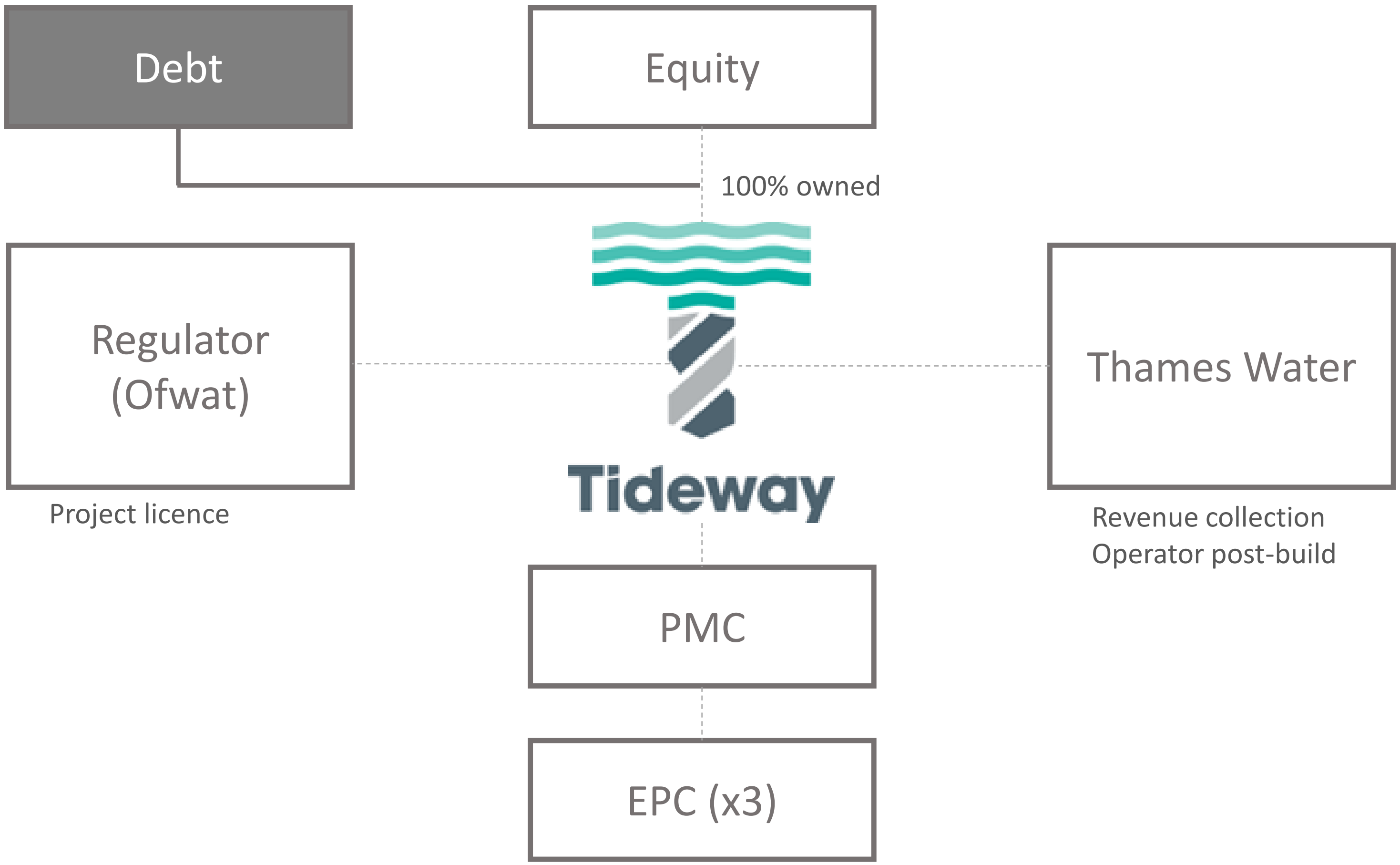
Thames Tideway funding option 3: Project finance



Step One: Project finance for construction

Step Two: Thames Water operates Thames Tideway

Tideway Structure



Question One:

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

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Revenue Risks	Construction Risks
Operational Risks	Extreme Event Risks
Political/regulatory 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

Construction insurance	• Costs and expenses recovered by dropping boring machines – in event of collapse • Cost and expenses of destroyed boring machine
Indemnity insurance	• Costs and expenses recoverable by buildings/businesses experiencing damage, with some exceptions (e.g. listed buildings)
Contractor insurance	• Costs and expenses recoverable if main contractor goes bankrupt, due to reasons unlinked to Thames

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

RCV Incentive	• Expenditure logged to RCV with no ex-post adjustment (project value = construction cost)
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

Insurer of Last Resort	• The Government acts as insurer of last resort • The Government provides cover for insurable events above the amount the market is ready to provide
Contingent Equity Support	• 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
Discontinuation	• In certain circumstances, the Government may elect to discontinue the project and pay compensation • Compensation equal to 1 x RCV (with adjustment for break costs)
Market Disruption Liquidity	• £500m committed liquidity facility in case of market disruption

Thank you.