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## **The Thames Tideway Tunnel; an Engineer's "Pipe-Dream"?**

### **The Case for an Alternative**

#### **Executive Summary**

The Thames Tideway Tunnel has been on Thames Water's 'drawing board' for more than twenty years. But it is only in recent times, following pressure from the EU, that the concept has gathered momentum into a project, which gathers more costs as it rolls, not least due to the enthusiasm of engineers for a UK "grand projet" and the encouragement of City lawyers, bankers and accountants attracted by fee income.

The proposed Tunnel solution, currently estimated to cost £4bn or more and taking 5-7 years to build, is estimated to raise customers bills' by £70 to £80 a year by 2020 (quoted @ 2013 values). However, even these figures have to be viewed as somewhat speculative.

In the absence of any established alternatives, - not least because the project sponsors, Thames Water plc., a privately-owned, public service utility, remain convinced that the Tunnel is the only answer, - Ministers to date have been persuaded that the Tunnel is the only option. However, the studies used to review alternatives and supposedly substantiate the Tunnel are now very dated (5-10 years old\*\*). With advances in technology and materials, alternatives such as SUDS\* offers an option which will:-

- **be quicker to implement**, thereby meeting EU requirements by an earlier date (and hopefully avoiding any fines which might be imposed);
- **lower financial risk**: with SUDS the risk will be spread across a series of projects, not just one, and the funds to be raised are individually smaller and could be spread over a number of years; and
- **create more jobs**: tunnels provide limited job opportunities, whilst a series of SUDS could employ larger numbers of (less skilled) workers.

A subsidiary argument in favour of SUDS is that the UK does not manufacture tunnelling machines of the size required!

\* SUDS = Sustainable Urban Drainage Systems.

\*\* Information on Thames Water's proposals for the Tunnel can be found at [www.thamestidewaytunnel.co.uk](http://www.thamestidewaytunnel.co.uk). However, the cost-benefit analysis cited therein is dated Dec 2006, and many other supporting documents are of a similar vintage.

## **Why Action is Needs to be Taken and the Options Available:**

The UK, in the context of the management of excess water/sewage overflows by Thames Water into the River Thames, is in breach of the EU Urban Waste Water Directive (UWWTD). This EU Directive, however, does not specify any particular solution, and the European Commission (EC) is concerned with ends and not means.

The European Court of Justice (ECJ) has confirmed that the UK government is in breach of this Directive, but to date the EC has not yet indicated that it intends to apply to the European Court of Justice for a fines judgement.

In the early 2000's, a number of studies for possible solutions to this outflow problem were undertaken and assessments made of the costs and benefits. However, the underlying data used in such analyses have been shown to embrace wide variations and are deemed unreliable by many commentators. Furthermore, Thames Water customers were largely side-lined in these exercises.

As a result, the costs and estimates of benefits of the Tunnel have been widely disputed.

There are several schemes that could potentially meet EU objectives:-

1. **The "Tunnel-only" solution**, preferred by Thames Water, but it is the most costly and highest financial risk;
2. **A mixed (tunnel) option**: a study commissioned by Ofwat by Jacobs/Babtie in 2006/7 shows that a mixed tunnel solution combining different elements in different areas could be carried out for half the cost of the Tunnel-only solution.
3. **SUDS**: since the original mid-2000's reports, SUDs / green infrastructure has become much more commonplace in other countries, e.g. USA, Canada, Germany, etc., and probably offers the cheapest solution.

**Given the magnitude of the problem, and the potential expenditure associated with any solution, an objective and independent appraisal is urgently required, not least to establish Value for Money for the public purse (see below) and for Thames Water customers, who will have to pay for whichever outcome is preferred.**

**Furthermore, the Consumer Council for Water ("CCWater"), the consumers' representative body, has also expressed concern that the proposed increase in bills for Thames customers to pay for the Tunnel is beyond their willingness to pay, and that other options should be reviewed in detail in today's context.**

## Thames Water: corporate issues

### **A** History of Thames Water

- **Nov 1989:** Thames Water shares were offered to the public at £2.40 per share

The Tideway Tunnel was first proposed by Thames Water in the early 1990s.

- **Sept 2000:** RWE acquires all Thames Water shares for £4.3bn @ £12.15 per share. The market price for Thames' shares at the time of the sale to RWE was £8.9, reflecting a 14% p.a. return to original investors, so the 40% premium on the share price for Thames shareholders generated in total a return of 17.9% for the original investors.

At that time Thames' debt was around £1.6bn, i.e. the equity value of Thames was therefore about £2.7bn.

- **Dec 2006:** RWE sold Thames for £4.8bn to Kemble, a consortium representing a Macquarie Infrastructure Fund ("MEIF") and various pension funds, domiciled in Luxemburg. At that time, Thames' debt was £3.6bn, giving an enterprise value for Thames of £8.4bn and a debt/equity ratio of 3:4, or a corporate leverage of 43% debt.

Of course, since year 2000, Thames Water was removed from the UK Stock Exchange, so the value of Thames' shares and the company was not necessarily publicly disclosed.

- **2011-2012;** various Thames shareholders sold their holdings, as below:-
  - Dec 2011: MEIF/EPIC sold their holding (9.9%) to ADIA, Abu Dhabi
  - Jan 2012: Santander/Finpro sold their holding (8.68%) to CIC, China
  - May 2012: MEIF sold 13.2% of their holding to BT Pension Fund

The considerations for these deals are unknown, as they effectively took place outside the UK, presumably in Luxemburg. Market comment (e.g. Reuters: "CIC bought 8.68% for £6-700mn") suggest that the value of 10% of Thames is around £700mn).

- **July 2012:** the estimated cost for the Tideway Tunnel is £3.6bn (2011 prices)
- **March 2012:** Thames Water sought Government support for the Tideway project via the Water Industry (Financial Assistance) Act, 2012.

- **October 2012:** media reports indicate that the Tideway project could be one of the first candidates to receive a (part?) Government Guarantee for its financing.
- **May 2013:** Thames submits the Tunnel project for review by the UK Infrastructure Planning Commission.

**The question arises: is this guarantee, to be supported by HM Government and taxpayers, justified, and are there alternatives?**

## **B Thames Water: Financial Issues:**

- During the period 2000 – 2012, Thames Water paid its shareholders dividends of, say, £2.7bn in total at the bottom-end to £3.3bn at the high end. The uncertainty lies in the fact that during this 12-year period Thames changed Accounting Periods twice and also often paid dividends after the Accounting Periods!
- Nevertheless, since Year 2000, the market value of Thames Water equity has risen from £2.7bn to reportedly around £7bn in 2012, representing a capital appreciation (i.e. excl. dividends) of 8.3% p.a. 2000-2012.

*[NB. the current value of Thames equity is needs be speculative, as there is no “open market” for Thames shares.]*

- If one takes into account dividends as well, the return on investment to Thames shareholders rises to 15.0% p.a.
- It is always difficult to make comparisons for investor returns across private utilities, as not surprisingly, owners/shareholders are coy about admitting their profitability. However, in the European power sector a return on investment of 12-15% may be considered acceptable to investors, depending as to whether the power is sold into a market or “pool”, as for in a “merchant” market, or whether power is sold under bulk purchase contracts, which are lower risk. State-owned utilities may also accept lower equity returns than privately-owned enterprises.
- Water utilities, however, are monopoly suppliers and customer demand is more certain (i.e. lower risk), so one might expect investors to be satisfied with lower returns, e.g. 8-12% p.a.. Thames, however, exceeds these returns by a significant margin.\*\*\*

*[\*\*\* In Jun 2012, NAO produced a report “Offshore Electricity Transmission: a New Model for Delivering Infrastructure”, HC22. In Section 3, NAO compared equity returns in the sector, calculating that the returns on equity were likely to be 10.3 - 11.3% (ref. para 3.13). However, they commented that said transmission companies were exposed to construction risk, so probably demanded higher equity returns than for operators. NAO went on to comment that for operational projects, - and Thames Water falls into that category, i.e. a private, public service utility, - lower returns are the norm, e.g. 8-9%. This is also in line with NAO’s Report on Equity Returns in PFI, Feb 2012, HC 1792)]*

- One has to conclude, therefore, that investors in Thames, - as a private sector, monopoly public service provider, - have done rather well.
- Furthermore, when reviewing the above, Macquarie Bank, as manager of Kemble/Macquarie Funds, will probably take a 1-3% on funds managed annual management fee, plus a 10-20% carried interest on any gains from share sales, thereby reducing shareholder capital gain returns.
- Hence, it is quite possible that Macquarie Bank will have generated fees of £60-70mn as an annual management fee (i.e. 1% of Thames equity value), plus £2-300mn carried interest on the sales of shares in 2011-2012. Of course, such fees will probably avoid HM Revenue, as fee payments took place outside the UK. We may never know the truth!! Macquarie may also have generated further fees from advice on borrowing, etc.. The management Agreement between investors and Manager remains undisclosed!!
- In the period 2000 – 2012, Thames' long-term debt rose from £1.6bn to over £9bn. today, i.e. over 5 times that of Year 2000, when debt represented 43% of Thames book capital; today it stands at over 90%.
- An additional uncertainty is that the majority of Thames' corporate debt is raised via Thames Water Finance (Cayman Islands). Not surprisingly, the terms of such debt, e.g. interest margins over funding, and fees, are not declared, but could provide an additional source of income for Macquarie Bank. As a tax-haven, the Cayman Islands are far from transparent.
- Thames have just released their figures for 2012-13. These are in summary:-

#### **P&L Account**

Turnover	= £1791mn	[2012 = £1695mn]
Operating Profit	= £549mn	[2012 = £644mn]
Profit before Tax	= £145mn	[2012 = £222mn]
Tax	= [£5.1mn]	[2012 = [£25mn]]
(i.e. a tax credit in both years)		
Profit after Tax	= £150mn	[2012 = £247mn]
Dividends	= £231mn	[2012 = £279mn]

### **Comment:**

(a) As in 2011-12, Thames pay themselves higher dividends than they make profits (& at the same time seek Government for funding the Tunnel!!).

(b) As in 2011-12, Thames pay no corporation tax. [NB. under UK tax law, companies can defer taxes due through investments made. In the case of Thames, the amounts currently owing in the future (potentially) to HMRC is over £1bn., almost as much as their book capital!]

### **Balance Sheet:**

Capital & Reserves = £1,234mn	[2012 = £1,401mn] (a decrease of 12%!!)
Debt > 1 year = £9,216mn	[2012 = £8,050mn] (an increase of 14%!!)
Provisions for Liab.**= £1,044mn	[2012 = £1,053mn] [** = mainly deferred tax]

### **C: What does all this mean for the Tideway Tunnel financing?**

- If Thames had paid no dividends to shareholders since Year 2000, and placed all distributable profits in the bank, or in suitable investments, at 6% interest, - equivalent to the cost of Thames own debt), - then they would have today around £4.5bn, easily enough to cover the full costs of the Tideway Tunnel without resort to any other funding support or guarantees. If the deposit rate had been only 3%, Thames would have accumulated £3.9bn. However, this scenario may be somewhat unreasonable on Thames.
- Supposing Thames had paid shareholders only 50% of what they received as dividends 2000-2012. Today they would have £2.2bn set aside for the Tideway project. Meanwhile, RWE would have made 12.0% return on investment 2000-2006, and Kemble/Macquarie 11.6% 2006-2012. Not bad at all!
- At least, in such circumstances, one might presume that Thames would not be faced with such a funding crisis as to have to require Government support for the Tunnel project.
- Unfortunately, however, Thames' debt has risen to such a level, - over 90% book capital by 2013 (ref. para above), - that it now has little room to manoeuvre, and their Investment Grade status, - a requirement under OFWAT's licence regime, - must be looking under threat. Given Thames' leverage, they must be hard-pressed to raise any new debt against their balance sheet as it stands.

- Not surprisingly, it is understood that Thames is attempting to raise the funding for the full cost of the Tideway Tunnel through a “Special-Purpose Vehicle”, with the hope that this funding will be “off balance sheet” for Thames, but who pays the extra costs in the end?..... Thames customers, of course!

**D: Thames Water Licence Conditions:**

- Under the Conditions of Appointment of Thames Water Utilities Limited, the “Appointee”, as a UK water utility, - and more specifically under Condition F, - outfall facilities such as the Tideway Tunnel project fall under the definition of “*Infrastructure Assets*” [ref. para 2.1 (e)]. Furthermore, under the Licence for the Appointed Business, Thames have a responsibility for sewerage management, and under Condition F to “*restoring the original operating capability, qualitative performance and condition of infrastructure assets*” in its network.
- Condition F also states [para 6.12] that the Appointee shall only pay dividends in accordance with the principle that “*the dividends declared or paid will not impair the ability of the Appointee to finance the Appointed Business*” [ref. para 6.12(i)].
- Further, Condition F is bolstered by the requirement [ref. 6A.1] that: “*the Appointee shall at all times act in the manner best calculated to ensure that it has adequate: (a) financial resources and facilities; (b) management resources; and (c) systems of planning and control.*”
- To ensure that such a breach, as above, should not normally arise, Condition F additionally requires the Appointee to maintain an “investment grade” rating, e.g. S&P, for its debt [ref. 6A.6(2)]. However, the fact that Thames has seemingly breached Condition F, para 6A.1(a), confirms that this latter Condition [6A.6(2)] of the Licence is by no means bullet-proof.

**E: The Scenario Now Faced by Thames Water**

- Financially, therefore, Thames have overpaid their shareholders and now find they cannot comply with their Licence without Government help, .... that is, if they are to invest in the Tunnel.
- However, their problems are not over. Government rightly is concerned that the Tunnel may not be the technical answer to the outflow problem and, financially, there is no structure, which takes Thames “off the hook”.
- Market reports indicate that Thames’ lawyers and bankers are attempting to set up a Special-Purpose Company (“SPV”) to undertake the Tunnel project, funded by a mixture of debt and equity. Given Thames’ current financial weakness, the equity is unlikely to be Thames’, unless new equity is raised. Come what may, it could be investors, or even Government, who provide such funding with the

prospect of future dividend payments from any business the Tunnel SPV might undertake.

- The debt will be more problematic, however. Lenders, whatever their proportion they take of the SPV financing, will seek security over the project's (i.e. the Tunnel) assets, plus liens over the underlying SPV's business.

Unfortunately, the Tunnel has only one customer, Thames Water. So whilst Thames might have taken the funding of the Tunnel "off balance sheet" for Thames Water plc. via the SPV, it will be a contingent liability on Thames Water all the same. Lenders to the Tunnel SPV will then look to Thames Water plc. for repayment. Likewise, existing lenders to Thames Water will be rightly concerned, as this turn of events will impact on the status of Thames' precarious S&P Investment Grade 'rating'.

Enron tried this wheeze once and it did them no good!!

- The only alternative is for HM Treasury to act as guarantor for the whole Tunnel SPV debt, but I cannot see Whitehall accepting this either!!
- One concludes, therefore that the Tunnel, - which by the time interest is capitalised into the funding package, will require £5.5–6.0 billion of finance to be committed at the outset (in today's values), - is doomed at the starting blocks!

### **Conclusion**

- It is time to review alternatives to the Tunnel, for example, SUDS or a SUDS-dominated solution.
- For many, given the performance of Thames shareholders over the last 12 years, it would not be without reason if Thames Water was put into Special Administration. Londoners' water supplies would not dry up, as the Administrator would have a responsibility to keep services operational.

In due course, the company could be sold-on to other investors, possibly under an updated Regulatory regime, or transformed into a mutual or form of public trust company, e.g. like Network Rail ("NR") or a Scottish Futures Trust. [Note: the former, i.e. NR, may not represent a shining example of a public service to many people. It has had its faults, but these are not beyond remedy!]

Some order, accountability and governance would then be restored to the Capital's and the UK's largest water utility provider.