

## The Thames Tideway Tunnel: a disaster for the environment

Delivering sustainable development, mitigating and adapting to climate change are critically urgent problems to address. But in addressing them, we cannot spend same money twice nor can we afford to spend money twice on addressing on the same problem. We have instead to:

- Determine a set of priorities: to decide which problems must be tackled first.
- Make every £ do the work of 2-3 by looking for approaches which deal with several problems at once. We have to look for synergistic options.

The Thames Tideway Tunnel fails both these tests: it neither addresses any of the highest priority problems nor is it synergistic, instead it is an old fashioned 'end of pipe' approach. It is a disaster for the environment by diverting enormous sums of money away from addressing the urgent problems. Its effect is to sabotage the moves to promote sustainable development in London<sup>1</sup> and especially the sustainable use of water<sup>2</sup>.

### Priorities

London and the Thames region are faced with multiple severe environmental problems including the heat island effect, air and noise pollution, water scarcity and over-abstraction of water, and groundwater pollution. The water quality in the tidal Thames cannot be regarded as amongst the most urgent of these problems. The water quality of the tidal Thames is assessed as 'moderate', "*the environment has improved significantly and the Thames Estuary is now one of the world's most unpolluted metropolitan tideways*"<sup>3</sup>; 125 species of fish having been recorded as being present. In 2010, the river was awarded the International Theiss River Prize, given for achievements in river management and restoration<sup>4</sup>.

Two examples of the urgent environmental problems in London are:

1. The water quality in the tributaries to the Thames is generally poor<sup>5</sup>, with that in the upper Lea catchment being notably poor<sup>6</sup>. Many voluntary groups and the Environment Agency are making great efforts to rehabilitate those rivers by restoring them to a more natural form<sup>7</sup>. But rivers such as the Lea, Crane and Wandle are periodically experiencing significant fish kills and the ambient water quality limits the biodiversity that can be achieved in those rivers. The Thames tunnel will do nothing to improve the water quality in the tributaries. Conversely, the best estimate of the number of fish killed as a result of the problem that the TTT is intended to address is: one<sup>8</sup>.

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<sup>1</sup> <https://www.london.gov.uk/priorities/planning/london-plan>

<sup>2</sup> <https://www.london.gov.uk/sites/default/files/water-strategy-oct11.pdf>

<sup>3</sup> (<http://www.zsl.org/conservation/regions/uk-europe/monitoring-thames-fish>)

<sup>4</sup> [https://www.riverfoundation.org.au/riverprize\\_about.php](https://www.riverfoundation.org.au/riverprize_about.php)

<sup>5</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/289937/geth0910bswa-e-e.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289937/geth0910bswa-e-e.pdf)

<sup>6</sup> <http://www.leamarsh.com/lea/leatesting.html>

<sup>7</sup> <http://www.therrc.co.uk/lrap.php>

<sup>8</sup> [http://cleanthames.org/wp-content/uploads/2014/01/Prof\\_Binnie-Tideway\\_measures.pdf](http://cleanthames.org/wp-content/uploads/2014/01/Prof_Binnie-Tideway_measures.pdf)

2. The Greater London Authority<sup>9</sup> estimates that in London in 2008 over 4,000 people died as a result of air pollution in London. The Health Protection Agency estimates that 7% of deaths in London are attributable to air pollution<sup>10</sup>. In particular, nitrous oxide levels continue to be a problem<sup>11</sup>.

## Understanding the problem

To address the problem, it is first necessary to determine its nature and cause. Two false understandings of the problem, which is claimed the Thames Tideway Tunnel will address, have been promoted:

1. That the problem is created by London as a whole; and
2. That each year, millions of tonnes of foul sewage are being flushed straight from toilets into the Thames.

Neither is true.

London is served by 9 wastewater treatment works serving different areas; the problem arises in the upper part of the area served by the Beckton treatment works. Thames Water has not been clear as exactly in which area of London the problem is created but of the 3.5 million people served by the Beckton works, the majority live below the overflows which produce the problem. The other 8 wastewater treatment works create their own significant pollution problems.

A large part of the overflows are of rainwater. Water specialists also now regard rainwater and both 'grey water' (the wastewater from washing) and increasingly also 'black water' (from toilet flushing) as resources which are too valuable to waste. This is especially true in London where water is scarce and the stress on the environment created by water abstraction is acute in some areas. The possibilities for synergistic solutions was demonstrated at the London Olympics Park where wastewater taken directly from the Northern Outfall sewer is treated and used for toilet flushing and irrigation<sup>12</sup>.

## Synergistic options

The huge overhang of public and private debt and existing problems of water poverty mean that we have to make every penny spent count several times. This is not just a London problem but a global problem but it is one which many cities have addressed through imaginative solutions which provide synergy. This approach is generally labelled as 'green infrastructure'<sup>13</sup>; planting seeds instead of pouring concrete. These measures are so unobtrusive that you have to know what you are looking for in order to recognise it when you see it. But the Olympic Park, the O2 Dome, Terminal 5 at Heathrow, the KPMG building and many other developments include elements. The technology is well-established, being widely implemented in Germany and in cities in other countries<sup>14</sup>; what has

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<sup>9</sup> <https://www.london.gov.uk/priorities/environment/clearing-londons-air/air-pollution-and-public-health>

<sup>10</sup> [http://www.hpa.org.uk/webc/HPAwebFile/HPAweb\\_C/1317141074607](http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317141074607)

<sup>11</sup> ([http://www.airqualitynow.eu/comparing\\_city\\_annual.php?london](http://www.airqualitynow.eu/comparing_city_annual.php?london)).

<sup>12</sup> <http://learninglegacy.independent.gov.uk/documents/pdfs/sustainability/old-ford-case-study.pdf>

<sup>13</sup> [www.ciwem.org/FileGet.ashx?id=1875&library=Public%20Access](http://www.ciwem.org/FileGet.ashx?id=1875&library=Public%20Access)

<sup>14</sup> [http://www.bluegreenuk.com/references/government\\_institutional/ENV-EPOC-WPBWE-RD\(2013\)8-OECD\\_report.pdf](http://www.bluegreenuk.com/references/government_institutional/ENV-EPOC-WPBWE-RD(2013)8-OECD_report.pdf)

been lacking in Britain is the will and the means to implement it in a systematic way and with the necessary speed. In part this is because the price structure of the water industry provides it with a disincentive to promote the wider adoption of the efficient use of water.

### Questions:

The three questions any environmentalist in favour of the tunnel has to answer are:

- Why do you believe that the overflows into the tidal Thames are the most urgent environmental problem facing London and the Thames region?
- Why do you consider that of the options available, a tunnel offers the best means of delivering sustainable development and climate change adaptation?
- Why do you support the single focus tunnel option, when WWF Europe has recently taken the lead in supporting the latest technologies with blue-green infrastructure as being the most sustainable/integrated and cost effective way for solving the many interrelated environmental issues and problems of the whole environment/ ecosystem?

### Detailed evidence

A large body of detailed material on the issues is available on the following two websites:

- <http://cleanthames.org>
- <http://www.bluegreenuk.com>

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<sup>15</sup> Colin Green has undertaken work on behalf of bodies such as Friends of the Earth, Greenpeace, RSPB and WWF-UK; Defra, the EA and OFWAT; as well as international agencies including the WMO, World Commission on Dams, OECD and the UN Water Decade.