

Blue Green Project Team at Imperial College, Blue Green Independent Expert Team and Thamesbank making the case for the need for:

AN INDEPENDENT ENQUIRY ON BLUE GREEN SOLUTIONS FOR LONDON

1) Capital costs for compliance and programme summary

- Multi-faceted Blue-Green allowance £4.1B or less (50% less in Philadelphia) to be developed through appropriate studies (see below for benefits), design 2013 to 2015, implementation 2013 to 2022, initial benefits 2013 onwards
- Interim measures in-river schemes £30M, implemented by 2016, benefits from 2015
- TTT comparison £4.1B, implementation from 2016 to 2023, benefits at the earliest from 2023

2) Legal arguments

- Following the 18th October 2012 Final Judgment of the European Court of Justice, the UK is now subject to fines of up to, or beyond, € 1 billion, depending on actions taken in response to the Judgment. In comparing Blue Green solutions with the Tideway Tunnel solution, Blue Green has the advantage of immediately diminishing potential fine liability by diminishing pollution incrementally from day one of implementation, compared to 2023, at the earliest, before the proposed Tunnel begins to receive polluted waters.
- There is also an uncertainty as to Directive compliance of the Tunnel's combined sewer overflow (CSO), the purpose of it being built being to stop overflow. Briefly, it was argued by the UK in Court (at para 85) that CSO discharges would be reduced from approximately 60 storm water overflows per year, to overflow only in 'unusually heavy rainfall' (para 55). The Court gave no assurances that that would be compliant, holding all waste water must be collected and treated in such 'normal' circumstances, now 'no longer out of the ordinary' (para 54).
- The BG approach, however, is capable of satisfying compliance requirements, probably at lower cost. After all, the EU Blueprint for Water (November 2012) encourages Blue Green implementation.
- The court found (para 29-38) that the UK had made a fundamental misconception, attributed to the meaning of the word 'Environment', which distinguishes the higher probability of the Blue Green approach reaching compliance by the use of the concept of 'Best Technical Knowledge Not Entailing Excessive Costs' than the Tideway Tunnel, holding (para 59) 'The UK's line of argument cannot be upheld.'

3) Financial, technical and social arguments

- Climate change has altered the whole perception of storm water in urban areas; it is no longer viewed as a nuisance but rather as a valuable resource in increasing times of drought that no one can afford to waste. In order to fully benefit from this valuable resource, this resource has to be managed in an integrated way with green infrastructure, to provide other multiple benefits through the full-scale implementation of Blue-Green solutions.
- It is not wise to compare the costs of the TTT against BG solutions for two reasons: a) studies have not been done to enable a comparison between the cost of the TTT and Blue Green Solutions, and b) cost comparisons should not be done without comparing the single / multiple benefits of both options.
- Blue-Green technologies have evolved and have multifaceted solutions with multiple benefits, which are highly relevant to the on-going discussion about the single benefit of the TTT.
- As proven in several international cases (Philadelphia, Washington, Seattle, Melbourne and Malmo) **if the same or similar investment planned for the TTT were to be invested in the low hanging fruits of Blue Green solutions** which would produce quick and significant results, it is expected that they would more than match the reduction of CSO spills (improvement of Thames water quality/compliance with EU regulations), but on top of that, many other benefits would be realised such as: reduced urban flooding the impacts of droughts; energy saving in treatment of storm water in periods when CSOs don't operate; improved water quality; improved public amenity and liveability of cities; improved air quality and reduced air pollution; reduced heat island effect and risk of heat wave related fatalities; reduced noise pollution; improvement biodiversity; improving the attractiveness of the commercial and residential areas and thereby increasing property values. Additionally increased human health and many other social benefits include, crime reduction, significant job creation, improved property value and raising the green credentials of the community and its government. **All these benefits would not happen with the TTT.**
- The costs of Blue-Green Solutions do not have to be borne solely by public bodies or water consumers as in the case of the TTT. Much of the associated costs would be absorbed by the private sector (landowners, big corporations, etc) as a means of reducing their operational costs (insurance, water and energy bills) as well as means to reduce their carbon and water footprints.

- Building upon and integrating what is already happening in an ad hoc way across the city, London has potential to become the world leader in the implementation of Blue Green solutions, as pursued by the Blue Green projects' concept.

4) Links for further information:

- To visualize what a Blue Green London might look like (video for Melbourne - <http://www.youtube.com/watch?v=ICOHRCZOM6Y>)
- Blue Green Independent Expert Team website - www.bluegreenuk.com
- Imperial College knowledge transfer working with global cities to maximise Blue Green value - www.bgd.org.uk

5) Contact details:

Professor Cedo Maksimovic, Professor of Urban Water Systems, Imperial College London
(c.maksimovic@imperial.ac.uk)

Callum Clench, BGD Project Manager, Imperial College London (c.clench@imperial.ac.uk)

Professor Darren Woolf (darren@woolfcs.com), Woolf Consultancy Specialists Ltd & Loughborough University – Blue Green Independent Expert Team

Graham Stevens (stevensgraham@aol.com), Atmospheric Industries Ltd & Solar Energy Ltd – Blue Green Independent Expert Team

Lady Dido Berkeley (river@thamesbank.org.uk), Thamesbank