

Thames Tunnel consultation

Response from the London Assembly

December 2010



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In preparing this response the Committee has gathered written submissions from London Councils, the London Regional Rowing Council and Tideway Scullers. Committee officers held informal meetings with the Environment Agency, Thames Water, London Councils and the Port of London Authority. The Committee held a public meeting with the following guests on 14 September 2010:

- Councillor Stephan Greenhalgh, Leader, London Borough of Hammersmith and Fulham
- Martin Powell, Interim Mayoral Advisor on the Environment, Greater London Authority
- Richard Aylard, Director of Sustainability and External Affairs, Thames Water
- Andrew Whetnall, Chairman, London and South East Committee, Consumer Council for Water

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Executive summary

The Health and Public Services Committee welcomes this opportunity to comment on Thames Water's proposal to build the Thames Tunnel, in order to prevent the discharge of untreated sewage into the Thames. We are grateful to Thames Water for its participation in the Committee's investigation of this topic and the level of detail about the proposal it has provided to both the Committee and the public.

In this report we set out our response to the proposal. We focus on a number of strategic issues identified in our discussions, and the implications of the Thames Tunnel proposal for Londoners. We will not cover in detail any specific issues regarding the tunnel route or individual construction sites, which will be addressed to a greater extent in responses to the consultation by the Mayor and individual boroughs.

The Committee has examined the problem of sewage discharge into the Thames over a number of years. We have concluded that building a new interceptor tunnel is the most viable solution available and have pressed the Government to support the scheme. We reiterate this view in our response. We also address the issues of planning, the costs to customers and the potential employment benefits.

Planning

The continuing uncertainty over the planning process for the Thames Tunnel should be ended as soon as possible after the consultation period. It is appropriate that in the planning decision for such infrastructure that there is a role for London's political leaders, given that the impact and benefits will be local to London. We appreciate however that for multiple boroughs to undertake separate planning processes may be problematic. The Government should further consider what role the Mayor could play with boroughs in co-ordinating the planning process for the tunnel proposal.

Costs

Thames Water customers will face an additional charge of £60-65 per year to pay for the Thames Tunnel. However, the full costs of the tunnel to Londoners are not yet known. Specifically we do not know how long Londoners will pay this charge, or how customers will be protected from water poverty. Thames Water and Ofwat should publish their current estimates for the period of time the charge will be incurred and the measures by which the poorest customers will be supported.

Employment

There needs to be a clear strategy for maximising the employment of Londoners in the construction of the Thames Tunnel, based on local employment targets and the provision of training in the skills required for the project. There should be an ambitious set of targets for the employment of Londoners, with Thames Water's contractors expected to fulfil these. The funders, commissioners and providers of education and training schemes need to ensure that Londoners can gain the skills they need to work on the Thames Tunnel project, with Thames Water working with these organisations to plan training provision.

We hope that our response will prove useful for Thames Water and its partners in undertaking the Thames Tunnel project, and look forward to receiving further details of the scheme in the future.

Figure one: Map of proposed tunnel route and construction sites



Source: Thames Water, 2010

The Committee's response

Key points

- The Health and Public Services Committee supports the proposal to build the Thames Tunnel, as the most viable solution to the problem of sewage discharge in the river.
- The process for gaining planning consent for the tunnel needs to be clarified as soon as possible. The tunnel is a strategic project for London with local impacts; the Mayor could work with boroughs to co-ordinate planning decisions.
- Thames Water customers may face an additional charge of £60-65 per year to pay for the tunnel. It is disappointing that information on the duration of this additional charge and how poorer customers will be protected has not yet been made available.
- The Thames Tunnel could support thousands of jobs. There needs to be a clear strategy including a mix of targets and training provision to ensure Londoners can take advantage of these opportunities.

The Health and Public Services Committee welcomes this opportunity to respond to Thames Water's proposals for the Thames Tunnel. The Committee first began to consider the problem of untreated sewage discharge and its potential solutions in 2004, and returned to this issue earlier this year following the launch of the consultation. As part of this work, we have gathered the views of a range of interested parties through written submissions, informal meetings and a public hearing. Among those we have heard from are Thames Water, London boroughs, the Consumer Council for Water, the Mayor's office and recreational users of the river.

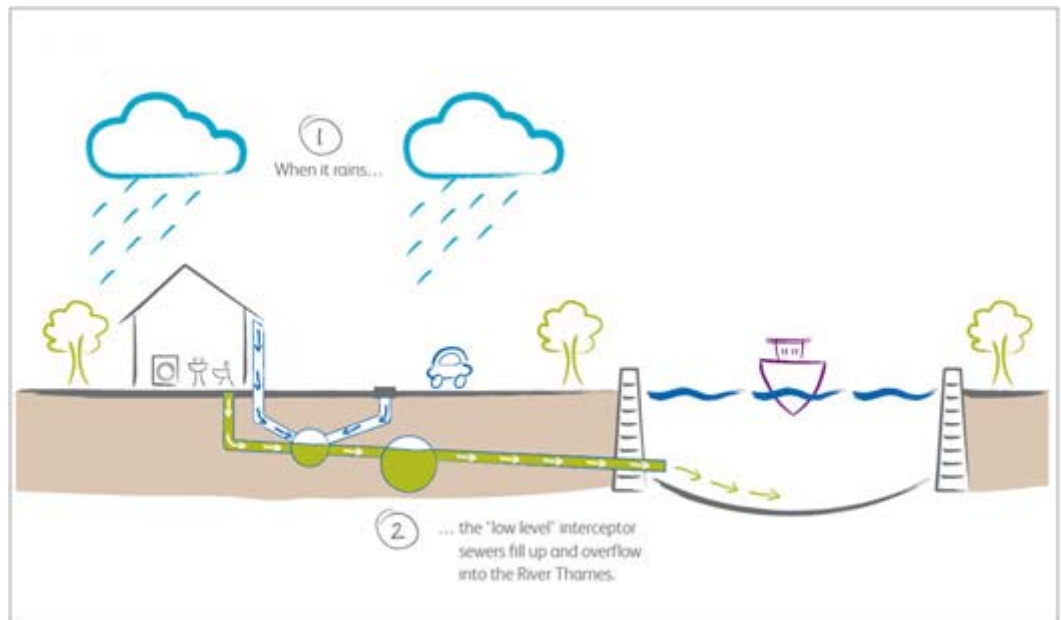
In this report we set our response to the proposal. We focus on a number of strategic issues, and the implications of the Thames Tunnel proposal for Londoners. We will not cover in detail any specific issues regarding the tunnel route or individual construction sites, which will be addressed to a greater extent in the Mayor's response to the consultation.

Sewage discharge in the Thames

Every year, 39 million tonnes of untreated sewage is discharged into the River Thames from London's sewers, enough to fill the Albert Hall 450 times over.¹ These discharges can kill fish, have health impacts on people using the Thames and reduce the aesthetic quality of the river. There is widespread consensus that this is a problem that is getting worse and needs to be addressed.

Why do the sewage discharges happen? They happen because London relies on a 19th-century sewage system, in which the foul water we flush down our toilets and the run-off rainwater from streets and roofs both flow into a single pipe. This sewage is normally conveyed to sewage treatment works for processing, but if there is too much sewage for the system to handle then it is discharged untreated into the Thames to prevent it flowing back up the drains, as illustrated in the diagram below.

Figure two: Sewage discharge into the Thames



Source: Thames Water, 2010

The discharges typically occur after heavy rainfall. When the sewage system was first constructed it only happened occasionally, following a major storm. However, the growth of London's population as well as an increase in building developments and paved surfaces mean that more

¹ *Overflow: Why we need to clean up the Thames*, Thames Water, September 2010

sewage is being created in the city and there is less porous for land rainwater to drain into. Today the discharges are occurring as often as once a week, and following just 2mm of rainfall.²

There are three main detrimental impacts of discharging so much untreated sewage in the Thames:

- The aesthetics of the river and its foreshore are degraded by the sight of sewage, which can include human waste and litter that has entered the system.³
- Large numbers of pathogenic organisms are introduced to the river, which increases the health risk to recreational river users. The Committee has heard from rowing organisations, which report rowers are sometimes prevented from rowing for a week or more after a major sewage discharge because of the health risks.⁴
- Large numbers of fish can be killed, because the sewage causes a drop in dissolved oxygen concentrations. After one storm in August 2004, sewage discharges into the Thames caused the deaths of 10,000 fish and 100,000 fish fry.⁵

The extent of the problem is such that if it is not addressed, the UK is likely to face legal action and a potential fine because the Thames is in contravention to the European Union's Urban Wastewater Treatment Directive.⁶ The Directive, which was transposed into UK law in 1994, imposes a duty on sewage undertakers to provide and maintain adequate collecting systems and treatment plants.

The solution being proposed by Thames Water is the construction of a new Thames Tunnel, running up to 75 metres below the surface, roughly along the course of the river from Acton to Abbey Mills, under 13 London boroughs. The construction is timetabled to begin in 2013 and be completed by 2020. It is anticipated that along the river there will be 22

² *Overflow: Why we need to clean up the Thames*, Thames Water, September 2010

³ *Thames Tideway Strategic Study*, Mayor of London, Environment Agency, Ofwat, Thames Water, 2005

⁴ Written submissions from Thames Regional Rowing Council and Tideway Scullers, September 2010

⁵ *The London Tideway Tunnels: Creating a cleaner, healthier River Thames*, Sian Thomas, Thames Water, 2008

⁶ *Thames Tunnel – response to concerns raised by LB Hammersmith and Fulham*, Thames Water, London Councils Transport and Environment Committee, 18 March 2010

separate construction sites used to build the tunnel and connect it to the existing sewage system (those are shown on the map on page 8). The projected cost of the project is £3.6 billion, which will be met entirely by Thames Water's 13.8 million customers.

The tunnel proposal

The Health and Public Services Committee supports the proposal to construct a new interceptor tunnel. Our first investigation on this topic was in 2004, when we concluded that the problem had to be addressed, and that the construction of a new tunnel was the most viable option. The Committee returned to the issue in 2007, when we again wrote to the Government and met with Ian Pearson MP, the Water Minister at the time, to express our support for this proposal.

The proposal being made by Thames Water now is for a new tunnel to be constructed underneath the Thames, broadly along the course of the river. When the existing interceptor sewers fill up with sewage and rainwater, this will flow into the new Thames Tunnel instead of the river, and be transported to the sewage treatment works at Beckton. The diagram overleaf illustrates how the tunnel will work.

The Secretary of State for the Environment, Food and Rural Affairs, the Rt. Hon. Caroline Spelman MP, has recently announced the Government's support for the proposal. In September she said: *"A tunnel continues to offer by far the most cost effective solution to the unacceptable problem of raw sewage being regularly discharged into the Thames."*⁷ The Committee has also heard from the Mayor's Environment Adviser Martin Powell that he supports the scheme, subject to further details to be provided on the management structures, tendering process and the obligations contractors will be under.⁸

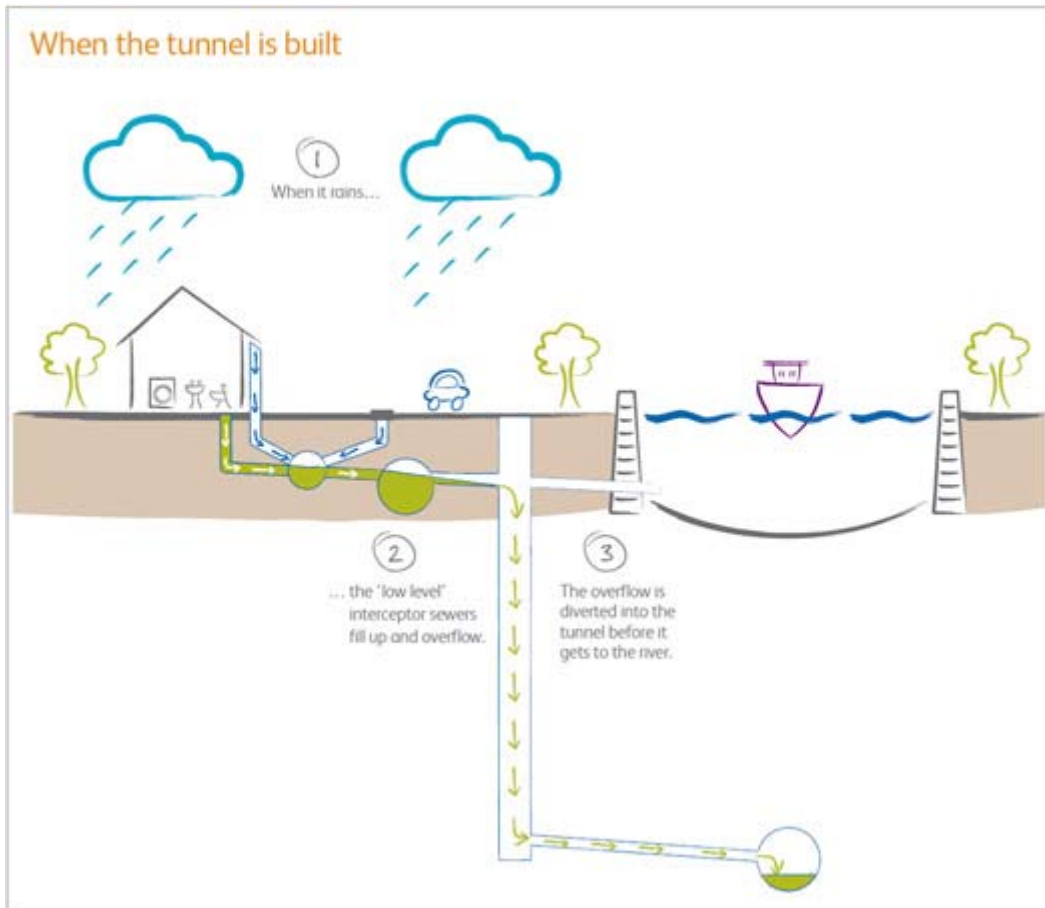
The Thames Tunnel will not necessarily prevent all untreated sewage from being discharged into the river. Some of the least-polluting overflows will not be connected to the tunnel. Furthermore, in exceptional

⁷ *Environment Secretary Caroline Spelman supports Thames tunnel plans*, www.defra.gov.uk, 7 September 2010

⁸ Transcript of Health and Public Services Committee meeting, 14 September 2010, pages 10-11. Minutes and transcripts of Committee meetings are available at <http://www.london.gov.uk/moderngov/ieListMeetings.aspx?Committeeld=148> or from the London Assembly secretariat

circumstances when the new tunnel becomes full, relatively small amounts of sewage could still be discharged.

Figure three: The proposed Thames Tunnel



Source: Thames Water, 2010

Several other potential solutions have been examined, including by the Thames Tideway Strategic Study Group, which included representatives of the Greater London Authority, Environment Agency, Ofwat, Thames Water and the Department for the Environment, Food and Rural Affairs. The three main alternatives are:⁹

- **Sustainable urban drainage systems.** These would reduce the amount of rainwater entering the sewage system by diverting it elsewhere: for instance, using grassland on rooftops and roadsides or rainwater detention ponds. This solution would require huge additional

⁹ *Options: Alternatives to the Thames Tunnel*, Thames Water, September 2010

amounts of porous land for storing rainwater, of which there is insufficient quantity in London to absorb enough rainwater to prevent sewage overflows.

- **Separating rainwater and sewage within an upgraded sewer network.** One pipe would convey foul sewage to treatment works, while another would capture run-off rainwater. This would tackle the cause of the problem, but would be very expensive (£12-£20 billion), take several decades and require many more construction sites throughout London.
- **Bubbler and skimmer vessels.** These two types of boat are already deployed by Thames Water on the river: bubbler vessels inject oxygen into the river, which helps fish to survive a sewage discharge, while skimmer vessels skim off surface litter that has been discharged into the river. More of these vessels could be deployed, but this would only tackle a symptom of the problem and would not prevent sewage discharge.

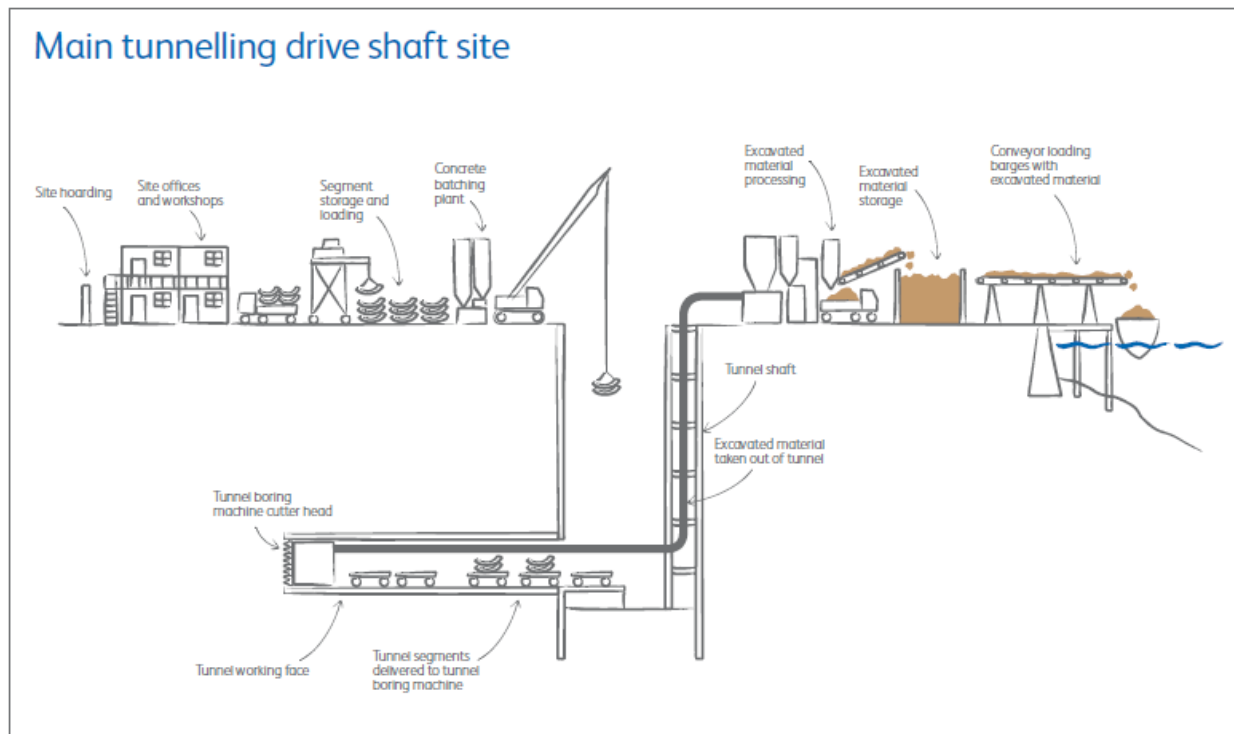
Constructing the Thames Tunnel is certain to be a very costly and potentially disruptive project at certain locations. However, the Committee supports the tunnel – subject to the other recommendations we make in this response – as it is the most viable solution to a problem that has to be addressed.

Construction and planning

The Thames Tunnel is a major strategic project for the whole of London, but its construction will have a particularly disruptive impact on residents and businesses around Thames Waters' construction sites along the river. The company has proposed using 22 sites to build the tunnel and connect it to the existing sewage system (see the map on page 8). These are all within 500 metres of the river.

There will be different types of construction site. The biggest of these will be the main tunnelling drive shaft sites, as illustrated in the diagram overleaf. Thames Water has proposed to place these at Barn Elms, Tideway Walk and Abbey Mills.

Figure four: Construction of the Thames Tunnel



Source: Thames Water, 2010

It is understandable that boroughs and local residents along the route have concerns about the disruption that will be caused during construction. In September the Committee met with Councillor Stephen Greenhalgh, Leader of the London Borough of Hammersmith and Fulham to discuss the borough's concerns regarding Thames Water's plans. He told the Committee that, *"the proposed scheme involves massive disruption to the riverside... the like of which has never been contemplated before."*¹⁰

It is important to note that riverside areas are a vital part of London's tourism infrastructure. Thames Water has deliberately avoided London's world heritage sites – the Palace of Westminster, Westminster Abbey and St Margaret's Church, the Tower of London and Maritime Greenwich – in choosing construction sites for the tunnel, but we should still expect disruption to the city's visitor economy during the construction phase.

Concerns such as these will be raised during this consultation and also in the planning process. Thames Water expects to submit a planning application in 2012. However, the planning process for the tunnel has not

¹⁰ Transcript of Health and Public Services Committee meeting, 14 September 2010, page 3

yet been confirmed. Specifically, we do not know what the relevant planning authority will be.

London boroughs determine planning consent for most developments in London. However the Mayor can 'call in' certain developments that are of strategic importance for London and determine the planning consent himself. There is also a national planning regime for projects of national strategic importance: this regime is currently being reformed following the Government's decision to abolish the Infrastructure Planning Commission.

London Councils suggested to the Committee that boroughs should retain planning control for the Thames Tunnel project, because its impacts are local in nature.¹¹ In her recent announcement of support for the project, Environment Secretary Caroline Spelman suggested that the national planning regime should be used because of the scale, complexity and national significance of the scheme.¹² Richard Aylard, Director of External Affairs and Sustainability at Thames Water, told the Committee of the company's position:

*"We, as a company, do not have a preference for which route to go down. What we need is clarity and something that works. Whichever route we go down, we are absolutely committed to working with local councils all the way through this process... We would point out that trying to do a scheme like this, that affects 14 boroughs, is going to be difficult with 14 separate planning applications."*¹³

It may not be possible under existing legislation for the Mayor to use his planning powers to 'call in' the project. This is because separate planning applications would have to be made to each borough along the route, with the Mayor required to call in each of these applications. For many of the individual applications he would have the power to do this. However, there are some boroughs where the proposed work within the borough will not be large enough in scale to be considered 'strategic'. Ultimately this could mean that the planning consent for some sections of the tunnel would be determined by the Mayor, and other sections by individual boroughs.

¹¹ Written submission from London Councils, September 2010

¹² *Environment Secretary Caroline Spelman supports Thames tunnel plans*, www.defra.gov.uk, 7 September 2010

¹³ Transcript of Health and Public Services Committee meeting, 14 September 2010, pages 3-4

The continuing uncertainty over planning process for the Thames Tunnel should be ended as soon as possible after the consultation period, with clarification over the planning regime that will be used for the project.

The Committee welcomes the Government's recognition that the Thames Tunnel is a major strategic project with national significance. However the impact of the scheme – in terms of the disruption caused by its construction, its funding and the future benefits it will bring – will be experienced predominantly by Londoners. Therefore it is appropriate that there is a role for London's political leaders in the planning decision.

We appreciate that for multiple boroughs to undertake separate planning processes may be problematic. In this context the Government should further consider what role the Mayor could play with boroughs in co-ordinating the planning process for the tunnel proposal.

Costs to customers

Thames Water has estimated that the tunnel will cost £3.6 billion. This is an increase on a previous estimate from earlier this year, of £2.2 billion. The revised budget has been scrutinised by HM Treasury and includes contingency funding, and should reflect an accurate projection of the costs of the project.

It is planned that Thames Water customers will cover the entire cost of the project through a surcharge on their bills. There are 13.8 million Thames Water customers in London and the surrounding area, which amounts to 5.8 million billpayers.

Thames Water has provided estimates for how much the Thames Tunnel will cost its customers. Water bills are set to rise from 2012 and peak in 2018, when it is expected that there will be an additional £60-65 per year on every bill. Customers are already paying for other improvement works, including the Lee Tunnel – an interceptor tunnel being constructed under the River Lee – which will mean they are charged an extra £80-90 per year

in total.¹⁴ The water industry regulator, Ofwat, will ultimately set limits for the price increases customers may face.

This is a substantial increase in water bills. The Committee asked Thames Water to clarify how long customers would pay these charges, and the answer is that this has not been determined. Indeed, it appears unlikely the charges will come to an end in the foreseeable future. As Richard Aylard of Thames Water explained:

*"It depends on the way in which Ofwat treats the problem. It is a complicated issue around what counts as infrastructure and non-infrastructure, but there will be operating costs. I think it would be wrong to assume that there would be any significant decrease but what will happen, over time, is that the other things that the company is spending on will come to an end."*¹⁵

The Committee also asked Thames Water to explain how vulnerable customers would be protected from facing unaffordable bills, which would increase the risk of water poverty. Richard Aylard told the Committee that the company has a trust fund provided by the shareholders that can help customers struggling with water bills, and is also hoping to introduce a social tariff:

*"In the Floods and Water Act [2010] we were very pleased that, thanks to Thames Water pressure... social tariff provisions are there and we are now working with the Government and Ofwat to see what those are going to be in practice. We think that that is a very substantial way of helping the poorest customers deal with their water bills."*¹⁶

Discussions around the precise form of a social tariff are ongoing, with no details available yet regarding how it will work and how it could help people who cannot afford the additional Thames Tunnel charges.

Thames Water has estimated that customers will face an additional charge of £60-65 per year to pay for the Thames Tunnel. The Committee welcomes the publication of this information, but is concerned that the full costs of the tunnel to Londoners are not yet known. Specifically we do not know how long Londoners will

¹⁴ Environment Secretary Caroline Spelman supports Thames tunnel plans, www.defra.gov.uk, 7 September 2010

¹⁵ Transcript of Health and Public Services Committee meeting, 14 September 2010, page 13

¹⁶ Richard Aylard, Thames Water, Transcript of Health and Public Services Committee meeting, 14 September 2010, page 15

pay the additional charges, or how the most vulnerable customers will be protected from water bills they cannot afford to pay.

Although Thames Water is awaiting decisions from Ofwat on these matters, and it is clear there are still details to be worked out, it is disappointing that customers are being asked to comment on the Thames Tunnel proposal without clearer information on how much it will cost them. As soon as possible, Thames Water and Ofwat should publish their current estimates for the period of time the additional charges will be incurred and the measures by which the poorest customers will be supported.

Employment benefits

Thames Water has estimated that 4,000 jobs will be created in the construction of the Thames Tunnel and Lee Tunnel (combined). This represents a significant opportunity for Londoners to obtain these jobs and the skills required to fulfil them. The company told the Committee that, *“we are committed to making as many of those available to Londoners and particularly long-term unemployed Londoners as we possibly can.”*¹⁷

There are other large-scale infrastructure projects underway in London, particularly the construction of Crossrail and of the Olympic and Paralympic venues in east London. There is therefore potential for Thames Water to learn from the experience of these projects, and build on the employment and skills initiatives that are already operating.

For the construction of the 2012 venues, the Olympic Delivery Authority is working to targets for the employment of local people, including apprentices.¹⁸ These targets have been met, although the real impact for Londoners has been small, arguably because the targets have not been stretching enough.¹⁹ The Committee asked Thames Water if the company was monitoring the number of local workers employed on the Lee Tunnel

¹⁷ Richard Aylard, Thames Water, Transcript of Health and Public Services Committee meeting, 14 September 2010, page 15

¹⁸ A minimum of 15 per cent of the workforce must be resident in the five host boroughs; a minimum of seven per cent of the workforce must have been unemployed prior to working on the site; at least 2,250 must have entered traineeships, work placements and apprenticeships on the site by 2012.

¹⁹ See *Legacy United? The legacy of London's Olympic venues*, London Assembly Economic Development, Culture, Sport and Tourism Committee, September 2010

project, which is currently being constructed, and was informed that it was not.²⁰

Beyond targets, both Crossrail and the 2012 venues have been accompanied by employment support and training schemes for Londoners. Boroughs, the London Development Agency and the Skills Funding Agency have helped fund these initiatives. A National Skills Academy for Construction has been established at three east London sites to provide skills for people to be employed on the Olympic Park, although two of these sites were not established until one and two years after work on the site commenced. Perhaps most relevant for the Thames Tunnel, Crossrail is launching a new Tunnelling and Construction Academy in east London in Spring 2011: it is clear there will be overlap between the tunnelling skills required for Thames Tunnel and Crossrail.

There needs to be a clear strategy for supporting the employment of Londoners in the construction of the Thames Tunnel, based on targets for local employment and apprenticeships and the provision of training in the skills required for the project. There should be an ambitious set of targets for the employment of Londoners, previously unemployed people and apprentices during the project, and Thames Water must ensure that any contractor(s) it employs to build the tunnel are expected to meet these.

The funders, commissioners and providers of education and training schemes – including the Skills Funding Agency, boroughs, Greater London Authority, specialist construction academies and colleges – need to ensure that Londoners can gain the skills they need to work on the Thames Tunnel project. Thames Water should be working proactively with these organisations so they know what the skills requirements are and can plan how to meet them. This should be happening now, so that programmes can be offered in advance of the beginning of the tunnel's construction.

²⁰ Richard Aylard, Thames Water, Transcript of Health and Public Services Committee meeting, 14 September 2010, page 15

Recommendations

The tunnel proposal

Constructing the Thames Tunnel is certain to be a very costly and potentially disruptive project at certain locations. However, the Committee supports the tunnel – subject to the other recommendations we make in this response – as it is the most viable solution to a problem that has to be addressed.

Construction and planning

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