Navin Shah (Deputy Chair - in the Chair): A very warm welcome to our first panel of guests who are here to help us with our deliberations on the proposed Thames Tideway Tunnel project. This is obviously the tunnel proposed to reduce sewage discharge into the River Thames. At £3.5 billion this is one of the biggest engineering projects to be implemented in London. This examination could not be more timely having heard yesterday the announcement of the route, as well as a 14 week consultation period. So this is a perfect opportunity to start addressing the issues and to ask some questions. Obviously, the issue has generated a lot of discussion and debate already and criticisms and concerns and we will be looking at a number of key issues during the deliberation this morning.

I will start with an opening question to Mr Richard Aylard from Thames Water. As a starting point, can you give us some background to the project? Also, can you tell the Committee about the challenges you will be facing in delivering this particular programme and how you will tackle the various issues arising from it?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): If we go back 200 years - just very briefly - London did not have a sewage system. When piped water started to be available in the capital, waste that used to go into cesspits started being flushed - first illegally and then legally - down little ditches and brooks and streams into London’s natural drainage. That process continued right through from 1800 to 1850, during which time London’s population increased from 1 million to 2.5 million. So London’s first sewage system was created, with hindsight, on the cheap by commandeering London’s natural drainage. Everything that happened over the next 100 years simply cemented that position in place, with the sewers taking both rainwater and sewage.

By 1850, famously, the situation was so bad that Parliament could not work any more because of the stench - the river was black, sulphurous and bubbling - and it moved to Oxford until it had been sorted out. Joseph Bazalgette, a great Victorian engineer, created interceptor sewers which would stop this mixed rainwater and sewage going into the Thames and convey it to the east - to what now are Beckton and Crossness Sewage Treatment Works. He could not build sewers big enough to take any conceivable volume of rainwater mixed with the sewage so he built strategically placed overflows into the river. Bear in mind the river, at that stage, was completely dead. Nothing lived in it at all.

London’s population since then has trebled and, at the same time, an awful lot of green space that used to be available to soak up rainwater and release it has gradually gone. We have concreted, asphalted and tarmaced over a lot of land that used to soak up water. In fact, in west London, the amount of impermeable surface has increased 20% in the last 30 years. Combined with the increase in population, we are all using more water. We are using washing machines and dishwashers; things that the Victorians had never thought of. What we are getting now is far more mixed wastewater and rainwater going through those sewers. Discharges that used to happen very occasionally into a dead river are now happening, on average, once a week into very much a live river which is important for recreation, for wildlife and for London’s reputation.

The total amount, in an average year, is 39 million tonnes. To give you some perspective, I have heard people talking about sewage seeping into the river. One of the biggest combined sewer overflows (CSOs), after a reasonable storm, would fill an Olympic swimming pool in less than two minutes. This is not sewage seeping into the river; it is a large amount and it is happening regularly. Everything shows
that, if we do not do something about it, it will get worse. That is why the Government has tasked us with coming up with the solution.

There are 57 CSOs along the route of the Thames, 34 of which the Environment Agency assesses as unsatisfactory. The remainder either do not discharge because they have been disconnected or are so small it is not worth worrying about. What we have come up with is a plan to connect those 34 CSOs to a storage tunnel under the river. The important part about this is that the capacity of that tunnel is available wherever the downpour hits. So whether it is east London, west London or central London, you have still got the whole tunnel available to fill and then, afterwards, it is pumped out at Beckton Sewage Works for treatment.

The key points are that you have got to intercept 34 CSOs and you have to have big capacity. We have worked with the Environment Agency to come up with 1.5 million cubic metres capacity in the tunnel and it needs to end up at Beckton where we can treat it.

We have now started a public consultation. We have come up with our preferred route and our preferred construction sites. We have published our preferences and we have published the short-listed sites that did not quite make it to the top, so local people can see the reasoning behind our conclusions. In the next 14 weeks we are going to visit all the boroughs And there will be public meetings. There is a website and every other possible form of consultation so local people can say, “OK. You’ve got it wrong. You could do it better here. Why don’t you do that?” We can look at all of that, we can respond to it and we will publish a second round of proposals next year for a second round of consultation before we even think of going to planning in 2012.

Navin Shah (Deputy Chair - in the Chair): What options appraisals did you carry out and how did you arrive at the preferred option you mentioned? Is this the most cost effective option?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): The options appraisals started in 2001 when an independently chaired group called the Thames Tideway Strategic Study spent five years looking at all the options. That was with Thames Water, the Environment Agency, the GLA and our regulator, Ofwat - as an observer - and one or two other interested parties.

The study looked at four possibilities. The first one was that we should stop the rainwater getting into the sewers in the first place. The problem there was that, while there are things you can do - this is the third time I have given evidence to the GLA in the last eight days and on each occasion I have said, “Sustainable Urban Drainage Systems (SUDS) and green roofs have a lot of potential but need to do more” - you need to be aware of two things. The first is they are not going to solve the size of problem we have got at the moment. They can only work with new developments to stop it getting worse. The second, is to not forget that you need large areas to make SUDS work and we have largely impermeable soils in London: clays and saturated gravels - certainly in the centre and to the west. Once your SUDS are full, they are no use to you because the next storm comes along and they have not drained away. There is some potential there.

The second option is to start building storage all the way along the route, offline on the sewers. The problem there is big disruption. Where are you going to dig large holes in London that are able to cope with the kind of capacity I was talking about: an Olympic swimming pool full in less than two minutes? We have not got the space to do it and doing it in bits and pieces is inefficient.

The third option looked at was to just deal with the symptoms of the problem. Why don’t we skim off all the sewage derived litter - condoms, sanitary towels and all sorts of other rubbish that comes down the sewer - and, at the same time, get a lot more bubbler boats - we already have two - and just bubble oxygen into the river to keep the fish alive? The feeling there was that that would be just treating the symptoms and not the problem.
These are the reasons why a storage and transfer tunnel came up as the preferred option. This has been done in a number of cities around the world already and, indeed, we have had people who have built these tunnels working with us on our project teams. They have spent the last two and a half years working on the problem.

The next phase of options appraisal was conducted by our regulator, Ofwat. We said, “OK. We take what the Thames Tideway study came up with: a storage and transfer tunnel”. It instructed the consultants Jacobs Babtie to do a study into what it called partial or cheaper solutions. Jacobs Babtie looked very hard at the problem and it came up with a split tunnel solution.

The Government considered both the split tunnel and the storage and transfer tunnel. I am cutting this fairly short but I can explain more later. The Government decided, in 2007, that we should proceed with the storage and transfer tunnel. That decision was, of course, reinforced by Caroline Spelman [Secretary of State for the Environment, Food and Rural Affairs] last week. She said that the tunnel we are proposing is the cheapest solution by far. She used the words “by far” in her statement. The Department for Environment, Food and Rural Affairs (Defra) is certainly convinced. I think the Environment Agency is and we are too. Equally, we are in discussion with the Consumer Council for Water, and have been for some time. In fact, Mr Whetnall was the first person to suggest that we could take the tunnel to Abbey Mills, join it up with the Lee Tunnel and save some money that way. That is now our preferred route.

We are listening, we are talking and all of the options appraisal work is available on our website. I am very happy to bring our engineers to brief anybody who would like more information on what we looked at and how we looked at it.

Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council): First of all, I am not an expert; I am just a local politician. The expertise obviously lies with Richard Aylard and this is probably the third time I have heard the historic exposition of how we have got to where we are. Andrew Whetnall has been arguing, as you have heard, for a simpler and more cost effective solution.

There is no doubt that the preferred proposals from Thames Water are simpler than the ones that were being talked about some months ago. I made a note that it was probably more than 50 construction sites. It is now about 30 something --

Richard Aylard (External Affairs and Sustainability Director, Thames Water): 22.

Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council): 22, sorry. It is considerably fewer construction sites.

There are two points that I would like to raise. The first point is that, while the construction disruption was going to be gargantuan, we still have to recognise that the proposed scheme involves massive disruption to the riverside and it is still a massive scheme – the like of which has never been contemplated before.

The second point which I would like to pick up is about cost. Richard [Aylard] has mentioned that Caroline Spelman said this is the cheapest option by far. I think we have got to understand, when I saw Caroline Spelman she described getting hold of the Chief Executive of Thames Water, grabbing him by the lapels and saying, “It won’t cost any more money, will it? You will absolutely assure me that it will not cost any more money.”

The history of this project, like all capital projects – and we can talk about the Olympics and Crossrail – is one of escalating costs. The reality is that this scheme, when it was first discussed, was going to cost around the £1.5 billion mark. The estimates we have today are £3.6 billion. I can guarantee that this scheme will cost more than £5 billion. My Deputy Leader, Nick Botterill, reckons it is probably going to cost £10 billion by the time our children and grandchildren have paid off the cost of this scheme.
So the costs for this, even before we have started the scheme, are escalating and have more than doubled. Those costs will be borne by every single Thames Water customer. This is not through general taxation. This will drive many hardworking families into water poverty. There is no doubt about that at all.

Against that, we have to discuss and understand the benefits that will accrue from a scheme that will cost half of Crossrail at a time when services are under extreme threat and there is going to be a large reduction in public expenditure. If it were not for the European Union (EU) and the threat of fines, the reality is that the benefits, for me as a local politician, are not clear cut. I cannot see the huge public health benefits. I cannot see huge environmental benefits nor can I see the aesthetic benefits that would justify this massive engineering project.

We recognise that you need to do something. It is absurd to say you should not do something. Surely there must be a way of tying in some of the options that were outlined by Richard Aylard, in a way that is going to be less disruptive for Londoners? You could have an even shorter tunnel, together with the sustainable urban drainage scheme and skimming off options. A hybrid solution which would potentially be less disruptive and also a more sensible response. We would encourage Thames Water to look at a more proportionate response to this problem.

Obviously this scheme is better than the one that was talked about some months ago, in terms of disruption. We still remain incredibly concerned by the levels of disruption. I will give some examples. Wandsworth Council has already talked to me about judicially reviewing the decision because it did not realise that the main entry shaft was going to be in Barn Elms, which are the recreation playing fields for most of the schools in south west London. That is going to be a crater. I think it is in the London Borough of Richmond, but it is owned by Wandsworth. That is going to be a crater for seven years, so lots of kids in our schools are not going to be able to play organised field activity.

Another site selected by Thames Water apparently is the location for one of the most successful businesses in Wandsworth, Panorama Antennas Limited. I gather it employs about 500 people and is economically very active.

There is going to be huge construction disruption in some of our majorly important amenity locations and massive economic disruption, and allied to that escalating cost; it will cost more than £3.6 billion. You can shake the Chief Executive by the lapels but this project will go up in cost, and has done.

Lastly, I do not see that the benefits justify this expenditure. The only reason that we are going ahead with this is because of the threat of prohibitive fines from the EU which, I think, is a great shame.

Navin Shah (Deputy Chair - in the Chair): Can I pick up an issue about the planning process? Obviously the Secretary of State is now looking at a different process for determining planning applications which could, potentially, have a very major impact on the whole proposal that you have. Would you like to comment on what the implication would be if local authorities were charged to determine planning processes, and what the role of the Mayor would be as well?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): First of all, I am not a planning specialist and I think it is very important that we should understand that. The facts are that Hilary Benn [former Secretary of State for Environment, Food and Rural Affairs], in the last months of the Labour Government, said that he was minded that this particular scheme should go through the new mechanisms of the 2008 Planning Act and Caroline Spelman said exactly the same thing last week. So we have, basically, a cross-party consensus that the 2008 Planning Act route is the one to go down.

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. Local impact is something that we would deal with them on, whatever happens and whatever the requirements of the Government are.

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. Whether the Mayor’s powers could be used is an interesting thought. Again, we would welcome that as a possibility. I think there are issues that the scheme would not, necessarily, be strategic in each of the 14 boroughs so would the Mayor then be able to call it in? Again, I am not a planning expert. The other thing is whether all the necessary powers would be available to the Mayor. These are things that are being looked at.

All I can say is that we want something that will enable us to deliver the project on time and with proper local consultation at every stage.

**Andrew Boff (AM):** Councillor Greenhalgh, you accept that there is a problem with sewage in London and with the overflow in London? What would be the alternatives that you would look at if this is not the right one?

**Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council):** This is the difficulty. If I could have a ready made fully worked up alternative we would be in a far stronger position. Certainly the direction that we would be pointing to, as an alternative, is what I described as a hybrid scheme which is a little bit of everything – rather than just banking on one solution. Some experts – and I am not an expert – have said, “It isn’t a definitive solution and will, potentially, require replacement in 50 years’ time”. One of them is an academic. Professor Richard Ashley [Professor of Urban Water, and Researcher, University of Sheffield] is his name. I am not saying he is right.

We definitely feel you should not just weigh up the different options that are outlined by Thames Water - SUDS, skimming, oxygenation or a storage tunnel - but use a little bit of each. That is what we feel might be the more sensible solution because it does not tie you down to a definitive answer. That is the direction we would look at.

The problem seems to be the almost binary approach to everything. There is a binary approach to the capital programme with Thames Water. We are very keen and we have been lobbying Thames Water over basement flooding which we think has a far greater public health impact on our residents. We have been a strong supporter of the Counter’s Creek scheme as a way of alleviating basement flooding. Indeed, one of the new tunnels that is being proposed by Thames Water for the Tideway Tunnel is not large enough to deal with the Counter’s Creek scheme and, indeed, needs to be far larger. What we are seeing is that each capital project within Thames Water is being considered differently, rather than it coming up with a capital programme that is affordable.

In direct answer to your question, a hybrid - a bit of everything - rather than just the gold-plated, single solution.

**Tony Arbour (AM):** A couple of preliminary points which are matters dealt with in your suggested questions. Firstly, can I express my gratitude to Richard Aylard. I first heard that Barn Elms was going to be the main shaft site when I read it in the Sunday Telegraph on Sunday. I choked on my breakfast and I immediately contacted Richard Aylard and I am very grateful to him for responding and saying, “Yes, indeed, Barn Elms was preferred”. Despite the fact that you say there is a consultation, I think it is a preferred site.

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** Yes.

**Tony Arbour (AM):** So the opportunity is open to suggest somewhere else. That is a preliminary point.
What I am cross about is that one reads about it in the paper. The newspaper story is quite lurid - if true - so I want to put a couple of things from the story to you, Richard [Aylard], for you to confirm which is true. “Thames Water appeared likely to choose Hammersmith’s Furnival Gardens as its entrance point until 2,000 local people signed a petition objecting to the idea”. I have to say, Richard [Aylard], if it is the number of people who sign a petition who determine where this is going, the people of Barnes are slow to get angry but by golly when they are angry they are really angry and those 2,000 will be as nothing, Stephen [Greenhalgh]!

**Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council):** We will get 20! We can play that game, Tony. We will get 30 to your 20, 50 to your 40 and 60 to your 50.

**Tony Arbour (AM):** That is precisely the point I am making. That cannot be a legitimate reason for -

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** It is just wrong, Tony.

**Tony Arbour (AM):** OK. You will come back to that. If you are able to make the case to convince people that there truly is no better alternative we will complain and we will moan but we really, really need to be convinced. There has to be a very substantial case.

The other thing I would say is I am a supporter of the tunnel and, in the absence of any viable alternative, and Stephen [Greenhalgh] concedes that, there is as yet no viable alternative to it. One wonders whether or not you are actually going to deal with the problem - across both sides of the river - in my GLA constituency. This does not appear to include Mogden. You are still going to get the contraceptives, you are still going to get the sanitary towels, you are still going to get all of that. Those of us who have been in local government for many years know that when this problem arises every couple of years the anger is always profound. You are failing, as far as I can tell, to deal with the Mogden problem here.

The most important thing that I want to put to you, Richard [Aylard], is that in your statement we are told, “Thames Water is planning to reduce disruption to local communities by transporting materials to and from the construction sites by river where possible, rather than by road”. We have heard all of this before. Not from you, but we have heard it from the Olympic Delivery Authority (ODA). “It proposed to transport one quarter of a billion tonnes by water to the Olympic site.” So far it has only transported 3,000 tonnes. The reason that we are given for this is that, in fact, transporting stuff by water is extremely difficult and it is extremely expensive. The hauliers do not want to do it and the contractors do not want to do it.

Many of us sitting round this table - and I know Murad [Qureshi] in particular - have been very keen on seeing that water transport is used to avoid the incredible disruption that there will be. If I can simply speak on the Barn Elms site, the vehicular access is just utterly impossible.

I would like to know whether or not this is just pie in the sky - as we heard from the ODA. The people who developed the Dome were going to do the same, as were the people who did this stuff at Vauxhall. We have heard it time after time. It is a fig leaf, apparently, and I would like you to deal with that please.

My final comment - and this is me as a member of the GLA looking at the whole thing completely strategically, rather than as a Constituency Member - is to say that if this proposal really does deal with the problem, and it deals with it for at least as long as Bazalgette managed to deal with it and we can be absolutely certain of that, I have no doubt that, on a regional basis and on a London-wide basis, it is something that we should support.
Richard Aylard (External Affairs and Sustainability Director, Thames Water): The 2,000 signatures were obtained after a public meeting called by the council at which it was suggested that we were going to dig up Ravenscourt Park, which was never anywhere on our radar as even a possibility. We explained a number of times to people, in public and privately, that Furnival Gardens was never going to be big enough for an entry shaft. It might have made a CSO shaft: a smaller shaft for a shorter period. Actually, we managed to engineer the design, such that nothing is needed in Furnival Gardens at all. So that has completely gone away.

We have not responded to petitions. I was not even aware there had been 2,000 petitioners. I have never seen these signatures or anything to do with it.

Secondly, we did do two three-hour briefings for councillors and officers - and I think Members of the London Assembly - last Thursday, Tony. I believe you were invited. I am sorry I should have rung you myself and said you need to be there.

Tony Arbour (AM): If I had known I would have been there.

Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council): Officers were invited to the briefing. I rang up Councillor Nick True, the Leader of Richmond Council, and he did not know anything about it. So I was the one that let him know on Thursday when I found out from my officers.

Richard Aylard (External Affairs and Sustainability Director, Thames Water): No, sorry, Stephen, there was a briefing for officers in the afternoon and for councillors in the evening. We said to anybody who could not come they were perfectly welcome to come to the other one. We would happily give you a list – I will supply it to you this afternoon, Chair - of who was invited. I can give you copies of those.


Navin Shah (Deputy Chair - in the Chair): Can we just keep going and move forward please?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): We are currently investing £675 million to upgrade all five of London’s sewage treatment works including £140 million at Mogden. That will increase treatment capacity by 50% and we think that the discharges to the river will be a maximum of one a year from now on. So the Mogden problem is being solved separately. It is not impossible that, in the longer term, the tunnel could be extended to Mogden but the cost would be around £200 million. That is not justified given that we have a scheme already underway which will sort that problem very substantially. I am happy to discuss that in more detail.

The fig leaf of transport by water. We take this very seriously. We are just about to break ground on the Lee Tunnel which is the shorter, four mile tunnel from Abbey Mills to Beckton. All of the spoil is going out by jetty and we are increasing the jetty capacity to do that. The vast majority of construction materials - the aggregates - are coming into the jetty.

When you look through our consultation and all the site specific information about the 22 construction sites, a lot of it is to do with building new jetties and new wharves in the river to handle getting materials in and out by barge.

One of the reasons why the cost has gone up so much is because, as we have looked at this, we have realised that we need to do more work in the foreshore and use jetties and wharves more for moving material to reduce disruption. So there is a trade off between disruption and cost. Certainly the proposals for Barn Elms will take away, for six years, the area of 3.7 football pitches. That is a fact.
It is only a proposal. That is our preference. In the site specific information we also talk about the other short listed sites and we are open to suggestions on where else we could do this. It is a genuine consultation, Tony [Arbour]. Yes, we have got a preference - we have to state that - but we are also showing our homework and showing the other sites that we looked at. I think we have got a meeting already fixed with you and Zac Goldsmith [Member of Parliament for Richmond Park] to take you through all this so I look forward to doing that.

The last point is that the tunnel will be good for 120 years. It may be, at some stage, that we will need to build bigger pumps at Beckton to empty it more quickly, but the tunnel itself is good for 120 years.

**Murad Qureshi (AM):** Can I share my concern on Barn Elms as someone who has played there as a kid? There used to be ILEA playing fields. It is not just the schools in south west London, but actually quite a bit of west London, that are still sending their kids to the playing fields.

I think what this raises is that we have got to be clear about what the benefits are; more so than has been articulated. I wanted to raise the issue - as the councillors have - about the regular sewer floods that we have had in west London, both in Hammersmith and Fulham, as well as the City of Westminster. Are residents in Askew Road, Hammersmith Grove and Maida Hill going to see fewer flats flooded in the basement as a result, or not? It is one of the ways, I think, you need to sell it to Londoners; to show them that it is justifiable and that they will see a direct benefit.

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** These are separate schemes but they are very much linked and being developed together. It is absolutely wrong to say that the Thames Tunnel will not be big enough to take the discharges from an increased Counter’s Creek scheme. The flows from Counter’s Creek already go into the tunnels which we are going to be intercepting. What we want to do is get it there faster; and a bigger tunnel will allow us to do that.

There are also synergies between the two schemes and, although I am not going to talk about it today publicly, there are things that we are working on where there are additional benefits that we can create by putting the two projects even more closely together and wrapping different things around the waste water network in west London.

With the support of Hammersmith and Fulham, for which we are most grateful, and from Kensington and Chelsea, our regulator has now funded short term measures in Counter’s Creek – flat valves to stop the worst affected properties flooding – and also sufficient funds for us to develop a major scheme to deal with it. Counter’s Creek is part of a historic network and it brings storm water from as far away as Brent and Camden. It all ends up in the low lying areas of Hammersmith and Kensington where, of course, there are a very large number of basements. It is a very serious problem and really important to us. We are dealing with the regulator on it and we have a solution on the drawing board.

**Murad Qureshi (AM):** So there are benefits beyond the investment you have made in Counter’s Creek already, which will mean residents in west London will see less flooding?

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** The Thames Tideway is the logical place for the Counter’s Creek scheme to end up. It is not the only possibility but it is the most likely one.

**Councillor Stephen Greenhalgh (Leader, LB of Hammersmith and Fulham Council):** We got some clarification on this because I think that is a very important point, Murad [Qureshi]. That would have sold it to us.

I have got an email exchange following a briefing from Phil Stride [Head of London Tideway Tunnels, Thames Water]. This scheme has a new tunnel that connects Acton storm tanks from Hammersmith
Pumping Station. We were told by Thames Water - by Phil Stride - that the two metre diameter tunnel is a Thames Tideway Tunnel requirement. In order to fulfil what you need for the Counter’s Creek sewer flooding alleviation scheme that would have to be a far larger tunnel. That is something that has not been factored in. Looking at the synergies between the two schemes is very, very important. At the moment that particular tunnel is not going to provide what is needed for the Counter’s Creek scheme.

Richard Aylard (External Affairs and Sustainability Director, Thames Water): Let me try to explain. We are currently proposing, as part of the Thames Tunnel, a 2.2 metre diameter tunnel to pick up the discharge from Acton storm tanks and take it to Hammersmith Pumping Station. That is a discharge we have to pick up somewhere along the route between Acton storm tanks and the river. Acton storm tanks is our site. That is the best place to intercept it and a two metre tunnel is what is required.

We think that by putting in a four metre diameter tunnel we can not only connect that in more easily to the Counter’s Creek scheme, we can also, potentially, do away with Acton storm tanks altogether, which would be a great benefit to the people of Ealing who occasionally get the odours from them. All of this is being looked at and it is on the drawing board, Stephen, and we are happy to come and brief you about it. The two schemes are being developed in parallel.

We have to be slightly careful because they have different regulatory drivers. If we are not careful, we will get on the wrong side of Ofwat by not being clear about what each scheme delivers. Actually, it is all joined together as part of draining west London.

Steve O’Connell (AM): The point I would like to make - and this is an observation first - is that the public has got to a tipping point around disruption in London and cost. I think it is a point to be made that gold-plated options - which I think has been picked up by Councillor Greenhalgh - are not options any more, and they will not be for, probably, the next ten years. So, to me, it is looking at a simple equation of the cost of this and the disruption. The cost is being borne, as Stephen [Greenhalgh] mentioned, by all people who pay for their water and there will be people who can ill afford this increase which, to me, at a very superficial level, seems to be a gold-plated option.

The equation to me is cost and disruption against benefits. I thank officers for the papers but, to me, I have not got underneath the benefit side of the equation - the whys. At the moment, the cost, which will probably be upwards of £10 billion --

Richard Aylard (External Affairs and Sustainability Director, Thames Water): That is nonsense. Absolute nonsense.

Steve O’Connell (AM): I will be more temperate. If it is up to £5 billion, to me, that is an enormous amount of money. The point I want to make is that the alternatives and the whys do not jump out at me - other than the fact that I love fish and I do not like to see 10,000 killed. If the whys are EU fines, a caning from Ofwat and the fact that we want to have a gold-plated service, that does not wash with me. There must be other alternatives that are cheaper.

We probably have not got time to go into all the whys. I would like to understand why we are going for this particular project? The time has come for operations, public bodies and others to say, “This is what we need to do. We do not really care about the costs because it is going to cost other people and we are not going to go for it”.

The reason I ask now is to give some context for my questions later. If I can have some comfort around those issues then I will understand it a little bit more.

Navin Shah (Deputy Chair - in the Chair): Can I suggest that we get a response when we look at the cost specifications and take it forward from there?
**Steve O’Connell (AM):** My point is that many of the questions, quite rightly, are around the detail of the consultations on the scheme that is - so called - accepted. I am not overly interested in the details of the scheme. The fact of the matter is that this is costing an enormous amount of money and I am not sure that my constituents can, frankly, afford this extra burden.

**Richard Barnbrook (AM):** I agree this has to happen. I believe, like other Members have said, that you are a water authority. What better promotion than to use the waterways of London to transport everything.

I am concerned at the timing. If you look at the bigger picture, rather than the immediate effect, London is growing and it is not going to shrink. We know from the London Plan, from central Government, from the Mayor, the GLA and different parties across London that they want more housing and that means millions more people coming to London. That creates a pressure. I would like you to explain the effect of the Victorian waterworks collapsing. You hear on the news constantly that it is breaking down here or breaking down there and the fact that it has taken from 2001 to now just to get to this stage.

When do you believe that this project will come to its conclusion?

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** First of all, the sewers are not breaking down. They are in extremely good condition. We have taken London Assembly Members down there recently. Mike Tuffrey will tell you the condition they are in, which is excellent. The problem is that they are still the same size as when they were built. That is the problem; it is growth. You are quite right to pick up on the problem of growth.

All of the work we have done around the needs case does factor in the latest projections on growth and on climate change and shows that the tunnel is good for 120 years.

On the issue of when we can get it done, we expect to be able to start construction in 2013. The target date for completion is 2020.

**Richard Barnbrook (AM):** That is brilliant. The reason I ask that is because these are Victorian stones and to maintain them is probably more expensive --

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** They are actually brick. They are in extremely good condition because they are underground so do not get exposed to frost, air or acid rain or anything else. They are in very good condition. It is the size that is the problem.

**Richard Barnbrook (AM):** The point is that the population is going to grow and I think something needs to be done and needs to be done very quickly.

**Navin Shah (Deputy Chair - in the Chair):** Both Mr Whetnall and Mr Powell have been listening to us very carefully and patiently. Mr Powell, you might want to cover what you feel are the Mayor’s powers when it comes to planning control, given how important it is.

**Martin Powell (Interim Mayoral Adviser on the Environment, GLA):** I can certainly pick up on our role. Obviously we need to ensure value for money for Londoners. There seems to be broad agreement that there is an acceptance that a scheme has to be done but a lot of detail needs to be worked out. Whatever that is we need to ensure a robust management structure and competitive tenders for the works. We need to put obligations into the contracts to ensure that these jobs solve an economic problem as well and possibly putting the long term unemployed into some of these jobs. It has worked very well with the Retrofit Employer Accord Pilot (REAP) for our refit RE:NEW energy programmes. There is no reason why we cannot replicate that kind of success.
We need to bring new skills into the water industry, which is only going to grow in a whole series of aspects across London and not just this particular one. We also need to be extremely sympathetic to the disruption - and I know that has been raised with the boroughs - to optimise the way we do this work.

I think, probably, an early investigation into the entry points and the construction site would, potentially, be useful, to see what that looks like because we have concerns over traffic flows as well as general disruption in the area. Perhaps if people can see and visualise some of these entry points during this process I think, potentially, that could allay some of the fears that have been presented.

**Navin Shah (Deputy Chair - in the Chair):** Do you think, given the Mayor’s serious strategic role in planning terms, that the Mayor should have a key role in planning determination?

**Martin Powell (Interim Mayoral Adviser on the Environment, GLA):** I think we need to start the consultation process and see what the scheme is, what the feedback is and understand what the best way forward is to get this process moving.

**Andrew Whetnall (Deputy Chair, London and South East Committee, Consumer Council for Water):** Picking up on what has been said, I think we recognise that this tunnel has to be built, there is a capacity problem in the sewers and this is the most cost effective option. I am very grateful that Thames Water looked seriously at our suggested shorter route and that that saves something like £700 million. We are less pleased of course that the total cost appears to have doubled in three years and, as people have been saying, that may have further to go. We do not know what the cost of capital will be by the time we get to 2018 and these mega projects always carry some degree of capital risk.

We are very keen for Ofwat to consult on its ideas for financial treatment, because what we do not want is for customers to be paying a premium to a constructor on a risk which they appear to be taking and then - as does sometimes happen with private finance initiative (PFI) type schemes - the risk materialises and the cost comes back to the consumer. Financial treatment remains very important.

We have no new numbers from Thames Water on whether the scheme is cost beneficial. I think it is almost certainly the most cost effective option. We asked for more work to be done on SUDS but they do not seem to have cracked the problem although they can make a contribution. Whether it is cost beneficial remains, I think, in some doubt. At the early stages there was an estimate that the public health impact of the tunnel was worth £4 billion and if you look at the regulatory impact assessment on another way of counting - a way normally used in the health service - the value is probably more like £1.5 million and that is too big a difference to glide over. Therefore, we are quite keen for the Chief Medical Officer, who used to have a group to look at the comparative cost beneficiality of different health interventions, to have a look.

We did have doubts as to whether it made all that much difference to fish because there was data around years ago which suggested that you do not get salmon - whatever happens - because of temperature rise and the sustainability of other species seems to come out pretty well whether you have a tunnel or not. There has been more work on that. I gather that we were right to have that concern on the data then because there is now new data which says that the tunnel has made a difference to fish.

However, whether it makes a difference in proportion to bill impacts, bearing in mind that the last time Thames Water customers were asked to pay for it, not just in London but across the region, the mean willingness to pay was about £13.50 and we are now talking about an average bill impact of anything up to £90 for the Lee and Tideway tunnels together. I think there is a big issue about whether customers would be happy and there is a big issue about the other cost pressures around. This is only,
as I understand it, one of hundreds of water bodies which are below prospective, highly aspirational European standards.

So if, in the next price review, we get a combination of this project at whatever the cost is then, and other interventions in other water bodies across the region which could be very expensive - perhaps a new reservoir, perhaps a higher cost of capital and, predominantly, volumetric charging - volumetric charging means that the spread of bills gets bigger around the average - a six person household might be paying 60% plus of the average bill; unless the distribution impact of these changes, coupled with metering, are very carefully examined, there is a real risk that those least able, especially households in poverty with children will be paying more than average for this project.

It seems to me that about two thirds of people have never noticed human sewage in the Tideway. It is very nasty when you make a video of it - as Thames Water will show - but it is not an everyday concern. We have externalised our control over whether we do these things or not and, therefore, it is very important to go on bashing away at cost control, choosing the tightest option - and we have certainly made some progress on that - and looking very hard at how the costs are shared between the customer base.

Andrew Boff (AM): How much are Londoners going to have to pay in their water bills and for how long?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): The question of bills is a matter for the independent regulator. It sets price limits, we do not. It sets them on the basis of the work we need to do and the capital we need to do it. One of the factors that is unknown, as Andrew [Whetnall] says, is the cost of capital, which changes assumptions. The work we have done with the regulator shows that we would expect bills to start rising to pay for this project in 2012 or 2013 and by 2018 they would be, on a range of very broad assumptions, £60 to £65 a year more than they are now. The £90 figure - which we have heard a number of times - includes expenditure on the Lee Tunnel and the sewage works upgrades, which is already in bill increases. That is already in prices now; that is factored in. The additional £60 to £65 is for the Thames Tunnel which will not peak until 2018.

Andrew Boff (AM): Would the adoption of a PFI solution just prolong the agony of Londoners like every other PFI solution has?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): The Government and Ofwat are looking very hard at the most cost effective way of delivering the scheme. The Floods and Water Management Act contains provisions, on a scheme this size, for the Secretary of State to direct that it should be put out to tender, by us - which means that we would not do it ourselves - and it is looking now at regulations around what is called the Infrastructure Services Provider (ISP) route and we have got a team working on how that would work and how much it would cost. The aim is to do this as cost effectively as possible.

On the gold-plating point, anybody who has ever dealt with Ofwat knows it does not allow any gold-plating! It is Ofwat’s job to stop it. The £3.6 billion cost has been scrutinised by Treasury experts and others. It includes a very substantial risk and contingency factor and it includes the Treasury’s optimism bias analysis. This is a robust figure where we stand today.

If there is a perception of gold-plating it is only around the work we are adding in to minimise disruption. Things like working in the foreshore, as I was saying earlier, are very expensive but they will minimise disruption. That is the only potential gold-plating that anybody could accuse this scheme of having. If other people have got suggestions they should make them in the consultation. We will look at them and respond formally. Certainly the discussions we have been having with Consumer Council for Water will continue on that basis.
Murad Qureshi (AM): You said earlier that it will have a life of 120 years. Will those price increases be continuous all the way through the project?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): 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. It may be that when we have got to the end of our Victorian mains replacement programme in 2025 or 2030 costs will come down for that reason.

There are checks and balances on bills but, as Andrew [Whetnall] says, there is also a potential expenditure for the Water Framework Directive and there are distribution impacts of more metering. That is why we have been arguing, very forcefully, for a social tariff to help the poorest customers. Again, in the Floods and Water Act we were very pleased that, thanks to Thames Water pressure - I think Andrew [Whetnall] would agree - 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.

Murad Qureshi (AM): Just to confirm, it is coming off the bills and, unlike Crossrail, there is no public money of any sort coming in. It is, essentially, paid for by the customers. It is wider than London though, isn’t it?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): It will be 13.8 million customers, which is 5.8 million people paying bills that would contribute to this. That is in the same way that customers in the south west - South West Water customers - have paid to clean up the beaches in Devon and Cornwall. Their sewage charges are now 2.5 times as high as ours and, even with the £60 to £65 increase, our bills are still projected to be at or below the national average by 2018.

Andrew Whetnall (Deputy Chair, London and South East Committee, Consumer Council for Water): It really depends what else comes in on the back of the Water Framework Directive which is, to describe it simply, a set of really aspirational standards for water bodies. It is about trying to return them to the condition they would be in if there were no people. That is, potentially, formidably expensive so I think we need to watch that.

Of course, I do not think anybody should envy the south west. The average rateable value bill goes up to £930 by 2015. Thames Water has got to control the differential between metered and rateable value bills, if only because a lot of people living in flats will probably not be able to have a meter put in, so there are really big questions. We think it is important to keep on top of the distributional impacts.

Richard Barnbrook (AM): It is not clear to me who is covering the cost of this. Is part of this central or regional Government and customers, or is it all down to the customers?

Andrew Whetnall (Deputy Chair, London and South East Committee, Consumer Council for Water): It is all down to the customers.

Richard Barnbrook (AM): Can I ask you then how much profit you made in the last three years as a water authority and why are the customers expected to pay such an amount?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): Several hundred million each year and I can give you the exact figures. The point about it is that that figure is calculated by the regulator as the amount we need to pay shareholders to keep them investing in this
company. Shareholders put in all the money and then they get a return on it but if we do not give them some sort of dividend they will put their money somewhere else.

Richard Barnbrook (AM): I think the Government should have stepped in on this, like they did with the Victorian building in the earlier days. A single government took costs out of the general tax to pay this, over and above the contract --

Richard Aylard (External Affairs and Sustainability Director, Thames Water): Sorry, that is not true. Bazalgette sewers were funded by a precept on the London rates.

I should also say that Paris is investing 4 billion euros in a scheme to deal with CSOs and the Rhine Ruhr conurbation in Germany is spending 4.5 billion euros, so this is not just a question of the UK following the rules and everybody else ignoring them.

Murad Qureshi (AM): I hear the figure of 300 million euros as a fine if we do not comply with air quality requirements. What is the fine, potentially, from the European Union if we do not comply?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): I think you would have to ask Defra but it is updating its cost benefit analysis and I would expect updated estimates with the size of the fines. Andrew [Whetnall], you may know more than I do on that.

Andrew Whetnall (Deputy Chair, London and South East Committee, Consumer Council for Water): The general assumption seems to be that they can fine until it becomes economic not to do the project!

Navin Shah (Deputy Chair - in the Chair): I would like to know what measures you might want to implement to keep the cost down; and what is your contingency, given the various uncertainties and the very long timescale of the programme, and what provisions will be made to help those customers who cannot afford the rise?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): Let me deal with the question of contingency first. I need to apologise that I cannot give, publicly, a figure for the size of the contingency because if this project goes out to tender there could be an issue affecting the tenders that we receive. There is a very serious commercial reason why I cannot give you the figure, other than it is substantial and the Treasury is satisfied with it. I am sorry it is not a good answer but it is the best I can give in public.

Navin Shah (Deputy Chair - in the Chair): You might say this is the nature of the beast, whether it is the Olympics or any major developments of this nature. Are you sure that you would be allowing, as part of your project plan, an adequate amount of contingency so that you do not suddenly find that you are going to have to go to the residents to ask them to cough up more money?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): We had 100 professionals, including people with international experience, working on these numbers for two and a half years. Defra and Ofwat have been challenging them robustly as we have gone along. The Treasury were required to satisfy themselves, before they signed off Caroline Spelman’s statement, that these numbers were robust. There is a very substantial risk contingency in there, commensurate with the risks in the project. The Treasury applies something called optimism bias and it has a set of rules about how that is to be done to avoid developers being optimistic about what they can achieve. Again, the optimism bias is in there, and the Government was satisfied with those numbers.

In terms of what will be done in terms of keeping costs down, we are scrutinised at every stage by Ofwat on any project. It appoints independent consultants called reporters who sit and scrutinise, not every pound, but every ten pounds that we spend. That report goes back to Ofwat. It simply will not
allow prices to go up to pay for something that is not good value. So every project we do is carefully scrutinised.

Navin Shah (Deputy Chair - in the Chair): What about help to customers who may have problems?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): We now have a trust fund, which is funded by shareholders, to help our poorest customers who get in trouble with their bills. This is along with other water companies and that does dispense quite a bit of money every year. We are pinning our hopes on having a social tariff. It has become clear there is going to be no help from central government through the benefits system so we are working on a social tariff. I know the Consumer Council for Water has some views on whether it is a good idea or not.

Andrew Whetnall (Deputy Chair, London and South East Committee, Consumer Council for Water): Technically, there is a report from Anna Walker [civil servant and Member of Consumer Focus] on metering and affordability which says the Government has to decide whether it assists through the benefits system or whether support comes from other customers. We think the benefits system would be a good idea, but everybody knows what is happening in the spending review so we are not betting on it.

What it comes down to is if you have a social tariff is you have to arrange it so that the nearly poor pay for the very poor - in the Thames Water model. Alternatively, you have to look at ways of making the take progressive. Funnily enough, we are phasing our rateable value charging which, at one stage, charged people in larger houses more. I think there is quite a debate to be had on what is the best way of spreading the cost fairly.

Richard Aylard (External Affairs and Sustainability Director, Thames Water): This is not just a Thames Tunnel problem; this is the Water Framework Directive and all the other investment that we need to make on the infrastructure.

Richard Barnbrook (AM): Since it is going to benefit Londoners and be paid for by Londoners, what assurance do you have that the employment for the construction of this, whoever draws up the contract - obviously under European laws, will be safeguarding jobs here in the capital? What percentage will be local people being employed in the construction of this project?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): I do not have a number on that but we are working with organisations in Newham --

Richard Barnbrook (AM): Percentage?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): I cannot give you a percentage. What I can say is that we estimate that there will 4,000 jobs for the Lee Tunnel, which has already been built, and the Thames Tunnel. We are working with the London Development Agency (LDA) and Martin Powell and his colleagues. We are working with organisations in Newham to make sure that we employ as many people as possible on the project.

The other thing, of course, is that this project is about London being a vibrant, world capital. Putting sewage in your river is not a very good way of attracting people and saying London is a really good place to come and work. So, potentially - and I think the Mayor has signed up to this - there are a wide range of economic benefits to London in cleaning up the river.

In terms of the 4,000 jobs, we are committed to making as many of those available to Londoners and particularly long-term unemployed Londoners as we possibly can. We expect to be held to account by the GLA on that.
Andrew Boff (AM): Just do not follow the Olympic Delivery Authority’s model, because it did not work. It was completely non proactive --

Richard Aylard (External Affairs and Sustainability Director, Thames Water): We are trying to learn from --

Andrew Boff (AM): If you want to employ local people you have got to get further than just printing a leaflet and sending it to the job centres. You have got to be proactive in attracting Londoners into these jobs. Do not just assume that everyone applies.

Richard Aylard (External Affairs and Sustainability Director, Thames Water): We agree with that. When we built our desalination plant in Beckton we did manage to employ a number of local people by going out and working with local organisations. This is not just a paper exercise; we are genuinely committed to it. We work in those communities, they are our customers and we want to employ them where we can.

I should also say we have a bursary scheme which, this year, is going to eight disadvantaged people in east London who will be funded by Thames Water to get an engineering degree. They will be mentored by Thames Water engineers and they will have paid work placements during their time at university. We are serious about this.

Martin Powell (Interim Mayoral Adviser on the Environment, GLA): Just to add to what Richard [Aylard] has been saying, on the water poverty status, in terms of this project, we are working with Thames Water on RE:NEW - our homes energy efficiency programme - to put water efficiency measures into London properties. These are not just energy measures. Part of this is to solve and reduce the poverty percentages in London. It is not just this project. There is a range of other interventions which will come out in the Water Strategy which will highlight how we can tackle this problem.

Navin Shah (Deputy Chair - in the Chair): Following the consultation, what will be the next steps in terms of how you are going to take on board the outcomes expected by the residents, local authorities and so on?

Richard Aylard (External Affairs and Sustainability Director, Thames Water): The 14 week consultation ends just before Christmas. We will then spend several months assessing all of the comments that we have received and we will publish a report on how we plan to address each of the comments. This will be aggregated together, as a number of people will have asked the same question. We will then answer every point that is made to us.

Situations like the Panorama Antennas factory which Councillor Greenhalgh picked up on, which we absolutely recognise as an issue, are already being looked at to see if there are other options that we can come up with in that area on the basis of feedback we have already received.

We met with Wandsworth Council yesterday morning and we will also be meeting with Southwark Council. We want to start working on alternatives now. We will publish a report on that. We will then publish our updated proposals and there will be new preferences, in some cases, and how we have got there. I will be amazed if there were not changes from where we are now as we are learning as we go along. This week is the first time it has been made public. The second round of consultation is a more refined one which will be about things like hours of work and more detail about access roads and all the things that would concern local people. This is a long process. We are not looking to submit the planning applications until 2012.

Navin Shah (Deputy Chair - in the Chair): From what you heard this morning and from what you might glean from the consultation, while one cannot prejudge what level of consultation responses you
will get, would it be realistic to believe that you will be able to, if needed, address the issue about different options of routes or, indeed, a different model of programme itself?

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** I am not going to prejudge the consultation. Somebody may come up with a marvellous answer which we will immediately want to rush away and look at, as Andrew [Whetnall] did with his Lee Tunnel proposal a couple of years ago. We will look at everything. We will make public the work that we have done. There is an awful lot in the needs case, in the appendices to the needs case and in the Jacobs Babtie report. All these documents are available and, if elected Members want more detail, I am happy to set up technical briefings and sit down with you and take you through it. We are really interested to know what you think. Local people’s views count too. We will be listening to them and responding in due course, before the second full round of consultation. We are a long way from digging holes in the ground anywhere yet.

**Murad Qureshi (AM):** Richard, you made a comment that you were not aware of the petition from Hammersmith. Last week, I put in a petition here at the Plenary about Cremorne Gardens as the residents had raised it as an issue. I just want to be reassured that during the consultation you will pick up on these?

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** We will pick up everything.

**Murad Qureshi (AM):** The problem is, up until the consultation process began, we were not sure where it should go. When I came across the residents there they explained their concerns about the last bit of greenery they had on the Thames being used as a worksite when there were adjacent sites which had been lying empty for many, many years. I thought they had a worthy point to make.

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** They do have a worthy point to make.

**Murad Qureshi (AM):** I would like to be reassured that petitions and other things will be taken on board now that the consultation process has begun.

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** There is a formal consultation process and everything will be recorded. Indeed, we would be quite in default in planning terms if we did not. I was in Cremorne Gardens last week. I know what the problem is there. There is an alternative, which we were steered away from, up until now. When we take all the feedback we can look at the other options and come up with something, hopefully better, in the next round.

**Murad Qureshi (AM):** This is no fault of yours but you are, essentially, a private utility and there is no onus on you, as far as I can see - apart from goodwill - to go through this and decide which way you want to go. I never got my head round all the privatisation legislation at the time in the 1980s but there were never processes in that legislation which let you loose, so to speak.

**Richard Aylard (External Affairs and Sustainability Director, Thames Water):** This is not a privatisation issue; this is about community consultation which is a legal requirement under the Planning Act. Our statement of community consultation was published formally in the *Evening Standard* yesterday. If we do not follow it we could be up for judicial review and all sorts of other problems. I am sure the Chair would explain better than I can. It is a serious issue and it is to do with planning. It is not to do with privatisation.

**Navin Shah (Deputy Chair - in the Chair):** OK. May I thank all our guests for the lively discussion we have had and, no doubt, we will be talking about this more in time to come. Thanks again.