



## RECONNECTING LONDON WITH THE RIVER THAMES

**The Thames Tideway Tunnel project** is a new major infrastructure scheme which will tackle the current problem of London's Victorian sewer system discharging combined sewage and rainwater into the tidal River Thames. This wastewater storage and transfer tunnel, approximately 25km long, and 7.2m in diameter, will run from west to east London at a depth of 35m to 65m. It will broadly follow the path of the River Thames and join the newly completed Lee Tunnel.

Combined sewer overflows (CSOs) discharge flows from the sewers into the tidal River Thames to prevent flooding. Due to increasing population and decreasing open space, discharges now occur more than 50 times in a typical year, resulting in unacceptable levels of pollution in the tidal River Thames.

The tunnel solution will take approximately seven years to construct and require a total of 24 construction sites across 14 local planning authorities. The project would bring the UK into compliance with the Urban Wastewater Treatment Directive and will help to ensure compliance with the Water Framework Directive which has the objective of maintaining and improving the aquatic environment in the community.

Construction has now begun and to get to this stage there were numerous planning challenges to negotiate. These range from strategic issues to detailed design issues. At the heart of this process has been a young planning team assembled from a range of specialist consultancies, many of who were on full time secondment to the project.

### Quality and innovation in the planning process

---

Finding suitable sites was always going to be challenging in one of the most populous cities in the world.

Key importance was attached to minimising impacts and maximising stakeholder support. We needed three main types of sites: one to intercept existing discharge points into the river (CSOs), and two much larger site types used for the Tunnel Boring Machines.

Nothing on this scale, in this type of environment had ever been undertaken before in Britain, so we had to innovate and create a new methodology. The first step was to develop a draft methodology and consult key stakeholders along the tunnel route. With a broadly agreed methodology, we next considered all sites within 500m of the river, excluding World Heritage Sites and residential buildings. We identified 1,142 potential sites, and through a process of sieving out unsuitable ones, we created a draft short list. Our methodology was specifically designed to use a multi-disciplinary assessment system, which gave equal weight to social, economic, property, planning and environmental factors and used professional judgement.

We carried out the first stage of consultation in autumn 2010, presented our preferred sites and identified other short-listed sites within the vicinity. We explained why sites were preferred and invited comments. The results of the feedback challenged some preferred sites we had identified, and put forward alternatives. In a number of cases, we reconsidered shortlisted sites, had regard to changes in circumstances, or examined new sites brought to our attention, which were then subject to a 'back check' process. Sites considered in this way were subject to the same rigour of multi-disciplinary assessment as the original preferred sites.

Following feedback we replaced two green field sites for driving the Tunnel Boring Machines from (Barn Elms and King Stairs Gardens) with brownfield sites that were identified as more suitable.

Our final 24 sites were then subject to formal pre-application consultation, and formed the basis of the final scheme submitted with our application for development consent in February 2013. The Secretaries of State confirmed they agreed with all of our proposed sites, and approved the grant of development consent.



## Overcoming hurdles

---

### 1. Adapting to Planning Policies

The UK planning system has often been criticised for the slow decision making process with the seven years it took for a decision to be made on the application to develop Terminal 5 at Heathrow airport often quoted. In 2008 Parliament passed a new Planning Act specifically aimed at simplifying the process of obtaining consent for what were termed “Nationally Significant Infrastructure projects” (NSIP’s). New national policy statements were introduced for various types of infrastructure so that need was clear and did not have to be debated at the consenting stage, and clear timetables and an independent decision making process established. Whilst on the face of it this was a preferable route to consent than applying to all 14 local planning authorities whose area the tunnel was proposed to go through there was a significant hurdle as tunnels for the transfer and storage of waste water were not one of the categories of development to which the Act applied. The planning team therefore led on the promotion of appropriate secondary legislation through Parliament to add such infrastructure into the Act and for the need for the project to be identified in the National Policy Statement for waste water (NPS) when it was designated following a vote in Parliament in 2012. We adapted our approach to comply with the requirements of this document.

### 2. Strategic Planning Efficiency

Given that by their very nature the sites needed for the construction of the project were close to or adjacent to the River Thames such sites were also highly desirable for residential or other development. The Planning team negotiated with Government to achieve a “safeguarding direction” that meant that Councils could not permit development on the sites we needed without our approval. This ensured there were no conflicts with competing commercial development schemes and efficiency in the use of land.

## Enhancing Economic Development

---

The project will leave a stronger and more sustainable river economy for the benefit of all Londoners and visitors to the capital, and provide essential infrastructure to enable London to continue to grow and prosper. Through the River Transport Strategy devised for the project we intend to make full use of this historic arterial route through the capital. In doing so, the project will be a catalyst for broader, positive changes to the river economy. Committed use of the river will be on a scale unprecedented in modern times – river transport will be used to remove the majority of material required to construct the tunnel, keeping harmful lorry traffic off the road network. The current maritime economy has a relatively small skills base and therefore we are training a new generation of river workers, such as tug masters, barge hands and deck hands. The project’s training programme will introduce new skills and experience easily transferable to subsequent projects and roles. In the long term, a modernised river fleet of commercial boats operating on the river, operated by an enlarged and newly trained marine workforce, will facilitate sustained river usage for construction, commuting and leisure. Additionally, Skills and Employment requirements were embedded in the DCO, and therefore translated into procurement requirements to ensure contractors honour the commitments made. Employment hubs and local employment targets also formed a key part of planning obligations we entered into with the local authorities. An innovative marine training programme has been instigated, initially to address training and safety needs on the river. By working in collaboration with the PLA our contractors working on the river will leave a real legacy of highly skilled marine workers and a modernised fleet of vessels after construction. The total number of jobs created by the project is estimated at around 9000. Approximately 4000 will be directly employed by the project and its contractors and the rest are induced jobs.



## Sustainable Development

---

The Thames Tideway Tunnel exemplifies sustainable development. By significantly reducing spills of storm sewage into the tidal River Thames it will improve the environment of the river for its users (both people and aquatic wildlife) for at least its design life of 120 years, creating a cleaner, healthier environment for future generations. To help ensure that the environmental benefits of the scheme are maximised and the negative effects minimised the consent application was accompanied by one of the largest Environmental Statements ever undertaken in the UK. This complied with the EIA Directive, including the assessment of cumulative environmental impacts. The failure of subsequent legal challenges to the consent which was granted has also established that the whole process of designating the NSIP and developing the scheme also complied fully with the SEA Directive. An estimated total of some 18 million cubic metres of storm sewage are discharged into the Thames in a typical year. When the Thames Tideway Tunnel is completed it will reduce discharges to 2 million cubic metres a year. Future discharges will also be less polluting than the current discharges due to how the overflows are managed. In the short term, the project would bring the UK into compliance with the European Waste Water Treatment Directive which has the objective of protecting the environment from the adverse effects of urban waste water. In 2012 the UK was found by the European Court of Justice to be in breach of its obligations in respect of discharges to the tidal River Thames.

If the tunnel was not built, increasing population and climate change would increase the spills to the river over time.

The project will also lead to a range of other sustainable development benefits. In order to compensate for the approximate 1.2ha of habitat which will be lost to new foreshore structures the project will create new intertidal habitat provided in the River Wandle in Wandsworth. This will be achieved by removal of a disused weir and dredging of contaminated silt that has been contained by the weir to create new estuarine habitat.

Furthermore the design of foreshore structures (left after construction) will provide inter-tidal terraces as new habitat. In addition, one of the most innovative small scale solutions we agreed with our partner the charity Thames21 was to assist juvenile fish migration. By building chevron-like structures in the river, this should create pools and eddies that provide refuge for fish in their migration, especially juveniles, to protect them from the strong currents of the Thames as they make their way upstream.

The project will also create over 1 hectare of new publicly accessible open space, next to the river in the heart of the city. This is a fantastic legacy which will help reconnect Londoners with the river on an unprecedented scale. The planning legal agreements which accompany the consent will ensure that this is delivered and maintained to a high standard for future generations.

The project has also implemented a deliberate action plan to engage with young people. This was seen as key to achieving sustainable and long-term economic benefits for local communities. Over 50 Science Technology Engineering Maths (STEM) Ambassadors, all employed on the project, have been involved in local school educational programmes to raise awareness of careers in construction and engineering, and to stimulate interest and participation in the project. Ambassadors' time is directly supported by the project.

## Planning Funding

---

At an early stage in the process it was recognised that engagement with the project would be time consuming for affected local authorities. We therefore offered a Memorandum of Understanding to local authorities (later renamed a Service Level Agreement) under which we would make payments to local authorities to allow them to recruit additional resources to cover the additional workload we put on them. This is helping to ensure essential resources for local authorities and to encourage collaboration and cooperation in the approval of the subsidiary consents which are still required to deliver the project.



## Planning Techniques

---

Where construction sites are in the foreshore new structures will be left behind. A great deal of work was done on the design of these structures and opportunities were taken to create new high quality areas of public domain. We went through a number of independently chaired design reviews with Design Council CABE and at the end of the process they were able to state “The Thames Tideway Tunnel ... will come to be regarded as one of the defining engineering projects of early 21st century Britain. Rarely do opportunities to improve the quality of life for so many Londoners present themselves on the scale envisaged”

## Transferable Knowledge

---

The knowledge of the process of the Planning Act 2008 has already been transferred to other projects, such as the A14 improvements, Hinkley Point C grid Connector and third runway for Heathrow, all of whom have met the planning team for briefings. We believe that the site selection process that we developed will come to be a model for other large scale projects to follow, and have also shared our SLA with Crossrail 2 and Heathrow.

## Young Planners

---

Over half of the professional planners involved in the team over the years are under 37. The young planners often fill the role of “Planning Assistant” who are the working level of the team responsible for several of the construction sites, direct engagement with the relevant local planning authority and bring forward the detailed approaches to each site.

## Citizen Participation

---

We referred above to various phases of public engagement. We sent 186,266 letters about our phase one consultation and 172,162 letters about phase two. These publicity exercises were supported by a very extensive programme of exhibitions leading to almost 10,000 responses across all phases of consultation.

At phase one and phase two consultation we produced Project Information Papers on key aspects of the project – eg, transport and environment and Site Information Papers for each of the 24 work sites. Through the use of illustrations and infographics we ensured that the messages and implications of the proposed works were clearly understood.

We also attended non-traditional events and activities to reach out beyond the normal range of consultation events. For example, we attended the Lord Mayor’s parade and the Totally Thames festival to give publicity to the project and to engage with stakeholders. We used our project staff to attend and assist at all meetings and exhibitions.

We considered equalities groups at each stage of the process.

A further unique feature of our approach was to carry out community stakeholder audits before starting our consultations. We consulted local authorities on our initial draft of the community audits for their input and developed the audits following their feedback before consultation. This audit was aimed at identifying as many relevant third sector organisations and business groups as possible, so we could involve them in the consultation process.

The types of organisations identified varied from residents’ groups, who would have a very local interest, interest groups whose remit would cover large swathes of the river and Local Strategic Partnerships with a borough-wide interest, who would be accustomed to engaging in the planning process.

Once the project is complete the intention is that not only will we have built a tunnel that will have greatly reduced the overflows of storm sewage to the river, but we will also have reconnected Londoners with the River Thames.