Currently, untreated sewage regularly overflows into the River Thames from London’s sewerage system via combined sewer overflows (CSOs). The Environment Agency has categorised 36 of the 57 existing local CSOs as ‘unacceptable’ because of the frequency of their discharges or the adverse environmental effect that they have on the River Thames. Thirty four of the CSOs would be controlled by the Thames Tunnel project and two are dealt with by other projects. The reduction in untreated sewage entering the River Thames would bring long-term benefits for the environment and users of the River Thames.

Key facts

- **Local authority:** Various London councils
- **Works proposed:** Minor modifications and works to the existing sewerage system
- **Duration of main construction works:** Approximately one week at each site.
Other Works

Section 1: Introduction

The method for controlling CSOs would vary. Some of the CSOs would be intercepted and the sewage flow diverted to the new storage and transfer tunnel between west London and Abbey Mills Pumping Station. The sewage flow would then be transferred to Beckton Sewage Treatment Works via the Lee Tunnel. Other CSOs would be controlled by modifications to the existing sewerage system, minor sewer improvements and pumping station operational changes. By undertaking these works, we would not need to carry out major engineering works at the associated CSO. As a result we are able to reduce the number of construction sites required.

These other works are set out in this site information paper and include:

- Minor system modifications
- Other system modifications
- Construction support sites
- Compensatory land
- Safety access points.

We have also produced project information papers, which cover overarching topics relating to the project. At the end of this site information paper is a glossary of terms.
Section 2: Other works

Minor system modifications

To integrate the Thames Tunnel project into the sewerage system, there will need to be some routine inspection of sewers and minor street works in the surrounding areas. Those works would be subject to the usual notification procedures for streets affected and will be of limited duration.

At phase one consultation, we indicated that depending on the tunnel route we may need to intercept the Charlton Storm Relief CSO. Since our preferred route remains the Abbey Mills route, we do not propose to progress these works any further as part of the proposals for the Thames Tunnel project. The Charlton Storm Relief CSO will be controlled by the upgrade works relating to the Crossness Sewage Treatment Works and by operational changes at Greenwich Pumping Station.
Other Works

Other system modifications

More significant modifications are also proposed to the existing sewerage system or Beckton Sewage Treatment Works as part of the Thames Tunnel project and are detailed in the following separate site information papers:

- Shad Thames Pumping Station CSO at Shad Thames Pumping Station (alternative to Druid Street)
- Holloway Storm Relief CSO at Bekesbourne Street (alternative to Butcher Row)
- Beckton Sewage Treatment Works.

The system modifications developed at Shad Thames Pumping Station and Bekesbourne Street have enabled the number of CSO sites required for the Thames Tunnel project to be reduced accordingly as interception of Shad Thames Pumping CSO and the Holloway Storm Relief CSO are not required to control the sewage flows.

The works at Beckton Sewage Treatment Works are required in conjunction with those permitted and currently under construction for the Lee Tunnel to accommodate the additional sewage flows from the main tunnel.

Related documents:

- BSTW Beckton Sewage Treatment Works
- BEK Bekesbourne Street
- STPS Shad Thames Pumping Station
**Construction support sites**

The contractors appointed to build the Thames Tunnel project may identify requirements for further construction support sites. No permanent works would be built at these locations. We have not identified the sites that may be used for these purposes, as this would be determined by our contractors after they are appointed.

Sites may be required to:

- Manufacture precast concrete tunnel and shaft segments
- Hold vehicles waiting to get to a site
- Store materials and equipment before taking them to the construction sites
- Transfer excavated material from river barges to sea-going barges.

If the contractor responsible for constructing the main tunnel between Chambers Wharf and Abbey Mills Pumping Station wishes to undertake planned maintenance during construction this could involve establishing a small site for improving ground conditions along the line of the main tunnel. This would involve locally treating the ground and injecting grout or other material by boring small holes down to the tunnel below. Any holes would be backfilled and no permanent structures would be left on the site.

The contractors would have to deliver the Thames Tunnel project within a set timeframe to meet contractual arrangements that comply with our objectives and the restrictions of a consent obtained. The construction sites identified in this consultation allow the Thames Tunnel project to be delivered. Additional sites proposed by a contractor may provide more flexibility in this delivery. The provision of such sites would have to secure required permissions in the usual way.
Other Works

Compensatory land
As part of our consideration of the environmental effects of the Thames Tunnel project, regard is being given to its effect in terms of flood risk, habitat loss and permanent loss of open space.

A flood risk assessment is being undertaken to assess the potential effect on fluvial flooding from the placement of additional structures in the River Thames and alteration of the river walls. The findings of this assessment will determine whether there is a need for additional flood storage capacity, requiring additional land, or improvements to the existing flood defences, or whether there is sufficient capacity in the River Thames.

Ecological surveys of all preferred sites are being undertaken to identify the possible effects on both land and water based ecology. Design measures would be incorporated where required at each site. If it is not possible to adequately compensate for all the effects at the site then ecological enhancements may be required elsewhere.

An open space assessment is being undertaken to further understand the effect on or loss of open space from the placement of new structures and creation of hardstanding areas. This will be considered in tandem with the new public areas being created and enhancements being considered as part of our proposals. If the new public areas and enhancements are not sufficient to alleviate the loss, additional sites may be required to be dedicated as new open space.

Safety access points
Access is required to the main tunnel and connection tunnels periodically for inspection and maintenance purposes, which is anticipated to take place once every ten years. Access into the tunnels would be provided at the shafts used to build the main tunnel and at the CSO drop shafts. At phase one consultation, we identified that additional shafts may be required if these access points were too far apart for safe working. Following further assessment of the distances between the shafts, there is no longer felt to be a need for any additional access points.
Further information on our proposals can be found on our website (www.thamestunnelconsultation.co.uk) or is available upon request (call our customer centre on 0800 0721 086).

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Combined sewer</td>
<td>A single sewer system that takes both rainwater and domestic and industrial wastewater.</td>
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<tr>
<td>Combined sewer overflow (CSO)</td>
<td>A structure, or series of structures, that allows sewers to overflow into the river when they are full as a result of increased rainfall. Without the overflows, the sewers would back up and cause flooding in streets or houses.</td>
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<tr>
<td>Connection tunnel</td>
<td>A tunnel connecting a drop shaft to the main tunnel.</td>
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<tr>
<td>Drop shaft</td>
<td>A vertical circular concrete structure, used to drop flows from the high level of the CSO to the low level of the main tunnel. It would also be used to provide access to construct the connection tunnels.</td>
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<tr>
<td>Lee Tunnel</td>
<td>A tunnel, currently under construction, which will intercept the Abbey Mills Pumping Station CSO, store and then transfer flows onward to Beckton Sewage Treatment Works.</td>
</tr>
<tr>
<td>Main tunnel</td>
<td>The tunnel from Acton Storm Tanks to Abbey Mills Pumping Station.</td>
</tr>
<tr>
<td>Segments</td>
<td>Most of our tunnels would be made from ‘precast’ (made in a factory offsite) concrete segments, and multiple segments are joined together to build the tunnel. Shafts would sometimes also be constructed from segments.</td>
</tr>
<tr>
<td>Thames Tunnel project</td>
<td>The Thames Tunnel project comprises a storage and transfer tunnel, from west London to Beckton Sewage Treatment Works in east London, and the control of 34 CSOs along the Thames Tideway.</td>
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Phase two consultation: Other Works

Autumn 2011

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It is very important that you understand the information we have provided. If you need further information in another language, braille, large print or audio format please contact us on 0800 0721 086.

For further information or to comment on our proposals see our website: www.thamestunnelconsultation.co.uk