Planning Act 2008; Application for the Thames Tideway Tunnel by Thames Water Utilities

Site address: Acton Storm Tanks site, Canham Road, Acton

Development Consent Order application under Section 56 of the Planning Act 2008 to the Planning Inspectorate by Thames Water Utilities Ltd. for the construction and operation of a wastewater storage and transfer tunnel known as the Thames Tideway Tunnel including works at the Acton Storm Tanks site within the site of the Northern 2 tanks to sink a shaft to receive the main tunnel, works to intercept and divert the flow from the Acton Storm Relief Combined Sewer Overflow, the erection of a 15 metre ventilation column, associated above and below ground plant and equipment, formation of a vehicular access from Canham Road, widening of a section of footpath in Canham Road and provision of landscaping and boundary treatment (application accompanied by an Environmental Impact Assessment)

Dear Ms. Bessell

Enclosed with this letter is a copy of this Council’s Local Impact Report with respect to the development proposed at the Acton Storm Tanks site, which was presented to, and accepted by, the Planning Committee of this Council at its meeting on 4 September 2013. There were no changes to the report.
Yours sincerely

Neil Bleakley
Borough Major Projects Officer
Planning Services
E-Mail: bleakleyn@ealing.gov.uk
Ref; P2013/1438

Address: Acton Storm Tanks, Canham Road/Warple Way, Acton, W3 0RG

Ward: Southfield

Proposal: Development Consent Order application under Section 56 of the Planning Act 2008 to the Planning Inspectorate by Thames Water Utilities Ltd. for the construction and operation of a wastewater storage and transfer tunnel known as the Thames Tideway Tunnel including works at the Acton Storm Tanks site within the site of the Northern 2 tanks to sink a shaft to receive the main tunnel, works to intercept and divert the flow from the Acton Storm Relief Combined Sewer Overflow, the erection of a 15 metre ventilation column, associated above and below ground plant and equipment, formation of a vehicular access from Canham Road, widening of a section of footpath in Canham Road and provision of landscaping and boundary treatment (application accompanied by an Environmental Impact Assessment)


Type of Application: Major Infrastructure Project

Application received: 17 April 2013

Report by: Neil Bleakley
Recommendation

1. Committee note the contents of this report.
2. The Council do not consider there will be a significant impacts arising from the operations of the Thames Tunnel with respect to the Storm Tanks site when the works are complete.
3. Whilst the construction works will give rise to noise, dust, traffic and odour issues, it is considered that these can be alleviated through compliance with the Codes of Construction Practice and the Requirements proposed to be attached to the Consent Order.
4. A Section 106 Agreement be entered to widen the footpath across the site frontage and to provide air quality monitoring equipment for at least 5 years.
5. Officers continue to negotiate the disposal of the Council owned land to enable this development to be implemented.

Introduction

The Thames Tideway Tunnel project involves the installation of a wastewater storage and transfer tunnel between Thames Water’s operational sites at Acton Storm Tanks and Abbey Mills Pumping Station. The tunnel would intercept combined sewer over flows (CSOs) that frequently discharge into the River Thames. One of these is the Acton Storm Relief CSO that passes through the Acton Storm Tanks site and discharges untreated sewage into the tidal Thames opposite Chiswick Eyot in the London Borough of Hounslow, on average 29 times per year. The flows of combined sewage (raw sewage mixed with rainwater) discharged from those CSOs would be captured, stored and pumped out for treatment at Beckton Sewage Treatment Works.

The Acton Storm Tanks site is one of 24 sites in London that will be required to construct and operate the project. It lies at the Western end of the project. The Acton Storm Tanks site, which is mainly owned and operated by Thames Water, lies within the London Borough of Ealing. The tunnel, at over 31 metres below ground level, would flow South from the Acton Storm Tanks site through the London Boroughs of Hounslow and Hammersmith and Fulham to link up with the main Tunnel that will generally follow the line of the Thames.

The project constitutes a Nationally Significant Infrastructure Project (NSIP), under Sections 14(1)(o) and 29(1A) of the Planning Act 2008 (the ‘2008 Act’).

Instead of applying for planning permission to the individual Councils for these works, Thames Water has made an application for development consent under the provisions of the 2008 Act seeking the consent and powers necessary for the construction, operation and maintenance of the project. This application is made to the Planning Inspectorate who will make a decision on the application. The application is accompanied by an Environmental Statement.

As part of this process, the Council is required to provide a Local Impact Report which offers comments on the proposals.

Site Description

The Acton Storm Tanks site is located on the South side of Canham Road and extends to the rear (South) of 1-5 (consecutive) Canham Road; semi detached and a detached two storey houses. The roughly triangular shaped site is bordered by Warple Way to the east and a former railway siding that is used for car parking on its South West side.
Beyond this former siding are the rear gardens of two storey terraced housing in Greenend Road, with housing in Hawkhead Road and Southfield Road also sited adjacent to this former siding to the South. Extending Westwards is an extensive residential area which is mainly two storey in height. Immediately to the North West of the site is a single storey scout hut building that is also used as a nursery.

To the North of the site extending up to The Vale is an extensive area of mainly industrial and warehouse premises of varying age.

To the East the site is a recent residential flatted development up to five storeys erected on the site of former Prestolite industrial premises. To the South of this, South of Cobbald Road is an older five storey flat development. Further to the East is terraced two storey housing. All of this extensive residential area lies within the London Borough of Hammersmith & Fulham. The London Borough of Hounslow touches the Southern tip of the subject site and extends out Southwards and takes the form of terraced housing.

The present access to the site is sited adjacent to 1 Canham Road, off the junction of Canham Road and Warple Way. There is a secondary means of access to the site off Warple Way.

Much of the subject site is occupied by 6 storm concrete lined tanks that are sited adjacent to the South West boundary, the substantial part of which lie below ground level. These fill with foul and surface water from the Southern tanks first at times of exceptional storms and high tides. The contents are released when there is capacity in the system. These tanks are open and have been the subject of complaint from local residents.

Elsewhere on site is a pumping station building close to the Warple Way boundary to the rear of 1 Canham Road, and other works and structures, including the Stamford Brook Sewer. A 15 metre high communication tower is located along the Warple Way boundary to the North of midway.

Consultation

Thames Water, prior to the submission of the application to the Planning Inspectorate, have carried out two rounds of formal consultation with those with an interest in, or located within the vicinity of, the project.

The first was held from October 2010 to January 2011. The Council provided comments on 31 January 2011. The initial proposals were for the shaft to be sited towards the South East boundary of the site. The Council raised no objection to the principle of the Tunnel. There were concerns expressed about the impact of the proposed works, particularly during the construction period, on the amenities of occupiers of neighbouring properties, albeit that the nearest residential properties were within LB Hammersmith & Fulham. A request was also made that the opportunity should be taken, as part of the Tunnel works, to address the odours from the existing storm tanks which were the subject of complaint from local residents when the tanks were used.

The second phase of consultation was held between November 2011 and February 2012 and comments from the Council were sent on 13 February 2012. The most significant changes to the proposals were that the site was to become the receiving site for the tunnel, this necessitated the size of the tunnel being widened to 6.5 metres and the shaft being resited to within Storm Tanks 5 and 6 towards the Northern end of the site, with material from the shaft used to infill the storm tanks. The size of the Tunnel between the river and site was also proposed to be enlarged. Due to the resiting of the shaft and construction works closer to adjacent residents in Canham Road and Greenend Road, the provision of screening, dust control and sound attenuation measures were requested. The flue and...
associated buildings were considered to relate to the scale and character of the adjacent industrial and commercial buildings to the North, with associated landscaping offering the opportunity to enhance the character and appearance of the area. The provision of more tree planting and early landscaping on site were encouraged. The opportunity to provide public access to non-operational areas of the site were welcomed, as was the widening of the public footpath across the site frontage. There were no objections to the new site access. The use by construction traffic of Warple Way, Canham Road and Stanley Road for vehicular access was considered to be acceptable in view of these roads serving mainly industrial and warehouse uses and the consequent commercial traffic using these roads. The levels of construction traffic were not considered to be significant. The temporary suspension of some car parking spaces in certain parts of these roads to assist the movement of construction traffic was considered to be appropriate. Details of works to the highway, traffic management measures and worker parking would need to be submitted. The use of Acton Railway Goods Yard for incoming materials was suggested.

It should be noted that under the latest proposals some of the plant is to be located below ground resulting in less evident built development. The whole of the site is to be retained by Thames Water, with no public access, as they are unsure about their future operational requirements.

Whilst storm tanks 5 and 6 would be decommissioned under these proposals, the remaining 4 tanks are to be hydraulically isolated.

As required by the legislation, Thames Tunnel have undertaken consultation related to their submission under the Development Consent Order with the occupiers and owners of properties within the vicinity of the site who have been required to submit any observations on the proposals to the Planning Inspectorate.

Proposals

The proposals at Acton Storm Tanks consist of a shaft, with an internal diameter of 15 metres, which extends 31 metres deep to link up with the end of the main Thames Tunnel, which is proposed to be 6.5 metres wide. Associated development comprises an interception chamber, overflow structures, hydraulic structures and structures for air management plant and equipment. Much of this plant and equipment is to be sited below ground around the shaft within the area of the Northern two storm tanks.

Above-ground works would include the decommissioning and infilling of tanks 5 and 6 and the hydraulic isolation of tanks 1 to 4, a ventilation structure containing 3 ventilation ducts. various ventilation structures, an overflow chamber and an interception chamber.

There are no details of these works, but their maximum heights have been specified and this forms one of the aspects for which approval is sought. They involve:

- a ventilation column that would be 15 metres high (The illustrative drawings suggest this would have a triangular footprint with rounded corners within an area 4.5 x 5 metres and contain one 2 metre and two 1.1metre diameter flues that would be sited immediately to the North of the present storm tanks)
- an overflow chamber sited towards the Northern end of the South West boundary that will be 2 metres high. This is in conjunction with the works to the Acton Storm Relief Combined Sewer Overflow and would be in a truncated triangular area measuring 24 metres x 7 metres
- an interception chamber in conjunction with this work that would 2 metres high located within the area of Northern infilled storm tanks.
- an inlet ventilation structure that will be 2 metres high (The illustrative drawings suggest this would have an area of 3.5 x 4 metres and be sited abutting the North West side of the storm tanks)
• an outlet ventilation structure that will be 2.5 metres high. (The illustrative drawings suggest this will have an area of 10 x 2.5 metres and be located towards the North Western corner of the area of storm tanks)

• ventilation structures for fans that will be 3.5 metres high (The illustrative drawings suggest there will be two structures that will have an area of 4 x 2.5 metres located within the area of the storm tanks towards the South of the shaft)

Approval is also being sought for two accesses to be formed in conjunction with the development:
• one is sited off Warple Way almost at the Southern end and will be 10 metres wide. This is required temporarily to provide access for construction traffic
• the other is sited off Canham Road immediately to the East of the housing. This is to be initially used as the main point of access in conjunction with the construction work and will be permanently used thereafter by vehicles for the purposes of servicing of the plant and equipment (once every 3 – 6 months) and maintenance (every 10 years). The existing access for the site at the junction of Canham Road and Warple Way will be retained and used by Thames Water for their existing operations at the site.

The following drawings have been submitted, for approval, for information, or as indicative and illustrative plans
For approval
DCO-PP-02X-ACTST-050003 – Access Plan
DCO-PP-02X-ACTST-050004 – Demolition and Site Clearance Sheet 1 of 2
DCO-PP-02X-ACTST-050005 – Demolition and Site Clearance Sheet 2 of 2
DCO-PP-02X-ACTST-050006 – Site Works Parameter Plan

For information
DCO-PP-02X-ACTST-050001 – Location Plan
DCO-PP-02X-ACTST-050002 - As existing – Site feature Plan
DCO-PP-02X-ACTST-050007 - Site Works Parameter Key Plans
DCO-PP-02X-ACTST-050008 – Permanent Works layout Sheet 1 of 2
DCO-PP-02X-ACTST-050009 - Permanent Works Layout Sheet 2 of 2

Indicative
DCO-PP-02X-ACTST-050010 - Proposed Landscape Plan – Overall
DCO-PP-02X-ACTST-050011 – Proposed Landscape Plan – Shaft Areas

Illustrative
DCO-PP-02X-ACTST-050012 – Section AA
DCO-PP-02X-ACTST-050013 – As Existing and Proposed - North Elevation
DCO-PP-02X-ACTST-050014 – As Existing and Proposed – East Elevation
DCO-PP-02X-ACTST-050015 – Ventilation Column Design Intent
DCO-PP-02X-ACTST-050016 – Construction Phases – Phase 1 Site Set Up & Shaft Construction
DCO-PP-02X-ACTST-050017 – Construction Phases – Phase 2 Other Structures & Secondary Lining
DCO-PP-02X-ACTST-050022 – Highway Layout During Construction (Area 1)
DCO-PP-02X-ACTST-050023 – Highway Layout During Construction (area 2)
DCO-PP-02X-ACTST-050024 – Highway Layout During Construction (Area 3)
DCO-PP-02X-ACTST-050025 – Permanent Highway Layout - Area 1 Work
DCO-PP-02X-ACTST-050026 – Permanent Highway Layout – Area 2 Work
DCO-PP-02X-ACTST-050027 – Permanent Highway Layout – Area 3 Work
The development is indicated to take place over a three and half year period, with work conducted during the times of 08-00 and 18-00 Mondays to Saturdays and 08-00 and 13-00 on Saturdays. There will be 24 hour working when secondary lining of half of the tunnel down to the Carnwath Road site is undertaken over a 7 month period, but this work will conducted below ground and associated traffic will be coming to the site during daylight hours.

The stages of the programme are, after 5 months site set up the shaft will be excavated (8 months, then the tunnel boring machine will be taken up through the shaft, dismantled and removed from the site. Secondary lining will take place, the construction of the other structures over 12 months, with a 12 month completion and site restoration, these latter being expected to overlap with the construction period.

The site is to be surrounded by 3.6 metre high hoarding during the construction period. This will screen the operations and form part of the sound attenuation measures.

The works include the removal of the wall between the two Northern tanks, removal of part of their base to allow the shaft to be constructed and raising the height of the 4 remaining tanks by 1 metre to increase capacity.

On completion of the works, the site is to be landscaped with hard surfaced areas where access is to be retained and soft landscaping in other areas. New boundary fencing is proposed as part of these works. Tree planting along the Warple Road boundary is to be carried out at the outset.

Across the Canham Road frontage of the site the present footway, which is currently narrow, is to be widened to 2 metres overall by setting back the boundary. These works are to be the subject of a Section 106 Agreement.

Planning History

<table>
<thead>
<tr>
<th>Plan No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>07916</td>
<td>New storm and balancing tanks (granted by Ministry) Approved 31/10/1972</td>
</tr>
<tr>
<td>17916/1</td>
<td>Erection of two temporary single storey buildings to be used for storage, workshop, office and ancillary purposes and erection of lock up garage. Approved 8/1/1975</td>
</tr>
<tr>
<td>07916/2</td>
<td>Erection of boundary fence. Approved 9/1/1980</td>
</tr>
<tr>
<td>07916/3</td>
<td>Erection of single storey generator building, basement and single storey pump house building to sewage pumping station (352 square metres) Approved 24/8/1983 Materials approved 9/1/1984</td>
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<tr>
<td>07916/4</td>
<td>Access and ventilation building to underground sewage pumping station Approved 6/6/1988</td>
</tr>
<tr>
<td>079016/5</td>
<td>Erection of single storey building for the storage of oil tanks and bund Approved 15/5/1991</td>
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<tr>
<td>P/2001/1359 (07916/6)</td>
<td>Erection of a 15 metre high telecommunications installation Objection raised 16/5/2000</td>
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P/2004/5053 Increase in height of existing telecommunications pole and antenna from 12.5 metres to 15 metres (18 metres including antennas)  
Approved 14/1/2005

PP/2011/1070 Environmental Impact Assessment Scoping Opinion for the Thames Tunnel project between the Hammersmith and the Abbey Mills Pumping Stations including a connection tunnel between Hammersmith Pumping Station and the Acton Storm Tanks site and ancillary works  
Response 19/4/2011

Planning Policies

Policy 5.14 in the adopted London Plan (2011) relates to Water Quality and Wastewater Infrastructure. It seeks to ensure adequate and appropriate wastewater infrastructure to meet the requirements placed on it by population growth and climate change and to protect and improve water quality. The development of the Thames Tideway Sewer Tunnels to address London’s combined sewer overflows is supported in principle. It requests Boroughs within their Local Development Frameworks to support the principle of the Tunnel.

Policy 1.1 (e) within the adopted Ealing Development (Core) Strategy (2012) seeks the Borough “To be a healthy and safe place to live and ensure that the necessary physical...infrastructure and services identified in the Infrastructure Delivery Plan are provided and enhanced in the Borough”

Under Development Strategy policy 2.1(f) the Council is committed “To work with Thames Water and other stakeholders to support the timely implementation of the Thames Tideway Sewer Tunnel Project, including connection of the combined sewer overflows in the Borough.”

Within the Ealing Draft Development Sites Development Plan Document (2012), Acton Storm Tanks forms a development site (OIS5). Its proposed allocation is identified as residential, public open space and Thames Tunnel operational requirements. With respect to design principles, it specifies : “Due to the proximity of the Thames Tunnel, a convincing case would need to be presented that proposals for residential accommodation would have a satisfactory level of amenity. New buildings must create a positive and appropriate relationship with surrounding buildings in respect of height, scale and massing, and ensure that amenity of existing residential properties is respected.”

Notwithstanding its allocation within the Draft Sites DPD, for residential and open space, the site is subject to a safeguarding direction until 30 April 2022 which would preclude any development other than the Thames Tunnel project. At this stage Thames Water wish to retain the remainder of the site for operational purposes. Any proposal to provide residential development and open space would probably be dependent on the four remaining storm tanks being infilled. It is not clear at this stage whether the tanks would be infilled in the future and, if they were, whether site would be suitable for such development given there is other Thames Water equipment and plant above and below ground that may require the retention and/or works to divert them. It is not clear where access to the site for any alternative use that involves built development may be gained.

The principle of the Thames Tunnel scheme is supported by both the London Plan and the recent Ealing Development Plan. Discussions between officers from Thames Tunnel and officers from the Council’s Regulatory Services, Transportation, Highways and Planning Service for over three years have sought to minimise the impact of the development and more importantly the construction works, as these are to last for three and a half years.
Other development plan policies and guidance relevant to the consideration of the proposed development and its construction include the following:

**National Planning Policy Framework (2012)**

4. Promoting sustainable transport  
7. Requiring good design  
8. Promoting healthy communities  
10. Meeting the challenge of climate change, flooding and coastal change

**Adopted London Plan (2011)**

2.7 Outer London: Vision and Strategy  
2.8 Outer London: Economy  
2.9 Outer London: Transport  
3.2 Improving Health and Addressing Health Inequalities  
4.12 Improving Opportunities for All  
5.3 Sustainable Design and Construction  
5.10 Urban Greening  
5.11 Green Roofs and Development Site Environ  
5.12 Flood Risk Management  
5.13 Sustainable Drainage  
5.18 Construction, Excavation and Demolition Waste  
5.21 Contaminated Land  
6.1 Strategic Approach  
6.3 Assessing Effects of Development on Transport Capacity  
6.9 Cycling  
6.10 Walking  
6.11 Smoothing Traffic Flow and Tackling Congestion  
6.13 Parking  
6.14 Freight  
7.1 Building London’s Neighbourhoods and Communities  
7.3 Designing Out Crime  
7.4 Local Character  
7.5 Public Realm  
7.6 Architecture  
7.13 Safety, Security and Resilience to Emergency  
7.14 Improving Air Quality  
7.15 Reducing Noise and Enhancing Soundscapes  
7.19 Biodiversity and Access to Nature  
7.21 Trees and Woodlands  
8.2 Planning Obligations

**Adopted Ealing Unitary Development Plan (2004)**

1.10 Legal Agreements and Partnerships  
2.1 Environmental and Other Sustainability Impacts  
2.5 Water - Drainage, Flood protection and Environment  
2.6 Air Pollution and Quality  
2.7 Contaminated Land  
3.9 Wildlife protection  
4.1 Design of Development
4.4 Community Safety
4.5 Landscaping, Tree Protection and Planting
4.11 Noise and Vibration
4.12 Light Pollution
9.1 Development, Access and Parking
9.9 Highways and Traffic Management
9.10 Freight

Adopted Ealing Development (Core) Strategy (2012)

1.1 Spatial Vision for Ealing 2026 (c), (f), (g), (h), (i), (j), (k)
1.2 Delivery of the Vision for Ealing 2016 (d), (f), (m)
5.4 Protect the Natural Environment – Biodiversity and Geodiversity
6.1 Physical Infrastructure
6.4 Planning Obligations and Legal Agreements


Ealing Local variation to London Plan policy 5.10 Urban Greening
Ealing Local variation to London Plan policy 5.11 Green Roofs and Development Site Environs
Ealing Local variation to London Plan policy 5.12 Flood Risk Management
Ealing Local variation to London Plan policy 5.21 Contaminated Land
Ealing Local variation to London Plan policy 6.3 Parking
Policy 7A : Operational Amenity
Ealing Local variation to London Plan policy 7.3 Designing Out Crime
Ealing Local variation to London Plan policy 7.4 Local Character
Policy 7B Design Amenity

Environmental Statement and the Impact of the Development

The application is accompanied by an Environmental Statement. This Statement includes the topic areas and impacts that are considered to arise from the proposed development once the development is completed and during the construction period.

Principle of the Development and Site Selection

The Council maintains its support of this Major Infrastructure Project in view of the resultant improvements to the water quality and environment of the Thames and the use of this site in conjunction with the Tunnel. Overall it is considered there are no significant impacts to the area around the Acton Storm Tanks site arising from the development once completed and that whilst there will be impacts that will arise from the construction programme, it should be possible to suitably control these in a reasonable manner. The submission is accompanied by a Code of Construction Practice (CoCP), which has been discussed and developed with Council officers. Any permission will also be subject to Requirements (the equivalent of conditions attached to a planning permission) which have also been the subject of discussion with Council officers. Whilst there may be a need to further slightly modify these details, such changes are unlikely to be significant.

The Environmental Statement submitted with the application addresses a range of issues associated with the scheme under the following topic areas. An outline of the most pertinent findings of this work and your officers review are set out below:
Air Quality and Odour

The reuse of material excavated from the formation of the shaft should assist in not having to increase vehicular movements to remove the material from the site and to bring other material onto the site.

Under the Code of Construction Practice it is intended that there will be measures to ensure the suppression of dust from the material removed from the shaft and other material brought onto the site, including that to be used in the concrete batching plant.

In order to monitor air quality during the construction period, Regulatory Services are seeking under the terms of the Section 106 Agreement, the provision installation of an air quality monitoring station for at least 5 years beginning one year before the commencement of the works.

The removal of two of the present storm tanks, the emptying of the Acton combined storm overflow into the tunnel and expected infrequent use (no more than once or twice a year in the event of exceptional circumstances) of the remaining four tanks, will significantly improve the incidences of the present odour problems that presently arise from the tanks. It is unfortunate that it has not been possible under this project to cease the use of all 6 of the tanks. This was an issue of concern to local residents, that was raised at the outset when the scheme was proposed. There had also been discussion between officers about covering the remaining tanks, but it is understood there are operational reasons why this is not possible. Improved cleaning systems would also assist and it is understood that new equipment has been installed, but it is not clear at this stage how effective this is. The Council remain concerned that this project does not fully address this problem. And Regulatory Services are seeking a Requirement (condition) for enclosure of the tanks and odour abatement measures to not exceed a concentration of 1.5 oue/m³ at the site boundary.

Once the development has been completed, the applicants indicate that the ventilation flues would not give rise to any odours that would be discernible at nearby properties. Regulatory Services are not fully satisfied with this approach and are seeking a Requirement for an Odour Management Plan following the Environment Agency guidance ‘H4 Odour Management, March 2011’ of the odours anticipated and measures to control their release to not exceed a concentration of 1.5 oue/m³ at the site boundary.

Ecology

The Storm Tanks contains some trees, scrub and grassland set amongst the tanks, buildings, structures and hardsurfaced areas. However none of this is of significance or provides an enriched environment. Some of the trees, scrub and grass will be lost to accommodate the construction works.

The applicants propose to provide tree planting to replace lost trees and enhance the biodiversity and character of the area. Some of this tree planting is to be undertaken at an early stage along the East boundary to assist in screening the construction works from the residential properties in Hammersmith and Fulham that overlook the site. The remainder of the tree and scrub planting and the laying of wildlife grasslands, including the provision of grassed areas on those areas of the reclaimed storm tanks that will not contain above ground works, will be undertaken on completion of the construction works. There are no details of this landscaping provided at this stage, which will be the subject of a requirement.

Also under the provisions of the Design Principles, there is a commitment to provide at least 5 bat boxes in conjunction with the scheme, with details of their siting subject to approval.

It is considered that the development would not have any material impact on the local environment which should be improved when the new tree planting and other soft landscaping is undertaken prior to
and after the works have been completed. When the construction works have been completed and the landscaping carried out, there should be an appreciable improvement in local habitats for wildlife, particularly as access to the Thames Tunnel works will be infrequent.

**Historic Environment**

As there are no listed buildings or Conservation Areas close to the site, it is not considered this scheme raises any concerns with respect to the historic environment either once the development is complete, nor during the construction phase.

Fielding Road within the Bedford Park Conservation Area lies approximately 100 metres to the South from the closest part of the subject site. The main part of the proposed works to form the shaft, ventilation column etc. lie a further 200 metre away (300 metres in total) from the Conservation Area. Even with the ventilation column being 15 metres tall, this, nor any other of the above ground buildings and structure would affect the setting, appearance and character of the Conservation Area.

Acton Park Conservation Area lies 350 metres to the North of the Aton Storm Tanks site and is separated from it by a collection of industrial and warehouse buildings. The proposed above ground works will have no impact on this Conservation Area.

The nearest listed buildings lie within the Bedford Park Conservation Area at least 200 metres from the nearest part of the Storm Tanks site and are separated from it by various residential properties. The development will have no bearing on the setting and character of the listed buildings.

As access to the site will be gained from the North, the traffic associated with the construction is unlikely to have any impact on the Bedford Park Conservation Area. Acton Park Conservation Area lies on the North side of The Vale and the construction traffic is unlikely to have any material impact on the function and character of this Conservation Area.

Whilst the site does not lie within an Area of Archaeological Significance, the Environmental Statement suggests that there may be possible evidence of Roman and medieval agricultural practices revealed during the course of the construction works.

**Land Quality and Contamination**

Due to the nature of the present and previous use of the site, it may be subject to contamination. The impact of any disturbance of such material will be addressed as part of the construction works and the impact is likely to be confined to anyone who may be working on site. Neighbouring properties are sited some distance away from the construction works and it is unlikely therefore that the occupiers of neighbouring properties would be affected.

Works would be undertaken to ensure the groundwater would not be adversely affected by the tunnelling and movement of soil, most of which is to be retained and used to infill the two Northern storm tanks. The will be an issue that is controlled by the Environment Agency.

The land quality of the present site is not high and so this would be an opportunity to improve it in order to provide improved biodiversity by allowing a wider variety of planting to be undertaken within the site.

**Noise and Vibration**

The proposal will give rise to noise from the construction operations and the associated traffic. Site working will generally be during normal business hours (08-00 to 18-00 Mondays to Fridays and 08-00...
to 13-00 on Saturdays. Underground secondary lining of the tunnel will operate continuously for a 7 month period, but the heavy lorries would continue to come to the site during the aforementioned hours. This will assist in reducing the impact of the construction on the amenities of the occupiers of neighbouring properties and those properties adjacent to the approach roads to the site.

To ameliorate the effect of noise, 3.6 metre high acoustically treated hoardings are to be provided around the boundaries to the houses in Canham Road and boundary with the Greenend Road properties. During the secondary lining procedure a temporary enclosure, or building, that is acoustically treated, is to be placed over the shaft in order to reduce the potential for noise disturbance. Under the terms of the Code of Construction Practice (CoCP) the best practicable means will be adopted to avoid creating noise and attenuate the noise over the build period.

Whilst the reuse of the excavated material from the proposed shaft within tanks 5 and 6 will generate a certain degree of noise, the resultant significantly reduced heavy lorry movements within the local area is considered to be of greater benefit, as well as providing a more sustainable option and creating less pollution.

The creation of the tunnel and associated removal of the wall between the two Northern tanks, as well as the base, is likely to create a degree of vibration. However under the terms of the CoCP, the contractor is obliged to adopt the best practicable means to minimise any disturbance from vibration.

Once the development has been constructed it is not expected that there will be any discernable noise associated with the operation of the plant and equipment for the Thames Tunnel. The only noise evident outside of the site would be when small service and maintenance vehicles come every 3 – 6 months, or significantly when mobile cranes and maintenance vehicles arrive every 10 years to inspect the main tunnel. Regulatory Services are seeking a Requirement (condition) that the noise from plant and equipment is 5 dBA below the existing background noise level measured 3.5 metres from the nearest ground floor sensitive facade and 1 metre from the first floor façade.

Socio Economic

Due to the depth of the main tunnel it is not expected that the works would cause subsidence, or have any other effect on neighbouring properties. However in the event this does occur, there are in place arrangements to pay compensation through the published Exceptional Hardship Procedure.

In situations where someone is unable to sell their property due to perceived concerns about the works, properties can be acquired at normal market price with a premium by Thames Water under this Procedure.

The report indicates there would be no significant socio economic effects arising from up to 40 construction workers being employed at this site. It also found there were no significant effects on the use of local community facilities. Beneficial effects were recognised as improvement to water quality in The Thames and the widening of the footway in Canham Road.

Townscape and Visual Impact

At this stage there no details of the specific siting, design and appearance of the proposed development. Zones are identified where buildings enclosing plant, structures and equipment and the ventilation flue will be sited and details of their height are specified (these are set out in the Proposals section above). Most of the buildings are of modest height, between 2 and 3.5 metres and are generally proposed to be set back into the site. The one exception is the ventilation flue which will be 15 metres high.
There are no objections to this height, particularly as it will cover a relatively small area of ground, approximately 4.5 x 5 metres. The siting to the North of the storm tanks will result in this structure being considered in the context of the industrial area to the North and to provide a feature of note on this extensive site that presently contributes little to the visual amenity of the area.

With the decision to site most of the plant and equipment below ground and to provide the above ground plant and equipment in a disparate series of low rise buildings that will provide little to the streetscene, instead of combined in a larger, taller building as had been proposed in the lead up to the Stage 2 consultation, the ventilation structure provides the only opportunity to celebrate that this is one end of a major infrastructure project. It will be expected to be a high quality design using high quality materials to form a feature of note.

The illustrative drawings suggest a rounded triangular profile with a twisted coil design, possibly in reconstituted stone. We are however not being asked at this stage to consider its design and appearance, only the principle of its height, together with the height of all other buildings.

As suggested, it is not considered that due to their siting and height that the other buildings will make much of a contribution to the visual amenities of the area. This is a relatively isolated and high enclosed site. After at one stage suggesting the site could in part be made more accessible to the public, Thames Water has maintained it as an enclosed site. Nevertheless good quality external finishes and a reasonable appearance will be sought for the enclosure of the plant to relieve the significant use of concrete on this site at present, with more apparently proposed under this project.

The provision of new boundary treatment to replace the present concrete panelled fencing also provides the opportunity to improve its unsatisfactory utilitarian appearance and enclosed nature of this site on those streets to the North and East where it is open to public views. The provision of a wider footpath on the South side of part of Canham Road should also assist the site having a more open character.

The provision of tree planting will also assist in enhancing the appearance and character of the area. Details of the tree planting and boundary treatment would be subject to the submission of details for approval by the Council.

One advantage of providing generally low level above ground works and enclosures is that they will generally not be seen by those occupiers of residential properties within the vicinity of the site and thereby have a neutral impact. The ventilation structure will be a visible feature which needs to be of a pleasant appearance.

During construction work it is proposed to enclose the development site with hoardings 3.6 metres high which will assist in ameliorating the visual impact of the construction works. Providing artwork on these hoardings has also been suggested which will offer a more pleasant appearance to the visual amenity of the area.

Accompanying the submission are Design Principles for the overall development and this particular site. These encompass the many of the issues that have been set out above and in other sections of this report.

Transport

Once the Tunnel development is complete, the associated plant and equipment will only require occasional maintenance (every 3 -6 months) with only a relatively small vehicle being involved in such
work utilising the permanent access provided to the site off Canham Road. Every 10 years a major inspection of the tunnel would take place involving bringing 2 mobile cranes to the site, which would be brought onto the site via the permanent Canham Road access. This work may necessitate the temporary closure of the highway. The inspection would take place out of normal hours and could take several weeks. There may be additional unplanned maintenance or repairs that could involve mobile cranes, but would be generally using vans.

Consequently once the development is complete the scale of traffic generated by the Thames Tunnel element of the use of the Storm Tanks site will be very light. It is therefore considered that there would be no appreciable impact on the local road network arising from this development. The only disruption would be during the 10 yearly tunnel inspection.

It should be noted that there will be traffic generated by the present operations on the Storm Tanks site, which will utilise the present site access at the junction of Warple Way and Canham Road.

The site is not within a controlled parking zone, but there are waiting restrictions on the corners of the junctions in Canham Road, Warple Way and Stanley Gardens.

The construction of the Shaft and works to line the tunnel will result in traffic over a 3 year period (at this stage this is envisaged to be 2018 to 2021). There will be a 6 month peak when there will be an average of 23 heavy lorry movements per day (envisaged between September 2019 and February 2021). Normally there would be 7 such movements per day. It is also calculated there would be 40 construction worker trips per day.

This level of movement is not considered to affect the traffic conditions on the local highway network, with modelling provided as part of the Statement to show the two worst affected junctions (Warple Way and Stanley Gardens with The Vale) will operate with spare capacity. There will however be a slight increase in potential vehicle/pedestrian conflicts and increase safety risks.

It will be necessary to ensure that all construction traffic uses the route agreed with the use of suitable signage and instructions to contractors, as part of Construction Method Statement.

It is recommended that signage, tactile paving and road markings are introduced at the two junctions nearest the site to raise pedestrian awareness.

Marshalls will be used for lorries to enter and leave the site. A standard tipper lorry would be able to park clear of the highway within the site during the operation of the site barrier.

There will be temporary suspensions of parking within the private car park to the South West of the site to facilitate the construction work, but the level of parking will be maintained at all times.

In order to assist the movement of the construction traffic, the Statement indicates that in Warple Way, Canham Road and Stanley Gardens 5 sections of the present on street parking should be suspended in order to improve the effective width of the carriageway. This in total amounts to a reduction in on street parking over 99 metres, approximately equivalent to 15-16 vehicles. Some survey work has been undertaken that established all of the parking in these roads was not taken up most of the time. Whilst there is concern about the inconvenience and impact of this on local businesses and residents, it has been agreed this is appropriate in order to ensure the safe movement of construction traffic, to avoid damaged to parked vehicles and to assist drivers seeing pedestrians crossing the roads. The applicants will need to apply to the Council for such temporary suspensions and it is hoped they will not be required for the full duration of the construction period. At this stage it is difficult to predict how long they will be necessary.
With the loss of such on street parking, there is a concern that workers on the project will compete for the available parking spaces, as there will be no on site parking during the construction period. Details of the means of bringing employees to the site and/or parking arrangements for such workers will need to be provided under the Requirements, as part of the Travel Plan. There has been some discussion regarding the use of the parking within the former siding to the South West of the site, which is presently underutilised, but this would require the Infrastructure Provider discussing and negotiating this with the owner(s).

The Statement estimates the scheme would have minimal impact on the journey times of cyclists and buses.

In addition to the removal of some sections of on street parking, it is proposed to undertake some kerb realignments to ensure that construction traffic will not overrun footways.

Highway strengthening will be undertaken in Canham Gardens adjacent to the proposed site access. Details of this need to be submitted to and agreed with the Highways section.

There are no objections to the principle of the construction and permanent access in Canham Road. Consent is being specifically sought for this access. Full details will need to be submitted for approval prior to its installation.

There are no objections to the provision of a temporary access proposed on Warple Way to assist in construction works on the revised combined sewer overflow. Again details will need to be provided for approval by the Council as the highway authority for this road.

Despite these concerns, there are no objections on highways grounds to the proposal, particularly in view of the access to the main highway network (The Vale – A 4020) is via roads that primarily are serving industrial, warehouse and other commercial premises.

The suggestion has been made that Acton Goods Yard should be used, if possible, to bring in material necessary for the construction in order to relieve pressure on the main road network.

The setting back of the Canham Road frontage to provide a 2 metre wide footway is supported.

**Water Resources (Surface and Ground)**

This project is not expected to provide any adverse effects at the Acton Storm Tanks site. The CoCP sets out measures to be adopted during the construction period to safeguard water quality and resources. The applicants are committed to adopting a sustainable drainage approach when the development is complete to reduce runoff during storms and details of sustainable drainage are to be submitted for approval by the Council.

**Flood Risk**

This is likely to remain unaltered at the site as a consequence of this proposal. There are measures in the CoCP to address this matter.

**Lighting**

Once completed it is not expected there would be a requirement for any additional lighting for this project, so it will have no greater impact. Details of the final lighting proposals do however need to be submitted for approval to the Council.
During construction lighting will be used during the 7 month tunnel lining programme due to the 24 hour operation. The CoCP includes measures to reduce the impact of such lighting on residential properties through limiting its use and capping and using directional lighting.

**Other issues**

**Compulsory Acquisition**

Most of the land required to carry out the development falls within the ownership of Thames Water as it is on their operational land.

Of the remaining land, some is owned by the Council in three areas of the site. Some is sited at the South tip of the site and the subsoil rights are required for the Tunnel construction. Some land is sited adjacent to the Warple Way boundary where a temporary access and gates are required for the construction works. The third area relates to land to the rear of the 4 and 5 Canham Road that is required as part of the works site.

The Council have no objections in principle to these sites being used by Thames Tunnel in order to implement the development. However from discussions to date it is not clear whether they are seeking to acquire a short term lease for the duration of the relevant construction works, whether they would be seeking to lease the land with an option to acquire the freeholds of the various parcels where they are sited within the curtilage of the Storm Tanks site, or whether they are seeking outright purchase of the freeholds.

The parcels of land are small and/or landlocked and consequently not suitable on their own for any beneficial use. It may well be in the interests of the Council to dispose of the sites and the consequent liability for their maintenance. The Property section, together with the Legal section, continue to discuss with Thames Tunnel to establish the most appropriate way of assigning the land to ensure the works at the Acton Storm Tanks can proceed if the Development Consent Order is granted for these works.