

**Thames Tideway Tunnel**  
Thames Water Utilities Limited



# Application for Development Consent

Application Reference Number: WWO10001

## Design and Access Statement

Doc Ref: **7.04**

### **Glossary of terms**

APFP Regulations 2009: Regulation **5(2)(q)**

Hard copy available in  
Box **69** Folder **C**  
January 2013

**Thames  
Tideway Tunnel**   
Creating a cleaner, healthier River Thames

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# Design and Access Statement

## Glossary of terms

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Term	Description	Term	Description
abutment scour	Erosion of an area at the foot of an abutment feature due to the reduced cross-sectional channel area and force of water.	bunding	Also called a bund wall, bunding is a separated area within a structure designed to prevent inundation or breaches of various types.
aggradation	The increase in land elevation due to the deposition of sediment.	change of use	A change in the way land or buildings are used. Planning permission is usually necessary in order to change from one 'use class' to another.
air management structures	Collective term for ventilation equipment to be provided by the Thames Tideway Tunnel project.	cofferdam	A wall that is constructed around the outside of a working area within a river that is then pumped dry. The inside of the cofferdam can be filled to create a safe working area.
air treatment chamber	A structure containing carbon that absorbs odour from air flowing out of a tunnel, without the assistance of mechanical pumping.	combined sewer overflow (CSO)	A structure, or series of structures, that allows sewers that carry both rainwater and wastewater to overflow into a river when at capacity during periods of heavy rainfall. The flows are discharged to rivers in order to prevent the sewers backing up and flooding streets or houses. Flows may discharge by gravity or by pumping.
alluvium	Sediment laid down by a river. Alluvium can range from sands and gravels deposited by fast-flowing water and clays that settle out of suspension during overbank flooding. Other deposits found on a valley floor are usually included in the term alluvium (eg, peat).	connection culvert	A covered channel structure to connect the interception chamber to the drop shaft.
amount	The proposed floor space for each proposed use (DCLG Guidance on information requirements and validation, March 2010).	connection tunnel	A tunnel that connects a drop shaft to the main tunnel.
Archaeological Priority Area/zone	Area of archaeological priority, significance, potential or other title, often designated by the local authority.	conservation area	An area designated by a local authority or English Heritage that has special architectural or historical interest. Defined in the Planning (Listed Buildings and Conservation Areas) Act 1990 as “an area of special architectural and historic interest, the character or appearance of which it is desirable to preserve or enhance.”
biodiversity	Biological diversity – or ‘biodiversity’ – is the term given to the variety of plant and animal species in a given environment and the natural patterns they form. Biodiversity was defined in the <i>Convention on Biological Diversity (CBD)</i> , signed in 1992, as:  “The variability among living organisms from all sources including, <i>inter alia</i> , terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” – CBD Article 2. UNEP 1992.	core strategy	Every local planning authority should produce a core strategy, which includes an overall vision that sets out how the area and the places within it should develop. These are relatively new documents that are a key part of the local development framework.
Blue Ribbon Network (BRN)	The Blue Ribbon Network, which is part of the <i>London Plan</i> , includes the River Thames, the canal network, and other tributaries, rivers and streams within London and London’s open water spaces, such as docks, reservoirs and lakes. It includes culverted (or covered over) parts of rivers, canals or streams.	culvert	A covered structure that conveys a flow under a road, railroad or other obstruction. Culverts are mainly used to divert stream or rainfall run-off to prevent erosion or flooding on highways.
brown roof	A roof that supports a wide variety of plant and animal species and reduces storm water run-off.	Design and Access Statement	A statement to be submitted as part of an application for development consent that covers the concepts and principles of design and addresses access issues.
brownfield land/brownfield site	Previously developed land and premises that may be partially occupied or used. It is most commonly associated with derelict urban land with redundant industrial buildings. Excludes agriculture or forestry land.	Design Council CABE	An enterprising charity comprising the Design Council and the Centre for Architecture and Built Environment (CABE) that provides advice and support on all aspects of design, including architecture.
bund	An embankment which acts as a visual or noise screen.		

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<i>Design Development Report (DDR)</i>	Design development reports describe the process behind the development of the proposed designs of the permanent above-ground elements of the Thames Tideway Tunnel project and the integration of these elements into the surrounding environment.	encroachment	With regards to the Thames Tideway Tunnel project, this refers to the extent that proposed structures extend into the river or foreshore.
design reviews	Hosted by the Design Council CABI and undertaken in consultation with the local planning authorities and pan London stakeholders, these two-stage reviews have provided independent advice and guidance on the emerging design of the Thames Tideway Tunnel project sites.	flood plain	Generally low-lying areas adjacent to a watercourse or the tidal lengths of a river or sea where water flows in times of flood or would flow but for the presence of flood defences.
Development Consent Order (DCO)	An order under the Planning Act 2008 approving a development that is or forms part of a Nationally Significant Infrastructure Project. The order can grant planning permission and compulsory purchase powers. The order is granted by the government ministers.	flood risk assessment	An assessment of the likelihood of flooding in a particular area in order to carefully consider development needs and mitigation measures.
development plan	In London, this refers to the LPA/local authorities' unitary development plan, core strategy, other development plan documents and the <i>London Plan</i> .	fluvial	The processes associated with rivers and streams and the deposits and landforms they create.
development plan document (DPD)	Development plan documents are a statutory element of the local development framework and are subject to independent examination by an inspector. DPDs include the following types of documents: <ul style="list-style-type: none"> <li>• core strategy: sets out the long-term vision and overarching policies for the borough</li> <li>• site-specific land allocations and policies</li> <li>• area action plans (where needed): set out the planning framework for areas of significant change and conservation areas</li> <li>• general development control policies</li> <li>• a proposals map: illustrates the spatial extent of policies.</li> </ul>	foreshore	Ground uncovered by a river when the tide is low.
drop shaft	A circular, vertical concrete structure to drop flows from a CSO to a main tunnel. Drop shafts also provide access to construct the connection tunnels.	functional requirements	Operational requirements look at the interface between the Lee Tunnel and Thames Tideway Tunnel. Regulatory requirements will be reviewed. Engineering and planning teams will carry out various studies of technical standards for the project.
effect	The result of an impact on a particular resource or receptor.	habitat wall	A wall that acts as a wildlife resource for insects and small mammals to feed, shelter and procreate.
electrical and control kiosk	A structure that houses electrical and control equipment (not necessarily a building).	hectare (ha)	A unit of area, defined as 10,000m <sup>2</sup> , primarily used in the measurement of land.
elevation	The actual façade of a building, or a plan showing a drawing of a façade.	heritage asset	A building, monument, site, place, area or landscape positively identified as having a degree of significance that merits consideration in planning decisions. Heritage assets are the valued components of the historic environment. They include designated heritage assets and assets identified by the local planning authority (including local listing).
		<i>Heritage Statement</i>	Description of the significance of the heritage assets affected, and the contribution of their setting to that significance (Policy HE6 of PPS5).
		historic environment	Above-ground and buried heritage assets that are considered to be significant because of their historic, archaeological, architectural or artistic interest. They might comprise below and above-ground archaeological remains, buildings, structures, monuments or heritage landscapes within or immediately around proposed development sites.
		historic parks and gardens	A park or garden of special historic interest graded I (highest quality), II* or II as designated by English Heritage.

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impact	A physical or measurable change to the environment that is attributable to the Thames Tideway Tunnel project.	listed buildings	A structure of architectural and/or historical interest included on the Secretary of State’s list, which affords statutory protection. Such buildings are subdivided in to Grades I, II* and II (in descending importance).
impermeable surface	Surfaces or ground unable to absorb rainfall eg, concrete, most tarmac surfaces and hardstanding.	local development framework (LDF)	A collection of planning documents prepared by a local planning authority that outline the management of development and land use in a borough.
inlet pumping station	A structure that contains pumps to lift sewage into a sewage treatment works.	local plan	An area-specific plan to interpret and apply the strategy set out in the structure plan to provide a detailed basis for the control of development to provide a basis for co-ordinating new development, and to bring planning issues before the public.
interception chamber	<p>A structure constructed around an existing combined sewer that diverts storm water from the sewer into a new system of structures to transfer storm water flow to a sewage treatment works.</p> <p>Transferring the flow from the existing sewer to the sewage treatment works requires a series of other structures including:</p> <ul style="list-style-type: none"> <li>• drop shaft: a vertical circular structure used to drop the flow down to the main tunnel level and connect the connection culvert to the connection tunnel</li> <li>• connection tunnel: a tunnel that connects the drop shaft to the main tunnel</li> <li>• main tunnel: the tunnel that transfers the flows from the connection tunnels to Abbey Mills Pumping Station, where they are transferred to Beckton Sewage Treatment Works via the Lee tunnel</li> <li>• pumping station: a vertical circular structure with pumps at the bottom is used to lift storm water flows up to the sewage treatment works.</li> </ul>	locally listed buildings	Buildings designated by the local planning authority as having local significance, which are included on a local list. Although such buildings are not statutorily protected, in general close scrutiny will be given to any development affecting them as a recognised heritage asset.
		<i>London Plan</i>	The <i>London Plan</i> is the strategic spatial planning document for London produced by the Mayor of London. It sets out a fully integrated, economic, environmental, transport and social framework for the development of the capital to 2031, and forms part of the development plan for greater London.
		main tunnel	The large diameter tunnel from Acton Storm Tanks to Abbey Mills.
		Metropolitan Open Land (MOL)	A London-specific designation that protects strategically important open spaces within the built-up capital and affords the same level of protection as greenbelt land.
layout	The way buildings, routes and open spaces are placed or laid out in relation to each other on the ground.	mitigation measures	Proposed actions to prevent or reduce adverse effects arising from the whole or specific elements of a development.
Lee Tunnel project	The Lee Tunnel project, currently under construction, comprises a storage and transfer tunnel from Abbey Mills Pumping Station to Beckton Sewage Treatment Works and the interception of the Abbey Mills CSO.	mixed-use (development)	Provision of a mix of complementary uses, such as residential, community and leisure uses, on a site or within a particular area.
limits of land to be acquired or used (LLAU)	Land boundary limits around the worksites encompassing both the permanent works and their associated construction facilities and activities to build them.	modelling	Simulation of a proposed design (eg, hydraulic modelling of a drainage network, physical modelling of drop shafts or odour modelling, etc).
linear views	Protected viewing corridors towards St Paul’s Cathedral framed by objects in the landscape, as described in the London View Management Framework.	monitoring	Monitoring, recording and collection of existing situation data prior to construction (eg, CSO spill frequency, vehicle or pedestrian traffic movements or building settlement monitoring before or during construction).

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open space	All space of public value, including landscaped public areas, playing fields, parks and play areas as well as areas of water such as rivers, canals, lakes and reservoirs that offer opportunities for sport and recreation or provide visual amenity.	reception site	A main tunnel site that would contain the shaft from which a tunnel boring machine would be 'received' ie, ends up. The tunnel boring machine would be removed from the tunnel via the shaft at the reception site.
operational phase	Once construction work is complete and the tunnel system is in use.	red route	The red route is a network of roads designated by Transport for London to carry heavy volumes of traffic, which is essential for the movement of traffic and public transport. It mainly comprises major routes into and around London. Transport for London is responsible for enforcing the red routes, which include clearways, parking and loading bays, bus lanes, yellow box junctions and banned turns.
orthogonal	That which has a set of mutually perpendicular axes meeting at right angles.	regeneration	The economic, social and environmental renewal and improvement of rural and urban areas.
overflow weir chamber	Used to manage and divert overflows from an existing sewer into the new system of connection culverts, CSO drop shafts and tunnel.	river prospects	Protected viewpoints with broad prospects over the River Thames, as described in the London View Management Framework.
overlooking	The outlook from a development or building over adjoining land or property.	run-off	Run-off is the movement of land water to oceans chiefly in the form of rivers, lakes, and streams. Run-off consists of precipitation that does not evaporate, transpire or penetrate the surface to become groundwater. Excess run-off can lead to flooding, which occurs when there is too much precipitation.
parapet	A wall-like barrier at the edge of a roof, terrace, balcony or other structure.	safeguarded wharf	A wharf that is protected by the Mayor of London and the Port of London Authority, to ensure that it is retained as a working wharf and protected from redevelopment into other uses.
permeable surface	Surfaces or ground able to absorb rainfall, eg, open textured ground, soil, grassed areas, open spaces.	scheduled monument	An ancient monument or archaeological deposit designated by the Secretary of State as a 'Scheduled Ancient Monument' and protected under the Ancient Monuments and Archaeological Areas Act 1979.
planning condition	A condition attached to a planning permission.	scour	Movement of riverbed materials due to the force of the water.
Planning Inspectorate	An independent body that examines applications for development consent for Nationally Significant Infrastructure Projects.	sensitive receptor	A person, animal, plant, eco-system, property, surface or groundwater water or historic environment that may be effected by the treatment, handling or use of excavated materials.
planning policy guidance/ planning policy statements	Planning policy guidance notes and planning policy statements, which have replaced the former, are prepared by the Government following public consultation to explain statutory provisions and provide guidance on planning policy and the operation of the planning system. They also explain the relationship between planning policies and other policies that have an important bearing on issues of development and land use.	sewage or wastewater	Water-borne wastes from domestic uses of water derived from households, trade and industry.
preferred site	Sites assessed as most suitable following a review of the suitability of shortlisted sites, having regard to engineering, planning, environment, property and community considerations.	sewerage	A system of pipes to collect and transport domestic and industrial wastewater.
public open space	Urban space designated by a local development framework where public access may or may not be formally established that fulfils or may fulfil a recreational or non- recreational role.	sheet or secant pile wall	A sub-surface barrier installed around construction sites in order to control inflows of shallow groundwater typically composed of intersecting concrete or overlapping shafts of concrete.
public realm	Any publicly-owned area, including streets, pathways, parks, publicly accessible open spaces, and public and civic facilities.		
Public Right of Way	Route to which the public has right of access.		
pumping station	A vertical structure with pumps used to lift storm water flows up to a sewer at a higher level or into a sewage treatment works.		



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Sites of Nature Conservation Importance (SNCI)/Sites of Importance for Nature Conservation (SINC)	Locally important sites for nature conservation adopted by local authorities for planning purposes and identified in the local development plan.	Utilities/utility assets	Assets belonging to utility companies, including Thames Water, that range from aged, rigid cast-iron pipework to flexible cables and ductwork.
Sites of Special Scientific Interest (SSSI)	An area given a statutory designation by Natural England or the Countryside Council for Wales due to its nature conservation value.		Liaison with utility companies to acquire third-party asset information, facilitate required diversion applications and procure new supplies.
slipway	A sloping surface leading down to a body of water from which boats may be launched.	valve chamber	An underground structure on the sewer system that contains valves used to isolate the flow between different parts of the sewerage system. For example, flap valves prevent flow from the river travelling back up the sewer or into tunnels.
surface water run-off	Water that travels across the ground and hard surfaces rather than seeping into the soil eg, from paved roads and buildings.	ventilation building	A building that contains fans and filters to remove and treat air from the tunnel.
sustainable urban drainage system (SUDS)	A drainage system that controls the quantity and speed of rainwater run-off from a development as defined in the Environment Agency and London Plan hierarchy.	ventilation column	A vertical pipe through which air is released.
Thames Path	A designated footpath that follows the route of the tidal Thames.	ventilation duct	Pipework (generally below ground) through which air moves.
Thames Policy Area	A planning policy designation designed to conserve and enhance the character and setting of the tidal Thames.	ventilation structure	An above-ground or below-ground structure that is part of the tunnel ventilation system.
townscape/cityscape	The general appearance of a built- up area, for example a street, town or city.	View Management Framework	The Mayor of London's policy framework to protect and manage designated strategically important views of London and its major landmarks.
townscape/streetscape	The urban landscape.	weir	A small dam in a watercourse or sewer that alters and manages the flow.
Transport for London Road Network (TLRN)	The 580km network of major or 'strategic', high capacity roads administered by Transport for London. It accounts for five per cent of London's roads but carries 33 per cent of the traffic.	wet well	The part of a pumping station that receives and stores incoming sewage flow before it is removed by pumps.
tree preservation orders	A designation of trees that significantly contribute to the amenity value of an area. An application must be submitted to the local authority before any works are carried out on a tree protected by a TPO designation, including routine maintenance.	works	All construction work associated with the construction of the Thames Tideway Tunnel project.
tunnel alignments	The horizontal and vertical routes of a tunnel.		
tunnel datum	A datum based on Ordnance Datum used to design tunnels that pass below sea level. By using a lower datum as the base point, negative numbers can be avoided in calculations, which eliminates a possible source of mistakes.		
unitary development plan (UDP)	A statutory plan that sets out the planning policies of a London authority. It is currently being replaced by the local development framework.		

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DCO-DT-000-ZZZZZ-070400

