Transport

We are investigating how we will transport materials, equipment and people to and from our worksites during construction.

How we will move construction materials and equipment

At sites near the river, we have the opportunity to move materials by barge to reduce the impact on the local road network. We propose to use the river to transport materials, particularly large volumes, to and from our worksites, where it is practical and cost-effective to do so.

Our proposed transport strategy maintains flexibility to find the most sustainable and economic solutions on a site-by-site basis.

We propose to:

- use the river to transport the majority of excavated material from the tunnel at main tunnel drive sites next to the River Thames
- use the river to bring in and take away the majority of bulk material used to fill the cofferdam (a temporary enclosure built in the river to create a dry work area) at sites in the River Thames
- explore opportunities to use rail freight to move material to or from our sites
- work with the contractor to determine the most practical and cost-effective way of transporting other material and equipment. The preferred solution will take full account of the potential impact on the local road network.

Whether other materials are moved by road, rail or river will depend on factors, such as where the materials are coming from or going to, and what facilities are available near the river for processing materials prior to transporting.

By using the river to move excavated material we can reduce the number of lorry trips from our sites on the River Thames by up to two thirds.
Transport

Road transport

At combined sewer overflow (CSO) sites and connection tunnel drive sites that are not adjacent to the River Thames, we will move all equipment and material to and from the site by road.

Even at sites adjacent to the river, some road transport will be used as it is not practical and cost-effective to move all materials by river.

We recognise that traffic congestion is a problem in London and have considered how we can reduce the impact of construction traffic on local roads. We have been working with Transport for London and local authorities to identify appropriate routes to our sites from major roads, and we have worked to minimise the need for long-term diversions where possible.

We will manage the potential effects of road transport by agreeing with the local authority, and Transport for London as appropriate:

- access routes through local roads
- hours for lorry movements to and from the site
- any road modifications, if required, to safely access the site.

Rail transport

We are currently evaluating opportunities to make use of rail freight to move material directly to or from our sites. Rail may also be used to transport construction materials, such as aggregates, into the London area generally.

Transport for construction workers

Construction staff would need to travel to and from the sites each day. We are producing a travel plan for construction staff, which will form part of our application for permission to build the project. It will identify appropriate transportation for each site, based on local conditions.

Most staff will be required to travel to and from the site by public transport. At our main tunnel sites, we may provide shuttle buses to get staff to and from the site, if public transport links are not easily accessible.

At main tunnel sites we will provide limited on-site parking, particularly for shift workers, who may not be able to use public transport to travel to the site for evening and early morning shifts.
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**River transport**

Our general strategy is that the majority of material excavated from the main tunnels and the majority of material for the cofferdams in the foreshore will be transported by river. By moving the majority of bulk materials by river, we significantly reduce the number of lorries needed to transport materials to and from our sites.

We are in the process of determining where our materials are coming from and going to, so that the most sustainable and cost-effective transport routes and modes can be chosen.

**Barges**

We will primarily use barges to move materials to and from our construction sites. Navigation restrictions, such as the depth of the channel and bridge clearance heights, limit the size of barges that we can use at some sites.

Our primary concern will be safety on the river. We will work closely with the relevant river authorities, including the Port of London Authority, and other river users to ensure the safety of all river users.

The use of barges will significantly reduce the number of lorries on the roads.
Jetties and river structures

To allow the use of the river for transport at certain locations, we would need to build structures in the river. These include:

- suitable wharfs or jetties, or upgrades to existing structures
- campsheds, which are flat areas on the riverbed that the barge sits on during low tide
- equipment to load materials on or off the barges, such as conveyors and excavators
- possible local dredging to allow barges to navigate to the wharf or jetty without hitting the bottom of the riverbed
- mooring points for barges to wait at, for example, when waiting for the tide to rise so they can access the site
- navigation aids, such as lights and buoys.

Transfer site

We may need a support site to transfer materials on and off barges. For example, we could use a transfer site to store, and possibly sort, excavated material from barges before it is transported to its final destination.

We could also use such a site to unload, store, sort and prepare incoming materials such as aggregates or steel reinforcement before transporting them to site.

We are currently looking at where the final destination may be for our excavated material, and hope to find a beneficial use for as much of it as possible.

Depending on where this destination is, the transfer site may be used to load the material onto lorries or barges for transport to its final destination.

We have not identified potential transfer sites as this will be the responsibility of the contractor. However, we anticipate that such a site would be in the eastern reaches of the River Thames and would require its own planning permission.
Types of construction materials we will need to move

The materials that we need to transport will vary from site to site, depending on the location and type of site. Below is a list of the typical equipment and materials that we will need to transport to and from our sites.

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<th>Incoming equipment and materials</th>
<th>Outgoing equipment and materials</th>
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| All sites            | • Machinery, such as cranes and excavators.  
                        • Offices, welfare facilities and other temporary structures.  
                        • Steel reinforcement.  
                        • Material to create temporary access and working areas.  
                        • Other items including site consumables (such as fuel and office supplies), scaffolding, kiosk and building materials, landscaping materials, mechanical and electrical equipment.  
                        • Precast concrete segments (the concrete pieces that are used to build the inside of the shaft), depending on the construction method. | • Machinery, such as cranes and excavators.  
                        • Material excavated during construction of the shaft.  
                        • Material required to create temporary access and site working areas.  
                        • Offices, welfare facilities and other temporary structures. |
| Foreshore sites      | • Sheet piles.  
                        • Material to backfill the cofferdam. | • Sheet piles.  
                        • Material used to backfill the temporary cofferdam. |
| Tunnel drive sites   | • Precast concrete segments (the concrete pieces that are used to form the tunnel wall).  
                        • Tunnel boring machine.  
                        • Bentonite, which is a type of clay used during tunnelling and shaft construction.  
                        • Ready mixed concrete.  
                        • Bulk aggregates (sand and gravel) and cement to make concrete on site. | • Material excavated during construction of the tunnel. |
| Tunnel reception sites| • Ready mixed concrete.  
                        • Bulk aggregates (sand and gravel) and cement to make concrete on site. | • Tunnel boring machine. |
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Our proposed transport strategy maintains flexibility to find the most sustainable and economic solutions on a site-by-site basis.

For further information see our website: www.thamestunnelconsultation.co.uk or call us on 0800 0721 086.

Phase two consultation (Autumn 2011)