

**17th century**

UK's first calico printer and porcelain factory

**1858** The Northern Outfall Sewer constructed

**1860** A form of plastic invented in the Lea Valley

**1876** Dry cleaning introduced to the UK

**1892:** UK's first petrol factory

**1904:** William Yardley cosmetics, soap and lavender factory, constructed

**CLEARANCE**

When the pylons had been removed, work to clear the site began in earnest.

Some 192 buildings had to be demolished and more than one million cubic metres of soil excavated. But the soil was not just dumped or carried away. It was taken to the soil laboratory for testing. Sixty scientists, technicians and other specialist staff worked in a laboratory on site to work out the best form of treatment. Five soil-washing machines then cleaned and shook the soil. Contaminates were removed from coarser particles of sand and gravel and mixed with the finer silts and clay; large lumps of metal were also extracted by magnets from the contaminated soil. The coarse gravels were separated at this stage and cleaned sand was filtered out for reuse. The remaining mixture was pumped through sieves, mixing blades and water sprays. Chemicals were sometimes added to remove contaminated material. The water was then treated and used again.

**REMEDICATION**

If soil was found to contain only petrol-related substances, it was usually treated by remediation. This process was to store the substances in concrete tanks and to add oxygen to break down the contamination, rather like composting. Other contaminants were left where they were after being stabilised chemically to stop them leaking into the ground water system.

The scientists also monitored ground and surface water and air across the site to check for contamination.

Over 800,000m<sup>3</sup> of soil, contaminated with substances such as oil, petrol, tar, arsenic and lead, were cleaned and then reused to raise some areas of the Olympic Park by five metres.

**WATERWAYS**

A feature of the Olympic Park is its waterways. It is divided and partitioned by about eight kilometres of canals and rivers. Some have to be dredged, some

cleaned and some walls have to be repaired. Seven permanent bridges are planned to span the river Lea; the first, in the north of the park, is now in place.

**PRESCOTT LOCK**

Previously, the waterways were tidal, which meant water levels rose and fell by several metres according to the state of the tide. Tide tables had to be used to calculate when and where a barge could be moored. So the Olympic Delivery Authority, working with British Waterways, developed a new lock and water control system at Prescott Channel, just to the south of the Park. The project, costing £20m, will have twin water control gates, a 62×8m tidal lock and footbridge, a lock control building, and a fish pass and weir gates. This will stabilise the river level at just over two metres deep and allow 350t barges to transport materials to and from the construction site. It is expected to replace hundreds of lorry journeys a week from local roads and save thousands of tonnes of carbon dioxide as well as linking the Olympic Park into the Thames Gateway. The lock will open up the rivers



A computer-generation projection of London's Olympics Park

in the area for transporting materials by water. In the long term, it will provide access for barges carrying construction traffic and recyclables between Stratford and the Thames. It will also create new opportunities for leisure boats, water taxis, tour boats and floating restaurants.

Construction has not always been uneventful. In June 2008, workers dredging for the lock struck an unexploded bomb. It was a German Hermann type

2,200lb bomb, dropped during an air raid in 1941. It took bomb disposal units four days to make it safe before detonating it in a controlled explosion.

**COMPLETION**

Now that the Olympic Park site has been fully cleared, the construction of the Athletics Stadium, the Aquatic Centre and Velodrome, buildings for Handball, and other events and the Athletes' Village can go ahead at full speed. ■



Computer-generated image showing an external view of London's Olympic Stadium