

# **EDITED PRESS RELEASES**

## **TRANSPORT FOR LONDON**

### **TRANSPORT FOR LONDON ORDERS ADDITIONAL LONDON OVERGROUND CARRIAGES**

**7 May 2013**

Transport for London (TfL) has today placed an order for 57 new carriages to increase the passenger capacity on the London Overground railway by 25 per cent. The longer trains (five cars instead of four) are expected to be introduced from the end of 2014, starting on the East London Line. The £320m capacity improvement programme also includes the construction of longer station platforms and other infrastructure upgrades. They are:

- Additional capacity for stabling trains overnight at a new facility in Silwood, south-east London, and also in the north-west London area.
- Reconfiguration of the New Cross Gate and Willesden depots.
- Platform extensions at some stations on the North and East London lines and associated signalling and power works.

The increased capacity is vital, London's population is expected to reach nine million by 2018, and the additional carriages will help London's transport network accommodate the new residents expected to move to the Capital. Enabling works for the infrastructure improvements commenced in April 2013 at Silwood Triangle. No decision on the provision of extra capacity on the Gospel Oak to Barking line has been made as a decision is still awaited on the electrification of the line – that will affect the provision of future rolling stock

### **CONTRACT AWARDED FOR MAJOR CONSTRUCTION WORK TO INCREASE VAUXHALL TUBE STATION CAPACITY AND MAKE IT STEP FREE**

**7 May 2013**

Vauxhall Underground station will be transformed over the next few years, with a £36m modernisation by Transport for London as part of wider investment designed to support the growth and regeneration of the surrounding area. The modernisation of Vauxhall Underground station is an essential first phase of this strategy, which will provide a major increase in capacity and improve accessibility by making the station step-free, while keeping it open to passengers.

London Underground has now awarded the contract for the major improvements to Bechtel Ltd. Construction work will start in early 2014 and be completed by late 2015. The number of passengers using Vauxhall Underground station is set to increase by 40 per cent over the next few years.

In order to create extra space, the ticket hall will be reconfigured to allow for more ticket gates and wide-aisle gates allowing disabled passengers and those with buggies or heavy luggage to travel more easily and reducing congestion within the station. The station, its subways and stairways will be completely refurbished and a lift will be installed between the ticket hall and platforms. This, combined with the existing lift from the bus station to the Underground ticket hall, will deliver step-free access to Victoria Line trains.

Network Rail has almost completed the National Rail station's upgrade, including new lifts, which are already in operation, so once the Underground station lift is completed it will create a fully accessible interchange between rail, bus and Underground. The total project cost of the Vauxhall Underground station improvements has been reduced by more than £9m from £45m to around £36m because of a more cost effective construction method which also reduces environmental impact. This includes building a lift shaft from below ground level and utilising sprayed concrete lining techniques, resulting in savings in both utility diversions and construction costs.

Vauxhall is designated as one of London's Opportunity Areas, and is set to benefit from huge investment over the coming years – with major developments planned for the Nine Elms area which includes projects to extend the Northern Line to Battersea.

The Government has agreed a loan of up to £1bn that will allow London Underground to fund an extension of the Northern Line to the Battersea Power Station site, which will be key to kick-starting regeneration in the area. The Northern Line extension is subject to planning approval from the Secretary of State and once a funding package is in place then the construction of the extension

could begin in 2015 with two new stations opening in 2020. TfL submitted an application for a Transport and Works Act Order, which is required for infrastructure of this scale, on 30 April 2013.

A public inquiry is likely to be held this autumn after which the Government will make a decision, which is expected by autumn 2014.

## CROSSRAIL

### MAJOR WORKS CARRIED OUT TO VICTORIAN RAIL TUNNEL FOR CROSSRAIL

**7 May 2013**

A Victorian rail tunnel beneath the Royal Docks in east London has been exposed to the light of day for the first time in 135 years as part of works to prepare for the arrival of Crossrail trains in 2018.

A hole has been drilled in the exposed crown of the Connaught Tunnel, which runs beneath the Royal Victoria Dock, following work to drain 13 million litres of water from a section of the docks that lie above.

Work will now continue to open up a hole that will eventually measure approximately 20 metres long and 10 metres wide to allow for the engineering equivalent of 'open heart surgery' to strengthen, deepen and widen the central section of the tunnel so that it can accommodate Crossrail's trains. Sections of the tunnel are in a poor condition and parts of it were narrowed during the 1930s so that the dock could be deepened to accommodate larger ships with brickwork removed and steel segments installed. The hole in the crown of the tunnel will allow Crossrail to remove much of this material and to continue with the process of ensuring that the tunnel is safe and ready for the arrival of the new trains.

Over the last few months a cofferdam measuring 1300 sq. metres, around the size of four tennis courts, has been put in place to allow a section of the Royal Victoria Dock to be drained so that Crossrail workers can access the tunnel from above. During the draining of the dock, a total of 332 fish were removed and safely relocated on either side of the cofferdam.

The tunnel was built in 1878 and has not been in passenger use since December 2006. It is the only existing tunnel that will be re-used for Crossrail.

### CONSTRUCTION OF EAST BOUND CAVERN AT STEPNEY GREEN COMPLETE

**15 May 2013**

Crossrail construction at Stepney Green shaft marked a major milestone this week with the completion of the eastbound cavern ahead of schedule, with work on the westbound cavern well underway.



The Stepney Green caverns are one of the largest mined caverns ever constructed in Europe using a tunnelling technique called Spray Concrete Lining. The eastbound cavern is where Crossrail trains will branch towards Stratford or Woolwich and so is scaled to accommodate the two tunnel boring machines that are due to arrive later this year. The cavern is 50m long, 13.4m wide and 16.6m high at its widest point. To construct the cavern, the team had to excavate 7,500m<sup>3</sup> of material and apply 2,500m<sup>3</sup> shotcrete to the walls.

Due to the site's urban location, neighbouring a school and a technical college a concrete batching plant was constructed on site to manufacture the concrete that is being used to construct the cavern.

The team also used a special cutting tool to remove temporary supports, rather than the traditional noisier method of using an impact hammer.

Stepney Green will have a critical role to play when Crossrail opens; it is where the railway divides with the southeast spur running underground to Plumstead and then onto Abbey Wood via Canary Wharf and the north east spur running underground to Pudding Mill and then onto Shenfield in Essex. Two of Crossrail's large tunnel boring machines, Victoria and Elizabeth, will pass through the cavern later this year on their way to Farringdon via Canary Wharf, Whitechapel and Liverpool Street stations.

## **MAJOR BREAKTHROUGH FOR CROSSRAIL AS TUNNELLING MACHINE ENTERS CANARY WHARF STATION**

**31 May 2013**

The Crossrail project has celebrated its biggest milestone so far as one of its huge 1,000 tonne tunnelling machines has broken through into the new Canary Wharf station box.

At an event today, Secretary of State for Transport Patrick McLoughlin, Mayor of London Boris Johnson, Crossrail Chief Executive Andrew Wolstenholme and selected guests visited the new Canary Wharf station to view tunnelling machine Elizabeth and the huge progress made on the Crossrail project so far.

Crossrail's eastern tunnelling machines, named Elizabeth and Victoria, were launched from the Limmo site near Canning Town towards the end of last year to create 8.3km (5.16 miles) of tunnels from east London to Farringdon – Crossrail's longest tunnel section. A marathon-equivalent 26 mile (42km) section of tunnels beneath central London will be built in total for Crossrail.

Over the past six months, both machines have been working round the clock to create the first section of new tunnels beneath the River Lea and east London towards the new Canary Wharf Crossrail station. Tunnelling machine Elizabeth was the first to arrive and has now broken through into the huge Canary Wharf station box 28 metres underground. It will now undergo maintenance inside the Canary Wharf station box before resuming tunnelling towards central London. Sister machine Victoria is due to breakthrough into the station in the next few weeks.

Crossrail's construction commenced on 15 May 2009 with the start of work on Canary Wharf station, with tunnelling work starting in May 2012. The western tunnelling machines Phyllis and Ada have now reached Tottenham Court Road and Bond Street respectively. In south-east London, tunnelling machine Sophia has reached the Woolwich station box with sister machine Mary now underway from Plumstead. Crossrail is moving into the peak of construction between now and 2015. The entire project is now more than one-third complete

## **ALSTOM**

### **ALSTOM TO SUPPLY GROUND-BREAKING ENERGY RECOVERY SYSTEM FOR LONDON UNDERGROUND**

**2 May 2013**

Alstom was awarded a contract by UK Power Networks Services to supply its innovative Harmonic and Energy Saving Optimiser (HESOP) energy recovery system for the Victoria Line of the London Underground. The contract, worth about €1 million, is for a trial of inverting substation technology that will run until 2014 at the Cloudesley Road substation. This will help make the Underground more energy efficient and will also help control tunnel temperatures.

The HESOP system works by converting and transferring any unused power, generated by the trains during braking, to accelerating trains elsewhere on the line or to the grid. The HESOP control system is highly intelligent and ensures that the energy is recovered via the most efficient route that the infrastructure will permit. It enables the recovery of more than 99% of the traction energy generated during braking, thereby reducing CO2 emissions through reduced energy consumption.

By using HESOP, the Underground could also become cooler because London Underground's tunnels are very small, meaning most heat transfer from the braking resistors stays in the tunnel walls and surroundings rather than being moved out of them by convection.

London Underground already makes good use of regenerative braking but, by adding HESOP to the power supply arrangements, the residual energy that is currently wasted in braking resistors can be made use of – this will help prevent tunnel temperatures rising.