



# How Crossrail will link London

By John Davison

Valuable work on Crossrail is being undertaken by the Strategic Rail Authority and Transport for London, Minister John Spellar told the House of Commons in November.

Cross London Rail Links Limited, a joint company set up by the SRA and TfL, is clarifying potential benefits of the scheme to route a new east-west line under London.

The choice between route options will not be easy and care will have to be taken to understand how the project interfaces with the existing infrastructure and existing services.

He said time spent on getting Crossrail properly defined is well spent and need not delay the overall implementation programme.

The minister reminded MPs that this was not just a railway to speed up journeys.

"It should also relieve congestion and overcrowding on existing national rail and underground networks and support the development of strategic interchanges.

"It should facilitate the continued development of London's primary finance and business service activities located in both the City and docklands.

"It should facilitate the improvements of London's international links including, looking to the west, Heathrow.

"It should facilitate the regeneration of priority areas such as the Thames Gateway and the Lea valley. It must also represent value for money and be affordable."

Bernard Gambrill is now director of public affairs for the Crossrail study.

He was guest of honour at the AGM of Railfuture's London and south-east branch. Mr Gambrill explained what had been happening to move the project from a notional to an operational phase.

He stressed that familiarity with the route diagram should not lead us to underestimate the scale of Crossrail One which is, after all, a larger scheme than the Channel Tunnel rail link.

He said CLRL was putting "flesh on the spine" and may



not peter out once an affordable scheme is designed.

It could become a train operator. But Crossrail should not be compared with the Regional Rail Express network in Paris. An all-stations "metro-style" service is envisaged for Crossrail with a high ratio of standing to sitting space in each 20-metre carriage.

Each train looks likely to be 10 coaches with driving cars outwardly resembling those on Heathrow Express. The new trains would have electric motors, but could draw power either from overhead wires or third rail infrastructure (such as that already used by Silverlink Metro, Thameslink or Connex Rail). This third rail would be for west of Willesden and east of Custom House.

Tunnel builders would also need to be familiar with metric measurements. A six-metre diameter tunnel looks appropriate, one metre less than those now nearing completion for the CTRL in north-east London.

The geological context is similar, dominated by London clay but with a more limited layer of Woolwich and Reading beds. The name of this geological stratum is strangely appropriate, because Crossrail One seems certain to serve both Woolwich in outer London and Reading in the heart of Berkshire.

Some in the audience were concerned that the trains serving Reading would probably not



**How Crossrail's Moorgate station will look, top, and the type of train which will operate on the line** Pictures:CLRL

travel directly to any Heathrow terminal, requiring passengers to change at Ealing Broadway or Hayes on to an airport service.

Where trains calling at Woolwich would terminate is also still unresolved. It might be Abbey Wood but both Slade Green and Ebbsfleet International have obtained substantial political and commercial support since November, particularly from interests south of the River Thames.

Many existing customers of Connex are not convinced that a ride through Whitechapel to Liverpool Street or Tottenham Court Road would necessarily be as attractive as a direct service to London Bridge and Cannon Street.

The loss of a through Connex service would not, in their view, be a price worth paying for Crossrail and they are conveying that concern through their elected representatives.

Whitechapel station would allow easy interchange with the East London Line which patiently awaits funding for extensions. A Crossrail station at Tottenham Court Road is being designed to integrate with a future Crossrail Two line.

As expected Aylesbury, Shenfield and Watford Junction are the other probable terminals for Crossrail One. Branches to Chesham in Buckinghamshire or Norbiton via Kew Gardens are still possibilities.

The chances of Charlton, Dagenham, High Wycombe and Uxbridge being involved have shrunk to zero.

The existing stations at Rickmansworth, Silvertown and Ealing Broadway would need complete re-builds as would the "airport junction" between Hayes and West Drayton.

If Crossrail services ran east of Slade Green, then Dartford Station would also need to be redeveloped. A tempting synergy with the Airtrack project between Staines and Terminal 5 is being examined by some of the 85-strong CLRL team.

Freight trains might be able to share a new tunnel beneath the Thames west of Woolwich bringing some relief to railway lines in inner south and west London.

Another spin-off benefit would accrue to users of the Chingford, Enfield and Hertford lines that feed Liverpool Street.

Two sub-surface Crossrail platforms at Liverpool Street could free five or six platforms in the existing terminus for use by trains serving these busy commuter routes.

Clearly some comparable capacity enhancements will be arriving much sooner across Kent and south London when Eurostars can be moved on to the CTRL.

Mr Gambrill admitted that if politicians keep faith in the Crossrail philosophy and stay the course, then many of the precious engineers who are achieving the high-speed international line will move across to the Crossrail team and deliver a cross-regional railway of which London can be proud by 2015.

Info: [www.Crossrail.co.uk](http://www.Crossrail.co.uk) or tel: 0845 602 3813