Crossrail: approaching the starting blocks

So the long-awaited Crossrail is to be built at last. Michael Schabas asks: Is it really going to happen this time? Who will pay for it? What is really going to be built? And how will it change London?

Will it really happen?

For 20 years Crossrail has been shunted aside while the Jubilee Extension, Heathrow Express, DLR extensions, CTRL and even Thameslink and East London Line jumped in the queue. Some £200 million has been spent on planning and engineering, and promoting the enabling legislation. A funding deal seems to have been done. But students of rail history know that many projects have gone this far (and further), and then either died (e.g. the original Jubilee Line extension to Lewisham) or been kicked into the long grass (Thameslink). If the current credit crisis worsens into a deep recession, then the Government’s new taxes chase footloose businesses out of Britain, Crossrail could be deferred again as it was in 1992. Let’s hope not.

Funding

Supposedly, the £16 billion cost is being shared between passengers, business, and central government.

Crossrail won’t attract many more passengers, probably enough to cover the extra operating costs and maybe fund a billion or two of bonds. Railways in southeast England can be very profitable, but Crossrail’s planners have chosen routes on political rather than financial grounds. So the only way to raise £5 billion from passengers will be to raise fares (although Ken Livingstone is trying hard to deny this - there’s a cute video on YouTube!).

The business share is in two parts. Major beneficiaries, namely the City Corporation, Canary Wharf, and BAA, are contributing about £1.5 billion. Not many details have been disclosed. Presumably Canary Wharf’s contribution is conditional upon permission for more buildings, as it was for the Jubilee Line, and will be paid over many years.

As for BAA, they have always been pretty lukewarm about Crossrail. They refused to let it take over the Heathrow Express or to run into the Terminal 5. Instead, it will replace the slow “Heathrow Connection” service which runs from Paddington to Terminal 4. My guess is that BAA’s “contribution” is mostly “in kind”, not cash, and amounts only to letting Crossrail run trains through its tunnels. There may be a secret deal relating to the third runway and Terminal 6, for which Government is just another tax - Crossrail is just the excuse. Business across London benefits from a wide range of transport projects, of which Crossrail is only one of many schemes.

Finally, the Exchequer - that’s national taxes - will chip in a third. Northerners may object to helping pay for yet another railway in London, but Londoners will argue they already pay more than their fair share of taxes.

The £16 billion budget seems to have lots of padding. It’s more than

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risk away from the taxpayer. Indeed TFL seems to be moving to the same contracting model as was used for the Jubilee Line Extension, which came in double the agreed budget. No lessons seem to have been learned from the DLR extensions and CTRL, which were brought in on budget, as private concessions.

What’s really going to get built?

The 1988 Central London Rail Study was a panicked response to overcrowding during the “Lawson Boom”, following deregulation of the financial sector. The narrow brief was to find ways of relieving congestion within the central area, specifically between the main rail terminals. In a short eight weeks, CLRS engineers did quick feasibility studies for half a dozen schemes, and in the following few months the planners estimated incremental revenues and congestion relief benefits so they could make a case to actually build one of them. The recommended scheme – “East West Crossrail” was nobody’s favourite, but it seems to have stuck.

The essence of Crossrail is a tunnel large enough for mainline trains, between Liverpool Street and Paddington. Practical capacity is claimed to be 24 trains per hour, per direction, although Crossrail-type systems in Paris, Frankfurt and Munich have up to 30 trains per hour. The story as to which 24 peak hour trains will run through Crossrail has changed over the years, and may change some more.

In 1988, the worst congestion was on the lines through Stratford into Liverpool Street. Crossrail would fix this, diverting trains from Shenfield into a tunnel under London. In the west, trains would run through to Aylesbury and Reading. Pretty simple. So simple, of course, that the business case was dismal. You don’t justify a new railway just on congestion relief. When City employment collapsed in the early 1990s the scheme quietly died. Aylesbury and Shenfield are hardly growth corridors and Government preferred to support schemes serving Docklands, the Thames Gateway, and airports.

Crossrail was dusted off again in 1999, by the “London East West Study”, and then hastily adopted by newly elected mayor Livingstone. Politicians are not noted for patience, and Livingstone was apparently sold Crossrail on the basis that construction could start within a couple of years. But the 1988 scheme served neither Canary Wharf (which barely existed in 1988) or Heathrow.

After some lobbying, branches were added to Canary Wharf and Heathrow. The Canary Wharf branch would extend via Custom House and then across the river to Abbey Wood, where there will be an interchange with one of the North Kent rail lines. The benefits of this are pretty modest, as the same north Kent trains have connections with the DLR at Greenwich, and also soon the DLR at Woolwich Arsenal. Blue Water lobbyed hard to have Crossrail trains run through to Ebbsfleet, but the Crossrail planners discovered that there was no spare capacity through Dartford. So Abbey Wood is as close the “Thames Gateway” as this Crossrail will get.

After further lobbying, a commitment has been made to build a station at Woolwich. Supposedly, the £200m – plus cost will be paid for by a contribution from a property developer. It will need to be a big development! Woolwich already has a frequent rail service to London Bridge, and an extension of the DLR is under construction. It’s hard to argue that Crossrail is needed as well to support development in the area.

In the west, Crossrail planners struggled to find places to run the 24 peak hour trains. They seem to have agreement from BAA to run 4 trains per hour into the airport - but only to Terminals 123 and 4, not Terminal 5. Heathrow Express will continue linking Paddington with Terminals 123 and 5, but not 4. Crossrail will take over 4 “stopping” trains per hour to Slough and 2 to Maidenhead. This will require electrifying the line. The semi-fast and express trains, which often run through to Oxford or Newbury, will continue and commuters from Maidenhead will often find it faster to take one of these and change at Paddington. Earlier plans to run Crossrail trains to Aylesbury over the Metropolitan line, or to Richmond and Kingston, have been dropped.

Readers who didn’t fail their Maths GCSE may realise that Crossrail will have 24 trains running in from the east, but only 10 running out to the west. Crossrail’s current plans are to build a “permanent turnout facility” (otherwise known as a “ghost station”) west of Paddington, for the 14 trains nobody seems to want. It is bizarre that they...
think it worth digging an incredibly expensive tunnel under London and then in effect use less than half its capacity.

Splitting the line at Whitechapel is a nonsense. By dividing the railway so close to central London, there will be two branches neither of which will be served very effectively.

The congestion problem on the Shenfield branch has been solved by other means. The Jubilee and two branches of the DLR take commuters from Stratford to new and relocated jobs in Docklands. The trains are still crowded into Liverpool Street, but nothing like they were in 1988.

With the line branching at Whitechapel, only half the trains can go to Shenfield and half to Canary Wharf. To get similar capacity as the current 14, 8 car trains that run into Liverpool Street, Crossrail will use 10 and eventually 12 car trains. So all the stations from Stratford to Shenfield will need to be lengthened, while trains will be less frequent. At some stations it is easy, but at some it is very expensive. At Maryland, it is impossible, so Maryland will probably only be served by a few trains each day. About half the commuters on this line currently walk to work from Liverpool Street. Once Crossrail is built, they will find their journeys actually take longer, as they alight from a station deep underground. Journeys to the west end will be faster, as there will be through trains to Bond Street and Paddington. But there won't be many trains to Heathrow - this will certainly be served by the trains from Canary Wharf! The net result at the cost of about £2 billion, train services on the Shenfield branch will be made worse than they are today. But Livingstone was reluctant to drop the Shenfield branch, apparently as this is seen as serving solid East London communities. And nobody can imagine that a new railway is not a better railway. Whether they will thank him for it when it opens is another matter.

How Will it Change London?

Crossrail will add very little new capacity into London, because it will, mostly, just take over existing train paths. It will do nothing to relieve the worst bottlenecks, currently at Euston and Victoria. By Crossrail’s own figures, it will support a 2% growth in rail commuting into central London.

The benefit to Canary Wharf will be much higher, supporting about a 20% growth in development capacity. Of course if the Shenfield branch is dropped, the potential is much higher. My (hopeful) guess is that after the current scheme is safely through Parliament, the Shenfield branch will be quietly deferred - indefinitely. Certainly, Canary Wharf should be lobbying for this. It will make it much easier to make some cross-London journeys. Most notably, there will be through trains from Canary Wharf, the City, and the West End to Heathrow. They won’t be as fast as Heathrow Express, but they will be faster and hopefully more reliable than the Piccadilly Line. A few spare trains will see a dramatic improvement in accessibility. The Canning Town/Custom House area will have DLR, Jubilee and Crossrail. Stratford will get its sixth or seventh railway, depending upon how you count them. Here there may be diminishing returns.

The three suburban corridors, Stratford - Shenfield, Woolwich - Abbey Wood, and Paddington - Maidenhead line, will get through trains across London. Currently these areas have trains only to a single London terminal. With cross-London connections, they will have regional rail accessibility similar to places like Ealing or Finsbury Park. This will make them more attractive places to live, especially for multi-earner households who need flexibility to get to the City, West End and Docklands. Don’t expect Slough or Ilford to be dramatically transformed, but the benefits will be significant.

What about the 14 spare trains from the west, that Crossrail is not using? And the 12 that are being wasted running to Shenfield. My hope and expectation is that after the bill gets through Parliament, there will be a serious look at options including those identified by the Superlink group, to run Crossrail trains over existing and new lines to places like Basingstoke, Milton Keynes, Stansted, Cambridge, Colchester and Southend. All of these are possible. And once the Cross London tunnel is built these additions can mostly be funded from incremental passenger revenues.

1 Go to www.youtube.com and search for "Crossrail" and "Livingstone". It’s quite funny.
2 For details see www.superlink.org.uk