

TRANSPORT FOR A WORLD CITY

by John Hawkins

When this report was released by the National Infrastructure Commission in March 2016, the press generally reported its support for Crossrail 2. But a reading of the report reveals a major redirection of the proposals only subject to consultation at the start of the year. We were originally expecting a line from New Southgate, with perhaps a second branch later connecting at Tottenham Hale to the Lea Valley line. But emphasis now is on access to new housing lands, and the Lea Valley branch will become the main northern route. It is suggested that the route from Broxbourne to Wimbledon and beyond becomes the basis for “a revised business case for Crossrail 2 by March 2017 and aim to introduce a hybrid bill by autumn 2019. The revised business case should include developed plans on costs, funding, housing and stations”. This provides a phased basis for the project which results in a lower initial cost, whilst providing for opening by 2033 when stage two of High Speed 2 will bring additional demand to Euston. The cost of the current proposed scheme is estimated by TfL at £32.6bn. Of this, 33% (£10.8bn) is for stations, 12% (£4bn) is for tunnelling and 4% (£1.4bn) is for rolling stock. New stations cost around £1 billion each, and it is suggested that one could be eliminated, since King’s Road does not provide interchange or crowding relief, and the need for Angel could be reconsidered.

A comparison of the proposed Crossrail 2 branches shows that the Wimbledon to Tottenham Hale core takes two-thirds of construction costs, with half the rest providing the New Southgate branch with only four stations (recently consulted on only three). This compares poorly with the surface branches at both ends, doesn’t meet greater traveller demand than they do, and will enable very few of the additional homes expected by 2051. It is claimed by TfL to provide service resilience with its exclusive terminus avoiding interworking with other services.

When possible branches were originally considered, it was felt that only two could be serviced sufficiently, and the final elimination was of an eastern branch which offered greater benefits than the West Anglia route but at greater cost. It will be interesting to see how it now compares with the proposed New Southgate branch. This last discarded Crossrail 2 branch option would have gone from Hackney via Hackney Wick and Stratford International to Barking, perhaps surfacing before Dagenham Dock and running on to Beam Park (new station), Rainham, Purfleet and Grays. With insufficient space beneath Stratford Regional station and the Olympic Park, a station at West Ham is now to be considered. This eastern branch could be more expensive, but may offer greater benefits of housing and growth.

A chart of frequency upgrades for current LU lines shows the sub-surface lines at their full limits after the current resignalling. The Bakerloo Line could get to 32 tph with the Lewisham extension by the early-2030s, but only 27 tph is planned with NTfL. The Piccadilly and Central lines expect 33 to 36 tph with NTfL, whilst the Waterloo & City is shown with 27 to 30 tph instead of the current 22 tph. Of course, these upgrades also promise much longer peak periods than are currently provided. The Jubilee Line is shown as reaching 34 tph by 2020, with the Northern Line to reach 31 tph, presumably upgrade 2, and possibly 33 to 36 tph with a note that the next realistic opportunity to increase line capacity there will not arise until fleet replacement around 2040. In fact, this is still under consideration as part of upgrade 2. The Victoria Line upgrade to 36 tph is shown by 2020, although planned for this year. Crossrail is being constructed to accept 30 tph. It also states that “of the limited future alternatives, some may not be economically viable – for example, replacing relatively new fleets on the Northern and Victoria lines ahead of life expiry – and others, such as the provision of additional capacity on the Bakerloo Line, would do little to address the most significant forecast congestion issues”.

With currently planned transport investments, severe overcrowding is listed to remain on the following lines. This is mainly defined as greater than 5 persons per square metre ($>5m^2$) except when shown otherwise below. Many other sections of line are shown as $<4m^2$.

- Northern Line – Archway/Chalk Farm to Warren Street/Balham via Bank.
- Victoria Line – Finsbury Park to Victoria.
- Jubilee Line – Waterloo to Canary Wharf ($<5m^2$).
- Central Line – Leyton to St Paul’s.
- Piccadilly Line – Finsbury Park to Holborn ($<4m^2$).
- Waterloo & City Line ($<4m^2$).
- District Line – Putney Bridge to Westminster.

Crossrail 2 as currently planned would cut overcrowding on the Waterloo & City and Victoria lines by around a half, on the Piccadilly Line by around a third, and on both branches of the Northern Line by around a quarter.

The District Line would get a 10% benefit. This is based on a possible service pattern of 18 tph from New Southgate and 12 tph from Broxbourne to form the Crossrail 2 trunk service, so allowing another 4 tph on the West Anglia Main Line through to Stratford and Liverpool Street from Cambridge and Stanstead Airport. At the southern end of Crossrail 2 a third of trains will reverse at Wimbledon, with 4 tph serving each of the branches to Epsom, Chessington South, Hampton Court and Shepperton, and a further 4 tph short-working to Kingston. This will free up 7 tph paths through to Waterloo from the South West Main Line from Basingstoke, Woking, Guildford, Southampton and beyond. TfL estimates the overall development cost at around £160m.

The next stage will be to identify proposals to phase costs and increase affordability, develop a strategy for significant housing growth, deliver funding with London paying a fair share, and involving the private sector in developing and funding stations and surrounding areas. Crossrail 2 tunnel links are shown to depots north-west of Wimbledon and New Southgate. If New Southgate is not part of phase one, then maintenance facilities planned for that branch would need to be relocated.

Source:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/506633/Transport_for_a_world_city_-_100316.pdf

At the same time a report to the National Infrastructure Commission received little publicity. Entitled "Review of the case for Large Scale Transport Investment in London" it gives consideration to the Crossrail 2 proposals in greater detail, suggesting more direct routing to save costs and alternative destinations. This presumably fed into the above report which seems to accept that the current proposals are well developed, dating back as far as the 1974 London Rail Study suggestions for a Chelsea to Hackney alignment, and should be pursued in view of time pressures to meet growing demand.

There are other schemes reported at various stages of development, and some of these could be examined in the East London Transport Study, now underway. Options here include the possible extension of the Docklands Light Railway westwards from Bank to King's Cross and Euston.

If Tower Gateway station is closed and higher capacity trains are deployed on the DLR then this could create a valuable way of increasing capacity, potentially 40 tph, and connectivity between the West End, the City and the East London growth area. This would relieve the City branch of the Northern Line and provide a link between the HS1 and HS2 terminals. It could be considered as an alternative to an eastern branch of Crossrail 2.

A southward extension of the Northern City Line to Cannon Street and Waterloo before joining a pair of surface tracks around Battersea is suggested as a cost effective alternative to the New Southgate branch of Crossrail 2, or alternatively a connection between the Lea Valley, Stratford, the Isle of Dogs and Brighton Main line, are both possible Crossrail 3 schemes. Then the possible Northern Line extension from Battersea to Clapham Junction is also related to the Crossrail 2 scheme.

Source:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/506632/Review_of_the_case_for_large_scale_transport_infrastructure_in_London_-_100316.pdf