

REPORTS OF SOCIETY MEETINGS

BEYOND THE ELEPHANT

by Jonathan Roberts

A report of the LURS meeting at All Souls Club House on 13 September 2011

The talk began with a photograph of the entrance of Elephant and Castle shopping centre with the model elephant itself facing west, with the tail pointing south east – does this say something about the history of the extension in that direction?

Jonathan Roberts wrote a report in September 2010, for stakeholders, including the Lewisham Council Sustainability Select Committee about the southern extension of the Bakerloo Line. Mr. Roberts was asked to comment on the potential of any extension, what is not possible, why do it, how long would it take, what would the costs be, etc. and the document itself was seen as being a stimulus for action. Since the report was written, things have moved on slightly and so further information, including an update on official thinking, spending pressures and priorities, project risks, etc. were included in the report to the LURS that were not included in the original document.

HISTORY OF THE BAKERLOO SOUTHEAST EXTENSION

In the last 85 years there have been at least nine chances to extend the line:

- Ideas and inquiries were made in the 1920s – cases were made for extension of both the Piccadilly Line and the Bakerloo Line. The Piccadilly was extended, the Bakerloo was not.
- 1931 – A case was put forward for an extension to Camberwell in the 1931 Camberwell Act though a lack of funding meant this good scheme came at the wrong time.
- 1935-40 – An extension to the Bakerloo Line was proposed during the initial versions of the New Works Programme but various stakeholders, including Finchley, lobbied to get the Northern Line extended instead. The Bakerloo was then dropped from the final drafts of the New Works and was intended to be in the next New Works Programme but the war then got in the way.
- 1949 Camberwell project – Work started, however the project was cancelled with funding and specification issues (such as the planners only building a 2-platform terminus into the plan rather than a 3-platform terminus).
- 1957 – The Victoria Line took precedence and the Bakerloo was sidelined again.
- 1965 – The Railway Plan for London was essentially a toss-up between extending the Bakerloo, building the Fleet line or an Aldwych extension to Waterloo.
- 1970s – GLC study into extending to Peckham but this was again behind the Fleet/Jubilee Line.
- 1980s – The DLR scheme to the Docklands took precedence.

Essentially the line has been behind others for many years though the extension even got as far as being shown as 'Under Construction' on tube maps, such as in the June 1949 edition where the Camberwell extension was shown.

LESSONS FROM HISTORY – WHAT MUST YOU DO:

History shows that in order to get a scheme built, it must fulfill several criteria:

- *Business case* – Why does your scheme have merit against everything else going on around you? (not even just against other rail schemes).
- *Government backing* as well as any future government – These schemes often scan multiple parliaments.
- *Stakeholders* – The line goes through more than one borough, etc. Do different boroughs agree, have similar views, etc.?
- *Private sector and partnerships* – Are they in agreement?
- *Funding and financing* – Is the money available? When?
- *Affordability*.

ANY CASE FOR AN EXTENSION?

The scheme is currently in the Mayor's revised Transport Strategy. However, in order to gain approval, much broader benefits than just transport must be shown – regeneration, business, etc.

Nowadays the Underground is not virtuous just because it's a 'tube' – any schemes must connect with other transport links – isolation is not good.

RECENT EXAMPLES OF SCHEMES IN LONDON

- 1970s – Split the Bakerloo Line in the north west into two lines.
- 1990s – Jubilee extension to Docklands and Stratford.
- 2000s – East London Line closure and reopening as London Overground
- 2010s – Crossrail and Thameslink. Very expensive but were given the go-ahead because, critically, these were projected to bring in more jobs, effectively paying for themselves and boosting the UK's economy.

MAYOR'S TRANSPORT STRATEGY DOCUMENT

The document assumes that the currently-planned Bakerloo upgrade will be complete in 2020 – this is currently optimistic. It may be underway but is unlikely to be complete. This will consist mainly of the visible benefits: higher capacity and more trains which are more energy efficient and have higher total capacity. Progress is being made although the Bakerloo used to be 30 trains per hour a few decades ago.

The document also defines the Bakerloo Line as having a north west – south east strategic role, which is good. At the moment the Bakerloo is the least used of all tube lines and so presents a big opportunity in that more passengers can be put through it. In terms of regeneration areas such as Harlesden, Paddington, Elephant & Castle and inner south east London would benefit greatly.

An improvement in the Bakerloo would also free some capacity through London Bridge and would also improve transport accessibility. However, at the moment, it is not funded and there is no timescale.

WHAT IS THE WORTH IN DOING IT?

Reasons, now and future, can be summarised by:

Regeneration

Investment in the local area

Capacity versus demand on rail

Housing and population growth

Environmental factors, rising petrol prices, a possible low carbon future

Slots released on the main lines

REGENERATION NEEDS

Studying GLA maps based on the 2010 index of multiple deprivation it appears that areas such as Harlesden and Willesden Junction are much worse off than inner southeast London. Similarly east and north east London still have major areas of deprivation. This does not put a huge case forward for a south east extension. However, looking at the amount of investment and economic activity in various south east London boroughs, when compared to areas such as Newham which has had huge amounts of money for the Olympics and Canary Wharf with business the areas around the proposed extension seem to have done rather poorly. When this comparison is made, the extension seems to have a decent case.

Other statistics were explained, including a 'growth corridors graph' to 2031 on National Rail. The south east, having separated out Thameslink is in the lower areas of growth – not a great influence.

Graphs also showed lots of poor housing in the proposed extension area although did not appear too bad compared to some, such as areas near Heathrow and north-east London.

PUTTING EXTENSIONS ON A MAP

Extensions generally aim for a major interchange and in this case it would likely be Camberwell or Peckham. From the costing already announced in the *Tunnel Talk* report detailing the potential Northern Line extension to Battersea it is therefore possible to work out the relative costs of the Bakerloo extension options.

What is immediately apparent is that costs rise very quickly, especially when extensions are underground. Stations cost in the region of £100 million whereas adding an extra interchange to a station is around £50 million. Tunnels come in at around £180-200 million per twin-track mile and adding on the cost of project management, sidings and control centres, it suddenly becomes remarkably expensive to do anything underground.

Various options can be no longer achieved. For example, the Bricklayers Arms route has been built on and Thameslink is taking up capacity on the track south of Elephant. The number of stations now also has to be scrutinised: it is impossible to justify a tube station on every corner, they now have to be built where interchanges exist, where economic growth will be greatest, where nearby developers will subsidise the cost, and therefore hard choices to be made.

CURRENT OPTIONS

Inner London scheme B1 to Canary Wharf

This is effectively a Jubilee Line bypass. The extension is extremely busy and needs slack: Canada Water interchange is hugely busy and has been a proven success as have other parts of the line and there is certainly now a case to be answered on bypass. It would have the benefits of the regeneration of the Old Kent Road, a relief in congestion, spurring economic growth. However, would it be possible for it to be done via Canada Water to allow interchange? The total cost of these scheme would be approximately £1.6 billion for 3.5 miles of tunnel.

Inner London B2 – Charlton

This route would follow the Thames Corridor, linking at Canada Water and Greenwich before heading out towards Charlton. The main problem with this route being that it depends very much on junction alterations at Lewisham to allow more main line trains through that congested point, but with alteration there a Charlton option may allow more national rail capacity to be gained. This scheme would cost almost £2 billion for 3.5 miles.

Inner London B3 - New Cross, Lewisham.

This is one classic extension – down to Lewisham via the Old Kent Road, New Cross Gate/New Cross. It is relatively straightforward but main line benefits again depend on how much Lewisham Junction can be changed. This also would work out at £2 billion.

Inner London B4 – Peckham direct

This route would go via Burgess Park and the Aylesbury Park Estate, an area in big need of regeneration. The route length would be two miles and as not as many trains would be needed the projected cost works out at £950 million. It has the lowest capital cost of all the proposals and would be least at risk of clogging up central London.

Inner London B5 – via Camberwell

This is the other classic route: via Camberwell/Denmark Hill to Peckham (as proposed by the GLC in the 1970s, when there were proposals for a depot triangle and housing at Peckham). This would work out at £1.2 billion - but would serve more centres than B4.

OTHER OPTIONS

There are also several other options, mainly of extending a Peckham line further to outer London, such as to Lewisham or Catford which would cost in the region of £2-£2.3 million overall. For options beyond Lewisham, it might even be possible to extend on existing railway and get rid of mainline branch trains although sharing Underground and main line stations would be prohibitively expensive: grandfather rights mean this can take place on existing routes but step-free access, ATP, trainstops, etc. would mean huge changes to existing infrastructure would have to be made.

There is also a case to be made for not going beyond Isle of Dogs when the DLR infrastructure is already in place and Crossrail will fulfill some of this demand.

Possible options would be to extend to Bexleyheath (with possible depot sharing at Slade Green?). With the shopping complex of Bluewater not that far away an extension here could possibly give the line a destination. Bromley North could be a possibility but there is no main line slot release and

compared to Bromley South would mean slow times to London. Catford and Hayes have already been separated from other lines and so they are their own master.

The capital costs are similar to Bexleyheath or Hayes: around £3.2-3.6 billion and would give the benefit of slot release – up to 8 an hour from Bexleyheath, although it has been mentioned that Hayes' 6 slots may be more beneficial as they cause more problems at Lewisham Junction.

VALUE FOR MONEY

This can be done yourself using the TfL statistics by comparing increase in passengers against cost. Examples of passenger usage of tube stations compared to mainline stations in a similar area are:

- Piccadilly Line – Bounds Green to Cockfosters. The Underground has 3.5 times more passengers than the equivalent Great Northern Line.
- Northern Line (north) – From West Finchley northwards (ex-GN) v Great Northern stations - 2.5 times more usage on the Underground.
- Northern Line (south) v the main Southern stations – 3 times more usage on the Underground.
- Northern Line (south) v the Thameslink loop through Wimbledon (although admittedly only 3 trains per hour) – 13.7 times more passengers on the Underground.

Averaging this out, it can be reliably stated that a tube infrastructure would result in 3 times more users than the equivalent rail network. This then gives an idea of passenger numbers which then means with projected costs you can get the cost per single passenger over the lifetime of the scheme – this is more telling than just upfront costs alone.

The cost per passenger at Charlton is surprisingly low although this comes against one of the higher upfront costs at ca. £2 billion. The lowest price scheme, B4 to Peckham, would cost about £50,000 per passenger for one year with the cheapest per passenger being B2 to Charlton at just over £40,000. The highest cost per passenger would be B3 to Lewisham at £55,000 per passenger per year. Of the outer London schemes, Hayes is significantly more expensive per passenger than Bexleyheath.

A TfL-commissioned study in 2009/10 looked at the connectivity, regeneration, rail benefits of various schemes. The Bakerloo gives most benefits but also at the most cost. The preferred alignment in this report was via Camberwell to Peckham. On a map this is a very roundabout route and is very curvy. This has the non-benefit of possibly annoying some commuters who prefer low-frequency but direct routes, e.g. Hayes to Cannon Street. Altering this runs the risk of being a line on the map that has voters concerned and doesn't get stakeholder endorsement.

WHY NOT JUST GO SOUTH RATHER THAN SOUTH EAST?

Extending the line at Camberwell and then carrying straight-on has been discussed for many years and was examined in 1957. However, Crossrail 2 will occur as Victoria Line relief at some point in the 2020s, possibly driven by High Speed 2, ahead of the Bakerloo extension. In addition the Victoria Line is just one mile to Herne Hill, and was originally designed to be able to go to Crystal Palace. This is in contrast to the Bakerloo Line which is the only available option for south east London.

BUSINESS CASES

The preferred TfL scheme has a ratio of 1.4 : 1 benefits to cost, but better schemes do exist at a ratio of 1.9 : 1. At present the Department for Transport currently sets 2:1 as a value pass mark – becoming a new investment scheme worth doing.

However the Bakerloo extension would serve fewer critical areas and objectives than other rail projects. London's new priorities are already emerging: Crossrail extensions, Crossrail 2, Orbital capacity (e.g. 5-car trains on the East London Line, expanding West London line), more mainline capacity, including 12-car trains – does this in itself take away the case for the Bakerloo extension? It is also necessary to accommodate the impacts of High Speed 2 – so far it seems that the Bakerloo extension is not yet justifying priority attention.

GOVERNMENT AND MAJOR STAKEHOLDER VIEWS

Any extension would bring less national benefit than Crossrail and High Speed 2. They would also question whether it is good value to extend beyond Lewisham – potentially there are only 6-8 peak

slots per hour. There is also a lack of clarity on best value route and boroughs not yet signed up to the extension or lobbying taken place.

In addition, the promoter, TfL, has a long shopping list and the Bakerloo is not quite marking its priority above everything else. Nationally it seems that people are complaining that London already has had too much in the run up to the Olympics.

FUNDING

There is a Government Spending Review every 3 years and as yet TfL doesn't know where funding will come after March 2015, to 2021, let alone as far as 2041. The Northern Line extension is looking for alternative financing from developers. However, there are few large developments in the Bakerloo catchment area.

Long-term planning can be done, however lots of factors: elections, mayoral elections, etc. tend to skew this planning when lots of lobbying takes place. Crossrail 2, trams, tube upgrades, HS2 phase 1, phase 2, etc. are all on the long-term list and so the Bakerloo might end up behind all of these, especially considering the potential cost of £2-4 billion.

PRACTICAL QUESTIONS

One fundamental issue would be the location of stabling sidings or a depot – the Hayes branch is almost impossible with golf courses the only (unrealistic) option at the moment! This is similar to problems faced during the Northern Line extensions when it was proposed that a depot would have to be as far out as Bushey Heath.

Another consideration is the question of whether it is efficient to replace a 12-car south east peak train with 2 or 3 shorter Bakerloo trains, each with fewer seats. Would this only end up having the same number of customers and seats? In addition it only solves 1 of the 5 Lewisham Junction lines and would annoy users who like direct City services.

IN CONCLUSION

There is a good to strong case for extension of the Bakerloo Line but not an overwhelming one and it is a high-risk scheme without strong passenger support as well as the high cost of the scheme which is not yet a TfL priority. To go with this there is only modest political and stakeholder interest and so the case for extension is the same as it's always been: it remains *nice to have* but the current funding gap is critical. Would phasing an extension be a viable alternative?

WHAT OTHER SCHEMES COULD BE BUILT WITH THE SAME MONEY?

A cross-river tram would cost approximately £1 billion.

The Bakerloo solution is not the only rail solution but the only one currently on the table but questions need to be raised as to whether it right to marry inner and outer proposals in one scheme. The inner scheme would be vastly easier but may not ring enough bells to get through the planning stage.

BAKERLOO IN THE SOUTH EAST – A NEW WAY?

Build the Bakerloo extension in phases in the 2020s but also think about future-proofing for 2040-50.

Thought also needs to be given about main line options that might solve Lewisham Junction issues without the obvious downsides for local commuters: is Mile End a relevant example of easy interchange for the City and West End passengers. If so, where could this be done?

To show that the Bakerloo extension was still in the minds of Londoners, in September 2011 Val Shawcross was due to question Boris Johnson on the extension – it was suggested that it would have been possible to pre-draft the likely answer.

In short the speaker suggested that there is still an awful lot of work to do to get the trunk to point to the south-east rather than its tail as at present.

Michael Woodside