Beyond the Elephant
Beyond the Elephant

Extending the Bakerloo

Jonathan Roberts, JRC
at LURS, 13 September 2011
Starting points

northbound

southbound
Real time information
Looking SE
Background to JRC report

• Request by Lewisham Council’s Sustainable Environment Select Committee
• Commentary on the potential for Bakerloo extension
• September 2010 report, committee meeting
• Stimulus for action by Lewisham and other stakeholders
JRC

Projects and their politics

• Lobbying and stakeholder briefing
• Political liaison
• Consultation with stakeholders
• Technical analysis
• Official reports
• Inquiry evidence
Topics in JRC report

• What tube options are not possible
• Rationale for recent schemes
• Potential purposes of extensions
• Possible routes and specifications
• A feel for costs and other factors
• Timescales and project priorities
Further topics today

- Update on official thinking
- Spending pressures and priorities
- Demand indicators
- Project risks and other ‘lions in the path’
- A wider South and SE London approach
- Stakeholders and politics
Bakerloo - SE history so far

At least 9 chances in 85 years

- Ideas and inquiry in 1920s
- Case made to Camberwell, 1931 Act
- In early 1935-40 New Works
- Among ideas for 1940-50 New Works
- 1949 Camberwell project
- 1957 LT South London studies
- 1965 Railway Plan for London
- 1970s scheme to Peckham
- 1980s scheme to Docklands
June 1949 tube map
Past route options

It’s the straight line which is unusual!

See the 1990 options for SE London, and predecessors

Past route options

**Figure 14:** 1960s: Fleet Line Proposals
1. Baker St. to Charing Cross.
2. Charing Cross to Fenchurch St.
3. Fenchurch Street to Lewisham.
4. Lewisham to Addiscombe.

**Figure 15:** 1973: Travers Morgan Docklands Study: Jubilee/Fleet Line.
1. Stambrooke to Aldwych (constructed).
2. Aldwych to Fenchurch Street
3. Fenchurch Street to Bankside and Thamesmead.

**Figure 16:** 1974/1976, London Rail Study, London Docklands.
Strategic Plan/River Line Proposals:
1. Stambrooke to Aldwych.
2. Aldwych to Fenchurch Street.
3. Fenchurch Street to Thamesmead via Custom House or Woolwich Arsenal.

**Figure 17:** 1985, GLC: Jubilee Line Extension Proposal
1. Stambrooke to Aldwych.
2. Aldwych to London Bridge.
3. London Bridge to Abbey Wood and Thamesmead.
Past route options

Figure 18: 1988, Olympia & York: Bakerloo Line Extension
1. Waterloo to Isle of Dogs via London Bridge
2. Waterloo to Isle of Dogs via Bricklayers Arms
3. Isle of Dogs to Stratford and Tottenham Hale
4. Isle of Dogs to Beckton

Figure 19: 1988, Olympia & York: Docklands Second Rail Line
Waterloo to Westcombe Park

Figure 20: 1989, Central London Rail Study: Jubilee Line Extension
1. Aldwych to Ludgate
2. Ludgate to Stratford
3. Ludgate to London Bridge
4. Stratford to Ilford
5. Stratford to Hainault

Figure 21: 1990, East London Rail Study: Jubilee Line Extension
1. Green Park to Stratford — now under construction
2. Aldwych to London Bridge via City
3. Canary Wharf to Canning Town via Basildon
4. North Greenwich to Thamesmead
Lessons from history

Five main criteria to be met

- Business case
- Merits and priority against other projects
- Government and stakeholder backing
- Funding / financing
- Affordability
Any case for an extension?

- Lack of line doesn’t justify automatically!
- In Mayor’s revised Transport Strategy
- Recent ideas within official rail planning
- Not limited to SE London
- Needs to show wide benefits
- **Unlikely as tube project in isolation**
  - more likely as part of wider strategy
Recent examples

Projects driven by over-riding capacity and access priorities

• 1970s split Bakerloo NW into two lines
• 1990s Jubilee extension to Docklands and Stratford
• 2000s East London Line
• 2010s Crossrail, Thameslink
Mayor’s transport strategy

MTS May 2010

• TfL Business Plan > 2017/18 now 31 March 2015
• Unfunded projection > 2031

• Support economic development and population growth
• Enhance the quality of life for all Londoners
• Improve the safety and security of all Londoners
• Improve transport opportunities for all Londoners
• Reduce transport’s contribution to climate change and improve its resilience
• Support delivery of the London 2012 Olympic and Paralympic Games and its legacy
MTS and Bakerloo SE

Various aspiring statements

• By 2020, Bakerloo Line tube upgrade will be complete
• Lighter, more energy efficient, higher capacity Bakerloo trains – and more of them
• Important NW-SE strategic role for Bakerloo
• Serve regeneration zones: Harlesden, Paddington, Elephant & Castle, inner SE London
• Improve transport accessibility
• Free up National Rail capacity at London Bridge
• **Project to be reviewed further: no funding or timescale**
MTS crowding levels in 2031

If all preferred schemes proceed
Tube upgrade example

• Northern Line example here:
• Bakerloo is last in the queue
• Now late 2010s or later (affordability, project basis)
• Issues will arise, eg depot, station and termini capacity
• Desirable to design upgrade to allow for any extensions NW and SE
Reasons now and future?

Six main elements

- **Regeneration & skills & access**
- **Investment and economic growth zones**
- **Capacity vs. demand on rail & transit**
- **Housing & population growth**
- **Environment / petrol prices / low carbon**
- **Slots released on main line tracks**
Regeneration needs

Light pink is among worst 15-20% deprivation in England, mauve is in worst 5%.

Index of Multiple Deprivation 2010

Investment & economic growth

Capacity on rail

Figure 8: AM peak demand growth by corridor to 2031

Housing: population to 2031

Housing: poor housing stock

Inner SE London needs

R: Regeneration  I: Investment and growth  C: Capacity  H: Housing (borough-wide)
E: Environment, carbon (borough-wide)  S: Slots for main line
Inner SE London needs

R: Regeneration  I: Investment and growth  C: Capacity  H: Housing (borough-wide)
E: Environment, carbon (borough-wide)  S: Slots for main line
JRC - inner London options
Capital costs

Based on Northern Line to Battersea

- also some guidance from JLE Green Park-Stratford.
- Source: analysis of October 2009 ‘Tunnel Talk’ on Kennington-Battersea
Battersea capital costs

<table>
<thead>
<tr>
<th>OPTION</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin tunnels</td>
<td>5,840m</td>
<td>6,081m</td>
<td>6,168m</td>
</tr>
<tr>
<td>Intermediate Stn?</td>
<td>no</td>
<td>Nine Elms</td>
<td>Vauxhall</td>
</tr>
<tr>
<td>Main costs</td>
<td>£428m</td>
<td>£528m</td>
<td>£682m</td>
</tr>
</tbody>
</table>

Other costs in **£750m-£1bn** total:
land acquisition, engineering and project management, risk management. It is unclear if these Battersea costs included financing or Treasury ‘optimism bias’.
Bakerloo capital costs

Cost break-down to re-use on Bakerloo

Basic costs to consider include:
• Number of additional trains
• Type of station construction
• Complexity of interchanges
• Tunnelling costs in SE London
• Costs of converting any surface railways.

Facilities such as control centre extension, escape shafts, environmental mitigation, and depot/siding expansion are within proportional extra costs.

Cost schedule adopted for Bakerloo extensions:

**Stations:** new in tube £100m, adaptation from main line £30m, extra interchange: £50m

**Tunnels:** £180m per twin-track mile

**Adaptation of main line:** £40m /mile

**Trains:** 7-car: rounded £10m /train

**Other charges:** £130m per twin-track mile for tunnel section, £30m per mile for surface section.

Main purpose of costs is to show relative size of funding for options.
Inner London – non-options
Inner London main catchments
Inner London B1 – Canary Wharf
Inner London B2 – Charlton
Inner London B3 – NX·Lewisham
Inner London B4 – Peckham direct
Inner London B5 – via Camberwell
# Inner London B1 – Canary Wharf

## Headline case
Serves expanding demand to major UK economic growth location
Other significant transport and regeneration benefits

## Reasons

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>Old Kent Road and South Bermondsey</td>
</tr>
<tr>
<td>Investment</td>
<td>More Southwark and Isle of Dogs growth</td>
</tr>
<tr>
<td>Capacity</td>
<td>Inner SE London and cross-river: Jubilee Line and ELLX relief</td>
</tr>
<tr>
<td>Housing</td>
<td>North Southwark priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>None directly, new inner orbital links</td>
</tr>
</tbody>
</table>

## Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Estimates</th>
<th>Rounded £m capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube line</td>
<td>3.6 miles twin tunnel</td>
<td>1,100</td>
</tr>
<tr>
<td>Stations</td>
<td>3 new underground stations (2 interchanges)</td>
<td>400</td>
</tr>
<tr>
<td>Trains</td>
<td>Approx 8 trains if 2½ min. service</td>
<td>80</td>
</tr>
<tr>
<td>Other</td>
<td>No slots released directly on main line</td>
<td></td>
</tr>
</tbody>
</table>
# Inner London B2 – Charlton

## Headline case
Serves London housing regeneration and expansion areas
Relieves Jubilee Line, North Kent line (but London B'dge-Greenwich passgrs use JLE)

## Reasons
<table>
<thead>
<tr>
<th>Regeneration</th>
<th>Old Kent Road, Deptford and Greenwich Peninsula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment</td>
<td>More Southwark and Thames-side growth</td>
</tr>
<tr>
<td>Capacity</td>
<td>Inner SE London: Jubilee Line, North Kent and ELLX relief</td>
</tr>
<tr>
<td>Housing</td>
<td>North Southwark, Lewisham and Greenwich priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>Approx 3 tph into London Bridge, limited by Lewisham Jcn capacity</td>
</tr>
</tbody>
</table>

## Specification
<table>
<thead>
<tr>
<th>Estimate Description</th>
<th>Rounded £m capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube line 3.7 miles twin tunnel to ramp, 3.1 miles ex main line</td>
<td>1,350</td>
</tr>
<tr>
<td>Stations 2 new underground stns (1 interchange), 5 main line (1 i/ch)</td>
<td>450</td>
</tr>
<tr>
<td>Trains Approx 14-15 trains if 2½ min. service, half after Maze Hill</td>
<td>140</td>
</tr>
<tr>
<td>Other Rejected £2.35bn option via B3 to New X then Greenwich-Charlton</td>
<td></td>
</tr>
</tbody>
</table>
### Inner London B3 – NX·Lewisham

**Headline case**
Direct West End tube to Lewisham SE London strategic centre and interchange
Benefits communities along route, scope to extend further onto main lines

<table>
<thead>
<tr>
<th>Reasons</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>Old Kent Road, North Peckham, Lewisham catchment</td>
</tr>
<tr>
<td>Investment</td>
<td>Lewisham gateway schemes</td>
</tr>
<tr>
<td>Capacity</td>
<td>Inner SE London: South Eastern network and ELLX relief</td>
</tr>
<tr>
<td>Housing</td>
<td>North Southwark and Lewisham priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>No slots released directly on main line</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specification</th>
<th>Estimates</th>
<th>Rounded £m capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube line</td>
<td>4.5 miles twin tunnel</td>
<td>1,400</td>
</tr>
<tr>
<td>Stations</td>
<td>3-4 new underground stns (3 interchanges, 2 double-ended)</td>
<td>550</td>
</tr>
<tr>
<td>Trains</td>
<td>Approx 9 trains if 2½ min. service</td>
<td>90</td>
</tr>
<tr>
<td>Other</td>
<td>2 stations costed above for Old Kent Road, saving if only one</td>
<td>-100</td>
</tr>
</tbody>
</table>
**Inner London B4 – Peckham direct**

**Headline case**
Direct West End tube to Peckham interchange, scope for further extension
Benefits high deprivation communities

<table>
<thead>
<tr>
<th>Reasons</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>Aylesbury Estate, North Peckham</td>
</tr>
<tr>
<td>Investment</td>
<td>Peckham Partnership</td>
</tr>
<tr>
<td>Capacity</td>
<td>Inner SE London: South Eastern network and ELLX relief</td>
</tr>
<tr>
<td>Housing</td>
<td>Southwark priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>No slots released directly on main line</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specification</th>
<th>Estimates</th>
<th>Rounded £m capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube line</td>
<td>2.1 miles twin tunnel</td>
<td>650</td>
</tr>
<tr>
<td>Stations</td>
<td>2 new underground stations (1 interchange)</td>
<td>250</td>
</tr>
<tr>
<td>Trains</td>
<td>Approx 5 trains if 2½ min. service (no more spares assumed)</td>
<td>50</td>
</tr>
<tr>
<td>Other</td>
<td>Lowest capital cost scheme, separate info for Lewisham or Catford</td>
<td></td>
</tr>
</tbody>
</table>
# Inner London B5 – via Camberwell

## Headline case
West End tube to Peckham via central Camberwell, scope for further extension
Benefits high deprivation catchments, serves Denmark Hill health community

## Reasons
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>Loughborough area, North Brixton, North Peckham</td>
</tr>
<tr>
<td>Investment</td>
<td>Includes Peckham Partnership</td>
</tr>
<tr>
<td>Capacity</td>
<td>Inner SE London: South Eastern network and ELLX relief</td>
</tr>
<tr>
<td>Housing</td>
<td>Southwark priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>No slots released directly on main line</td>
</tr>
</tbody>
</table>

## Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>Estimates</th>
<th>Rounded £m capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tube line</td>
<td>2.7 miles twin tunnel</td>
<td>840</td>
</tr>
<tr>
<td>Stations</td>
<td>2 new underground stns (1 interchange, 1 double-ended)</td>
<td>300</td>
</tr>
<tr>
<td>Trains</td>
<td>Approx 6 trains if 2½ min. service (no more spares assumed)</td>
<td>60</td>
</tr>
<tr>
<td>Other</td>
<td>Low capital cost scheme, separate info for Lewisham or Catford</td>
<td></td>
</tr>
</tbody>
</table>
B4 or B5 to Lewisham or Catford

**Headline case**
Extension includes Lewisham centre and i’change, or Catford centre and i’change
Expands SE catchment with overall costs similar to B3

<table>
<thead>
<tr>
<th>Reasons</th>
<th>B4 + Lewisham</th>
<th>B4 + Catford</th>
<th>B5 + Lewisham</th>
<th>B5 + Catford</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>Grand Tot</td>
<td>Grand Tot</td>
<td>Grand Tot</td>
<td>Grand Tot</td>
</tr>
<tr>
<td>Investment</td>
<td>2,065</td>
<td>2,096</td>
<td>2,315</td>
<td>2,346</td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slots</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Spec</td>
<td>1,940</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tube line**
- B4 + Lewisham: +2.5 miles
- B4 + Catford: +2.6 miles
- B5 + Lewisham: +2.5 miles
- B5 + Catford: +2.6 miles

**Stations**
- B4 + Lewisham: 2 or 3, 2 i’c
- B4 + Catford: 2 stn, 2 i’c
- B5 + Lewisham: 2 or 3, 2 i’c
- B5 + Catford: 2 stn, 2 i’c

**Trains**
- B4 + Lewisham: +4 to Lew
- B4 + Catford: +4 to Cat
- B5 + Lewisham: +4 to Lew
- B5 + Catford: +4 to Cat

**Capacity risks**
- Medium

**Tube extensions:** Lewisham via Brockley, Catford via Honor Oak Pk
Outer route options

Basis for assessment

• Most suburbs built-up, so gains are:
  – new main line train slots + reliability
  – lower carbon use (e.g. less car travel)
  – new links to key growth areas (homes, jobs)

• Only a top destination justifies more tunnelling

• Aim for surface line conversion or vacant route

• Joint tube/main line unlikely with disability rules
Outer route options

Choices between routes

• B1 east of Isle of Dogs – not relevant with DLR and Crossrail
• B2 east of Charlton – not relevant with Crossrail
• Beyond Lewisham:
  – B3/B4/B5 Blackheath then Bexleyheath Line
  – B3/B4/B5 Hither Green then Grove Park, Bromley North Line
  – B3 Catford then Hayes Line (incl. Beckenham Junction)

• Beyond Peckham via Catford:
  – B4/B5 options to Catford on surface or in tube
  – B4/B5 options beyond Catford towards Hayes/Beckenham Jcn
Outer route options

Optioneering

- **Bexleyheath:**
  - ? depot sharing at Slade Green
  - ? long term potential to Bluewater on surface line

- **Bromley North:**
  - major SE town centre
  - **but** no main line slot release, slow times to London
  - (? Better as light rail, referenced in LSE RUS and SELRAS)

- **Catford and Hayes:**
  - already separate from other lines after Lewisham

- **So main options Bexleyheath, Hayes**
Outer London capital costs

### Headline case
Substitution of main line branch creates new train slots via Lewisham / New Cross
Local usage gain despite fewer London destinations, scope for new outer rail flows

### Reasons

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration</td>
<td>New workforce catchments; Bexleyheath helps Thames Gateway</td>
</tr>
<tr>
<td>Investment</td>
<td>Promotes more of SE London on tube map</td>
</tr>
<tr>
<td>Capacity</td>
<td>Allows service expansion on other SE London and Kent lines</td>
</tr>
<tr>
<td>Housing</td>
<td>Outer London Borough priorities</td>
</tr>
<tr>
<td>Environment</td>
<td>Sustainable growth</td>
</tr>
<tr>
<td>Slots</td>
<td>8 released from Bexleyheath line (Vic. not counted), 6 from Hayes</td>
</tr>
</tbody>
</table>

### Specification

<table>
<thead>
<tr>
<th>Specification</th>
<th>B3 + Bexleyh’th</th>
<th>B4 + Bexleyh’th</th>
<th>B5 + Bexleyh’th</th>
<th>B3 + Hayes/BJc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Total</td>
<td>1,291</td>
<td></td>
<td></td>
<td>1,292</td>
</tr>
<tr>
<td>Tube/Surface</td>
<td>½ mile tube/ramp, 8.8 miles surface</td>
<td>771</td>
<td>+½T+8%S</td>
<td>732</td>
</tr>
<tr>
<td>Stations</td>
<td>8 surface stations (Blackheath 4 track), 2 i’change</td>
<td>340</td>
<td>10 stn, 2 i’c</td>
<td>400</td>
</tr>
<tr>
<td>Trains</td>
<td>up to 18 more trains, incl. CtI Lon extras</td>
<td>180</td>
<td>+16 &gt; Bex</td>
<td>160</td>
</tr>
<tr>
<td>Capacity risks</td>
<td>High risk in Central London, more capacity needed</td>
<td></td>
<td>High in CtI Lon</td>
<td></td>
</tr>
</tbody>
</table>
Value for money

Relative use: compare to relative capital cost

- Tube stations attract different passenger volume!
- Piccadilly North Z45 v GN Z456 = x 3.2-3.7
- Northern North (ex GN) v GN Z456 = x 2.3-2.7
- Northern South v main Southern Z3 = x 2.9
- Northern South v Thameslink loop Z3 = x 13.7
- Various U/D Z2 v nearby main line Z2 = x 15-20

- Apply some usage factors consistently
Value for money

Bakerloo SE Options - value for capital cost

Worth of getting the passenger

Affordability

Capital cost £bn

£ capital cost / annual user

B4 PB  B5 PC  B1 CW  B3 Lew  B4 Cat  B5 Cat  B4 Lew  B5 Lew  B2 Cha  B3 Hay  B3 Bex  B4 Bex  B5 Bex  B4 Hay  B5 Hay

B4 Lew  B5 Lew  B3 Bex  B4 Bex  B5 Bex

B4 Lew  B5 Lew  B2 Cha  B3 Hay  B3 Bex  B4 Bex  B5 Bex

B4 Cat  B5 Cat  B1 CW  B3 Lew  B4 PB  B5 PC
What London & South East RUS says

8.6 Gap N – Bakerloo Line Southern Extension
8.6.1 The established Kent RUS identified that a potential scheme to convert the Hayes branch for use by London Underground services could alleviate main line and suburban routes via London Bridge, with services on this line rerouted via a southern extension to the London Underground Bakerloo Line. Such a line would also provide additional capacity in inner South London, greatly improving travel opportunities for areas such as Denmark Hill and Camberwell. There may also be capacity relief to the Elephant & Castle corridor to Blackfriars, depending on the specific route chosen.
Bakerloo SE – TfL position

SE London Rail Access Study (SELRAS) objectives

• regeneration and development in opportunity areas
• improve connectivity
• reducing crowding on National Rail and at termini
• maximise Underground efficiency
• value for money

Bakerloo gives most benefits – at high cost

Schemes tested

• DLR to Bromley North
• bus link along Hayes branch
• Bakerloo to Bromley or Hayes
Preferred alignment: Elephant & Castle to Beckenham Junction and Hayes via Camberwell, Peckham, New Cross Gate, Lewisham, Catford.

Cost of £3.5 to £4bn

High level BCR 1.4 : 1

Option via Old Kent Road BCR 1.9 : 1 (shorter journey time)
Bakerloo – why not South?

There is a case, but lower than SE

• Project timings put Crossrail 2 (Victoria Line relief) ahead of Bakerloo southwards
• Victoria Line just 1 mile to Herne Hill
• Only Bakerloo available for SE London
• Other main line options for S London
• Major spend needed on Southern network likely in 2030s
Lessons from history

Five main criteria to be met

• Business case
• Merits and priority against other projects
• Government and stakeholder backing
• Funding / financing
• Affordability
Business case - benefit:cost ratio

• Preferred TfL scheme BCR 1.4 : 1
• Better schemes already exist, eg 1.9 : 1
• DfT currently sets 2 : 1 as value passmark for new investment
• JRC analysis shows:
  – via Camberwell to Hayes is highest cost option
  – Hayes options costlier per passenger than Bexleyheath
  – Phasing (affordable?) may support good BCR
Merits & priorities vs others

- Serves fewer critical areas / objectives than some other rail projects
- London’s new priorities already emerging:
  - more Crossrail extensions
  - Crossrail 2 (possibly phased)
  - Orbital capacity, Lea Valley, SWT etc
- More main line capacity, eg 12-car SE London
- Accommodating the impacts of HS2
- Bakerloo not yet justifying priority attention
Government & stakeholders

A matter for the Mayor of London

• London needs to prioritise its own spend
• Less national benefit than Crossrail, HS2
• Is it good value to spend (net) £1.3bn on outer extension to gain 6-8 peak slots/hr?
• Lack of clarity on best value route, boroughs not yet signed up or lobbying
• A promoter (TfL) with a long shopping list
Funding and financing

• TfL doesn’t know where its funding will come from, to 2021 let alone 2031
• Currently bidding for 2014-19 National Rail investment priorities
• Crossrail taking Supplementary Business Rate, who might be next for that?
• Northern Line to Battersea relying on developer gain/Tax Increment Financing
• Few large developments in Bakerloo catchment
Spending pressures in 2020s

Affordability + some large bids

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Some practical questions

• Depot location if many trains for SE?
• Is it efficient to replace 12-car SE peak train with 2 shorter Bakerloo trains (& are there fewer seats)?
• Why spend £1bn+ to turn commuter line into tube?
• Only solves 1 of 5 Lewisham Jcn. lines, and will annoy users who like direct City & West End trains
• If SE and Kent see even more demand in 2030s, could need further, main line scheme
• South London also needs more relief in 2030s
Bakerloo SE – JRC assessment

• Good to strong, but not overwhelming case
• Risks being high cost project without strong passenger support
• Not yet sufficient TfL priority and attention
• Moderate political and stakeholder interest
• Remains ‘nice to have’
• Probable funding gap - phasing needs care
• Risk of an ‘ideas gap’ as well as funding gap
What else with £2-4 bn?

Is Bakerloo the only London SE option?

• No it isn’t. Eg Cross river tram £1bn+
• Would give a different spread of benefits
• Is Bakerloo the only rail solution?
• No, but it’s the only one now on the table
• Is it right to marry inner and outer proposals in one scheme?
• It’s simpler to focus on an inner London tube, but it may not ring enough bells to get approval
Bakerloo SE – a new way?

• Build Bakerloo in phases in 2020s, but please design for 2040s-2050s?
• Think of main line options that might solve Lewisham Jcn issues without some of the apparent downsides for local commuters
• Is Mile End a relevant example of easy interchange for City / West End passengers?
• How might such opportunity be achieved?
Mayor’s questions 14.9.11

‘Future transport projects 2’

Q 2665 / 2011 - Val Shawcross:

‘The TfL business plan has demonstrated enthusiasm for the extension of the Bakerloo line southwards via Southwark and Lewisham to Hayes. When do you envisage that development of this plan will be included in the TfL business plan?’
Another way?