

Bakerloo line extension

Responses to the main issues raised
September 2015

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1. Introduction

- 1.1. To inform further development of proposals for a Bakerloo line extension, an initial consultation took place between 30th September and 7th December 2014. This was to help TfL understand local and wider views on the principle of extending the Bakerloo line.
- 1.2. In March 2015 TfL published the results of the consultation. This is available online at www.tfl.gov.uk/Bakerloo-extension
- 1.3. This report sets out the TfL response to the main issues raised by consultees. The issues and the responses have been grouped according to themes and broadly follow the order of questions as presented during the consultation, with each question covered chapter by chapter. A copy of the consultation questions is available in Appendix A.

The extension proposals

- 1.4. In order to manage growth and support development and regeneration in southeast London, TfL is considering an extension of the Bakerloo line.
- 1.5. The key aims of the proposed Bakerloo line extension include:
 - Putting southeast London on the Tube network and supporting development and regeneration in the area
 - Improving access to public transport and employment opportunities for local residents
 - Improving journey times and network capacity with a high frequency Tube service
 - Providing better connections between southeast London and central London and Docklands via DLR at Lewisham
 - Improving capacity and relieving crowding on National Rail services by enabling train paths to be reallocated to other routes
 - Reducing traffic congestion and air pollution by offering new public transport options
- 1.6. The options for the proposed extension are shown in Figure 1-1 and described in Table 1-1.

Figure 1-1: Map of Bakerloo line extension options, autumn 2014

Proposed Bakerloo line extension

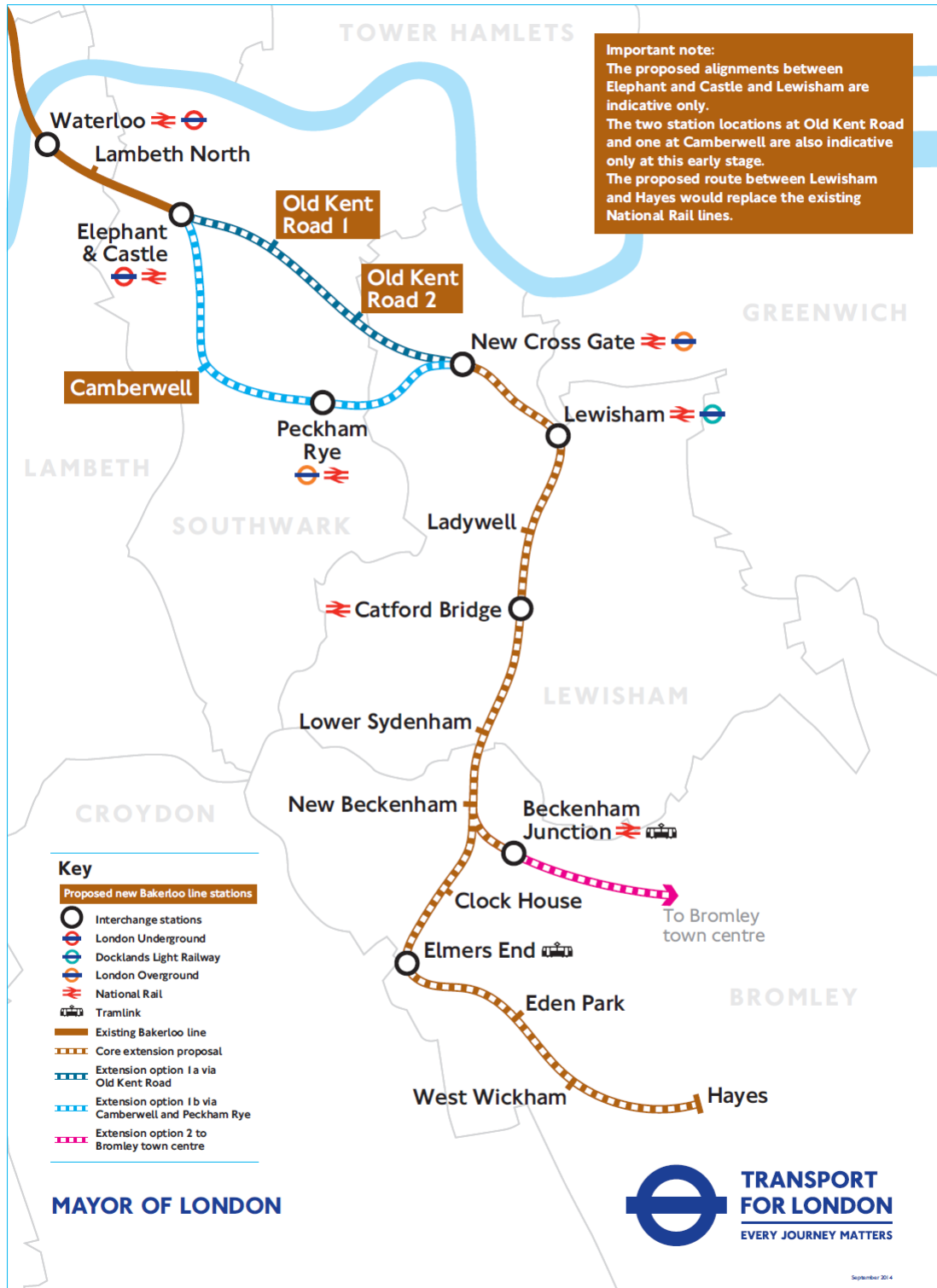


Table 1-1: 2014 consulted options for a Bakerloo line extension

Option title	Description
Option 1a	Bakerloo line extension to Hayes and Beckenham Junction via Old Kent Road
Option 1b	Bakerloo line extension to Hayes and Beckenham Junction via Camberwell and Peckham Rye
Terminate at Lewisham	Bakerloo line extension to Lewisham only
Option 2	Bakerloo line extension to Hayes and Bromley via Beckenham Junction

Summary of consultation results

- 1.7. There were a total of 15,346 responses to the 2014 consultation.
- 1.8. The consultation found that 96% of respondents supported the principle of the Bakerloo line extension and 2% opposed the principle.
- 1.9. Eighty two per cent of respondents supported the scheme in connection with new development.
- 1.10. Support was high for both Option 1a and Option 1b, with Option 1b having the greater level of support. Sixty four per cent of respondents supported this alignment, compared to 49% for Option 1a.
- 1.11. Thirty per cent of respondents supported the line terminating at Lewisham. Twenty eight per cent of respondents were neutral and 40% were opposed to this option.
- 1.12. Fifty six per cent of respondents stated they preferred that the line went to Beckenham Junction and Hayes and 60% of respondents supported the option of an additional tunnel to Bromley town centre.
- 1.13. Approximately 4,500 comments were also received regarding other options or routes that could be considered to support growth and increase public transport accessibility in southeast London.

Next steps

- 1.14. TfL is now further reviewing the consulted options and the alternatives suggested by respondents. Once the options have been fully explored the results will be published and a further public consultation is currently anticipated to occur by early 2016.
- 1.15. If a decision is made to progress the scheme, and the necessary funding secured, it is anticipated that construction could commence in around 2023 and be completed in approximately 2030.

Project contact details

1.16. For more information regarding the consultation please visit www.tfl.gov.uk/bakerloo-extension

1.17. If you would like to further discuss a query or issue, please contact us via:

- Email: ble@tfl.gov.uk
- Post: Freepost TfL Consultations

2. Principle of the extension

Ref	Main issues raised	TfL response
2.1	The Bakerloo line extension is overdue	<p>This extension proposal is being considered due to the future challenges London faces as it grows.</p> <p>In 2011, the population of London was 8.2 million and it is now estimated to have exceeded the previous (1939) peak of 8.6 million. By 2036, the population is projected to grow to 10.1 million, and it is expected to reach 11.3 million by 2050. Over the next 20 years, the number of jobs in London is projected to grow from 6.6 million to 8.3 million. The scale of this projected growth sets a considerable challenge for the provision of housing, facilities and infrastructure.</p> <p>The growth forecasts mean the boroughs along the consulted extension options will see the following changes in population and jobs by 2036:</p> <ul style="list-style-type: none"> ▪ Southwark: 62,000 more jobs and 62,000 more residents ▪ Lewisham: 20,000 more jobs and 65,000 more residents ▪ Bromley: 16,000 more jobs and 53,000 more residents <p>The proposed extension would follow a sustained period of transport investment to support the growth that is occurring across London. This includes projects such as Crossrail, the tube upgrades, London Overground extensions and upgrades, bus service increases, and a large increase in cycling through Cycle Superhighways and the cycle hire scheme.</p> <p>If the proposal is developed further and funding is found for construction, TfL currently aims to commence services on the extension around 2030, in time to support the forecast jobs and population growth.</p>

2.2	Southeast London already has adequate transport links	<p>The area currently has Overground, DLR and rail provision. However, compared to other parts of London, there is a relative under-provision of frequent rail services. For more information see Appendix B – Current levels of ‘turn-up-and-go’ rail services across London based on services over seven days.</p> <p>It is also important to note that given the growth pressures across the region (see above) there is a need for future rail capacity improvements to help meet future demand.</p>
2.3	The Bakerloo line extension does not address public transport provision in southeast London	<p>Planning and investigations to date have confirmed that an extension of the Bakerloo line could support development and regeneration in the southeast, improve access to public transport for local people, improve journey times and network capacity, provide better connections to central London and relieve crowding on National Rail.</p> <p>More information regarding the proposal’s benefits is available online at www.tfl.gov.uk/bakerloo-extension</p> <p>TfL also recognises that a single major scheme cannot address all transport challenges across southeast London. A range of committed and funded improvements to the transport network are planned. More details can be found in the relevant Sub-regional Transport Plans for southeast London, which are available online: https://tfl.gov.uk/corporate/publications-and-reports/sub-regional-transport-plans</p>
2.4	Improve the Bakerloo line instead of extending it	<p>TfL is already planning an upgrade of the Bakerloo line as part of the New Tube for London Programme. The upgrade will deliver new trains and new signalling to provide a minimum of 27 trains per hour through central London on the Bakerloo line.</p> <p>Further details are available on TfL’s website at: https://tfl.gov.uk/campaign/tube-improvements/the-future-of-the-tube/new-tube-for-london</p>
2.5	The extension should be opened progressively so that benefits can be experienced in stages	<p>The consulted routes included various options for terminus points. TfL is currently undertaking further work to understand whether a phased approach could be taken and what the advantages and disadvantages could be.</p>

2.6	If an extension is built, what happens to National Rail services?	<p>Of the options TfL consulted on, only an extension beyond Lewisham, to Hayes and Beckenham Junction, would directly impact National Rail services.</p> <p>This option proposes that the existing line is converted to sole use by London Underground trains. This has been proposed for three key reasons:</p> <ol style="list-style-type: none"> 1. Trains that currently operate on these lines could be reallocated to provide enhanced services on other parts of the National Rail network. This could also help support future demand on southeast London's rail network and into Kent. 2. A conversion of the Hayes branch to London Underground would enable the extension to reach further into southeast London at a lower cost due to the existing infrastructure already being in place. 3. A tube extension would increase the frequency of services and capacity on the Hayes branch and most journey times to and from central London could be reduced. See Appendix C – Proposed Bakerloo line extension (to Hayes and Beckenham Junction) frequency in comparison to current rail services and Appendix D – Estimated journey times with a proposed Bakerloo line extension <p>Conversion of the Hayes branch to a London Underground line was also suggested by Network Rail in the 2010 Kent Route Utilisation Strategy. As part its long term planning process, Network Rail is commencing a new Route Study for the Kent region in 2015. This study, which is anticipated to be completed in 2016, includes consideration of the Hayes line branch. TfL will work with Network Rail and other industry partners, during this study, to understand the options that exist for improving capacity. More information about Network Rail's planning work is available online at: https://www.networkrail.co.uk/long-term-planning-process/</p>
2.7	Will the extension increase my journey times?	<p>Overall journey times between existing stations that might be served by an extension and central London are expected to fall. This is because the proposed extension could offer a higher frequency service and more direct journeys to many central London destinations. Appendix D shows the estimated journey times for Options 1a and 1b, including the route</p>

		<p>to Hayes.</p> <p>For journeys beyond New Cross Gate, to and from central London, Option 1a (via the Old Kent Road), may provide a greater reduction in journey time than Option 1b (via Camberwell) as the route is expected to be shorter. Newly built stations, in areas without existing rail services, could also deliver faster journeys for many people and connect them to new destinations.</p> <p>If National Rail trains, currently operating on the Hayes branch, were reallocated to operate on other routes, there could also be journey time improvements for many other national rail passengers.</p>
2.8	<p>Concern that an extension may create negative impacts such as overcrowding on other Underground lines and for neighbouring rail services</p>	<p>TfL is proposing an extension because of the expected positive impacts on the wider public transport network.</p> <p>By providing new capacity, an extension could help reduce congestion and crowding on the existing network.</p> <p>Appendix E shows that the Bakerloo line is forecast to have spare capacity in 2031 following the upgrade of the line. Other lines in the area either do not have any available capacity (such as the Victoria line), or there are already committed plans to extend them (such as the Charing Cross branch of the Northern line).</p>
2.9	<p>Concerns raised regarding infrastructure needed to support the extension i.e. accessibility and capacity improvements at existing stations such as Lewisham; station improvements at Elephant & Castle; and interchange with other transport modes e.g. buses.</p>	<p>The different extension options consulted on will have different impacts on the transport network and on the additional infrastructure needed to support that particular option.</p> <p>As part of further work on potential options, TfL will consider what additional improvements might be required alongside the extension at locations such as Elephant & Castle and Lewisham.</p> <p>This could range from improving bus services that connect to new stations, interchanges between extension services and other rail and bus services, or providing cycle parking and cycle hire at stations.</p>

2.10	Requests for further details of proposals i.e. any impact to travel costs, environmental impacts, depot locations, tunnel depth, station locations	<p>TfL undertook early consultation to understand public and stakeholder views on the principle of the proposed extension and the possible destinations it might serve.</p> <p>Further information will become available as options are developed and TfL will carry out additional consultation and provide further information updates as the project progresses.</p> <p>Some information, for example detailed environmental impacts, will not be available until a decision is made to progress the proposed extension and the necessary funding is secured. At that stage, TfL would undertake and publish the results of a full environmental impact assessment on the selected option and apply for the necessary planning powers.</p>
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3. Enabling new development

Ref	Main issues raised	TfL response
3.1	An extension should be built regardless of whether it enables new development	<p>Southeast London can make a large contribution to London's growth and an extension of the Bakerloo line aims to support this.</p> <p>New development enabled by the proposed extension could provide new homes and jobs. The new development could in turn help to fund the proposed extension. This approach would follow examples elsewhere, for example the Northern Line Extension to Battersea and the Crossrail scheme. Both projects have received significant funds from new development.</p>
3.2	How will the extension be funded?	<p>As part of wider work, TfL is currently exploring how the proposed extension could be funded via new development.</p>
3.3	Oppose increased development in southeast London	<p>Southeast London has brownfield (developed land) sites which could be used to accommodate future growth. These areas have been selected as Opportunity Areas (OAs) in the London Plan – the Mayor's Spatial Development Strategy for London. This sets out how planned growth to support London's economy can be achieved.</p> <p>The selection of these Opportunity Areas has previously been consulted on as part of the adoption process for the London Plan.</p> <p>The extension options TfL consulted on covered three of these OAs – Old Kent Road, New Cross-Lewisham-Catford and Bromley Town Centre.</p> <p>TfL is working with the local authorities and the Greater London Authority to ensure that the future population growth in these OAs is supported by new transport infrastructure.</p> <p>More information about London's Opportunity Areas and the London Plan can be found on the Greater London Authority website at: www.london.gov.uk</p>

3.4	An extension needs to serve the existing population	<p>The consulted route options would directly serve large existing populations in southeast London.</p> <p>These options would also offer new interchange opportunities with other public transport services such as National Rail, London Overground and the DLR. This is due to new connections between the proposed extension and existing stations on the transport network.</p>
3.5	Scale, location and nature of proposed development	<p>The scale, location and nature of proposed development in southeast London will be determined in accordance with relevant planning policies that apply to the area. This includes policies set out in the London Plan (the Mayor's Spatial Development Strategy) as well as those held by the local planning authorities. Any new developments would be authorised by means of a planning application and its approval by the relevant planning authority.</p> <p>TfL will work with local planning authorities to identify whether any future planned development might require an extension to accommodate the increase in travel demand. Where an extension is required TfL could seek contributions from the developer towards the cost of the proposed extension.</p>

4. Old Kent Road – Option 1a

Ref	Main issues raised	TfL response
4.1	The Old Kent Road is already well developed	<p>The London Plan, the Mayor’s Spatial Development Strategy, has designated the Old Kent Road area as an Opportunity Area (OA). It considers that industrial sites and brownfield land in the OA could accommodate a minimum of 2,500 new homes and 1,000 new jobs. TfL is currently working with the GLA and London Borough of Southwark to consider levels of new development that could be supported by the proposed extension.</p> <p>The London Plan and further details regarding the OAs can be found online at: www.london.gov.uk</p>
4.2	The Old Kent Road is currently well served by public transport	<p>The Old Kent Road is currently served by a number of bus services but also experiences high levels of traffic which can cause congestion and delay. One reason for the high traffic volumes and congestion is that the Old Kent Road has no direct rail access. The nearest rail stations are located at New Cross Gate, Elephant & Castle and Queens Road Peckham.</p> <p>The Old Kent Road is also an important arterial route that buses and other vehicles use to travel to and from central London, which adds to the current levels of traffic and congestion.</p> <p>TfL is working with the GLA and the London Borough of Southwark to understand the housing and jobs growth potential of the Old Kent Road OA, and whether it could be supported by existing bus services or if it requires further transport investment, such as the proposed extension.</p>
4.3	An Underground extension will not relieve congestion on the Old Kent Road	<p>An extension of the Bakerloo line could provide a faster and alternative travel option to road-based transport on the Old Kent Road. In doing so, an extension could help ease congestion and support increased travel demand from any future development that could occur.</p>

4.4	The Camberwell and Peckham Rye route offers more interchange opportunities than a route via the Old Kent Road	<p>The Camberwell route (1b) offers interchange opportunities, such as at Peckham Rye (National Rail and London Overground) and with current bus services.</p> <p>In comparison, the Old Kent Road area's relative under-provision of rail services means that an extension via this route would add the area to the rail network. In addition, new interchanges (between new underground stations and bus services) could be provided.</p>
4.5	A route via Camberwell should take precedence as Kings College Hospital is located closer to this route	<p>The rationale for the proposed extension is to improve transport capacity and accessibility in southeast London. This includes improving access to services such as health and education.</p> <p>The options TfL consulted on all have potential to improve accessibility to services along the route the extension serves.</p> <p>A further important consideration is that the proposed extension needs to support London's population growth by enabling new development to provide new homes and job. These opportunities are currently expected to occur along the Opportunity Areas outline in the London Plan.</p>
4.6	An extension to Camberwell and Peckham Rye will serve more people than a route via the Old Kent Road	<p>TfL's planning work considers both the current and future distribution of London's population in assessing the impact of transport schemes.</p> <p>The timescale for the proposed extension being operational is around 2030. TfL is working with the local planning authorities to understand how the population of areas along extension options may change over this period and beyond 2030. This work will play a key part in determining the selected route for any future extension.</p>
4.7	Congestion is worse on Walworth Road than on the Old Kent Road	<p>The Old Kent Road and Walworth Road are both major routes for access into central London. Both routes are served by the bus network, however both routes also experience road congestion which can cause delay to bus journeys.</p> <p>The impact an extension could have on traffic levels on both of these routes is being further considered.</p>

4.8	Camberwell has better development opportunities	TfL will work with the London boroughs that could be served by an extension to understand the potential development opportunities along the proposed extension routes.
4.9	This option will take longer / be more expensive to build because there is no existing infrastructure along the route	Any route between Elephant & Castle and Lewisham would be built as an Underground tunnel, and therefore options 1a and 1b would require new infrastructure along their route.

5. Camberwell/Peckham Rye – Option 1b

Ref	Main issues raised	TfL response
5.1	Camberwell and Peckham are already well served by public transport	<p>Currently, Camberwell has no rail station. Denmark Hill station is within 1 km of Camberwell town centre and is served by London Overground and Southeastern train services. Peckham is served by Peckham Rye and Queens Road Peckham stations on the London Overground, as well as Southern and the Southeastern train services. Camberwell and Peckham are also served by a range of bus routes.</p> <p>An extension would add provision of direct services to central London destinations such as the West End and northwest London as well as new interchange opportunities onto the wider transport network, such as Crossrail.</p>
5.2	Option 1b is longer and a less direct route	<p>Option 1b is currently expected to be longer than Option 1a and so currently has a slightly longer forecast journey time.</p> <p>Further work will be undertaken as the extension proposals develop. This work will consider the future performance of the trains that will operate on the Bakerloo line following its upgrade, the track geometry and the best alignment achievable. All of these aspects may impact the proposed extension's journey times.</p>
5.3	Camberwell and Peckham are already well developed / the Old Kent Road has more development opportunities	<p>A key driver of the proposed extension is enabling new development in southeast London. It is unlikely an extension can happen without this new development.</p> <p>TfL will work with the local authorities along the proposed routes to understand regeneration and development impacts each extension option might enable.</p>
5.4	The Old Kent Road needs regenerating more than Camberwell and Peckham Rye	<p>New rail stations can attract new residents and visitors to an area and increase economic activity including new development and regeneration.</p> <p>TfL will work with the local authorities that could be served by the proposed extension to understand how it could help achieve this.</p>

5.5	The Camberwell and Peckham Rye route is more expensive to build than a route via the Old Kent Road	Option 1b is currently expected to be a longer extension and is therefore currently expected to be more expensive to build than Option 1a.
5.6	An extension to the Old Kent Road will serve more people and businesses than a route via Camberwell and Peckham Rye	<p>TfL's planning work considers both the current and future distribution of London's population and jobs in assessing the impact of transport schemes.</p> <p>The timescale for an extension being operational is around 2030 and TfL is working with the local planning authorities to understand how the population of areas along extension options may change over this period and beyond. These forecasts will be a key aspect in determining the selected route for any future extension.</p>

6. Issues related to Option 1a and Option 1b

Ref	Main issues raised	TfL response
6.1	Both options are justified / should be delivered	As part of further assessment of options and consultation responses, TfL will undertake detailed work to understand whether it is possible to deliver both options as part of an extension and what the advantages and disadvantages of this option would be.
6.2	Both options may be possible if they both terminated at Lewisham	The outcome of this work will be made available prior to a future consultation.
6.3	Regardless of which option is chosen, the other option area should also receive transport improvements	<p>TfL undertakes on-going planning reviews to identify challenges and assess potential transport solutions across the capital.</p> <p>Whichever Bakerloo line extension options are selected for further development, the remaining southeast London region will continue to be the subject of further planning work through the sub-regional planning process.</p> <p>More information regarding the Sub-regional Transport Plans is available online at: https://tfl.gov.uk/corporate/publications-and-reports/sub-regional-transport-plans</p>
6.4	Where will the stations be located? How many will there be?	The consultation indicated where stations could be located along the different route options. Further and more detailed development is required to confirm extension station locations. This will occur once a preferred route option has been determined.
6.5	What is the cost-benefit-analysis of each option?	<p>Cost-benefit-analysis for all options that were presented during the 2014 consultation is currently underway and will be published prior to the next public consultation.</p> <p>The cost-benefit-analysis will be an important consideration in deciding which options to develop further.</p>

7. Terminating at Lewisham

Ref	Main issues raised	TfL response
7.1	The extension should go as far as it can / the economic case is stronger if the line is extended further	<p>The rationale for the proposed extension is to improve transport capacity and accessibility in southeast London. The options TfL consulted on also have potential to make significant improvements for accessing locations and services along the route options.</p> <p>A further important consideration is that an extension needs to support London's population growth by enabling new development to provide new homes and jobs. These opportunities are particularly located in the Opportunity Areas along the extension options.</p> <p>It is also important to note that funding for the proposed extension is still under consideration, and that TfL has other important projects planned to keep London moving as it grows. These projects include the London Underground line upgrades programme, investment in cycling and Crossrail 2, all of which will require significant funding.</p> <p>As no funding has yet been confirmed for the proposed extension, TfL is assessing the extent to which new development along the proposed routes might contribute to the delivery costs. If funding for a full extension cannot be found, TfL might seek to undertake a phased approach as a shorter extension may be cheaper, less complex and potentially quicker to deliver and work could continue to identify how a further extension beyond an initial phase could be funded and delivered.</p>
7.2	Outer London connections are currently inadequate	<p>Both inner and outer London have challenges regarding public transport accessibility. Capacity and congestion on the bus and highways networks also requires addressing. The extension options proposed help address these challenges across both inner and outer London.</p>

7.3	Lewisham Station would require upgrading if it is to become a terminus /interchange point	TfL will work with Network Rail, the infrastructure owner of Lewisham station, to further understand the impact of the proposed extension options and the works that could be required to provide an effective interchange.
7.4	Support the terminus at Lewisham if services are improved on the National Rail Hayes branch	<p>As TfL does not operate the Hayes branch, TfL is unable to commit to any improvements. However, TfL is working work with Network Rail and other industry partners to support growth and improve the rail network throughout London.</p> <p>As part its long term planning process, Network Rail is commencing a Route Study for the Kent region in 2015. This study, which is anticipated to be completed in 2016, includes consideration of the Hayes line branch. TfL will work with Network Rail and other industry partners during this study to understand the options that exist for improving capacity. More information about Network Rail's planning work is available online at: https://www.networkrail.co.uk/long-term-planning-process/</p>

8. Terminating at Beckenham Junction and Hayes

Ref	Main issues raised	TfL response
8.1	Beckenham Junction and Hayes already have sufficient public transport links	<p>The option of extending a Bakerloo line onto the current Hayes branch has been proposed for three key reasons:</p> <ul style="list-style-type: none"> • The trains that currently operate on these lines could be reallocated elsewhere to provide greater capacity on other rail lines.
8.2	The proposed route duplicates the current Hayes branch	<ul style="list-style-type: none"> • Converting the Hayes branch to London Underground is expected to increase the frequency of services and most journey times could reduce. For more information see Appendix C – Proposed Bakerloo line extension (to Hayes and Beckenham Junction) frequency in comparison to current rail services and Appendix D – Estimated journey times with a proposed Bakerloo line extension. • Converting the Hayes branch to London Underground and utilising the existing infrastructure is currently expected to cost less than installing new infrastructure for the proposed extension beyond Lewisham. <p>The conversion of the Hayes branch to London Underground was also suggested by Network Rail in the Kent Route Utilisation Strategy (2010) for the rail network from London into Kent.</p> <p>As part its long term planning process, Network Rail is commencing a Route Study for the Kent region in 2015. This study, which is anticipated to be completed in 2016, includes consideration of the Hayes line branch TfL will work with Network Rail and other industry partners during this study to understand the options that exist for improving capacity More information about Network Rail’s planning work is available online at: https://www.networkrail.co.uk/long-term-planning-process/</p>

8.3	Extending beyond Lewisham is cost prohibitive	Extending the Bakerloo line beyond Lewisham to Hayes and Beckenham Junction could be achieved by converting the existing National Rail branch to London Underground. Without this existing infrastructure, a longer extension would have a higher total cost.
8.4	Tube access is not required as far as Beckenham Junction and Hayes	<p>The Central, Piccadilly, Northern, District and Metropolitan lines all have stations at a similar distance, or further away, from central London than the Hayes station.</p> <p>An Underground extension could improve the frequency of services to locations along the route of the proposed extension, as shown in Appendix C – Proposed Bakerloo line extension (to Hayes and Beckenham Junction) frequency in comparison to current rail services and in Appendix D – Estimated journey times with a proposed Bakerloo line extension.</p>
8.5	Extending the line to Beckenham Junction and Hayes could lead to overcrowding on the Bakerloo line	<p>The Bakerloo line offers an opportunity for an extension as it has spare capacity and this is forecast to continue following the planned line upgrade. For more information see Appendix E – Future crowding forecast for Underground and DLR, 2031.</p> <p>In addition, the Bakerloo line is planned to operate up to 27 trains per hour (tph) following its upgrade. Modern systems provided by this upgrade might have the capability to enable service levels above 27 tph - the Victoria and Jubilee lines both achieve train service frequencies of over 32 tph. As option development work continues, demand modelling will be reviewed and updated.</p>
8.6	Preference to extend the Bakerloo line to Beckenham Junction or Hayes (one or the other, but not both)	<p>Extending the line to either Beckenham Junction or Hayes would require the proposed extension taking over the Hayes National Rail branch south of Lewisham. As National Rail services that currently serve these destinations would be reallocated, if the proposed underground extension terminated at Beckenham Junction and did not serve the terminus at Hayes, stations south of New Beckenham would lose a rail service.</p> <p>Currently, there are no timetabled services on the Hayes to Lewisham National Rail branch to or from Beckenham Junction. If the proposed extension only served the Hayes</p>

		<p>terminus and not Beckenham Junction, there would not be a loss in rail services for existing passengers. However, a proposed extension also serving Beckenham Junction could provide an interchange opportunity with Tramlink and other rail services towards Kent, Dulwich and Brixton.</p>
8.7	<p>Concern that the proposed extended Bakerloo line would not have the same capacity and provision that current National Rail train services provide, i.e. passenger capacity and bicycle carriage.</p>	<p>Although London Underground trains are smaller than National Rail trains, they operate at a high frequency, and therefore can provide high overall capacity.</p> <p>The extension option to Hayes was based upon an estimated service of 27 trains per hour (tph) between Elephant & Castle and Catford Bridge, 21 tph between Catford Bridge and New Beckenham, six tph between New Beckenham and Beckenham Junction and 15 tph between New Beckenham and Hayes.</p> <p>The table below shows how the capacity of London Underground Bakerloo line train services compares to planned National Rail services to Hayes. The Hayes National Rail branch is forecast (by the time the proposed Bakerloo line extension could be delivered in around 2030) to receive two Cannon Street services consisting of 12-car Class 376 Electrostar trains and four Charing Cross services consisting of 10-car length Class 465 or 466 train types. The 465 train has been used in the table below as it has the higher total capacity.</p> <p>The table shows that on the Hayes branch there would be a slight reduction in seated capacity between Hayes and New Beckenham but an increase in total capacity.</p> <p>Beckenham Junction would benefit from new regular train services of at least six tph. From New Beckenham to Lewisham, there would be an increase in seating capacity and an increase in standing capacity for users of the line compared to the existing services that operate. If the 10-car trains that operate were lengthened to 12-car, seated capacity would still be lower than the proposed Bakerloo line service.</p> <p>Note: the table below assumes the current forecast capacity of a Bakerloo line train following a planned upgrade to trains. The train timetabling estimates are also subject to further development.</p>

	Hayes LU	New Beckenham LU	Catford Bridge LU	National Rail Class 376 Electrostar	National Rail Class 465
Service	15 tph	21 tph	27 tph	2 tph	4 tph
Seats per train	248	248	248	504	860
Standing passengers per train (at 4 passengers per square metre ²)	566	566	566	1,212	540
Total train capacity	814	814	814	1,716	1,400
Frequency (trains per hour)	15	21	27	2	4
Total seated capacity per hour	3,720	5,208	6,696	4,448	
Total capacity per hour	12,210	17,094	21,978	9,032	

Foldable bikes are permitted on the entire Underground network at any time of the day. Non-folded bikes are currently permitted on above-ground sections of the Underground network outside the peak times of 0730 to 0930 and 1600 to 1900 hours. Based upon this current policy, non-folded bicycles would be permitted between Ladywell and Hayes outside of these peak times as this extension option is expected to run at surface.

8.8	What will the train timetable be for services to and from Beckenham Junction and Hayes	<p>Planning for the extension has assumed an estimated service pattern of 15 trains per hour (tph) to Hayes and six tph to Beckenham Junction. A further six tph is assumed to reverse at Catford Bridge, making 27 tph on the extension north of Catford Bridge into central London.</p> <p>Trains would be scheduled to service termini and intermediate stations in a regular service pattern to manage demand and provide predictable departures. The service assumptions for any proposed Bakerloo line extension option would be developed in more detail as part of future work.</p>
8.9	Suggestion to tunnel all the way to Beckenham Junction and Bromley, rather than taking over the Hayes branch	<p>Constructing an extension in a tunnel would be more expensive than converting the existing rail corridor. For this reason, it is likely that a tunnelled extension beyond Lewisham would represent lower value for money.</p> <p>Further, a tunnelled extension would not provide the potential capacity benefits elsewhere on the rail network. One of the key drivers of the proposed extension is converting the Hayes line so the current National Rail services on this line can be reallocated.</p>
8.10	Concerns regarding disruption that may be caused to services during construction	<p>Subject to construction methodology, it would be TfL's aspiration to maintain a rail service on the Hayes National Rail branch during construction.</p>
8.11	Oppose a Tube extension serving Hayes and Beckenham Junction as this would lead to too much new development	<p>An extension to Hayes and Beckenham Junction has been proposed because it can improve the rail services on the line by increasing their frequency and capacity.</p> <p>Further, by converting the line to London Underground, trains that currently operate on these lines could be reallocated elsewhere to provide greater capacity on other rail lines, helping to support future growth in southeast London.</p>

9. Bromley town centre option

Ref	Main issues raised	TfL response
9.1	Bromley already has fast rail connections to central London	<p>An extension to Bromley could provide improved connectivity between Bromley town centre and other areas along the proposed extension.</p> <p>Appendix D shows that an Underground connection between Beckenham Junction and Bromley town centre may provide journey time savings to central London destinations including Canary Wharf and Old Street.</p> <p>Bromley's current, direct links to Victoria from Bromley South station would remain the fastest way to reach Victoria station from Bromley town centre and vice versa.</p>
9.2	The extension could cause unreliability to the National Rail line to Bromley town centre	<p>A Bakerloo line extension link to Bromley town centre from Beckenham Junction would not operate on National Rail tracks between these stations. It is currently proposed that this connection would be constructed in a tunnel underground.</p> <p>The Underground services would therefore operate between these stations independent from the National Rail services that currently operate between Beckenham Junction and Bromley South station.</p>
9.3	The branch is not required as it duplicates existing transport links from Bromley to central London	<p>This option may provide additional connectivity benefits. From Bromley to Lewisham and New Cross Gate, passengers could change to DLR or the London Overground to access Canary Wharf or the city. Currently, these journeys require a number of interchanges and this proposal may provide journey time savings.</p> <p>In order to extend to Bromley town centre, this option would involve converting the Hayes National Rail branch from Lewisham to London Underground. National rail services would no longer run and would be replaced by a high frequency underground service. From Beckenham Junction to Bromley town centre a new tunnelled section of underground is currently proposed.</p>

9.4	Support is conditional on the Hayes extension being built too.	The proposed branch to Bromley town centre is currently only possible if the Hayes branch is converted to London Underground first.
9.5	Bromley does not require further new development	The London Plan has designated Bromley town centre as an Opportunity Area, capable of providing an additional 2,500 homes and 2,000 jobs. Planning policies to deliver this growth would be the subject of a separate consultation led by the local planning authority.
9.6	Where will the station be located within Bromley town centre?	No decision has been made as to the location of a possible station in Bromley town centre. If this option is progressed, it would be subject to engineering feasibility and further consultation with the public and stakeholders.
9.7	Trains from Bromley South to Victoria should continue to operate	It is currently expected that an extension to Bromley would involve tunnelling and new infrastructure. Therefore services between Bromley South and London Victoria are not expected to be affected by this option.
9.8	Construction of an extension will cause considerable disruption	TfL's proposals to extend the Bakerloo line remain at an early stage of development. If a decision is made to progress any of the proposed options, and the necessary funding is secured, TfL will undertake and publish the results of a full environmental impact assessment. This assessment would provide details of the construction impact. TfL would also need to apply for the necessary planning powers and there would be further public consultation and opportunities for people to express their views on this.

10. Other options or routes suggested to support growth and increase public transport accessibility in southeast London

Ref	Main issues raised	TfL response
10.1	The proposed extension should be in addition to existing rail services	<p>The proposed extension aims to increase the capacity of the rail network in southeast London and will be planned based upon the future rail network in order to support growth. The option of an extended Bakerloo line taking over the National Rail lines south of Lewisham (to Beckenham Junction and Hayes) has been proposed for three key reasons:</p> <ol style="list-style-type: none"> 1. Trains that currently operate on these lines could be reallocated to provide enhanced services on more crowded parts of the National Rail network. This could also help support future demand on southeast London's rail network and into Kent. 2. A conversion of the Hayes branch to London Underground would enable the extension to reach further into southeast London at a lower cost due to the existing infrastructure already being in place. 3. A tube extension would increase the frequency of services and capacity on the Hayes branch and most journey times to and from central London could be reduced. See Appendix C – Proposed Bakerloo line extension (to Hayes and Beckenham Junction) frequency in comparison to current rail services and Appendix D – Estimated journey times with a proposed Bakerloo line extension <p>Conversion of the Hayes branch to a London Underground line was also suggested by Network Rail in the 2010 Kent Route Utilisation Strategy. As part its long term planning process, Network Rail is commencing a new Route Study for the Kent region in 2015. This study, which is anticipated to be completed in 2016, includes consideration of the Hayes line branch. TfL will work with Network Rail and other industry partners during this study to understand the options that exist for improving capacity More information about Network Rail's planning work is available at: https://www.networkrail.co.uk/long-term-planning-process/</p>

10.2	Invest in and improve the area's National Rail provision	<p>TfL is not responsible for determining the National Rail services that operate in southeast London, however, TfL has successfully introduced London Overground onto parts of the rail network, such as to West Croydon and Clapham Junction. More information about the Mayor's Rail Vision is available from online at:</p> <p>https://www.london.gov.uk/priorities/transport/investing-transport/improving-london-railways/the-mayor-s-rail-vision-investing-in-rail-services-in-london</p>
10.3	Re-open Camberwell and Walworth Road stations	<p>TfL will work with Network Rail and the London Borough of Southwark to consider how services can be improved to benefit travel to these locations.</p>
10.4	TfL should take control over / rebrand southeast rail services terminating in London	<p>TfL is working with Network Rail and wider stakeholders to improve rail services in London.</p> <p>More information regarding the Mayor's Rail Vision is available online at:</p> <p>https://www.london.gov.uk/priorities/transport/investing-transport/improving-london-railways/the-mayor-s-rail-vision-investing-in-rail-services-in-london</p>
10.5	Invest in other projects instead for example, Crossrail 2, Brighton Main Line 2, Thameslink 2, Dartford Loop line, Catford Loop	<p>TfL has a clear set of future priorities for transport improvements in London. More information can be found online at: https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/planning-for-the-future</p> <p>For southeast London, a Bakerloo line extension has been proposed because it could help address future transport challenges in this particular area. This includes relieving future crowding, improving access and connectivity and enabling new development to support population growth and economic prosperity. Further details on the benefits an extension could deliver are outlined on the project's website at www.tfl.gov.uk/bakerloo-extension</p>
10.6	Extend the Docklands Light Railway (DLR)	<p>TfL has considered the possibility of extending the DLR beyond Lewisham, as detailed in section 4.1.3 of the Background to Consultation document (2014).</p> <p>Various combinations of surface running and tunnelled sections of new railway to destinations in Bromley and Catford were considered. Whilst these solutions would have improved connectivity between Bromley and Catford, Lewisham and Docklands, initial feasibility studies have concluded that extending the DLR to Bromley or Catford would not</p>

		<p>be cost effective.</p> <p>The costs of extending the DLR are estimated to be in the region of £1bn but in contrast to an extension of the Bakerloo line, such an extension would offer limited ability to support growth and improve accessibility in inner southeast London. This is because it would not increase capacity on the National Rail network, nor would it improve connections into central London and to the southeast London Opportunity Areas.</p> <p>The Background to consultation document can be found online at: www.tfl.gov.uk/Bakerloo-extension</p>
10.7	Extend and improve the London Overground	<p>TfL is continuing to invest in the London Overground network. Trains on the East London line are currently being lengthened, providing a 25% increase in capacity. TfL will continue to seek improvements to the rail network, including London Overground, by working with Network Rail and working towards delivery of the Mayor's Rail Vision.</p> <p>Initial work undertaken by TfL has concluded a need to await the outcome of the detailed Thameslink timetable, expected at in 2017. After this time the feasibility of incorporating extended London Overground services amongst existing National Rail services can be more accurately assessed.</p> <p>The proposed Bakerloo line extension could serve New Cross Gate, providing a connection to London Overground services, and Lewisham. An extension would provide more capacity, a greater increase in public transport access, and better connect the southeast area to central London.</p>
10.8	Extend and improve London trams connections	<p>TfL is currently making significant improvements to the London Tram network, such as the Wimbledon line enhancement. This project involves construction of a new platform at Wimbledon, new track to relieve bottlenecks and additional trams to increase service levels.</p> <p>TfL also has a long term plan to 2030 for the Tram network to ensure it can continue to accommodate growing demand, become more reliable and support regeneration of</p>

		<p>Croydon town centre. Further details are available online at: https://tfl.gov.uk/modes/trams/the-future-of-trams?intcmp=27737</p> <p>In regards to the challenges that the Bakerloo line extension proposal is planned to address, extending London Trams would not provide the connectivity, improved access or capacity improvements required to support development in the southeast Opportunity Areas.</p>
10.9	Invest in and improve the area's bus provision	<p>In order to support future growth and development in southeast London, the option of a rail extension is currently expected to provide greater capacity and connectivity benefits over the long term.</p> <p>Bus services in the area could also be improved as this additional public transport option (an extended Bakerloo line) could help ease congestion on the roads and lessen bus journey times.</p> <p>It is also important to note that as part of the proposed extension, TfL would seek to ensure that bus services complement the extension, by providing access from local areas to the new London Underground stations.</p>
10.10	Improve and increase the area's cycling infrastructure	<p>TfL is currently investing in improving cycle infrastructure in southeast London, such as Quietways. Quietways are designed to link key destinations by following backstreet routes, through parks, along waterways or tree-lined streets to provide low-traffic routes. Quietway 1 will run from Waterloo to Greenwich via South Bermondsey and New Cross and is due for completion in mid 2016. Further Quietways are planned for the southeast area. More details of these plans are available on the TfL website site at: https://tfl.gov.uk/travel-information/improvements-and-projects/quietways .</p> <p>In the longer term, the significant population and travel growth forecast in the area cannot be supported by cycling alone. For this reason, a Bakerloo line extension is also proposed. The wider development and regeneration in the area would be supported by improved cycling provision and each new station would be constructed with consideration to cycle access and parking.</p>

10.11	A completely new Underground line is required to serve southeast London	<p>The proposed extension aims to address future transport and growth challenges in southeast London, including crowding on the transport network. It also aims to improve access and connectivity and enable new development, such as housing, to support London's population growth and economic prosperity.</p> <p>The Bakerloo line offers an opportunity for an extension as it has spare capacity and this is forecast to continue following the planned line upgrade. For more information, see Appendix E – Future crowding forecast for Underground and DLR, 2031.</p> <p>Construction of an entirely new Underground line from southeast London into central London would also be significantly more expensive than the proposed extension of the Bakerloo line.</p>
10.12	Extend other tube lines southeast in London, for example the Victoria line	<p>Compared to other lines, the Bakerloo line is relatively under-utilised and is forecast to remain so by 2031, meaning it can accommodate additional demand without causing high levels of crowding to users of the existing line.</p> <p>In comparison, passenger forecasts indicate that trains between Stockwell and Finsbury Park remain very busy in the peaks on the Victoria line. An extension south from Brixton would exacerbate crowding.</p> <p>The reasoning for excluding the Victoria line also applies to the Jubilee and Northern lines, which both serve southeast London but which are forecast to remain crowded by 2031. For more information, see Appendix E – Future crowding forecast for Underground and DLR, 2031.</p> <p>Further, the Bakerloo line station at Elephant & Castle includes 'over-run' tunnels which extend beyond the platforms in the direction of southeast London. This means any new southbound tunnelling works may be able to occur without any significant closures on the current line.</p>

10.13	Invest in and improve the area's road network	<p>TfL is working towards improving both the Transport for London Road Network (TLRN), that it is responsible for, and working with London borough's to improve the wider road network.</p> <p>The Roads Task Force (RTF) was set up by the Mayor of London in 2012 to tackle the challenges facing London's streets and roads. Progress by the RTF up to 2015 is available online: https://tfl.gov.uk/corporate/publications-and-reports/roads-task-force?intcmp=29566#on-this-page-0</p>
10.14	Improve access to river crossings	<p>TfL is working towards improving river crossings in London. More information o is available online at: https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/planning-for-the-future</p>
10.15	Other destinations suggested, within southeast London, that the extension may serve	<p>TfL is currently assessing alternative options and destinations or routes that a Bakerloo line extension could serve.</p> <p>TfL anticipates publishing the results of that assessment later in the year.</p>
10.16	Suggestions not related to the project area, i.e. Tube extensions that do not serve southeast London such as the District line and the Metropolitan line; and extending the line to serve destinations outside of southeast London	<p>As these suggestions do not address supporting growth and public transport accessibility in southeast London, they are out of scope and will not be further considered.</p> <p>Note: TfL regularly undertakes on-going planning reviews to identify transport issues and assess solutions across London. More information regarding plans to improve the network outside of southeast London can be found online at: https://tfl.gov.uk/corporate/publications-and-reports/sub-regional-transport-plans).</p>

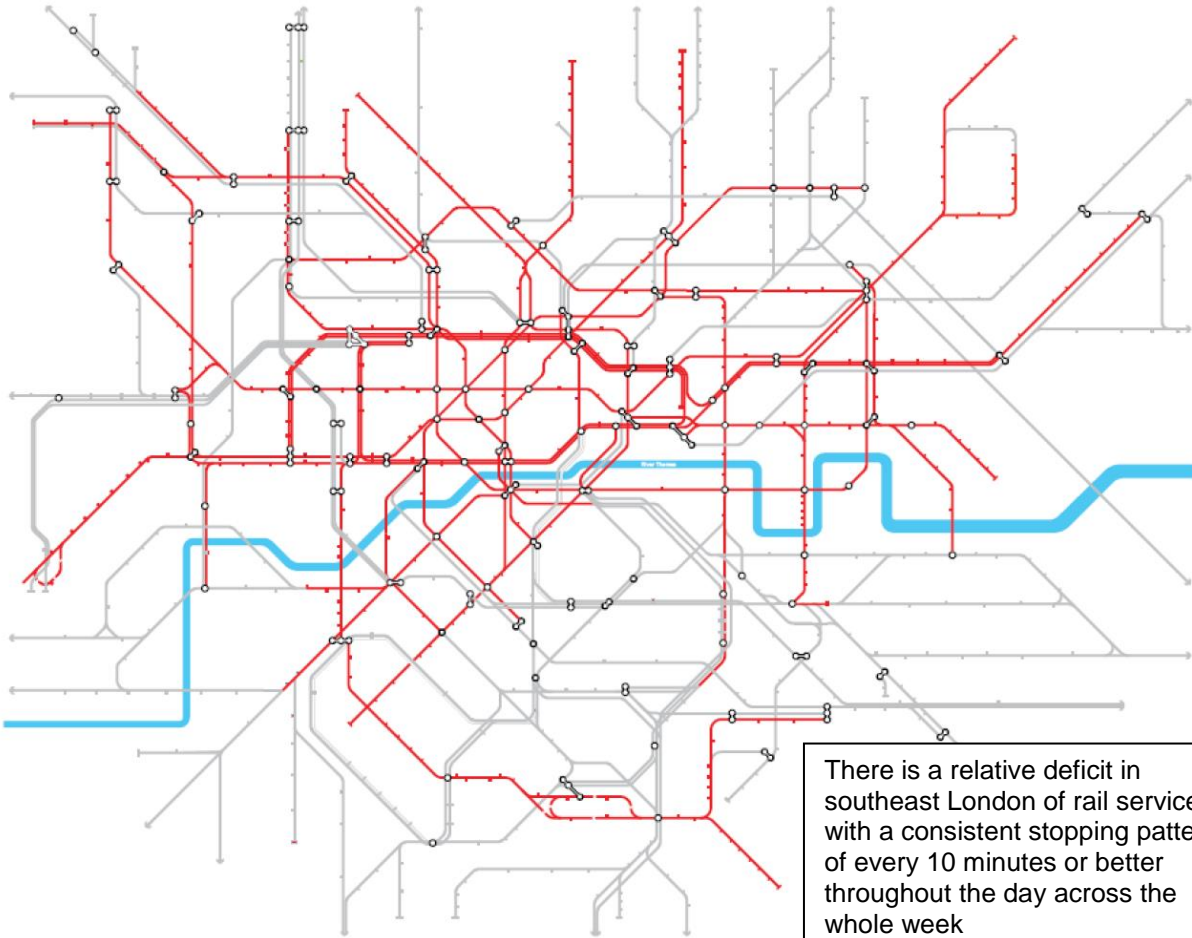
10.17	Improve step-free access on the transport network	<p>Any future extension would support step-free access. This means ensuring that any new station is built to provide this from the 'street to the train'.</p> <p>More information about work to deliver greater accessibility across the transport network can be found online at: https://tfl.gov.uk/corporate/publications-and-reports/accessibility-implementation-plan</p>
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Appendix A – The autumn 2014 consultation questions

TfL asked eight questions, listed below, during the autumn 2014 public consultation.

1. Do you support, in principle, the extension of the Bakerloo line into southeast London from its current end point at Elephant & Castle?
2. One of the key purposes of the proposed extension is to enable new development in southeast London. It is unlikely the scheme can happen without this new development. Do you support the proposed extension on this basis?
3. One possible route option could be along the Old Kent Road to New Cross Gate and Lewisham (option 1a). Do you support a route down the Old Kent Road?
4. Another possible option would be a route via Camberwell and Peckham Rye to New Cross Gate and Lewisham (option 1b). Do you support a route via Camberwell and Peckham Rye?
5. We are currently considering options for where the proposed extension may end. Do you support the proposed extension terminating at Lewisham?
6. Do you support the proposed extension terminating at Beckenham Junction and Hayes?
7. There is also potential for the proposed extension to operate to Bromley Town Centre from Beckenham Junction, in a new tunnel. Do you support an extension to Bromley Town Centre?
8. Are there any other options or routes you think we could consider to support growth and increase public transport accessibility in southeast London?

Appendix B – Current levels of ‘turn-up-and-go’ rail services across London based on services over seven days



- Red line** Lines with a with a consistent stopping pattern every 10 minutes or better throughout the day
- Grey line** Lines with an inconsistent or infrequent (less often than every 10 minutes) stopping pattern throughout the day

Appendix C – Proposed Bakerloo line extension (to Hayes and Beckenham Junction) frequency in comparison to current rail services

As published in the Background to Consultation document included within the 2014 consultation materials.

Origin station	Rail transport available currently (2014)	Current frequency from station to central London – AM peak hour (tph)	Rail transport available in future year (2031)	Future frequency from station to central London – AM peak hour (tph)**	Percentage increase
Hayes	National Rail	6	Bakerloo line	15	250%
Elmers End	National Rail Tramlink	6 8 [#]	Bakerloo line Tramlink	15 8 [#]	165%
Beckenham Junction	National Rail Tramlink	6 6 [#]	Bakerloo Line National Rail Tramlink	6 6 6 [#]	150%
Catford Bridge/ Catford	National Rail	12	Bakerloo line National Rail	27 4	260%
Lewisham	National Rail DLR	18 20	Bakerloo line National Rail DLR	27 21 22	185%
New Cross Gate	National Rail Overground	9 8	Bakerloo line National Rail Overground	27 6 8	240%
Peckham Rye	National Rail Overground	10 4	Bakerloo line* National Rail Overground	27 16 4	335%

[#]Tramlink services to Croydon town centre

*Assumes the extension serves Peckham Rye and Camberwell

**Includes future National Rail frequencies as set out in the Kent and London and the South East RUS and unrelated to the proposed BLE

Appendix D – Estimated journey times with a proposed Bakerloo line extension (BLE)

As published in the Background to Consultation document included within the 2014 consultation materials.

Option 1a

Destination	Cannon Street	Charing Cross	Canary Wharf	Waterloo	London Bridge	South Kensington	Old Street	Oxford Circus	Paddington
Current journey from Lewisham	21	22	21	16	12	31	22	30	38
Journey time saving from Lewisham with BLE	No change	5.4	No change	1.9	No change	1.9	No change	8.9	7.9
Current journey from Hayes	48	44	50	38	41	55	46	51	58
Journey time saving from Hayes with BLE	10.9	9.4	10.9	5.9	5.9	7.9	3.4	12.4	10.4

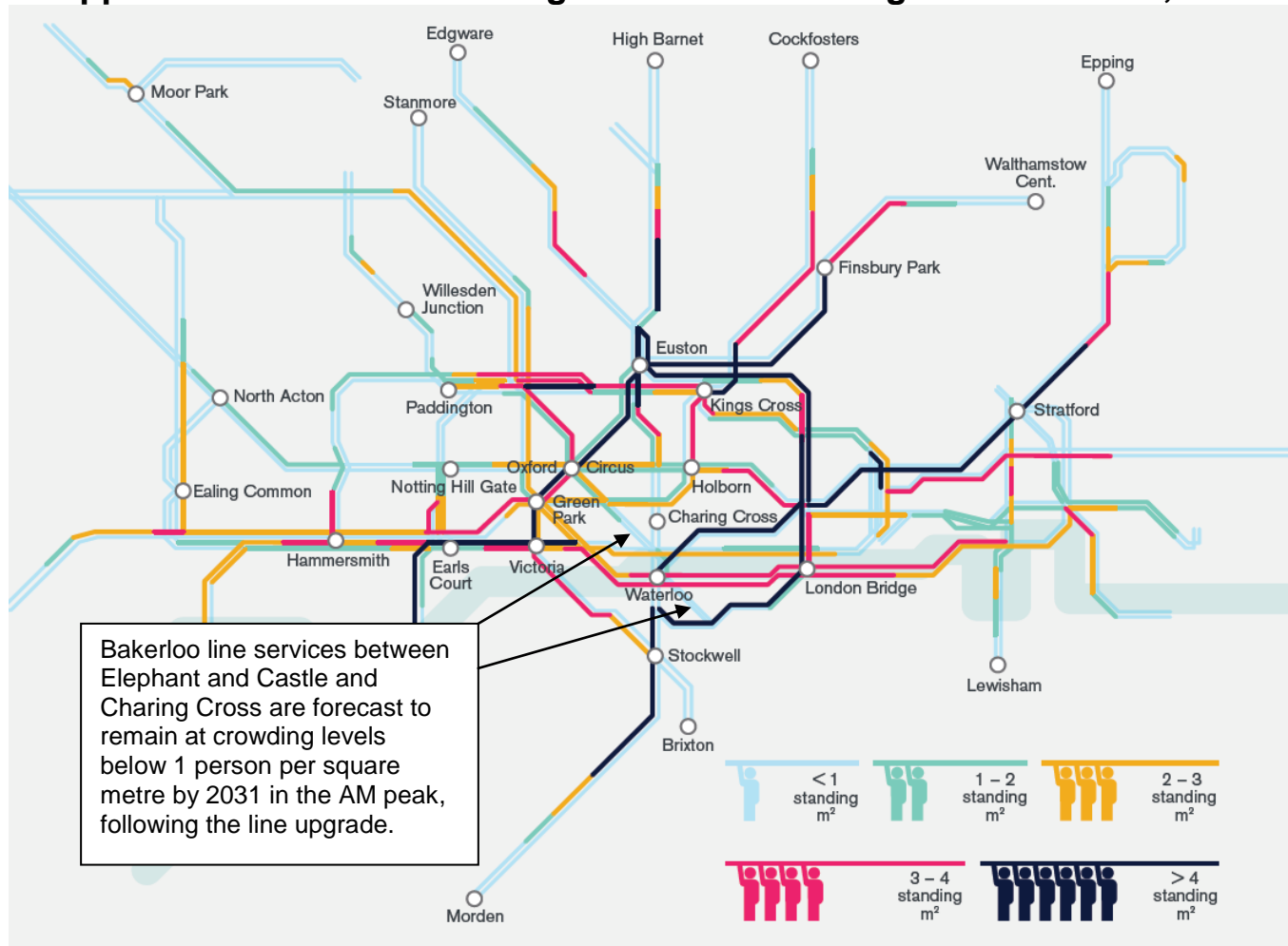
Option 1b

Destination	Cannon Street	Charing Cross	Canary Wharf	Waterloo	London Bridge	South Kensington	Old Street	Oxford Circus	Paddington
Current journey from Lewisham	21	22	21	16	12	31	22	30	38
Journey time saving from Lewisham with BLE	No change	3.7	No change	0.2	No change	0.2	No change	7.2	6.2
Current journey from Hayes	48	44	50	38	41	55	46	51	58
Journey time saving from Hayes with BLE	9.1	7.6	10.9	4.1	4.1	6.1	1.6	10.6	8.6

Bromley Town Centre

Destination	Cannon Street	Charing Cross	Canary Wharf	Waterloo	London Bridge	South Kensington	Old Street	Oxford Circus	Paddington
Current journey time	34	38	41	32	26	36	43	34	44
Journey time saving from Bromley town centre with BLE	0.7	7.2	6.2	3.7	No change	No change	4.7	No change	No change

Appendix E – Future crowding forecast for Underground and DLR, 2031



Source: London Infrastructure Plan 2050: Transport Supporting Paper