# **Appendix 2**

# Central London Bus Services Consultation – Updated Supporting Material

October 2018

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#### 1. Introduction

This report supports our Central London Bus Services Consultation, which you can respond to by completing the questionnaire on our consultation hub <a href="https://example.com/here">here</a>1

You can also submit a response by writing to us via email or post. Our email address is consultations@tfl.gov.uk and our postal address is FREEPOST TFL CONSULTATIONS.

# 2. Methodology and findings

In this report you will find a summary of our analysis of key bus services or corridors in central London.

We identified any change in bus usage by looking at historic and current demand for buses and matching this with the service we currently provide in central London.

We have two primary data sets which we use to measure capacity, one is called Keypoints and the other is ODX.

Keypoints data is a roadside loading survey conducted by surveyors counting the number of customers boarding, alighting and on-board each bus at a number of key points along the route.

ODX uses Oyster card data gathered from customers touching their Oyster or contactless card when they board the bus. It also infers a proportion of alighting trips based on other Oyster transactions. The data is scaled to take account of trips that can not be inferred (either the system knew a customers boarded the network but the algorithm was unable to conclude an alighting point, or if a non-contactless method were used).

This data lets us see where we are providing buses with excess capacity - unused sitting or standing space.

We have used this information to develop our proposed changes to our central London bus network. These changes were appraised by balancing the cost or saving against the customer benefit or disbenefit attributable to each proposal. This also takes into account changes in revenue.

<sup>&</sup>lt;sup>1</sup> You can respond to the survey here: tfl.gov.uk/central-London-bus-consultation

# 3. Re-shaping the bus network

London's bus network has evolved over a number of years to accommodate the changing needs of the city. As travel demands change, we need to reshape the bus network to meet customer requirements and to support the goals of the Mayor's Transport Strategy (MTS). The MTS outlines the policies<sup>2</sup> and proposals that we, and London Boroughs, will deliver to ensure our bus services are faster, more reliable and effectively integrated with London's rail and Tube network.

Through our bus priority programme, we are taking action to improve bus journey times and reliability in central London. This programme includes plans to deploy bus priority measures such as 24 hour bus lanes, and bus and cycle-only corridors.

However, our data shows there has been a fall in demand for buses in central London as customer transfer to the new and upgraded rail network and to cycling and walking.

Excess bus provision has several disadvantages: it adds to congestion on London's roads, negatively affects London's air quality, can lengthen bus journey time (where bus-on-bus congestion occurs) and is an inefficient use of our resources.

Where demand has fallen we now need to take action to ensure our resources are being used effectively, that bus capacity matches demand, and that we do not add to congestion on London's roads by running excess services.

One of the strengths of the bus network is that it is adaptable and flexible when customer needs change. This flexibility allows us to reduce or remove services where they are no longer required, while also affording us the opportunity to reshape the network where there is an increase in demand, for example in Outer London.

Our proposals in the Central London bus consultation align with the strategy described on pages 156-8, and proposal 57<sup>3</sup> of the MTS.

During our review and proposal development we balanced the costs, customer numbers, revenue and customer benefit against one another. As a complete package we forecast our proposals to save around £12 million per annum (net), this includes changes in revenue generation which may occur as an outcome of our proposals. Any savings realised as a result of these proposals will be reinvested into improving the transport network for the millions of people who rely on it everyday.

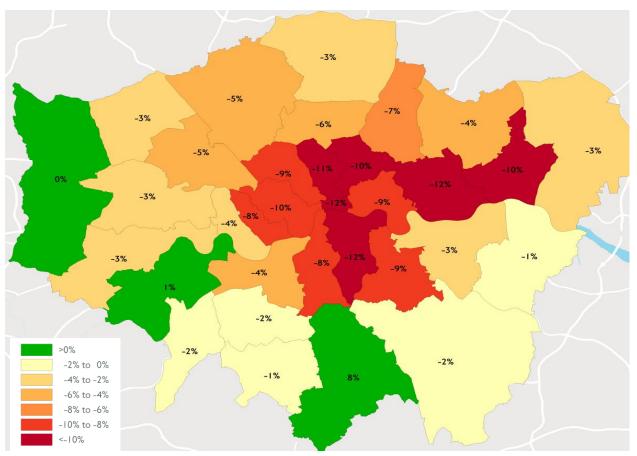
<sup>&</sup>lt;sup>2</sup> Mayors Transport Strategy 2018, Page 155, Policy 15, you can read the full MTS here: tfl.gov.uk/corporate/about-tfl/the-mayors-transport-strategy

<sup>&</sup>lt;sup>3</sup> Mayors Transport Strategy 2018, Page 158, Proposal 57

# 4. Why we reviewed central London

Central London is where there is the greatest opportunity to improve bus journey times and reliability. Through these service changes, our ambition is to make central London buses simpler to use, while also helping to improve air quality and reduce congestion on London's roads.

Demand in central London has declined over the past four years. The majority of this has happened in the past two to three years. Across central London since 2014/15 we have seen a decline in bus use by between eight-12 per cent. Figure 1 shows the spatial distribution of this on a London-wide scale.



Map – Change in capacity utilisation by Borough, 2014/15 – 2017/18

# Changes by route

# 5. Tottenham Court Road – Routes 14 (24 hour) and 134 (24 hour)

Route 14 runs between Putney Heath and Warren Street Station (University College Hospital). Demand for route 14 has been declining. In July 2017 and January 2018 frequency was reduced on this route to better match demand.

Our data shows us that demand for route 14 is greatest at South Kensington (Onslow Square) towards Warren Street, when at its busiest time 7.9 buses per hour are required, and 8 are scheduled. However, it also shows that demand drops off between Tottenham Court Road and Warren Street (University College Hospital), where 20 buses per hour are required and 33 are scheduled.

In parallel with this, we are withdrawing route 10 between Marble Arch and the British Museum/Russell Square.<sup>4</sup> This will however leave the British Museum without a service.

As demand for the 14 between Tottenham Court Road and Warren Street (University College Hospital) has declined we propose to fill the gap created by the withdrawal of route 10 with route 14.

Customers wishing to travel between Tottenham Court Road and Warren Street can interchange and use routes 24 or 29 to reach their destination.

Route 134 runs between North Finchley Bus Station and New Oxford Street. The busiest parts of the route are Highgate station and Highgate Wood towards Tottenham Court Road during the morning peak, where between 9 and 10 buses per hour are required to meet demand (10 buses per hour are scheduled).

#### Our proposals

To better match capacity to demand and to maintain a service to the British Museum we propose:

- Change route 14 so that it no longer runs between University College Hospital and Tottenham Court Road station and instead provide a link to the British Museum and Russell Square via Great Russell Street
- This means route 14 no longer serves Goodge Street station, Warren Street station, Euston Square station and University College Hospital
- Change route 134 so that it no longer runs between Tottenham Court Road station and University College Hospital
- The 134 will no longer serve Gower Street, Tottenham Court Road or Bloomsbury Street

#### Impact of change

These changes will improve the resilience and reliability of route 134 and N134 and allow us to retain a route serving the British Museum. Proposed changes would make a net saving of £550,000 per annum.

<sup>&</sup>lt;sup>4</sup> We consulted on this change in late 2015, you can find further details here: https://consultations.tfl.gov.uk/buses/7-10-98/

As a result of our proposal some customers would need to change bus, where previously their journey was direct. This will affect:

- Four per cent, 503 trips daily on route 14
- Eight per cent, 2,055 trips daily on route 134

Route 134 Customers can make these journeys by interchanging with routes 24 or 29.5

# 6. Kings Road to Shaftesbury Avenue corridor - Routes 9 and N9

Piccadilly and Pall Mall became two-way for all traffic from November 2011. Following this change, route 9 was re-routed via Pall Mall in February 2012. However, since the change in route the number of journeys made on route 9 has decreased, by 2,500 a day.

In April 2017 the frequency of route 9 was reduced from 10 buses per hour to eight buses per hour to match customer demand.

Our data has shown us that since 2012 there has been an increase in demand at stops at Green Park and Trafalgar Square of around 1,000 journeys. However, during this time we have also seen a total of 3,571 fewer journeys made to/from stops on Pall Mall.

Therefore a total of around 2,500 fewer trips are made on route 9 as a result of the rerouteing via Pall Mall.

#### Our proposals

To better match demand for services we propose to:

• Re-route the 9 and N9 via Piccadilly Circus in both directions

#### Impact of change

We believe this will simplify the local network, while increasing frequency along Piccadilly for common destinations. We do not propose to change the frequency of either route 9 or N9. Proposed changes would increase revenue by around £50,000 per annum

Customers who currently use stops on Pall Mall (1,114 daily trips) will have to walk 340 metres to Piccadilly. Our proposal will make the journey time up to a minute slower; however this is unlikely to have an impact on bus reliability.

# 7. Kings Road to Shaftesbury Avenue corridor – Routes 11, 19, 22 and 311

Route 11 runs between Fulham Town Hall and Liverpool Street station, route 19 runs between Finsbury Park Interchange and Parkgate Road. Both routes are long and run across zone 1, making them susceptible to variable traffic conditions which reduces their reliability.

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<sup>&</sup>lt;sup>5</sup> Customers interchanging more than an hour after departure, would not be covered by the Hopper fare and would have to pay an additional fare. The maximum daily cap for bus fares is £4.50. We will investigate opportunities to minimise this impact on customers.

Routes 11 and 19 parallel each other between Beaufort Street and Sloane Square. We found significant surplus capacity on route 19 between Battersea Bridge and Holborn, especially on the King's Road where route 11 overlaps route 19. A maximum of 19 buses per hour are required to meet demand during the AM peak, 37 are currently scheduled.

The busiest point on route 19 is Islington Town Hall towards Battersea Bridge where 9.8 buses per hour are required to meet demand, 10 are scheduled.

The busiest point on route 22 is Chelsea Old Town Hall towards Putney Common in the afternoon peak where 7.4 buses per hour are required to meet demand, 8 are scheduled.

During the busiest hour a total of 6.3 buses are required to meet demand departing Sloane Square northbound in the AM peak on routes 19 and 22, where 15.5 buses per hour are scheduled. At this time sufficient capacity is provided on route 22 to meet the demand on both bus routes.

Our data demonstrates that route 11 is operating with surplus capacity. At its busiest point, Chelsea Old Town Hall, during the morning peak a maximum of 4.6 buses per hour are required to meet demand, 6 buses are currently scheduled.

#### Our proposals

To better match capacity to demand and maintain connections from the King's Road to Oxford Circus we propose to:

- Introduce a new route, the 311, between Fulham Broadway and Oxford Circus via Victoria station
- Change route 11 so it will no longer run between Fulham Town Hall (for Fulham Broadway station) and Victoria
- Change route 22 so it no longer runs between Green Park and Oxford Circus and instead extend it from Green Park to Piccadilly Circus, Charles II Street
- Change route 19 so that it no longer runs between Holborn and Battersea Bridge
- Create a new stand at Victoria for route 11 on Buckingham Palace Road, north of Victoria Street – using an existing bus stop
- Repurpose a route 171 bus stand at Holborn, New Oxford Street for route 19
- Repurpose a route 11 bus stand at Fulham Broadway stand for route 311
- Repurpose a route 22 bus stand at Oxford Circus, Henrietta Place for route 311

#### Impact of change

By making these changes we will provide new connections between Buckingham Palace Road and Mayfair/Oxford Circus. This will also improve resilience and reliability on routes 11 and 19 by reducing the length of their routes.

These changes will maintain sufficient capacity to meet demand between the King's Road and Holborn, while retaining a bus service between Mayfair and the King's Road. These proposed changes could realise a net saving of £1,450,000 per annum.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

- Ten per cent, 1800 trips on route 11
- Five per cent, 500 trips on route 22
- Eighteen per cent, 5,200 trips on route 19

A total of 3,500 of these trips can be made by interchanging once, 1,200 can be made by walking up to 650 metres to the King's Road and 550 would require interchanging twice.

# 8. Whitehall and Westminster Bridge - Routes 3 and 53

Route 3 parallels route 159 between Trafalgar Square and Brixton, with the exception of the section between Parliament Square and Lambeth Road. Route 53 parallels routes 453 for 8.9km between Whitehall and Deptford.

Across these four routes we have identified excess capacity between County Hall and Whitehall due to a slowing of bus speeds over the past few years. Currently we schedule 58 buses per hour between these two points. We have found that a maximum of 22 is required.

Routes 53 and 453 share a long parallel between Trafalgar Square and Deptford and route 53 is long and susceptible to delays and unreliability. During the morning peak a maximum of 22.4 buses are required to meet demand at the busiest point on these two routes, between Bricklayers Arms towards Trafalgar Square. We currently schedule 24 buses.

A maximum total of 14 buses are required to meet demand in the peak hour at Lambeth North, we currently schedule 24. Demand west of Lambeth North is significantly lower due to changes to the road layout at Parliament Square.

#### Our proposals

We believe the following changes will make best use of our resources and remove underutilised buses from London's roads:

- Change route 3 by stopping it at Whitehall Place instead of Trafalgar Square. Route N3 would remain the same as now
- Change route 53 to no longer run between Whitehall and County Hall
- Renumber the night service as the N53 but otherwise retain the current night service route and frequency
- Reduce frequencies on route 53 from every 7.5 minutes to every 8 minutes, whilst retaining an additional westbound journey in the morning

#### Impact of change

These changes will improve the operational resilience and reliability on route 53. These proposals would realise net savings of £1,000,000 per annum.

To facilitate the route 53 proposals we will alter the stand location for route 341 at Waterloo from Addington Street to Waterloo Road. This will mean that stops on York Road, Bayliss Road and Lower Marsh would no longer be served by route 341. Currently, 350 customers make trips to or from the affected stops, all of which can be made with interchange onto route 76.

As a result of our proposals some customers on route 53 would need to change bus, where previously their journey was direct. This will affect two per cent, 740 trips daily. All of which can be made by changing bus onto route 453.

# 9. Waterloo to Fleet Street - Routes 4, 76, 172 and 341

Routes 4, 26, 76, 172 and 341 currently run between Waterloo and Fleet Street. Routes 76 and 341 run 24 hours a day and route N26 runs between Trafalgar Square and Chingford. A maximum of 16.5 buses per hour are required to meet demand between Waterloo and Aldwych, 34 are currently scheduled.

Demand on routes 4, 26, 76, 172 and 341 has decreased significantly between Waterloo and Fleet Street. Our 2014 bus usage data survey showed the morning peak hour load departing Waterloo was around 1,870, but by 2016 it had fallen to 1,383, a decrease of 487 customers or 26 per cent across the four routes.

Connections between Angel Islington and Fleet Street/Waterloo are slow and indirect. There is no direct connection between Farringdon and Angel, Islington.

Route 4 is well used between Islington and the Barbican but demand quickly reduces south of this point. The number of longer trips between Waterloo/Fleet Street and areas north of Angel are low.

#### Our proposals

To better match capacity to demand and provide a direct link between Farringdon station and Islington we propose:

- Re-route the 341 via Farringdon Road
- Change route 4 so that it no longer runs between Waterloo and New Change and extend it to Blackfriars via Queen Victoria Street
- Change route 172 so it no longer runs between Clerkenwell Green and Aldwych
- Re-route the 76 via London Wall and New Change
- Alter the stand location for route 341 at Waterloo from Addington Street to Waterloo Road

#### Impact of change

If implemented these changes would provide 22 buses per hour between Waterloo and Fleet Street during the morning peak on routes 26, 76 and 341.

These proposals would create new links between Blackfriars and Islington, and provide faster journey times between Waterloo and Islington by up to 2 minutes in each direction on route 341.

Proposed changes would also improve the operational resilience and reliability of route 4. They would make a net savings of £615,000 per annum.

The proposed change to route 76 would remove a unique bus movement from Bank junction, which could give more time for pedestrians to cross. This is a City of London aspiration.

This would also support our proposed changes to routes 45 and 388 which will remove a connection for customers at London Wall and New Change.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

- Six per cent, 1,300 trips on route 4
- Three per cent, 580 trips on route 76
- Three per cent, 400 trips on route 172

• Seven per cent, 1,380 trips on route 341 – most of these are within 450 metres walking distance of their end destination, Farringdon Road

These changes would also break the direct bus link between southeast London and Fleet Street. However, customers who will travel between southeast London and Fleet Street will be able to change bus at Elephant & Castle onto route 63 which will take them to Fleet Street/Ludgate Circus. Our data shows this will be a faster journey.

#### 10. Euston Road – Routes 59 and 476

Routes 59 and 476 both run between Euston Road between King's Cross and Euston Bus Station. Route 59 runs between Streatham Hill and King's Cross, route 476 runs between Euston Station and Northumberland Park.

During our review we found that there is excess capacity on the Euston Road between King's Cross and Euston Bus Station, along which routes 30, 59, 73, 91, 205, 390 and 476 run. Routes 59 and 91 closely parallel each-other between King's Cross and Aldwych. While routes 73 and 476 parallel each-other between Stoke Newington and Euston Station.

We found that at its busiest point at Kennington, route 59 requires a maximum of 10.8 buses per hour to meet demand, 13 are currently scheduled.

On route 73, a maximum of 12 buses per hour are required to meet demand at Angel, 15 are scheduled.

On routes 73 and 476 a maximum of 11 buses per hour are required to meet demand at King's Cross, 22.5 are scheduled.

#### Our proposals

To better match capacity to demand we propose:

- Change route 59 so that it no longer runs between King's Cross and Euston Bus Station
- Remove two additional journeys on route 59 towards Euston in the morning peak and an additional journey towards Brixton in the evening peak
- Change route 476 so that it no longer runs between Euston Bus Station and King's Cross Station
- Reduce frequencies on route 476 from every 8 to every 10 minutes, Monday to Saturday daytimes, to better match demand
- Repurpose a route 476 bus stand at Euston Bus Station for route 59
- Repurpose a route 59 bus stand at King's Cross, York Way for route 476

#### Impact of change

We believe these changes will better match capacity to demand, with a total of 30 buses per hour now traveling on Euston Road. They will also improve resilience and reliability of routes 59 and 476.

These proposed changes would make net savings of £1,200,000 per annum.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

- Two per cent, 620 trips daily on route 59
- Three per cent, 580 trips daily on route 476

# 11. Marylebone Road – Routes 205 and N205

Route 205 runs between Paddington Station and Bow Church. It serves Marylebone Station by running via Melcombe Place in both directions. Route 453 parallels route 205 between Marylebone Station and Great Portland Street.

During 2016/17 our data shows daily usage on route 205 increased by three per cent between Mondays to Friday. However, it decreased by one per cent on Saturdays and by two per cent on Sundays. The usage increase on weekdays is largely due to significant frequency decreases on routes 25 and 18 which both share long parallels with route 205. During this same time we saw daily usage on route N205 has increased by five per cent on weeknights, and decreased by 12 per cent on weekend nights. A factor in decreasing demand for night services is the introduction of the Night Tube towards the end of the first year of the data collection.

#### Our proposals

To better match capacity to demand we propose to:

- Re-route the 205 and N205 direct via Marylebone Road, so it would no longer serve Melcombe Place.
- This would mean that the 205 and N205 would no longer serve stops at Marylebone station
- Decrease the frequency of service on Monday to Saturday from every 8 minutes to every 9 minutes, to better match demand

#### Impact of change

We believe these proposals will improve journey times. Proposed changes would make a net saving of £235,000 per annum.

Customers waiting at stops 1584 and 1589 on Marylebone Road will see an increase in frequency for journeys between Baker Street and Warren Street due to route 205 serving these stops instead of stops at Marylebone station.

There would be a decrease in journey times for approximately 2,670 through-customers daily, and a frequency increase for the approximately 1,180 customers who currently travel between stops on Marylebone Road and common sections of routes 18 and 27. About 1,290 customers daily would have to walk approximately 180 metres to stops on Marylebone Road.

Reliability of both routes 205 and N205 will be improved by these proposed changes. By running via Marylebone Road, rather than Marylebone Station, the return running time for the bus should be reduced by up to three minutes.

There will be a decrease in capacity between Marylebone Station and Great Portland Street and an increased walking distance by 180 metres for customers boarding or alighting at Marylebone Station.

Our data shows us that re-routeing the N205 via Marylebone Road would negatively affect 65 customers on weekend nights and a smaller number on weeknights. However, we believe the change in route would benefit approximately 330 weekend customers.

As a result of our proposals no customers would need to change bus and all trips would end within walking distance of their previously journey.

# 12. Kingsway - Route 171

Route 171 parallels routes 1, 68, 168 and 188 between Elephant & Castle and Holborn and along the Kingsway. Routes, 1, 68, and 171 have corresponding night routes (N1, N8 and N171) route 188 is a 24-hour route. Since 2015/16 we have seen weekday usage decreased on routes 1, 168, 171 and 68.

The majority of this lost demand has been during off-peak and we have seen the greatest loss in demand during weekends. In April 2017 we reduced frequency to match the drop in demand. Conversely, during this time we have seen demand rise slightly on route 188.

Our data shows around 10 buses per hour of excess capacity are currently operated between Elephant & Castle and Holborn along the Kingsway during the peak hour. A maximum of 29.1 buses are required to meet demand at Aldwych, 39 are currently scheduled.

#### Our proposals

To better match capacity to demand we propose to:

- No longer run route 171 between Elephant & Castle and Holborn. The service will continue to run between Elephant & Castle and Bellingham
- Bring into use a spare 2-bus stand on Borough Road, South Side, accessed by Newington Causeway

#### Impact of change

We believe that withdrawing route 171 between Elephant & Castle and Holborn will better match capacity to demand and improve resilience and reliability. Route 171 is currently very long with cycle times of up to 200 minutes.

This proposal would realise net savings of £710,000 per annum.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect eight per cent, 2,100 trips daily.

# 13. Kingsland - Routes 67, 149 and 242

Route 67 runs between Wood Green and Aldgate, route 149 runs between Edmonton Green and London Bridge. They parallel each other between South Tottenham and Shoreditch High Street station.

Route 242 runs between Homerton Hospital and St Paul's. It parallels the 67 and 149 between Dalston Junction and Shoreditch High Street station. It further parallels the 149 between Shoreditch and Threadneedle Street.

Route 67 provides unique connections to Aldgate from Shoreditch and Kingsland Road and is also the only route to run on Commercial Street.

All three routes provide unique links across Shoreditch. Route 67 serves Commercial Street, the 149 serves London Bridge, and the 242 serves Cheapside.

While capacity is generally well matched to demand across those routes, we found that there is excess capacity between Dalston Junction and Liverpool Street where all three routes converge and parallel one another. During the morning and evening peaks a maximum of 14 buses per hour are required, where 26 buses per hour are provided.

#### Our proposals

To better match capacity to demand we propose to:

- Change route 67 so that it no longer runs between Dalston Junction station and Aldgate
- Divert route 242 at Shoreditch to run via Commercial Street to Aldgate
- Change frequencies on the on route 149 to
  - Increase Monday to Saturday frequencies in the middle of the day from every 8-9 minutes to every 6 minutes
  - Decrease evening frequencies from every 8 minutes to every 10 minutes
  - Decrease Sunday frequencies from every 8 minutes to every 10 minutes
- We would also change frequencies on the 242 to
  - Decrease Monday to Saturday daytimes from every 7-8 minutes to every 10 minutes
  - Decrease evenings and Sundays from every 6 minutes to every 12 minutes
  - Introduce an extra peak journey on the Liverpool Street to Shoreditch to Kingsland Road section

#### Impact of change

We believe these changes will improve the resilience and reliability of routes 67 and 242. These proposed changes would realise a net saving of £1,800,000 per annum.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

- Twelve per cent, 2,200 customers on route 67
- Thirteen per cent, 1,930 customers on route 476

# 14. Blackfriars and London Bridge – Routes 35, 40, 45, 46, 343, 388 and RV1

Routes 35, 40, 45, 388 and RV1, all cross the Thames via either Blackfriars Bridge, Waterloo Bridge or London Bridge:

- Route 35, a 24-hour service, runs between Clapham Junction and Shoreditch High Street
- Route 40 runs between Dulwich Library and Aldgate
- Route 45 runs between King's Cross and Clapham Park

- Route 46 runs between Lancaster Gate and St Bartholomew's Hospital
- Route 343 runs between London Bridge, City Hall and New Cross
- Route 388 runs between Stratford City and Elephant & Castle
- Route RV1 runs between Covent Garden and Tower Gateway Station

Through our review we identified excess capacity across routes 17, 45, 46, and 63 at King's Cross, where at the busiest time nine buses per hour are required to meet customer demand, and 18 buses per hour are scheduled.

- Routes 45 and 46 provide a southbound link from bus stop D at King's Cross station to Gray's Inn Road/Chancery Lane station. Approximately 335 customers depart from this stop on this corridor in the busiest hour. Our data shows us that an additional journey on route 46 would provide sufficient capacity without route 45.
- Approximately 710 customers arrive at King's Cross on routes 17, 45 and 46 from the Chancery Lane/Gray's Inn Road corridor at the busiest hour. Our data shows that the existing frequency on route 46 - of six buses per hour - and on route 17 - of seven buses per hour - would provide sufficient capacity to meet demand if route 45 did not serve this section.
- Routes 45 and 63 run in parallel between Elephant & Castle and Charterhouse Street; providing links between this section and King's Cross. Approximately 325 customers arrive, and 470 depart from King's Cross on routes 45 and 63 during the busiest hour. Our data shows that existing frequency on route 63, of eight buses per hour, provides sufficient capacity to meet demand without route 45.

In the morning peak hour approximately 670 customers travel northbound on routes 35 and 40 between Walworth Road and Newington Causeway/Borough High Street. In the evening peak hour approximately 620 customers travel southbound. We have identified surplus capacity between Newington Causeway and Borough High Street, where a combined frequency of 33.5 buses per hour is provided by routes 35, 40, 133 and 343 in the busiest hour and a frequency of 18 buses per hour are required to meet demand.

Approximately 1,250 customers travel on routes 45, 63 and 388 on the Elephant & Castle to Blackfriars Road in the busiest hour. Our data has shown us that we have surplus capacity currently provided on the Blackfriars Road – Farringdon Street corridor. A maximum of 17 buses per hour during the peak are required, while 22 are currently scheduled across routes 45, 63 and 388.

The busiest point on route 388 is at Brick Lane towards Stratford City in the evening peak where 4.9 buses per hour are required. Demand on route 388 is largely focussed to the east of Liverpool Street. Approximately 7,500 customers travel on the section between Liverpool Street and Stratford, whereas 1,300 customers travel within the section between Liverpool Street and Blackfriars, and between this area and the section to the east of Liverpool Street. A further 3,200 customers travel within the section between Blackfriars and Elephant & Castle and between this section and the rest of the route.

Surplus capacity is currently provided on the Blackfriars Road – Farringdon Street corridor, where a combined frequency of 22 buses per hour is provided on routes 45, 63 and 388 and a frequency of 17 buses per hour is required to meet demand.

Surplus capacity is currently provided on the Newington Causeway – Borough High Street corridor, where a combined frequency of 33.5 buses per hour is provided on routes 35, 40, 133 and 343 in the busiest hour and a frequency of 18 buses per hour is required to meet demand.

Demand on route 388 is largely focussed to the east of Liverpool Street. Approximately 7,500 customers travel on the section between Liverpool Street and Stratford, whereas

1,300 customers travel within the section between Liverpool Street and Blackfriars and between this area and the section to the east of Liverpool Street.

A further 3,200 customers travel within the section between Blackfriars and Elephant & Castle and between this section and the rest of the route. Route 388 has suffered with reliability issues since its extension to Elephant & Castle in part due to variable traffic conditions on Blackfriars Road and Blackfriars Bridge.

The total cost of operating the RV1 is about £3.3 million per year. Fares revenue is about £650,000 per year, meaning there is a subsidy of £2.6 million a year for the route, about £3.23 for each customer journey. Usage has fallen from c. 25,000 customers per week in March 2016 to c.17,000 per week during the summer of 2017. Our review has shown us that usage of the RV1 is now running at about 70 per cent of the previous year. The forecast for the change in usage following the frequency decrease was about 60 per cent of previous levels but it takes about a year for full effects to be realised. As such the change is in line with forecast decrease in usage on the route.

We have provided a complete report on the RV1 which is available on our website here.<sup>6</sup>

#### Our proposals

To better match capacity to demand we propose:

- Change route 45 so it no longer runs between Elephant & Castle and King's Cross
- Introduce an extra morning journey to St Bartholomew's Hospital on route 46
- Change route 388 so it no longer runs between Liverpool Street station and Elephant & Castle, and decrease its frequency from every 10 minutes to every 12 minutes
- Change route 40 so it no longer runs between Elephant & Castle and Aldgate but instead extend it to Clerkenwell Green
- Increase peak frequencies on route 35 to buses from every 10 minutes to every
   7-8 minutes, as well as introducing an additional return journey
- Extend route 343 from Tooley Street via Tower Bridge to Aldgate
- No longer run route RV1

#### Impact of change

These proposals will provide new connections between

Heygate Street/Rodney Road/Thurlow Street and Tower Hill/Aldgate. East Dulwich and Blackfriars Road If implemented these changes would realise a net saving of £2,065,000 per annum. These changes will remove a bus service from Fenchurch Street.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

- Fifteen per cent, 2,500 trips on route 40
- Thirteen per cent, 2,700 trips on route 45
- Twenty-nine per cent, 3,550 trips on route 388
- Forty-four per cent, 1,750 trips on route RV1<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> A complete report on the RV1 is available here: <a href="https://consultations.tfl.gov.uk//buses/central-london/supporting">https://consultations.tfl.gov.uk//buses/central-london/supporting</a> documents/routerv1reviewofusageandserviceplanning.pdf

#### 15. Blackfriars and London Bridge – Route 100

Route 100 operates between London Wall, Museum Of London and Shadwell Station. Over the last three years, daily usage has decreased by 46 per cent to approximately 2,830 journeys on Mondays to Fridays. Usage has also decreased, by 38 per cent to approximately 1,660 journeys on Saturdays, and by four per cent to approximately 1,140 trips on Sundays.

The busiest point is Vaughan Road in Wapping where four buses per hour are required to meet demand during the morning peak towards the Museum of London, five buses per hour are provided. Our data also demonstrates that our proposal to withdraw the 388 between Elephant & Castle and Finsbury Square will see demand on Vaughan road increase.

In a 2017 public consultation to change route 100 so it terminated at Museum Of London, a number of stakeholders requested that the route end at St. Paul's station, instead of Museum Of London.

At the time no additional stand space was available at St. Paul's, which meant we were unable to make this change as requested by people responding to the public consultation. However, our proposed changes to route 242 would free-up stand space to allow the extension of route 100 to go ahead.

#### Our proposal

 Extend route 100 from the Museum of London to St. Paul's station, King Edward Street

#### Impact of change

Our proposal is dependent on our proposed changes to route 242 progressing, however, if implemented extending route 100 to St Paul's station would create a new link to St. Paul's Station, improving the interchange for onward travel at St. Paul's. Proposed changes would increase revenue by £22,000 per annum.

Extending route 100 from Museum of London to St. Paul's station adds an extra two to four minutes to journey time. As the route currently has good reliability, and there is room within existing resources to make this change without greatly increasing overall journey times, we have no concerns about negative impacts on the reliability of this route due to this change.

Due to highway constraints in Shadwell and Wapping, single deck buses will be specified.

# 16. London Bridge to Hackney Road - Routes 26, 48 and 55

Routes 26, 48 and 55 and all run between Hackney, Well Street and Shoreditch High Street

- Route 26 runs between Hackney Wick, and Waterloo
- Route 48 runs between Walthamstow Central and London Bridge
- Route 55 runs between Leyton Bus Garage and Oxford Circus, Harewood Place
- Route N55 runs between Oxford Circus, Harewood Place and Woodford Wells

<sup>&</sup>lt;sup>7</sup> This relates to the number of trips affected that can not be made on other routes

Routes 48 and 55 parallel each other between Lea Bridge Road, Bakers Arms and Shoreditch High Street. Route 26 parallels route 48 between Hackney, Well Street and Bishopsgate, and route 55 between Hackney, Well Street and Shoreditch High Street.

Across routes 26, 48 and 55 up to 18.1 buses per hour are required in the morning peak hour at Hackney Road towards central London, 22 are scheduled. During the evening peak across the same routes, 16.2 buses per hour are required traveling towards Hackney Central, 22 buses per hour are provided.

Across routes 48 and 55, a maximum of 8.3 buses per hour are required in the morning peak towards central London between Hackney Town Hall and Lea Bridge, 19 are scheduled. During the evening peak up to 7.4 buses per hour are required towards Lea Bridge Road on routes 48 and 55, currently 16 buses per hour are scheduled.

At the busiest point, nearly 60 per cent of all customers arrive and depart using route 55 during the busiest hour, making it the most popular service. The remaining 40 per cent of customers are evenly split between routes 26 and 48.

Route 48 is the only service that connects Walthamstow Central to central London via Bakers Arms. This generates nearly 5,000 direct customer journeys between Walthamstow Central and Shoreditch High Street.

The busiest point on route 26 is Hackney Road, Queensbridge Road towards Waterloo in the morning peak, where 4.6 buses are required to meet demand and six buses are scheduled. Route 26 experienced a drop in usage across all days over since 2013/14 with an 18 per cent decrease on weekdays, and a nine per cent decrease on weekends.

The busiest point on route 48 is Hackney Road, Queensbridge Road towards Walthamstow in the evening peak, where five buses per hour are required to meet demand, and six are scheduled. Since 2013/14 usage on route 48 has dropped by 21 per cent on weekdays, 17 per cent on Saturdays and 13 per cent on Sundays. With the exception of 2016/17 where usage was broadly stable, there have been consistent declines in usage.

The busiest point on route 55 is Hackney Road, Queensbridge Road towards Oxford Street in the morning peak, where 11.2 buses per hour are required to meet demand, 12 buses per hour are scheduled.

#### Our proposals

To better match capacity to demand:

- We will no longer run route 48
- Re-route the 55 away from Leyton High Road and extend to Walthamstow Central Bus Station via the current route 48 - this would maintain the link between Walthamstow Central and Central London
- Increase frequencies on the 26 to from every 10 mins to every 7.5 mins Monday to Saturday

#### Impact of change

Our proposals provide a total of 21 buses per hour on Hackney Road. They would retain a bus service between Walthamstow Central and Shoreditch High Street, with adequate capacity.

These proposals would releases stand space at Leyton Green for future network planning and resilience.

If implemented, these proposals would realise a net savings of £2,662,000 per annum.

As a result of our proposals some customers would need to change bus, where previously their journey was direct. This will affect:

Eighteen per cent, 4,000 trips on route 48<sup>8</sup>

A total of 2,300 of the route 48 customers originate from north of Hackney Central Station and the remaining 1,700 originate between Hackney Town Hall and Cambridge Heath Station. Customers wishing to travel towards London Bridge would need to walk 200 metres along Shoreditch High Street and interchange using routes 35, 47 or 149.

# 17. Holloway Road - Route 271 Night Service

Route 271 runs 24 hours a day between Highgate and Finsbury Square. The busiest point on the night service is at Old Street roundabout on weekend nights when 0.7 buses are required, 2 buses are scheduled.

#### Our proposal

• Withdraw the night service on all nights

#### Impact of change

Removing the service would mean that Canonbury Road, and part of New North Road and Highgate Hill would not be served directly by the night bus network. The number of weeknight customers who board and alight at affected stops are:

- Canonbury Road 30 trips
- New North Road 27 trips
- Highgate Hill 42 trips

Customers who board and alight on New North Road are within 400 metres of alternative night routes on the southern section of New North Road and Essex Road. Customers on Canonbury Road are within 400 metres of night routes on Essex Road, St Paul's Road and Upper Street.

Customers on Highgate Hill are within 400 metres of night routes at Archway and Highgate Village; apart from 9 of the 42 boarders and alighters who are within 650 metres of other services.

This proposal would realise a net savings of £190,000 per annum.

Our proposal will require 69 per cent, 160 customers on weeknights to change bus, where their previous journey was direct.<sup>9</sup>

<sup>&</sup>lt;sup>8</sup> This relates to the number of trips affected that can not be made on other routes

<sup>&</sup>lt;sup>9</sup> This relates to the number of trips affected that can not be made on other routes