![West Midlands Combined Authority logo]

**Busting delay on the bus network - Bus stop rationalisation**

**Birmingham City Council Economy, Skills & Transport Overview & Scrutiny Committee**

**Background Paper**

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**Purpose**

1.  To brief Economy, Skills and Transport Overview & Scrutiny Committee on a pilot of Bus Stop Rationalisation in South Birmingham as part of a wider strategy aimed at ameliorating recent increases in congestion for buses.

**Background**

The region's congestion challenge

2.  Traffic in the West Midlands reached record levels in 2016 with 8.5 billion vehicle miles driven on the region's roads, beating the previous 2007 record. Inevitably, the corollary is record levels of peak hour congestion, rising markedly in two years up to 2015/16, as shown in figure 1 below.
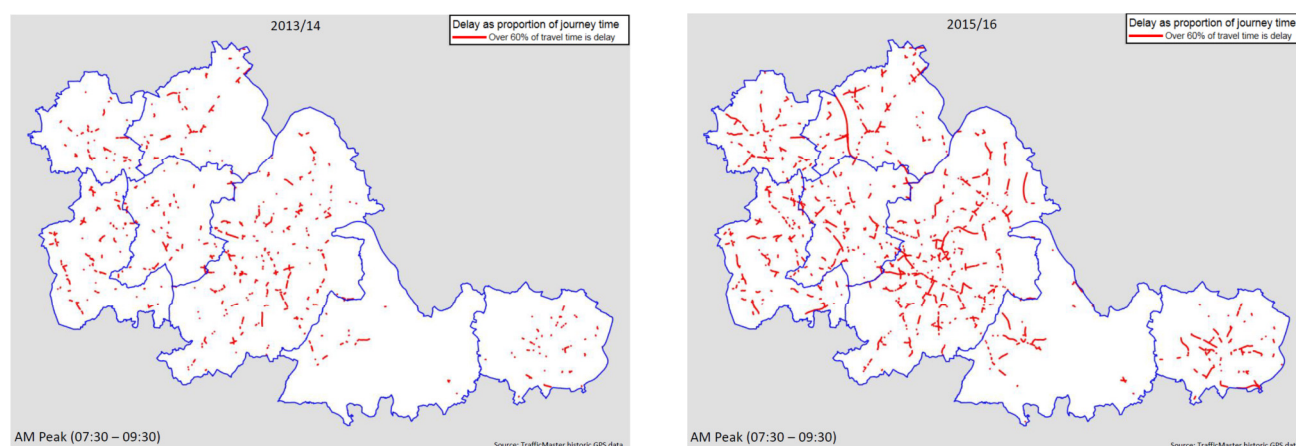


Figure 1 – Relative change in congestion - 2013/14 – 2015/16

3.  The *HS2 Growth Strategy* and the region's Strategic Transport Plan *Movement for Growth* contain over-arching strategies to ensure all residents within the region are within a 45 minute journey time of at least three strategic centres. Delivering this aggregated level of mobility will be critical in capitalising on the once-in-a-generation

opportunity HS2 brings whilst also supporting the wider objectives of the Strategic Economic Plan to create 506,000 new jobs by 2030. Congestion, however, means that nearly 217,000 fewer people are within this target journey time by public transport, compared to 2011 - as shown in figure below.
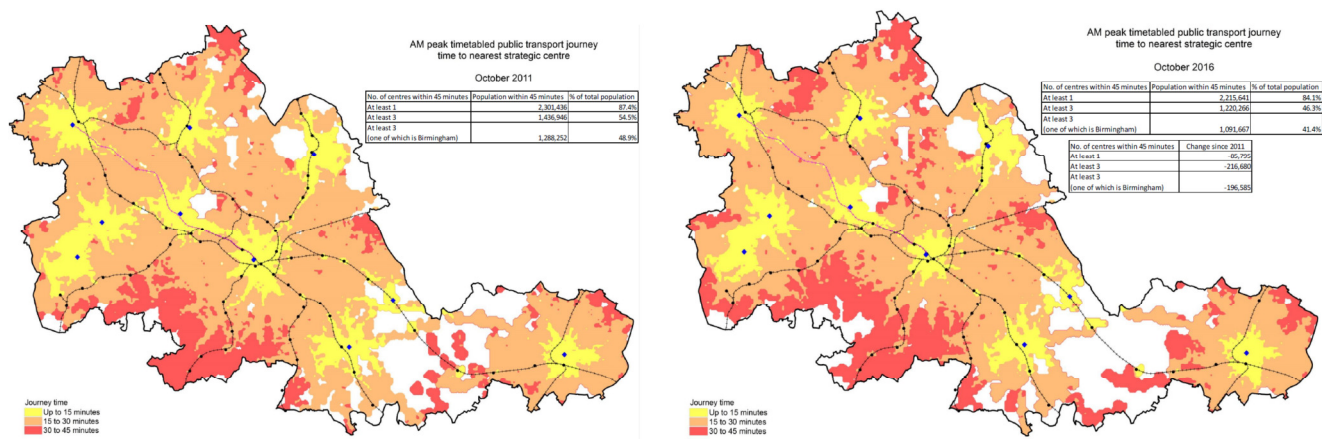


Figure 2 – Relative change in 45 minute public transport accessibility to strategic centres 2011 - 2016

4.  This picture is also set within the context of the imminent disruptive challenges from unprecedented levels of investment in the region, arising from the programmes within the WMCA Strategic Economic Plan (SEP), HS2 Phase 1, 2026 Delivery Plan and Highways England Road Investment Strategy. Whilst the region is preparing well for these challenges, acute roadspace pressures remain in the short-term in managing the associated construction impacts.

The impact on the bus network

5.  Average peak hour bus speeds in the region have reduced by 20% in the AM peak and 14% in the PM peak in the last three years. On some radial corridors, brisk walking now competes with bus for speed. Reliability has also suffered with more people waiting longer for buses that take longer to get to their destination. For example, the figure below shows journey time variability on the Bartley Green to Birmingham corridor in the AM peak; the worst 5% of journeys now take nearly 175% of the advertised timetabled journey time. Passengers therefore have little certainty on journey time, effectively having to factor the additional time in red as contingency.
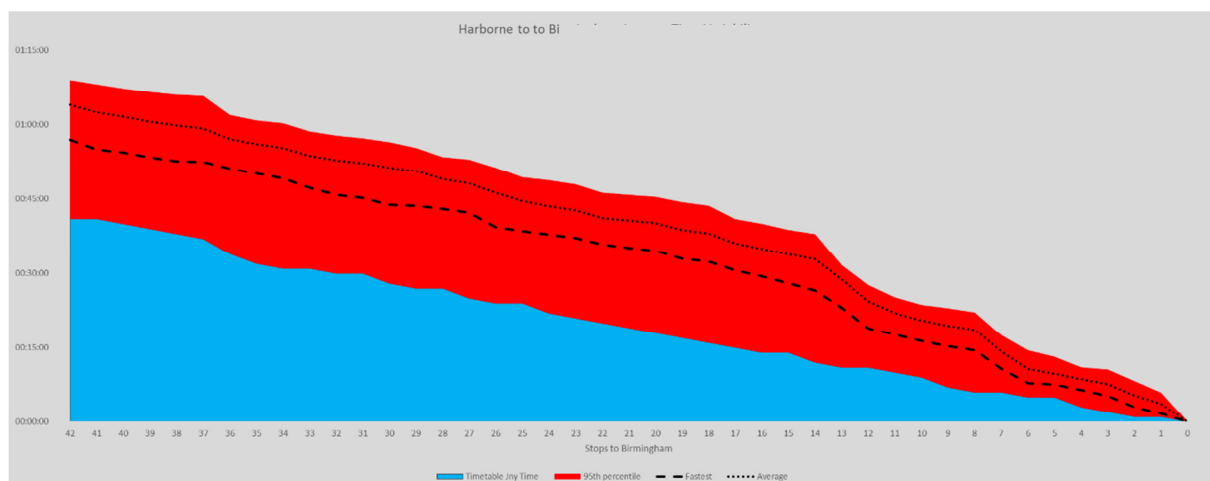


Figure 3 – Journey time variability – advertised journey time v real journey time
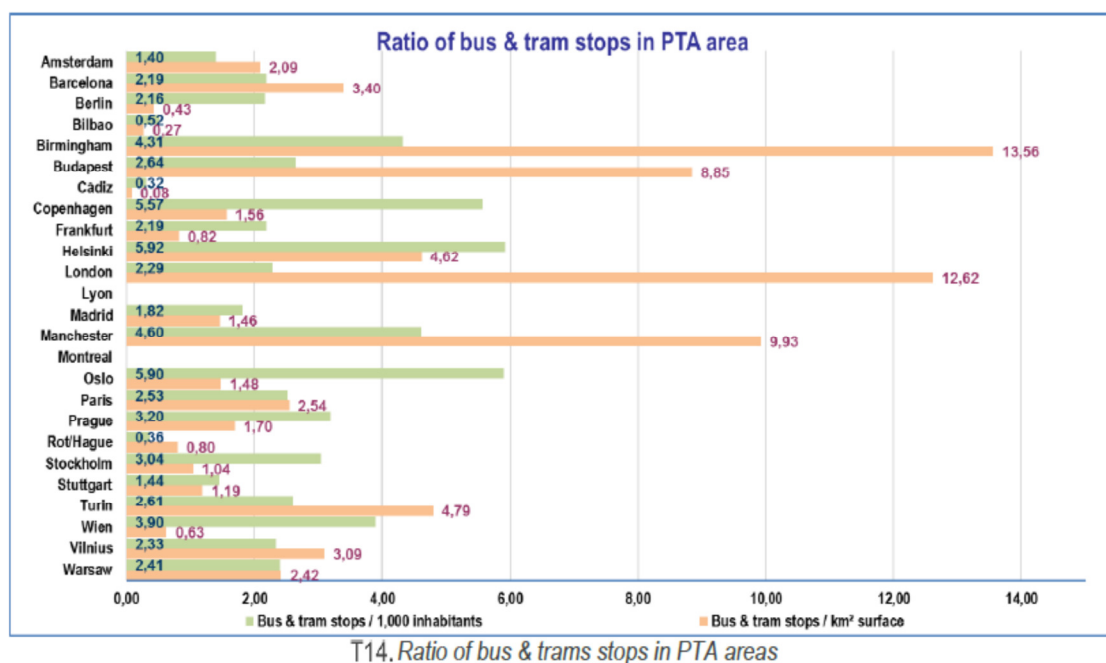
6.   Bus users bear a disproportionate impact from congestion; they seldom have other route choices during periods of network delay and cannot readily compensate for poor reliability. It is perhaps unsurprising that a clear relationship between bus speed and patronage exists, where the progressive slowing of the bus network perpetuates a cycle of fewer bus passengers leading to more car trips and creating yet more congestion.

Delivering a strategic action plan for the bus network

7.   Despite continued falling bus patronage in the region, four in every five public transport journeys continue to be made by bus. There can be no doubt that an effective and resilient transport system that unlocks the region's ambitious growth potential is reliant on an efficient bus network as its backbone.

8.   Officers are therefore working closely with bus operators and district authorities to develop a Strategic Action Plan to respond to the challenges posed by congestion. The action plan will focus on establishing a framework to increase and sustain investment for highway schemes to improve bus speeds and reliability on key corridors.

9.   In positioning schemes to attract funding, the action plan will develop a robust evidence base, underpinned against alignment to wider local and regional policy objectives whilst, at the same time, developing schemes to 'shovel ready' stage to allow the authority to quickly and positively respond to funding opportunities.

10.  Whilst the action plan is currently under development, a number of investment themes are emerging to treat both the symptoms and causes of congestion on the bus network, comprising:
   - Quick-wins
     - Delivery of intervention that could be mobilised quickly at congestion hotspots and network bottle-necks to realise immediate benefits to the highway network;
     - Possible early delivery of some Sprint intervention.
   - Optimising existing assets
     - Reviewing and optimising traffic signals, reviewing bus lanes.
   - Strategic bus priority
     - Development of strategic bus priority schemes to transform bus transit, focussed on connecting growth areas and catalysing benefit realisation of Metro/Sprint.

11.  The action plan will be support by Network Development Plans (NDPs) which will be produced for all areas in the region. NDPs will take a long term, spatial approach to planning the bus network to support growth and development. They will analyse proposed development sites, including details of numbers and phasing of houses and jobs growth and provide evidence to influence how major sites should best be served by bus and the associated transport infrastructure required to support bus access. NDP's will therefore provide important tool to support the action plan's delivery and help unlock new development with high quality bus access.

<u>Bus stop rationalisation</u>

12. An emerging programme under the quick-win theme comprises rationalisation of bus stops on those corridors most affected by recent increases in congestion. Whilst 90% of the region's urban area is within TfWM's adopted 400m 'access standard' to bus stops, a progressive incremental approach to bus stop installation over the years, as a result of ad-hoc customer/Member requests and land uses, means some locations are now over-served. Bus stops on some corridors are spaced as little as every 130m, providing significant over-provision relative to the adopted access standards.

13. This point is further reinforced in the graph below (European Metropolitan Transport Authorities barometer of public transport in the European Metropolitan Areas) showing the region (identified as the Birmingham PTA area) has the highest ratio of bus stop density in Europe.



### Ratio of bus & tram stops in PTA area

| City | Bus & tram stops / 1,000 inhabitants | Bus & tram stops / km² surface |
|---|---|---|
| Amsterdam | 1,40 | 2,09 |
| Barcelona | 2,19 | 3,40 |
| Berlin | 2,16 | 0,43 |
| Bilbao | 0,52 | 0,27 |
| Birmingham | 4,31 | 13,56 |
| Budapest | 2,64 | 8,85 |
| Cadiz | 0,32 | 0,08 |
| Copenhagen | 5,57 | 1,56 |
| Frankfurt | 2,19 | 0,82 |
| Helsinki | 5,92 | 4,62 |
| London | 2,29 | 12,62 |
| Lyon | | |
| Madrid | 1,82 | 1,46 |
| Manchester | 4,60 | 9,93 |
| Montreal | | |
| Oslo | 5,90 | 1,48 |
| Paris | 2,53 | 2,54 |
| Prague | 3,20 | 1,70 |
| Rot/Hague | 0,36 | 0,80 |
| Stockholm | 3,04 | 1,04 |
| Stuttgart | 1,44 | 1,19 |
| Turin | 2,61 | 4,79 |
| Wien | 3,90 | 0,63 |
| Vilnius | 2,33 | 3,09 |
| Warsaw | 2,41 | 2,42 |

T14. *Ratio of bus & trams stops in PTA areas*

14. It is clear that passenger densities and land use patterns have undergone a drastic change over the years where bus stops may not now be commensurate. Moreover, changes to highway layouts and lane designations have resulted in some bus stop locations not being fit for purpose by requiring difficult bus manoeuvres and/or causing buses to obstruct traffic flow.

15. Data from National Express West Midlands (NX) shows that a bus stopping at a bus stop to allow one passenger to board or alight can add 35 seconds to journey time. Where close bus stop spacing is combined with low levels of use, the aggregated effect of stop/start delay can materially add to journey time and compound reliability issues, benefitting relatively few passengers but disproportionately disadvantaging the majority.

<u>Proposed bus stop rationalisation trial - South Birmingham Bus Network Review</u>

16. At the same time as defining a possible bus stop rationalisation programme, NX approached officers about its intention to review the bus network in south Birmingham. The review is a direct response to increasing delay to buses and includes options to split existing services, remove some local services altogether and provision of new less frequent local routes.

17. As part of the review, NX has sought support from TfWM and Birmingham City Council (BCC) to identify and implement highway measures that could reduce congestion for buses and avert some of the more severe possible network changes. This has led to TfWM and BCC officers working closely to define and develop a package of highway interventions for the area. Work continues in this respect, with most schemes requiring further transport planning and BCC approval.

18. This work has, however, so far identified several corridors over-served by bus stops and where quick-wins to increase bus speed and reduce journey time could be achieved by their rationalisation. The corridors include:

    - 8a/8c – Inner-circle;
    - 50 - Alcester Road;
    - 45/47 - Pershore Road; and;
    - 63 - Bristol Road;

19. A study has consequently been commissioned to specifically review bus stop locations along these corridors against a number of metrics covering:
    - TfWM adopted bus stop access standards;
    - Relative levels of use (according to fare stage);
    - Accommodating future development;
    - Connectivity to local services and facilities; and,
    - Interchange to other transit.

20. The study concluded that a significant number of bus stops could be removed along the corridors without affecting the adopted 400m access standard nor connectivity to key local services/facilities and/or interchange to other transit. Importantly, unlike other types of highway intervention to prioritise the bus, rationalisation of bus stops can be implemented quickly and cost effectively, realising immediate benefits for the bus network. Technical studies have been completed for each route, identifying the specific bus stop locations recommended for removal and can be made available upon request.

21. As part of NX's consultation for the South Birmingham Network Review, it has asked *'should [NX] consider taking carefully selected stops out of routes to help speed them up?'* To date, NX has received over 4,500 responses to the consultation with over 70% of those answering the question supportive to the removal of carefully selected stops.

22. Taking the above in to consideration at its meeting on the 4<sup>th</sup> September the Transport Delivery Committee approved the pilot bus stop rationalisation exercise within the South Birmingham Bus Network Review area. This is in accordance with

the recommendations of the technical studies and the wider emerging strategic action plan to ameliorate the challenges of congestion to the bus network. As the proposal would effectively form a trial, it is not proposed to physically remove any stops at this time.

23. The pilot will operate for a period of six months from October 2017 to late March 2018. Bus performance, in terms of patronage, journey time, reliability and variability will be assessed on a monthly basis whilst customer feedback will be closely monitored throughout the period. A full monitoring report and proposed next-steps will be reported to TfWM's Transport Delivery Committee in Spring 2018.

Impact of bus stop rationalisation not being implemented

24. Without highway mitigation to improve the efficiency of the bus network in South Birmingham, significant changes to bus services will be required. As described above, this could include splitting existing services, removing some local services altogether and provision of new less frequent local routes.

25. The proposed bus stop rationalisation pilot forms a critical part of the highway mitigation package. Whilst the more substantive highway changes will take time to mobilise and deliver, bus stop rationalisation can be delivered very quickly, realising immediate improvements to bus services on high frequency corridors.

26. This mitigation programme will ensure existing levels of services can be maintained on high frequency corridors without the need for additional resource. In turn this reduces the likelihood of resource from marginal services on local routes being reduced and transferred to other higher priority corridors.

Communication and Engagement

27. Lead TfWM Members and Birmingham City Council's Cabinet Member for Transport and Roads, Councillor Stacey, were briefed on the emerging proposals for rationalisation in July.

28. This led to a report being considered on 4th September by the Transport Delivery Committee where the high-level principles for a pilot bus stop rationalisation programme in South Birmingham were approved.

29. Once approval was in place a dedicated project delivery team provided information and briefings communicating the proposals to a wider audience which included :-

   • All Ward Members of proposed corridors
   • The West Midlands Mayor
   • TfWM internal colleagues – Equalities and Diversity and Smarter Choices and Resilience
   • Disabled and vulnerable user groups (including audio detail for talking pages)
   • Schools, Colleges, Business.

30. All information regarding the programme detail, stops removed from the route and alternative stopping locations were communicated to bus passengers by:-

- Notices on buses
- Bespoke at stop notices
- Snap survey
- Pres release
- Dedicated web page
- Dedicated phone line
- All comments/phone calls are logged and will be answered by the delivery team.