

## Large Local Major Transport Schemes

### Application for Scheme Development Costs – Main Round

|   |  |
|---|--|
| <b>Scheme Name</b>  | Bromford Gyratory                                  |
| <b>Lead LEP</b>   | Greater Birmingham and Solihull                    |
| <b>Other supporting LEPs</b><br><i>(if applicable - see 2.4 below)</i>          | Black Country LEP<br>Coventry and Warwickshire LEP |
| <b>Promoting Authority</b>  | Birmingham City Council                            |
| <b>Is this an update of a bid that was unsuccessful in the fast track round</b> | N  |

#### 1. Introduction

##### 1.1 Description

Please describe the scheme (and attach a map if available)

Bromford Gyratory is located on the Key Route Network (KRN) as defined by the West Midlands Combined Authority (WMCA) at the intersection of A4040 Bromford Lane and A47 Fort Parkway (location plan provided as Appendix A). The A47 Fort Parkway, a former Annex E project, was opened in the late 1990's as new road construction and effectively links junction 5 of the M6 with Birmingham city centre through the east of the city. The A47 Fort Parkway also intersects with the A452 Chester Road adjacent to the Jaguar Land Rover factory at Castle Bromwich, where the Chester Road major scheme funded by the Department for Transport (DfT) has recently been completed. In addition, the route is used as a major link out towards Birmingham Airport, the NEC and development proposals at UK Central relating to the HS2 Interchange station. As such, it has strategic significance for GSBLEP and the WMCA.

In the context of the Strategic Road Network (SRN), the A47 and Bromford Gyratory play a vital role in relieving congestion on the Birmingham Motorway Box, offering an alternative route into and out of Birmingham between junctions 4 and 6 of the M6. As shown in Appendix B the A47 also serves as a formal diversionary route for the M6 as defined by Highways England. This is particularly relevant considering the ongoing requirement for major maintenance on elevated sections of the M6 and substantial repairs that require the closure of junction 6 (Spaghetti junction). Additionally the route will support major maintenance works to the A38 (M) Aston Expressway provisionally funded through the Local Growth Fund in respect of diversions.

Bromford Gyratory is one of the most congested major junctions in Birmingham and the subject of the greatest number of complaints from businesses, local residents, public transport operators, local councillors and Members of Parliament. Congestion is identified as a challenge in the GBSLEP Strategic Economic Plan (SEP) and congestion on the M6 through the West Midlands and on the rest of the Motorway Box is identified by Midlands Connect as a key corridor constraint.

With an existing daily throughput of 56,000 vehicles on an average weekday major works are required to significantly enhance the capacity of Bromford Gyratory and also support key public transport services, walking and increased levels of cycling in accordance with the Birmingham

Cycle Revolution funded by the DfT as part of its Cycle City Ambition programme.

Improvements to Bromford Gyratory are complex (and costly) given that it is located directly beneath an elevated section of the M6 and above the Birmingham to Nottingham railway line and the River Tame. HS2 will also align in a tunnel beneath Bromford Gyratory, with the complexities and capacity issues of the gyratory a major factor in this decision by HS2 Ltd.

Bromford Gyratory enables significant growth opportunities in the GBSLEP and WMCA area:

- **HS2** – Supports the two stations in GBSLEP, Curzon and Interchange. The site is adjacent to core employment land at Washwood Heath. In addition the site has been identified by HS2 Ltd as the preferred location for the **HS2 Rolling Stock Maintenance Depot (RSMD)** to serve the planned high speed rail network and will also have a function as a construction centre for the new rail line creating more than 500 jobs. HS2 Ltd has identified a number of high-level depot requirements, one of which is that the depot will require good road access and connectivity to arterial routes for the delivery of spare parts and consumables. The Washwood Heath site's close access to the A4040 and A47 Fort Parkway, with nearby connections to the SRN, will need to fulfil this requirement.
- The Washwood Heath site therefore has a key role in realising the **HS2 Growth Strategy**. Residual land will be available on the site for development upon completion of the HS2 construction phase, with the potential for a business park creating up to 3,000 jobs. A detailed access strategy is being completed for the site, which looks at the transport impacts of the potential developments in a cumulative and holistic manner and maximises growth and jobs.
- The **Jaguar Land Rover** advanced manufacturing facility at Castle Bromwich is benefiting from circa £400m investment to support the production of new models, including the award winning Jaguar F-type. In late 2015 JLR announced further expansion, to include the erection of 2 new storage / logistics buildings with associated works with additional gross floorspace proposed as 33,303m<sup>2</sup>, creating up to 415 jobs. JLR has also recently increased the size of its staff car parking provision and has introduced an additional shift at the assembly plant.
- The proposed improvements, whilst benefiting a large part of East Birmingham would also play a role in the wider transport network across much of the West Midlands. Routes through Bromford Gyratory including the A47 running east-west form key diversionary routes in times of planned works or disruption to the adjacent **M6 Motorway**, and the nearby **A38 (M)**. This will become even more important during the forthcoming **GBSLEP Growth Deal** scheme to strengthen the **A38 (M) Tame Valley Viaduct**, and future **Highways England** planned improvements to the Motorway Box.
- The **Midlands Engine** for Growth Prospectus states that connectivity across the Midlands is essential for supporting and attracting businesses as well as highly skilled workers. The Midlands strategic road and rail networks including the M6 are all of national importance. They are used to transport people and goods across the Midlands as well as across the country. It is suggested that improvements to this junction are therefore of regional and national importance as well as local. Congestion on the M6 through the West Midlands, and on the rest of the Motorway Box, is identified by **Midlands Connect** as a key corridor constraint.

- The **West Midlands Combined Authority**'s priority is that the resulting transport network should enable the efficient movement of goods to help businesses to connect to supply chains, key markets and strategic gateways. Improvements to this junction should also therefore contribute to the objectives of Transport for the West Midlands (TfWM), Black Country LEP and Coventry & Warwickshire LEP

Currently, this section of the network is underperforming, with road users experiencing severe delays and unreliable journey times. This project would form the second phase of a two-phase package looking to deliver improvements to Bromford Gyratory; the first phase (funded by GBSLEP from LGF1) would deliver short-term improvements to the traffic signals, signing & lining and other minor layout changes.

This major scheme would:

- Provide increased capacity for all modes;
- Improve journey time reliability;
- Reduce existing congestion that acts as a major barrier to growth both in Birmingham and throughout the West Midlands;
- Support sustainable transport by retaining existing pedestrian facilities at the junction thereby allowing pedestrian access to/from the Washwood Heath development site and the Bromford Estate on the opposite (east) side of the A4040;
- Allow for cycling movements across the junction as a key link between Bromford and Erdington and between those places and the Washwood Heath development site, including proposals through the Birmingham Cycle Revolution; and
- De-risk major development opportunities in the area and support existing large businesses including Jaguar Land Rover.

The benefits will be realised by remodelling Bromford Gyratory by creating two smaller at grade roundabouts, introducing new slip roads, creating new structures, increasing the number of lanes on Bromford Lane to the North, reducing the number of signals and optimising traffic signal timings (see Appendix C).

It is anticipated the cost of the project could be in the region of £80-85m taking into account structures, land, significant traffic management requirements and the overall complexities outlined. Scheme development costs of £1.35m are needed to take the project to Outline Business Case stage.

## 2. Strategic Case

### 2.1 Problem Identification

Please describe the problem that the scheme is designed to solve. Please illustrate with evidence and provide hyperlinks to any online material

The **Midlands Engine** for Growth Prospectus states that connectivity across the Midlands is essential for supporting and attracting businesses as well as highly skilled workers. Congestion on the M6 through the West Midlands and on the rest of the Motorway Box is identified by **Midlands Connect** as a key corridor constraint. It is suggested that improvements to Bromford Gyratory are therefore of regional and national importance as well as local.

The WMCA's Strategic Economic Plan shows how the West Midlands will use devolved powers

and resources to deliver a stronger West Midlands, with a focus on skills, innovation, transport and inward investment. In particular the West Midlands' great rail, road and air links give the area a significant competitive edge, however, improvements such as those to Bromford Gyratory will be essential in maintaining this position.

The HS2 Growth Strategy sets out the opportunities that the arrival of HS2 affords the region. It aims to leverage the benefits delivered by HS2 to drive local growth on a nationally-significant scale over and above the construction of HS2. As many as 2,000 apprenticeship opportunities will be created by HS2, and there will be around 25,000 people employed during construction. HS2 will support growth in the wider economy and it is predicted that this could lead to an additional 400,000 jobs.

The two HS2 stations, Curzon and Interchange create the opportunity for more than 52,000 jobs and £1.25 billion in GVA per year. The HS2 RSMD at Washwood Heath will create over 500 jobs, however, investment is needed at Bromford Gyratory to ensure that the high-level depot requirements for good road access and connectivity are met and opportunities for the wider region are realised.

The GBSLEP SEP seeks to harness the transformational potential of HS2 and recognise that with an associated package of local transport investments, HS2 provides the opportunity to dramatically transform East Birmingham and North Solihull, two areas of long-standing deprivation. HS2 will also further enhance Greater Birmingham's attractiveness as an investment location, for example, Birmingham Airport has huge potential and the ability to open up access to key international markets for thousands of the region's businesses, and will be significantly bolstered by HS2 bringing 35m people within two hours travel. To deliver this growth a package of investment is needed with funding for Bromford Gyratory forming a key ask in GBSLEP's Local Growth Fund 3 proposals.

Birmingham's population is set to grow by 150,000 by 2031, creating a need for more than 50,000 new homes and 100,000 jobs. The east of the city has the potential to accommodate a significant amount of physical growth, complementing the growth in the city centre and at UK Central, and to do so in a way which also maximises benefits for existing communities.

The Birmingham Development Plan (BDP) will set out the statutory framework to guide decisions on development and regeneration in Birmingham up to 2031. The Bromford Corridor was recognised as a part of a key movement axis between the city centre and North and East Birmingham linking two distinct employment centres - professional, retail and leisure jobs in Birmingham city centre, with a greater proportion of manufacturing and wholesale jobs in the Bromford Industrial Corridor.

Bromford Gyratory was identified as a major constraint to the BDP examined in public in 2014, with the junction predicted to be at over-capacity by 2031 (BDP, Transport Evidence Base - Stage 3 Transport Modelling Assessment Initial Output Report, 2014), and increases of 700 person trips per peak hour on this corridor are expected (BDP, Transport and Infrastructure Evidence Base and Strategy, June 2014).

Public transport improvements are proposed as one of the main mitigations for increased travel flows to the city centre and into the Bromford Industrial Corridor (Birmingham Eastern Fringe Bus Study, 2014). Public transport will play a supporting role to walking and cycling, which are the main mitigation for short-distance trips. Alongside this, investment in Bromford Gyratory is needed to facilitate access to the railway network, as well as increasing vehicular capacity on key

arterial routes to sustain reliable travel times for business travel, goods traffic and bus services.

Despite numerous interventions over the past decade, East Birmingham continues to have an employment rate that is too low, high levels of worklessness, deprivation and child poverty and low levels of skills whilst other parts of Birmingham have demonstrated improvement. Measures to address these issues, and to improve skills and employability, must be matched with available and accessible jobs. Improvements to connectivity which will allow better access to jobs, and growth which will create new jobs and raise aspirations will be important. Improvements to Bromford Gyratory are seen as unlocking the wider potential of the area.

The junction has also been identified as a significant priority for improvement in the East Birmingham Prospectus (Birmingham City Council, February 2015 <http://www.birmingham.gov.uk/ebprospectusforgrowth>), with improvements needed to assist in managing congestion and allow better access to the city centre and better links with East Birmingham. There are also some significant opportunities for housing development in East Birmingham as the area has the potential to accommodate some 3,500 new homes over the next 10 years.

Land at Washwood Heath is located in one of the most deprived wards in the country and is identified as core employment land and a focus for economic regeneration and jobs. Within the context of the strategic East Birmingham Prospectus for Growth, there is a need to take forward more detailed activity to progress employment creation at this site through a 'masterplan', which improvements to Bromford Gyratory via a wider Access Strategy for the Washwood Heath site will play a key role in.

The Washwood Heath Access Strategy (WHAS) provides a detailed plan for land at Washwood Heath (approximately 64 hectares) comprising a number of commercial and industrial sites owned by a range of landowners. The WHAS focuses on the key transportation links in the vicinity of the site in terms of traffic movements, operation of key junctions and corridors and investigates local public transport links and opportunities for active travel modes.

The WHAS identifies a number of access challenges for the site. In particular, with the bridge link into the site from the A47 being removed as part of HS2's proposals, access needs to be carefully considered in terms of routes from Washwood Heath Road, Drews Lane and Bromford Lane. In addition, there are key interfaces with adjoining residential areas, whilst the severe capacity issues exist at Bromford Gyratory (a key transport gateway to the site) need to be addressed.

Investment is needed to de-risk major development opportunities in the area and support existing large businesses and employers including Jaguar Land Rover, GKN, Royal Mail and Alcoa.

Approximately 25% of the jobs in the city are located in East Birmingham and nearly 40% of all manufacturing jobs. The advanced manufacturing sector and particularly the automotive sector is important in the area. Over 3,000 people are employed at Jaguar Land Rover in Castle Bromwich.

The Jaguar Land Rover advanced manufacturing facility at Castle Bromwich is benefiting from circa £400m investment to support the production of new models including the award winning Jaguar F-Type. This will drive local growth as supply chain opportunities are captured.

The site is home to some of the world's most advanced aluminium body construction facilities and almost 340 body construction robots. On site are body shops, paint and final assembly lines for all models, as well as a press shop which operates 24 hours a day.

In late 2015 JLR announced further expansion, to include the erection of 2 new storage / logistics buildings with associated works with additional gross floorspace proposed as 33,303m<sup>2</sup>, creating up to 415 jobs. JLR has also recently increased the size of its staff car parking provision and has introduced an additional shift at the assembly plant.

Many of the supply chain opportunities from Jaguar Land Rover have been successfully captured locally. Further opportunities within the automotive and advanced manufacturing supply chain make this area an attractive place to locate. The proposed improvements at Bromford Gyratory will enable the major development opportunities to be de-risked.

Alongside anticipated growth in the area, further demand will be created from forthcoming GBSLEP Growth Deal schemes to strengthen the A38 (M) Tame Valley Viaduct, and future improvements to the Motorway Box. The cumulative effect of this additional traffic demand will likely result in the Highways England SRN diversion routes becoming less robust in future years as demand increases without suitable provision locally. As such improvements to Bromford Gyratory will provide wider-network resilience.

## 2.2 Option development

Please describe what option development work has been done to date or is planned during 2016/17, and reference with hyperlinks or attachments. In particular, illustrate why alternative/lower cost/phased options have been ruled out.

Have any of the following documents been produced? (If Y please attach to this bid)

|   |   |
|---|---|
| <i>Option Appraisal Report (OAR)</i>          | Y |
| <i>Appraisal Specification Report (ASR)</i>   | N |
| <i>Strategic Outline Business Case (SOBC)</i> | N |

Bromford Gyratory is one of the most congested major junctions in Birmingham and the subject of the greatest number of complaints from businesses, local residents, public transport operators, local councillors and Members of Parliament. Congestion is identified as a challenge in the GBSLEP Strategic Economic Plan (SEP) and congestion on the M6 through the West Midlands and on the rest of the Motorway Box is identified by Midlands Connect as a key corridor constraint.

HS2 Ltd has previously proposed to redesign the Bromford Gyratory as part of works to construct the HS2 route into Birmingham. This would have resulted in a new single bridge running north-south over the HS2 route and existing railway with signalised junctions at both ends. However, following concerns over costs, the level of risk and environmental impact this proposal has since been rejected by HS2 Ltd in favour of the HS2 route being aligned in a tunnel between Castle Bromwich Business Park, and the west side of Bromford Gyratory.

The Birmingham Development Plan will set out the statutory framework to guide decisions on development and regeneration in Birmingham up to 2031. Bromford Gyratory was identified as a major constraint to the BDP examined in public in 2014, with the junction predicted to be over-capacity by 2031 (BDP, Transport Evidence Base - Stage 3 Transport Modelling Assessment Initial Output Report, 2014).

As the construction of the HS2 route will now not include improvements to Bromford Gyratory, it is essential for the City Council as Highway Authority to take forward such improvements. Investment is needed to de-risk major development opportunities in the area and support existing

large businesses and employers including, Jaguar Land Rover and development opportunities in the area.

Short term measures have been explored and the first phase (funded by GBSLEP via LGF1) will deliver short-term improvements to the traffic signals, signing & lining, and other minor layout changes. However, it is considered that due to predicted long term traffic growth (both from developments at Washwood Heath and background growth on the Key Route Network) more extensive changes will ultimately be needed.

The Washwood Heath Access Strategy was commissioned by the HS2 Strategic Board to provide a detailed plan for the site (approximately 64 hectares) comprising the HS2 RSMD and employment land for 2,000-3,000 jobs. A baseline transport assessment has been constructed to examine current traffic interactions along the Bromford Corridor to inform the options development. A number of key locations are observed as having queues and there was congestion in the Northern half of the Bromford Gyratory both northbound and southbound.

The options considered here would form the second phase of a two-phase package looking to deliver improvements to Bromford Gyratory. Taking the existing site constraints into account, a number of medium term and longer term options to improve the Bromford Gyratory have been investigated (More information on the proposals is available in the full options report - see Appendix D).

- Option 1 – seeks to reduce the number of signals for all traffic movements by reducing the number of junctions and conflict points around the gyratory. This removes all traffic from the existing southbound bridge, using the existing northbound bridge across the railway as a 2-way dual carriageway.
- Option 2 – utilises the existing northbound bridge across the railway as a two way dual carriageway. In addition the existing southbound bridge accommodates a segregated southbound route for traffic from Bromford Lane north and Fort Parkway to the south.
- Option 3 – break ups the traffic flow on the gyratory by placing two roundabouts, one north and one to the south, at each end of the existing gyratory. The plan would allow for the junction to stay mostly within the existing highway boundaries.
- Option 4 - removes the southern roundabout in option 3 and expands the northern roundabout so that it would use up the currently unused land immediately to the north of the gyratory. The junction proposal would keep the existing Bromford Central access where it is but would remove any links south of the railway, between Heartlands Parkway and Bromford Lane South. This option would provide one large roundabout with increased road capacity instead of an elongated gyratory with signals.

More radical solutions such as re-routing traffic under the gyratory via a tunnel or over via a flyover were not considered in the context of deliverability and affordability.

The options have been tested against a set of traffic counts taken in October 2015 on and around the gyratory. These counts were increased using growth factors to establish the 2026 future year scenarios. Option 1 has been discounted because it does not relieve the gyratory of congestion nor significantly reduce it.

Options 2, 3, and 4 are all possible options to pursue. However more detailed design work is needed as part of as part of the Outline Business Case.

Option 4 shows the best results for relieving congestion and could be an option to pursue. However, the junction design has not been drawn up or tested in detail so results could differ with further analysis. If chosen, Option 4 would have to be a much longer term option for the gyratory as it would be significantly more expensive than the other options, and require significant land purchase.

It is anticipated the cost of the project could be in the region of £80-85m taking into account structures, land, significant traffic management requirements and the overall complexities outlined. Scheme development costs of £1.35m are needed to take the project to Outline Business Case stage.

It is considered that not proceeding with improvements to Bromford Gyratory would cause significant difficulties both for access to the Washwood Heath site and for users of the Key Route Network through much of the east of the city. Such a course of action is therefore not recommended.

Each scheme will be carefully optimised in due course to ensure that it provides best value for money in line with the WebTAG funding requirements set out by GBSLEP.

### *2.3 Alignment with LEP Strategic Economic Plan*

Please illustrate how the proposal links with the aims of the SEP and the degree to which it would enhance the SEP. Please make any necessary cross reference to your bid for Growth Deal funding.

This proposal has strategic significance for Midlands Engine, WMCA and GBSLEP:

The **Midlands Engine** for Growth Prospectus states that connectivity across the Midlands is essential for supporting and attracting businesses as well as highly skilled workers. The Midlands strategic road and rail networks including the M6 are all of national importance. They are used to transport people and goods across the Midlands as well as across the country. It is suggested that improvements to this junction are therefore of regional and national importance as well as local. Congestion on the M6 through the West Midlands, and on the rest of the Motorway Box, is identified by **Midlands Connect** as a key corridor constraint.

The **West Midlands Combined Authority's** priority is that the resulting transport network should enable the efficient movement of goods to help businesses to connect to supply chains, key markets and strategic gateways. Improvements to this junction should also therefore contribute to the objectives of Transport for the West Midlands (TfWM), Black Country LEP and Coventry & Warwickshire LEP.

The **GBSLEP SEP** seeks to harness the transformational potential of HS2 and recognises the importance of Washwood Heath in delivering the HS2 Growth Strategy. The SEP identifies a package of investment to unlock growth, enable access to jobs and employment land and de-risk investment in east Birmingham. As such, the Bromford Gyratory proposal forms a key ask in GBSLEP's Growth Deal proposals. This project would form the second phase of a two-phase package looking to deliver improvements to Bromford Gyratory; the first phase (funded by GBSLEP from Growth Deal One) will deliver short-term improvements to the traffic signals, signing & lining, and other minor layout changes.

#### *2.4 Cross LEP support*

If this bid has been endorsed by more than one LEP as an agreed priority over a multi-LEP area please confirm which LEPs (and any other bodies) support this bid and provide any further information on the strategic rationale.

Support and part funding for development work to date was approved by the West Midlands HS2 Strategic Board (as was) in 2015. This Board included representation from organisations part of the Greater Birmingham and Solihull LEP, Black Country LEP and Coventry & Warwickshire LEP, and the West Midlands Combined Authority (WMCA). Those organisations included Birmingham and Solihull Councils, West Midlands Integrated Transport Authority (as was, now Transport for West Midlands – TfWM), Greater Birmingham Chamber, and Birmingham Airport.

The proposed scheme plays an integral part in supporting the Midlands Engine as well as the WMCA's ambition for the growth of the area (see letter of support in Appendix E). The bid is aligned to the Strategic Transport Plan 'Movement for Growth' which provides an overall long term transport strategy to support growth and development.

This bid is also supported by Highways England (see letter of support in Appendix E) who recognise the vital role that the A47 and Bromford Gyratory plays in the context of the Strategic Road Network (SRN), in relieving congestion on the Birmingham Motorway Box, offering an alternative route into and out of Birmingham between junctions 4 and 6 of the M6. As shown in Appendix B the A47 also serves as a formal diversionary route for the M6 as defined by Highways England.

### **3. Economic Case**

#### *3.1 Value for money*

Please summarise your current understanding of the likely costs and benefits of the scheme and reference any reports on this to date (please provide hyperlinks or attachments). If more than one option please detail the relative costs and benefits of each, if available. In doing so, please make clear the age and source of the underlying data and any assumptions.

At this stage development funding is being requested to undertake further work which will more specifically quantify the works required and their associated costs and benefits. The benefits of this project are predicted to include:

- Increased capacity for all modes;
- Improved journey times;
- Improved bus journey times and reliability;
- Improved traffic flow and reduced congestion;
- Reduction in Co2 emissions;
- Reduction in existing congestion that acts as a major barrier to growth both in Birmingham and throughout the West Midlands;
- Relieve congestion on the Birmingham Motorway Box and support to SRN in terms of diversionary route;
- Unlocking development opportunities, access to employment sites, jobs and growth; and
- De-risk major development opportunities in the area and support existing large businesses including Jaguar Land Rover.

The following options have been considered as mentioned previously in this bid.

*Medium term*

- This option contains left-turn filters and changes to the Bromford Gyratory. It is intended that measures will be split with between short and long term options. The benefits will need to be recalculated.

*Long term*

- Option 1 – seeks to reduce the number of signals for all traffic movements by reducing the number of junctions and conflict points around the gyratory. This removes all traffic from the existing southbound bridge, using the existing northbound bridge across the railway as a 2-way dual carriageway.
- Option 2 – utilises the existing northbound bridge across the railway as a two way dual carriageway. In addition the existing southbound bridge accommodates a segregated southbound route for traffic from Bromford Lane north and Fort Parkway to the south.
- Option 3 – break ups the traffic flow on the gyratory by placing two roundabouts, one north and one to the south, at each end of the existing gyratory. The plan would allow for the junction to stay mostly within the existing highway boundaries.
- Option 4 - removes the southern roundabout in option 3 and expands the northern roundabout so that it would use up the currently unused land immediately to the north of the gyratory. The junction proposal would keep the existing Bromford Central access where it is but would remove any links south of the railway, between Heartlands Parkway and Bromford Lane South. This option would provide one large roundabout with increased road capacity instead of an elongated gyratory with signals.

Four options have been tested against a set of traffic counts taken in October 2015 on and around the gyratory. These counts were increased using growth factors to establish the 2026 future year scenarios.

- Both the Medium Term and Long Term Option 3 showed better results against the Do Min, where a saving of 50 seconds and 87 seconds per vehicle are seen respectively. Improvements are most noticeable by reducing southbound journey times.
- The consistency of journey times was forecast to improve considerably as can be seen from the standard deviations – with reductions ranging up to 33 seconds standard deviation in the Do Minimum to less than 6 seconds in the long term option. This would produce more reliable journeys for travellers.

Option 1 has been discounted because it does not relieve the gyratory of congestion nor significantly reduce it. Options 2, 3, and 4 are all possible options to pursue, however, more detailed design work is needed as part of as part of the Outline Business Case. This would enable an economic appraisal to be undertaken on the revised options, and the benefits for bus journey times and Co2 emissions to be quantified.

Option 4 shows the best results for relieving congestion and could be an option to pursue. However, the junction design has not been developed or tested in detail so results could differ with further analysis required, hence this application.

#### 4. Financial Case

##### 4.1 Cost of producing OBC

Please provide a breakdown of the estimated costs from 2017/18 of producing an Outline Business Case. As a minimum we would expect costs to be broken down into categories such as (but not necessarily restricted to) the following: transport surveys; geotechnical surveys; other surveys; transport modelling; transport appraisal; consultation; preparing business case material; although we would be happy to receive a more detailed breakdown as an Annex. We would also like you to provide us with a short, but clear, description of the work that is planned under each category, cross-referring, if necessary, to the work already detailed at 2.2 and 3.2 above.

Please exclude costs incurred, or planned, up to and including 2016/17 but state these in the table at 4.2 below.

This is a bid for £1.35m to the Large Local Major Transport Schemes to fund the development and production of an Outline Business Case for Bromford Gyratory. A cost breakdown is provided below.

- Transport, geotechnical, structural, and topographical surveys: £200,000;
- Land referencing: £50,000;
- Development of WebTAG compliant SATURN model: £350,000;
- Options development and refinement of a preferred option and lower cost alternative: £300,000;
- Transport appraisal: £200,000;
- Consultation with stakeholders: £50,000;
- Preparing business case materials and 5 cases: £150,000;
- Deliverability and traffic management requirements in context of HS2 construction: £50,000

##### 4.2 Funding requirement

Please break the total of producing the OBC into financial years and indicate how much is being sought from DfT. (Please express in £m to three decimal points)

|   | 2016/17 and before | 2017/18       | 2018/19       | 2019/20       | TOTAL         |
|---|--------------------|---------------|---------------|---------------|---------------|
| Funding sought from DfT large local majors fund |                    | £0.850        | £0.500        | £0.000        | £1.350        |
| Local funding                                   | £0.200             | £0.000        | £0.000        | £0.000        | £0.200        |
| <b>TOTAL</b>                                    | <b>£0.200</b>      | <b>£0.850</b> | <b>£0.500</b> | <b>£0.000</b> | <b>£1.550</b> |

*The total cost from 2017/18 onwards should match the cost quoted in 4.1 above*

Please confirm whether or not the funding sought from DfT can be capitalised (you may provide additional comments or qualifications as necessary)?

Funding can be capitalised in terms of the development and future implementation of a capital asset.

#### 4.3 Capital cost of scheme

Please provide your best estimate of the capital cost of the scheme (excluding the costs of producing an OBC above).

We recognise that the scope and cost of the scheme may be approximate at this stage, but if possible, please

- provide the cost of each option if more than one. And please express as a range if necessary.
- use outturn prices, but ensure that the current prices and inflation uplift can be separately identified.
- include and separately identify the preparation costs (between OBC and start of construction)
- include a reasonable estimate of risk/contingency but do not add an additional optimism bias uplift (reference WebTag guidance if unclear)

The following format would be helpful but is not mandatory.

|                          | Preparation costs<br>(between OBC and construction),<br>plus supervision<br>£m | Land purchase<br>£m | Construction Costs<br>£m | Traffic Management<br>£m | TOTAL<br>£m    |
|--------------------------|--|---------------------|--------------------------|--------------------------|----------------|
| Base cost                | £2.000   | £5.000              | £45.000                  | £2.500                   | £54.500        |
| Risk @ 20%               | £0.400   | £1.000              | £9.000                   | £0.500                   | £10.900        |
| Inflation @ 5% per annum | £0.660   | £1.660              | £14.920                  | £0.830                   | £18.070        |
| <b>TOTAL</b>             | <b>£3.060</b>  | <b>£7.660</b>       | <b>£68.920</b>           | <b>£3.830</b>            | <b>£83.470</b> |

#### 4.4 Affordability

|   |   |
|---|---|
| Is the likely total capital cost of the scheme (as detailed in 4.3 above) below the guideline threshold for your LEP at Annex A | N |
| Is the scheme in an area that has Devolution Deal/Gainshare funding?  | Y |
| Is the scheme on the strategic road or rail network?  | N |
| Is the scheme composed of elements that could be delivered independently of each other over a longer timescale?                 | N |

If you have answered YES to any of the above questions please provide additional explanation of why you feel the scheme is unaffordable other than via a bid to the large majors fund.

This scheme is not included within the West Midlands Devolution Deal funding and therefore cannot be delivered using that funding.

## 5. Management Case

### 5.1 Outline Business Case delivery

Please provide a timeline for the production of an OBC (a full GANNT chart is not necessary, just the basic milestones and dates) cross-referring if possible to the key tasks mentioned in 4.1 above

Timescales assume funding approval received as part of Autumn Statement 2016:

- Funding approval from DfT – November 2016;
- Undertake surveys – December to April 2017;
- Procurement activities for modelling, design and business case - December to February 2017;
- Build base SATURN model – February to September 2017;
- Develop and refine scheme options to include a preferred option and lower cost alternative – February to December 2017;
- Undertake full stakeholder consultation – January to March 2018;
- Undertake transport appraisal and complete 5 cases for OBC – March to August 2018;
- Complete internal Council and GBSLEP governance – September 2018;
- Submit OBC to DfT – October 2018.

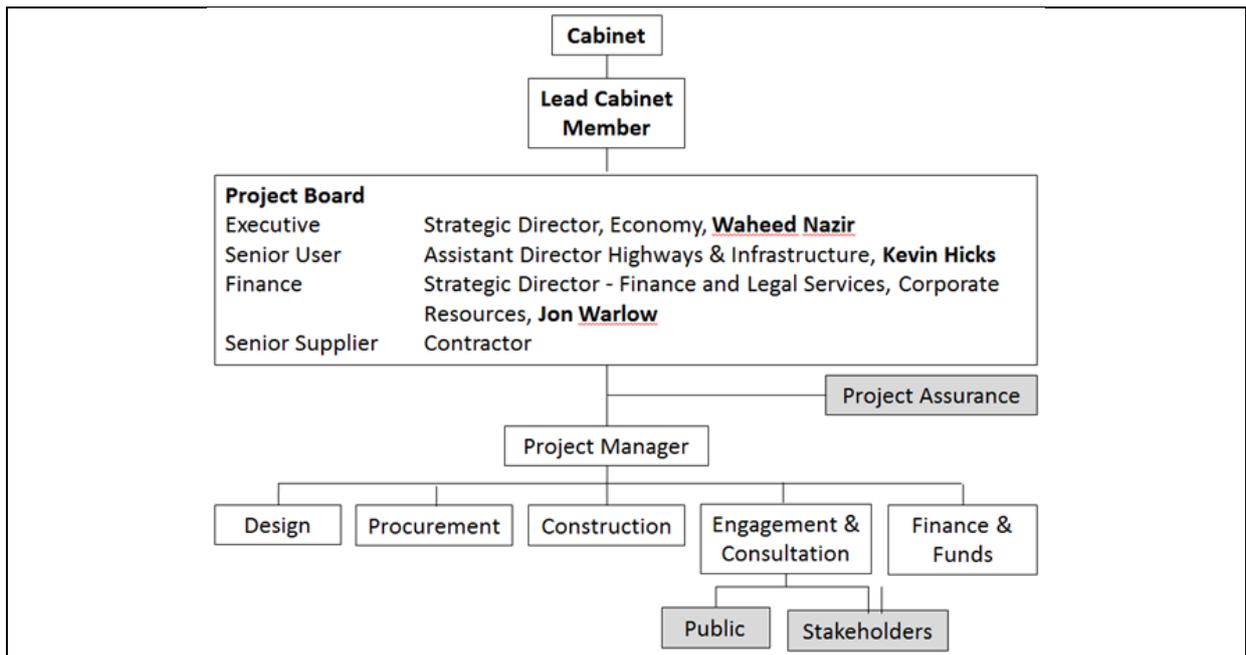
#### *5.2 Outline Business Case Governance*

Please set out the basic governance arrangements for production of the OBC, roles, responsibilities, resources etc.

Birmingham's Large Local Transport Scheme will be managed at a senior level by a Project Board consisting of the Executive, Senior User, Finance and Contractor. The Executive will be Waheed Nazir (Strategic Director, Economy) and the Senior User will be Kevin Hicks (Assistant Director Highways & Infrastructure). Finance will be represented by Jon Warlow (Strategic Director - Finance and Legal Services, Corporate Resources). These three Birmingham City Council Directors will be joined by a senior member of the contractor's team.

The Project Board will meet with predefined regularity and together they will be responsible for project control. They will make decisions within the scope of Cabinet approval and where appropriate decisions on any minor scope alterations. Any exceptional decisions, including decisions outside of the approved scope of the scheme, will be referred to the relevant Cabinet Member and if necessary the full Cabinet.

The Project Manager will manage the project, tracking progress against scope, time and budget. They will give direction to officers across the authority with a specific role in delivering the project, meeting with each area regularly to ensure any risks or issues are identified and providing challenge where needed. They will also report to the Board on a regular basis, escalating any issues for discussion or decisions outside of their remit.



Members of the project team will work together to deliver the project, ensuring a joined up approach. The engagement & consultation section of the project team will engage with key stakeholders as well as conduct public consultation. This will be used to inform decision making across the project.

Two well established officer groups within the authority, the Transport Delivery Group (TDG) and Transport & Street Services Group (TSSG), will provide project assurance. They will scrutinise delivery, finances and procedures, providing challenge to the Project Manager and Project Board and recommendations for improvements where appropriate.

### 5.3 Scheme delivery

Please provide an outline timeline for the delivery of the scheme itself (a full GANNT chart is not necessary, just the basic milestones and dates).

- Full funding approval assumed in Autumn Statement – November 2019;
- Complete procurement and mobilise project – January 2020 to October 2020;
- Construction and traffic management requirement – August 2020 to October 2020;
- Commence construction – January 2021;
- Complete construction – January 2023;
- Post scheme evaluation – March 2025.

Close cooperation and coordination with stakeholders will be sought regarding construction timescales as the scheme develops including with the following:

- HS2 Ltd due to the anticipated programme overlap with HS2 Birmingham Spur construction;
- Highways England regarding any M6 works; and
- Network Rail’s proposed improvements to the adjacent Birmingham-Water Orton rail corridor as part of the Midlands Rail Hub.

Transport for the West Midlands and emergency services will also be key stakeholders.

#### *5.4 Stakeholder support*

Please provide evidence of support for this scheme prior to the development of this bid, referencing activity from businesses, campaign groups, MPs etc.

It would be helpful to include any relevant links to news stories, campaign websites etc.

The scheme has widespread support from across the region, including:

- West Midlands Combined Authority;
- MPs (Liam Byrne MP, Shabana Mahmood MP, Jack Dromey MP);
- Highways England;
- Businesses (including Jaguar Land Rover), and;
- Public transport operators (e.g. National Express).

Letters of support from the above are attached in Appendix E.

There are key interfaces with adjoining residential areas, whilst severe capacity issues exist at Bromford Gyratory, which serves as a junction between the A47 Heartlands Parkway and the A4040 Bromford Lane. Such issues have been subject to recent correspondence received from Jack Dromey MP and are also a concern for local members, businesses and residents.

Examples of news articles and reports are available in Appendix F. These include coverage of the hundreds of complaints about the delays experienced at the junction being raised by Cllr Mahmood at full council; a city taskforce identifying the retiming of signals as a priority to reduce congestion, and; Cllr Hartley identifying measures to improve bus journey time through Bromford Gyratory.

The proposals will clearly require lane closures and other disruption to undertake the works which may temporarily cause increased queuing and longer journey times. Diversions may also be necessary, potentially of some distance due to the gaps between bridges across the Birmingham-Water Orton railway line. There will be some land take to allow widening of the junction on the north and south sides, affecting commercial premises.

Key stakeholders are:

- West Midlands Combined Authority
- MPs and Councillors
- Highways England
- High Speed Two Ltd
- Jaguar Land Rover
- National Express
- Network Rail
- Washwood Heath Site Landowners

### **6. Optional**

#### *6.1 RIS2 funding*

Would you like to flag this scheme for potential RIS2 funding if it is close to, and could possibly help the Strategic Road network? Y

If Y, please briefly describe, with any evidence, the scheme's potential to help the Strategic Road Network.

The scheme has considerable potential to help the SRN. The A47 and Bromford Gyratory play a vital role in relieving congestion on the Birmingham Motorway Box, offering an alternative route into and out of Birmingham between junctions 4 and 6 of the M6. As shown in Appendix B the A47 also serves as a formal diversionary route for the M6 as defined by Highways England. This is particularly relevant considering the ongoing requirement for major maintenance on elevated sections of the M6 and substantial repairs that require the closure of junction 6 (Spaghetti junction). Additionally the route will support major maintenance works to the A38 (M) Aston Expressway provisionally funded through the Local Growth Fund in respect of diversions.

## 7. Declarations

### 7.1 Lead LEP officer

I confirm that this bid has the full support of Greater Birmingham and Solihull LEP and hereby submit it to DfT on the LEPs behalf for consideration.

Name: Katie Trout

Position: Director - GBSLEP

Phone: 0121 303 9867

Email: [Katie.trout@birmingham.gov.uk](mailto:Katie.trout@birmingham.gov.uk)

Signed:

### 7.2 Section 151 Officer declaration

As Section 151 Officer for Birmingham City Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Birmingham City Council:

- has allocated sufficient budget to produce the Outline Business Case on the basis of its proposed funding contribution
- accepts responsibility for meeting any costs of producing an Outline Business Case over and above the DfT contribution requested, including potential cost overruns
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested

Name: Alison Jarrett

Signed:

Please email this completed form to:

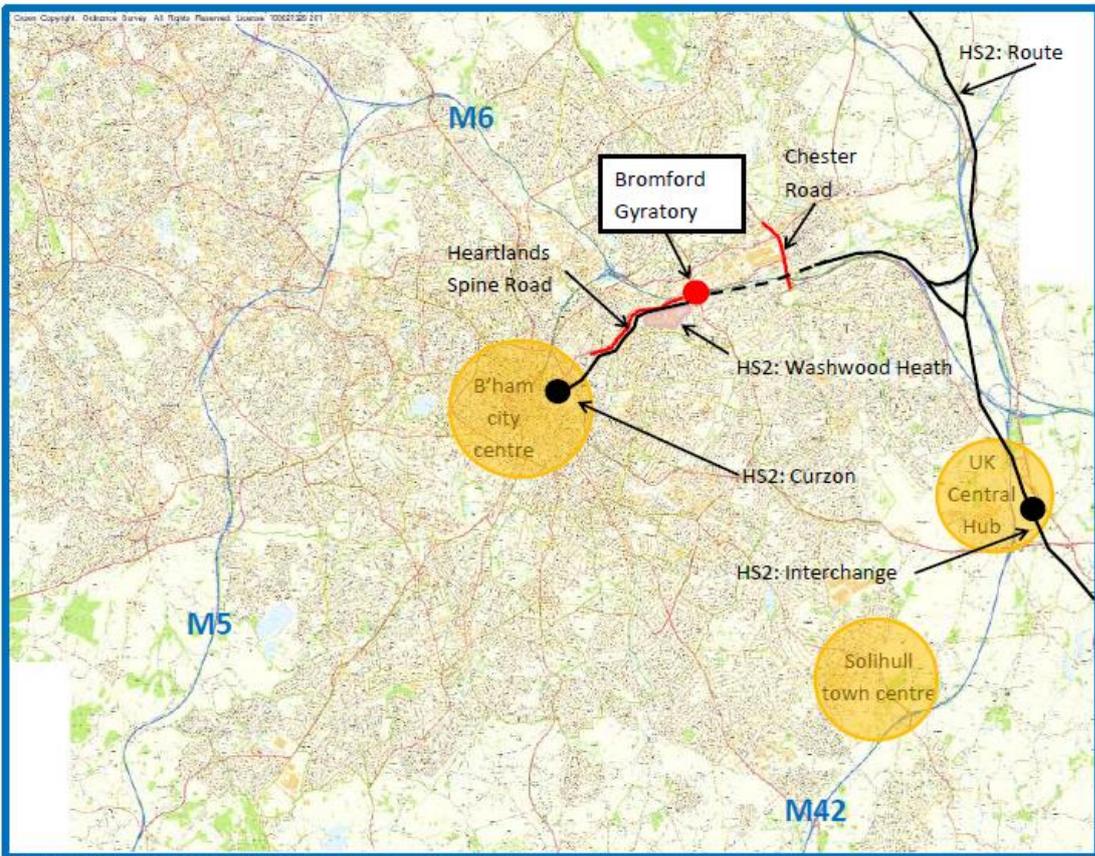
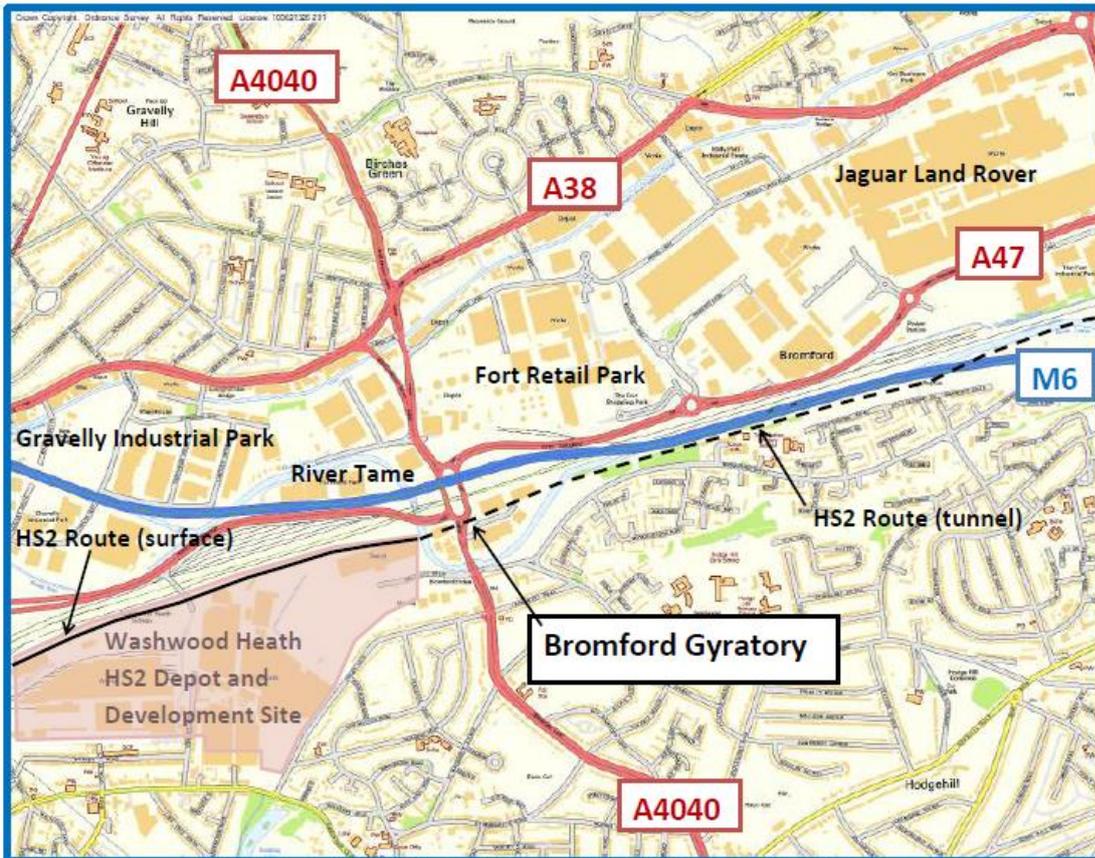
[LT.plans@dft.gsi.gov.uk](mailto:LT.plans@dft.gsi.gov.uk)

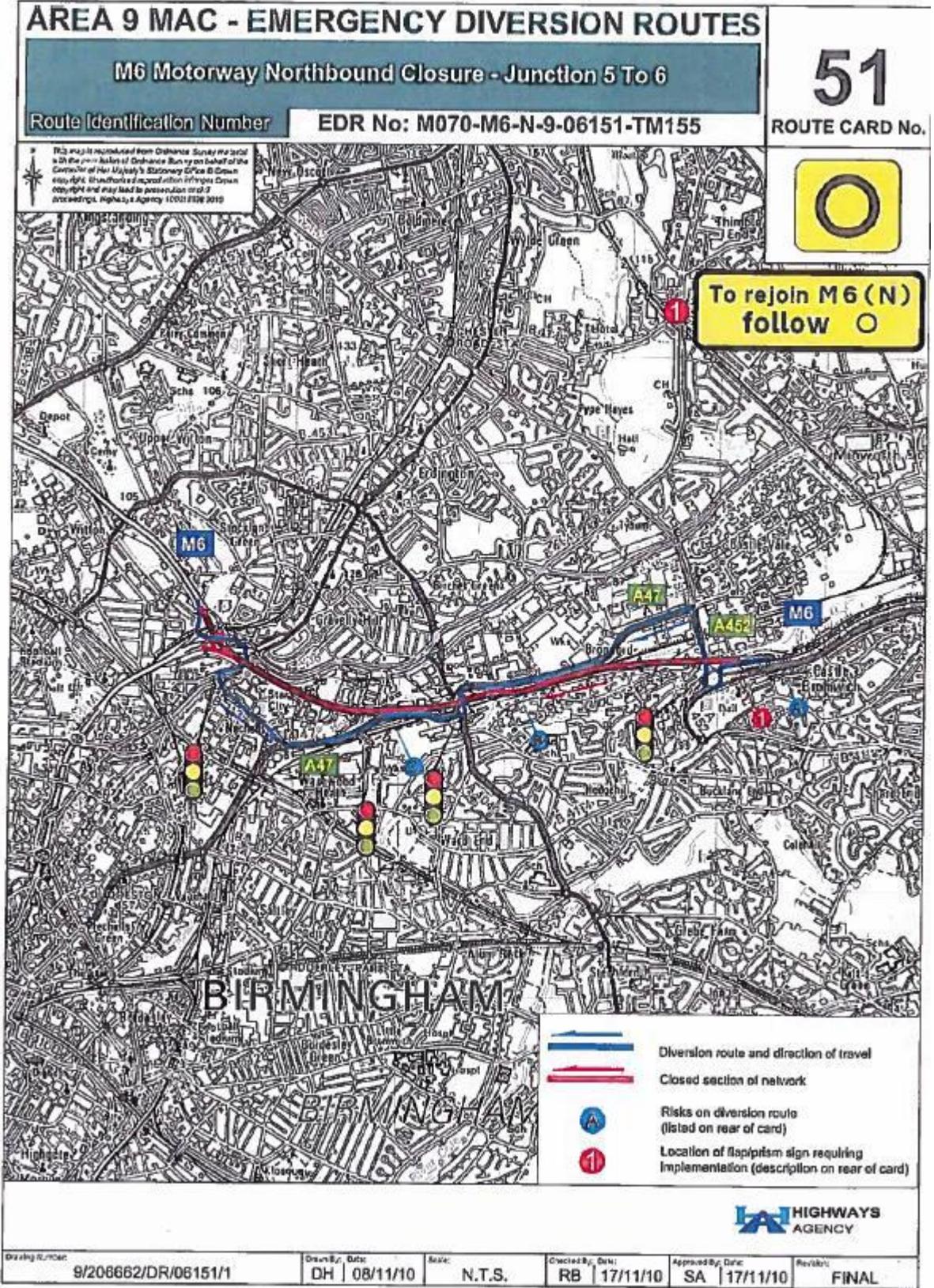
by **midday 28<sup>th</sup> July 2016**

*Please note that the size limit for attachments to a single incoming email to DfT is 20MB. If your bid is larger than this please submit separate emails, use a zip folder, or convert large files to an alternative format.*

## List of Appendices – Bromford Gyratory Large Local Major Transport Scheme

1. Appendix A – Location Plan
2. Appendix B – Highways England Diversionary Route Map
3. Appendix C – Proposed Scheme Option
4. Appendix D – Draft Washwood Heath Transport Access Study (*Please see separate attachment*)
5. Appendix E – Letters of Support (*Please see separate attachment*)
6. Appendix F – Press Cuttings





**Proposed Improvements to Bromford Gyratory**

The Long Term option was developed on the existing structure by creating two smaller at grade roundabouts at either end of the gyratory. The following changes are proposed to be made, as shown on the plans below:

Bromford Gyratory:

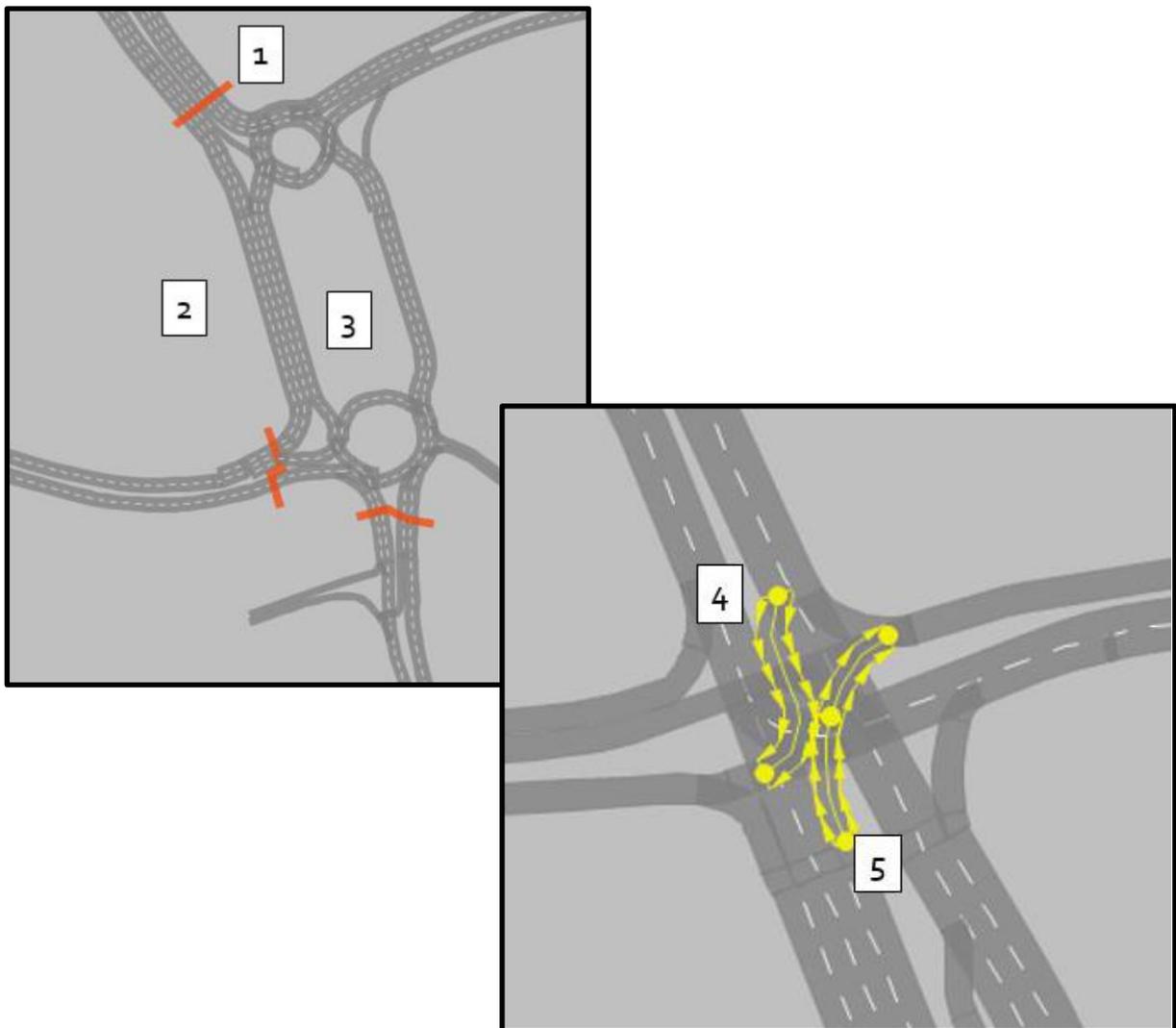
- 1 Re-modelled Bromford Gyratory and increased number of lanes on Bromford Lane to the North;
- 2 Reduces the number of signals – crossings shown are pedestrian demand only; and
- 3 Utilises existing bridge structure.

Bromford Lane / Wolseley Drive junction:

- 4 Removed yellow boxing – less queueing on Bromford Lane reduces need for this; and
- 5 Added pocket lanes for right turns, increasing throughput.

Along the corridor, traffic signal timings have been optimised.

Figure 1 : Long Term Changes at Bromford Gyratory (proposals 1-3), Bromford Lane, Bromford Road and Wolseley Drive (proposals 4 and 5)



**APPENDIX D – Draft Washwood Heath Transport Access Study**

*Please see separate attachment*

**APPENDIX E – Letters of Support**

*Please see separate attachments*

## Birmingham Mail, July 2015

<http://www.birminghammail.co.uk/news/midlands-news/pledge-tackle-traffic-gridlock-bromford-9611923>

M » News » Midlands News » Bromford

# Pledge to tackle traffic gridlock at Bromford Island

12:01, 8 JUL 2015 | BY NEIL ELKES

Councillor Tahir Ali said they are seeking Government money to fund 'simple measures' at busy roundabout

    **113** SHARES

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Birmingham's transport chief has pledged action to ease the horrendous congestion at a major roundabout.

Labour cabinet member for transport Tahir Ali said that he is bidding for Government funding to deal with traffic queues at the [Bromford](#) Island.

The busy roundabout, under the M6, links major routes north-south between Erdington and Stechford and east-west along the Heartlands spine road.

Coun Ali was quizzed over the congestion during council question time.

Coun Majid Mahmood (Lab) said that hundreds of people in his [Hodge Hill ward](#) have complained about the queues and asked what is being done to tackle the problem.

Coun Ali (Lab, Nechells) replied that they had initially planned to deal with the island during the construction of [HS2 rail line](#).

But now with a tunnel being built for HS2 under east Birmingham they have to make alternative plans.

He said: "We are looking at simple measures that can be taken to improve the traffic flow."

"No matter which way you approach it there seems to be gridlock, and at any time of day."

He confirmed that Birmingham is requesting funding from the Department for Transport.

Congestion in the area has been further worsened by long-running works at the nearby [Spitfire Island at Castle Vale](#) and [M6 slip road closures](#) bringing gridlock to major routes at peak times.

### Recommended in Midlands News



**MIDLANDS NEWS**  
Man jailed for pub 'execution' of dad of two challenges conviction »



**WEST MIDLANDS POLICE**  
Tax cheat Mohammed Suleman Khan who built 'Buckingham Palace' in Pakistan has appeal thrown out »



**A38 ASTON EXPRESSWAY**  
Will the Aston Expressway be open this weekend? July 22-24 »



**SUTTON COLDFIELD**  
Watch: Birmingham Dad punched on school run after honking horn »

## **Blog Page of Cllr Hartley, Ward Member for Ladywood**

<http://www.labour4ladywood.com/apps/blog>

Extract of post from 3<sup>rd</sup> November 2013, regarding issues around the No. 11 Outer Circle bus route which passes north-south through Bromford Gyratory.

Within a day of the official launch of the WMITA Adopt-a-Bus scheme, Ladywood's Cllr. Kath Hartley went out with the no.11a/c Route Manager on a 3.5 hour investigation of what needs to be done to improve the service.

Here are her observations:

Last week I went out on my adopted no.11c with Chris Crowe, the Route Manager. I enjoyed the trip and it opened my eyes to why the 11a/c service is sometimes so disappointing. I hope that my observations will be of help to NXWM, Centro and BCC and will bring about joint action to help the service to be smoother and more reliable.

I had already met Chris 2 weeks before when I went the whole 26 mile journey on the 11a with a Passenger Champion as part of Customer Services Week- a smooth and quick journey from 11.45am-2.15pm.

However, this time I didn't go round asking passengers what they thought about the service. We set off at 3.45-ish and I didn't get back until well gone 7pm- it's a 2.5 hour journey time in normal conditions. I sat with Chris on the top deck at the front and we noted down issues along the way that impacted on the progress of the bus. Issues such as:

- Cars parked awkwardly on the junctions along narrow streets meaning that either the bus or oncoming vehicles had to pause, pull in etc. Double yellow lines and enforcement needed.
- Vehicles parked 'illegally' on double yellow and single lines on busy roads- e.g. Dudley Rd., Soho Rd.
- Need for changes to traffic lights' timing
- Road works- emergency ones in particular where there is no opportunity for NXWM to discuss best ways of working with the contractor.
- Planned road works where contractor hasn't informed/approached bus operators, or hasn't gone along with recommendations about staged approach to works rather than doing the whole road at once, detours etc.
- **Sudden narrowing of the road, lack of proper road space allocation at congested junctions- e.g. Bromford junction where two lanes suddenly become one and there's no preferential treatment for the direction in which most traffic is going.**
- Disruption caused by traffic accidents, floods/fires, police incidents and so on.

## Congestion Task Force

<http://www.thefreelibrary.com/Task+force+finds+300+ways+to+cut+congestion+in+the+city+centre+.-a0140983128>

### Task force finds 300 ways to cut congestion in the city centre.



[Link/Page Citation](#) [G+](#) [0](#) [Like](#) [Share](#) [0](#)

**Byline:** By Paul Dale Chief Reporter

A task force set up to tackle congestion on Birmingham roads has identified almost 300 ways to ease traffic flow.

Suggestions include re-phasing the timing of traffic lights, the removal of changes to bus lanes, the introduction of high occupancy vehicle lanes and the remodeling of major road junctions.

The group, which was established last year by the city council, includes two councillors and representatives from more than 20 organisations with interests in transportation.

The group has also been considering ideas from members of the public. Some of the suggestions were simple to put into operation with little financial cost and have already been implemented as "quick wins" according to Neil Dancer, the council's chief highways engineer.

These included the re-timing of traffic signals on the A47 at Fort Parkway and Bromford Lane, re-timing of lights at the Moor Street Station and Priory Queensway pedestrian crossing and the re-phasing of traffic lights along Hagley Road.

Items under consideration include a proposal to place diamond markings along the Aston Expressway, in an attempt to dissuade drivers from queue jumping, and the development of red route parking restrictions along Kings Heath High Street.

More effective regulation of traffic lights at exits from the A38 Aston Expressway has been earmarked as a medium term project. Mr Dancer said the task force had met three times and had produced a snapshot of public opinion about the best ways to cut congestion.

He added: "This captures the views of a number of organisations and what they think about this very important issue. We will incorporate some of these ideas into work programmes because they will harmonise with initiatives we have in place anyway."

Mr Dancer said concerns raised about congestion ranged from the smallest cul-de-sac to major roads.

[paul\\_dale@nrm.co.uk](mailto:paul_dale@nrm.co.uk) Comment, Page 10

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## East Birmingham Prospectus

<http://www.birmingham.gov.uk/ebprospectusforgrowth>

### Section on improved connectivity, paras under Enhancement to the road network

14

#### Improved connectivity

High quality transport and communications infrastructure is vital to the creation of successful places. The City's vision for a connected transport network has been set out in the Birmingham Connected White Paper. This puts the user first, and aims to develop a network to meet the needs of people and businesses. Investing in a radically improved integrated transport system will realise the City's potential to support sustainable economic growth, job creation and linking communities.

The City will continue to work with the GBSLEP and partners including Government to ensure that this vision is realised.

#### Enhancement to the road network

Road improvements are underway at Chester Road Castle Bromwich, which will support the Jaguar Land Rover site with improved access onto the M6 at Junction 5, as well as providing improved connectivity for Castle Vale and other surrounding residential areas. Further improvements to include the A4540 Middle Ring Road, Stechford and others - significant priorities include Bromford Gyratory, Gravelly Hill/Kingsbury Road, and the A4040 Outer Ring Road/A5127 'Six Ways' junction.

Improvements to junctions on the Ring Road will assist in managing congestion allowing better access to the City Centre and better links with East Birmingham. Work at Bordesley Circus and Curzon Circle will be carried out during 2015 as part of a £7.3m programme. Ashted Circus, which will be redesigned as a signal controlled junction, will be implemented in 2016/17.

#### Public transport

We have identified public transport (especially Metro) as a priority to unlock growth more widely.

Funding is in place, through the Growth Deal, to extend Metro to Eastside, and additional funding is being sought to enable the development of the route through East Birmingham. Development funding of the order of £1.5m per annum will be required in the early stages of this work; once this is in place initial design work will commence, and will be used as the basis for public consultation.

The development and delivery of Metro can take over eight years from the start of outline designs to the end of construction and opening to service, given the requirements of the Transport and Works Act Order processes. A tried and tested delivery model has been put in place for the Metro delivery programme by Centro.

Funding of £50m has been identified, including £35m from the Growth Deal, for the Sprint (bus rapid transit) route along the A45 by 2021.

Proposals to provide new railway stations at Fort Parkway and Castle Vale/Castle Bromwich require the provision of significant additional rail network capacity at Water Orton and into Central Birmingham. The Camp Hill Chords, which would enable a link into Birmingham Moor Street Station, will cost in excess of £150m and therefore is likely to require funding by Central Government.

In the longer term, HS2 will free up capacity on the West Coast Main Line, which should facilitate improved local rail services at Adderley Park, Stechford and Lea Hall stations and enable the restoration of direct local train services across Birmingham City Centre to Perry Bar, Walsall and Wolverhampton.

Public transport integration including physical connectivity between modes, smart ticketing across networks and information integration will make movement easier and more affordable.

#### Birmingham cycle revolution

More than £24m has been committed across the City to deliver improved cycle routes. Two significant projects in East Birmingham will see enhancement of the route between the City Centre and Small Heath, and from the City Centre via Adderley Park and Alum Rock to Fox and Goose.

These routes will benefit from:

- Signage.
- Road markings including cycle lanes.
- Shared pavements.
- Improvements to side road junctions.
- New and improved signalised crossings.
- Reduced vehicle speeds including traffic calming.

#### Green Travel Districts

Two areas in East Birmingham have been identified as Green Travel Districts. These are Castle Vale/Castle Bromwich (including Jaguar Land Rover and surrounding employment areas) and the residential areas around Small Heath and Bordesley Green.

As Green Travel Districts, the areas will benefit from a range of interventions designed to put people before cars. The interventions will be developed to suit the different needs of each area but will cover:

- Behaviour based interventions associated with smarter choices.
- Infrastructure approaches ranging from DDA improvements (e.g. dropped kerbs) to major infrastructure investment (e.g. new public transport interchange).
- Spatial planning, transport policy, guidance and other governance tools such as low emissions zones or reduced car parking provision.