



WMCA Board

Date	14 September 2018
Report title	Congestion Management
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Report has been considered by	WMCA Programme Board - 31 August 2018 Strategic Transport Operators Group - 3 September 2018

Recommendation(s) for action or decision:

The WMCA Board is recommended to:

- (1) Agree the ten point plan summarised in 3.36 and the wider actions outlined within the Congestion Management Plan (attached at appendix 1) where they relate to it.
- (2) Agree the preferred option (option 6) for the development of the Regional Transport Coordination Centre (RTCC) (as per appendix 2) and next steps in development;
- (3) Approve the Road Safety Memorandum of Understanding (attached at appendix 3) and note the development of a Regional Road Safety Strategy being led by Coventry City Council; and
- (4) Publish the Key Route Network (KRN) global evidence report, 23 detailed corridor reports and approve the monitoring framework (executive summary attached as appendix 4).

1.0 Purpose

- 1.1 The purpose of this report is to agree the Congestion Management Plan (CMP) and supporting activities which will, together with all partner authorities and other transport agencies, facilitate the existing and future economic performance of the region with a growing demand for journeys.
- 1.2 The CMP builds on existing programmes of work from various partners to tackle congestion through providing additional capacity on the public transport and road networks. It brings forward new areas of work taking into account the additional powers of the WMCA in relation to the Key Route Network (KRN) and road safety.
- 1.3 The wider transport investment programme will bring positive economic benefits to the region but the need to manage congestion during this investment period is also critical given the scale of these works. All parts of the transport system will be affected limiting capacity, particularly on the road networks, during construction. These projects are not just being delivered through the WMCA's investment programme but also major projects including HS2, Highways England, Network Rail and major developments will have a cumulative negative impact on the transport network during their construction.
- 1.4 The recommendations contained in this report are to enhance the ability to coordinate programmes of work at multi-agency level that will manage congestion and enable more effective methods of mitigating the impacts of the delivery of the investment programmes on residents, businesses and visitors through a regional transport coordination centre supported by outcomes of 5G connectivity within the region.
- 1.5 Further, the recommendations also ensure that we understand the performance of the KRN, in particular congestion hotspots, as well as the relationship with the strategic motorway and trunk road network. This will include future demands as a consequence of growth and understand road safety issues. This will enable a strong evidence base for future investment requirements on the road network aligned with improving road safety as well as the growth plans of the partner authorities and the WMCA.
- 1.6 The CMP will rely on strong partnerships with the delivery partners to ensure an enhanced ability to coordinate planned and unplanned disruptions on the transport network. This will include the tools to enable communication of disruptions to residents, businesses and visitors to help them to avoid congestion but also to encourage more sustainable journeys to help reduce congestion.

2.0 Background

- 2.1 Road congestion is a difficult concept to define and measure precisely, often subject to an individual's perception of traffic conditions. Fundamentally congestion and reliability problems arise when road space demand starts to outstrip available supply. The most commonly used measures relate to speed and travel time based typically in the morning and afternoon peak demand periods.
- 2.2 The maps on pages 10-11 of the CMP in appendix 1 show the extent of the travel delay (minutes per kilometre) across the region's KRN. The KRN comprises of 7% of the local road network, carries 50% of the traffic and connects the region to the strategic road network (motorway and trunk roads). Understanding the issues of congestion on the KRN is therefore paramount to providing solutions to manage congestion.

- 2.3 The West Midlands' economy is seeing sustained growth and with this growth comes increasing demand for journeys on our networks. With record levels of traffic measured on the region's roads in 2016, this has impacted on travel during the peak periods.
- 2.4 Congestion is also a key concern for residents of the West Midlands with 86% of those surveyed identifying that they are not satisfied with the current levels. In addition, a recent study by the Greater Birmingham Chamber of Commerce has found that congestion is viewed by businesses as a major constraint citing staff punctuality, reduction in productivity and subsequent loss of revenue as key concerns.
- 2.5 This issue is also a key concern environmentally with road transport emissions responsible for approximately 80% of air pollution. This is harmful to health outcomes and over 1,500 early adult deaths within the region are attributed to poor air quality, with many more suffering long term chronic conditions. Managing congestion will support wider initiatives to improve air quality and public health outcomes addressing a further key concern for the region. Making sure that traffic is kept moving whilst reducing the number of miles travelled by vehicles on the road network will have a positive impact on air quality.
- 2.6 The WMCA and partner authorities have set out in its Strategic Economic Plan, its growth ambitions backed up with investment programmes around housing, infrastructure and skills development. By 2035 it is anticipated that 215,000 new homes and up to 506,000 new jobs will be created across the West Midlands. Based on current travel habits as listed in "Movement for Growth", this growth could add an additional 1.2 million trips on our transport system each weekday increasing the number of car kilometres by 34%.
- 2.7 Transport is a key enabler to growth and congestion left unmanaged, will have an adverse impact on the demands for additional journeys that come from that growth.

3.0 The Congestion Management Plan

- 3.1 The CMP is based around three key pillars:
- Improving capacity;
 - Improving efficiency; and
 - Managing demand.
- 3.2 The CMP considers all modes as part of an integrated transport system and focusses on the most efficient way of moving people (rather than vehicles) and goods.

Improving Capacity

- 3.3 The plan identifies current actions aimed at improving capacity of the existing public transport system and road space. The WMCA investment programmes are delivering improvements to public transport with tram extensions, bus priority measures and rapid bus corridors through Sprint. Through the WMCA's relationships with the DfT, rail operators and rail franchises, improvements to rail passenger services, rolling stock and new rail stations are also being brought forward.
- 3.4 HS2 whilst delivering a new rail service, is also unlocking capacity on existing rail networks and is a catalyst for wider connectivity projects.

- 3.5 Investment in the road network, through multiple funding sources such as the National Productivity Investment Fund (NPIF) are tackling congestion hotspots on the region's roads. These are being delivered by the local authorities alongside investments from Highways England on the motorway network.
- 3.6 Partnerships such as Midlands Connect are leveraging further strategic improvements to both road and rail. At a West Midlands regional level, there is a pipeline of projects on the KRN and other local roads that are being delivered which can cater for a range of journeys including cycling, walking and priority public transport measures where appropriate.
- 3.7 There have been a number of successes in the region to increase capacity at key locations on the road network. These include recently completed programmes at Holloway Head in Birmingham city centre, which has provided greater control of the junction through improved signalling and changes to the road layout which, as well as improving the capacity of the junction, will help manage diverted traffic during the Metro works along Paradise Circus and Broad Street. Similar benefits have been seen at completed schemes elsewhere around the region including local improvements on the A459, junction improvements with Coombs Road in Halesowen and the A45 Leamington Road junction.
- 3.8 In addition there have been successes to increase bus capacity through schemes such as the bus priority measures on Lode Lane, which has made the morning bus commute to Solihull town centre 8 minutes faster for 25,000 passengers, bringing a 5% rise in customers using these services.
- 3.9 Furthermore, the metro tram extension from Snow Hill to New Street Station, has seen an increase in tram passengers along this corridor from Wolverhampton grow from approximately 5 million in 2015 to 6.6 million following the extension opening in 2016, with forecasts of between 7 and 8 million for 2018.
- 3.10 Further planned capacity improvements on the transport network will deliver additional successes enabling more sustainable journeys as demand grows.

Improving Efficiency

- 3.11 Improving the efficiency of the road network through better management is critical to making the existing assets enable more journeys.
- 3.12 This includes programmes of work to deliver improvements to the existing traffic signal infrastructure and improve control at the respective traffic management control centres across the region, as well as road safety measures which are helping to reduce road traffic collisions and minimise congestion.
- 3.13 **Monitoring of the Key Route Network** - The legislation defines the KRN along with a schedule of roads and confers on WMCA functions in regards to promoting road safety, bus lane contravention, road traffic reduction and permit schemes. The development work for the KRN culminated in the production of a global evidence report which provides the baseline of the operational performance. This is further accompanied by 23 route reports setting out the issues and challenges in more detail.

- 3.14 The global evidence report and the accompanying route reports confirms that -
- There are major congestion and capacity problems accessing the strategic centres in the West Midlands;
 - Only 65% of drivers are satisfied with their travel experience;
 - The main concern for drivers is congestion and road maintenance;
 - During weekday peak time, 44% of drivers built extra journey time for delays/congestion;
 - The average weekday peak speed is 17.7mph;
 - There are 800'000 daily bus trips and congestion has decreased average bus speeds below the average network speed; and
 - Collisions and casualties on the KRN remain fairly consistent compared to an overall decline in Great Britain.
- 3.15 The KRN is an integral piece of the region's transport network and an area where TfWM have concurrent responsibility in some key aspects. TfWM together with the constituent authorities have defined a number of performance metrics for the KRN.
- 3.16 Monitoring the KRN is critical in terms of understanding causes of congestion, bringing forward relevant mitigating proposals and providing key information to inform additional measures needed to facilitate development and growth. Work has been undertaken to baseline a set of measures to understand current performance. Ongoing monitoring will provide relevant intelligence assist in developing further congestion mitigation strategies and inform growth programmes. This is particularly critical to supporting the development for infrastructure that supports the unlocking of land and delivery of the region's housing investment programme and industrial strategy.
- 3.17 The complexity of the network suggests a regional approach to monitoring is required; KRN routes cross local authority boundaries and the performance of these routes needs to be understood end to end, the network cannot be simply monitored and measured as part of a series of local authority networks and this will be particularly important for further investment programmes to improve the performance of the region's roads.
- 3.18 A number of performance metrics have been considered as part of this monitoring framework, these include:
- Collisions;
 - Congestion;
 - Asset Condition;
 - Roadworks/Planned works;
 - Preventable Disruption; and
 - Future impact
- 3.19 The Board is recommended to approve the monitoring framework in order to provide the evidence base needed for further investment programmes as and when funding becomes available through further government challenge funds or other sources. The executive summary is included at appendix 4.

3.20 **Road Safety** - Improving road safety and reducing collisions on our road network will also have a positive impact on managing congestion and delays. The local authorities and TfWM have developed a Memorandum of Understanding (MoU) which interprets how the powers contained within the West Midlands Combined Authority (Functions and Amendment) Order 2017 are to be applied. It sets out the principles of collaboration, governance structures to be established and explains the role of the West Midlands Strategic Road Safety Group (WMSRSG). The MoU also clarifies:

- the concurrent legal powers available to the WMSRSG;
- the functions and service it will oversee, including the associated financial implications;
- the respective roles and responsibilities the parties will have during the activities being delivered in support of the Regional Road Safety Strategy and Action Plans; and
- the collaborative working arrangements, required by the Mayor of the West Midlands, the constituent authorities and the partners in order to reduce the risk of road traffic collisions and casualties occurring in the West Midlands Combined Authority area.

3.21 The draft MoU is attached as Appendix 3 and is recommended for approval within this report by the Board. A Regional Road Safety Strategy is currently under development being led by Coventry City Council and will be presented to the WMCA Board for approval in due course.

3.22 In addition, a protocol is under development with West Midlands Police, Local Authority Traffic Managers and TfWM to enable greater coordination between the parties relating to the management of incidents on local roads.

3.23 **Regional Transport Coordination Centre** - As part of the devolution agreements, funding was allocated by the DfT to TfWM to develop a full business case (FBC) for the delivery of a Regional Transport Coordination Centre (RTCC). A report setting out the case for change and a Strategic Outline Business case was agreed at the WMCA Board in February 2017. The next steps were to review a range of options and recommend a preferred option to the Board in order to take forward the development of the detailed design and set out a delivery plan. This work has been overseen by a Steering Group drawing from the expertise within the partner authorities, TfWM, West Midlands Police and Highways England. Their role was to provide a professional steer and ensure visibility of the project within their respective organisations, ensuring that their views and interests were conveyed in the development of the FBC.

3.24 The RTCC, in terms of managing congestion and mitigating the impacts of planned events and infrastructure programmes, is intended to cover a range of outcomes -

- There is no single place where a global view of the network is visible making coordination difficult. The RTCC will provide a multi-agency view cross the whole transport network (traffic and public transport);
- Provide a joined up approach to planning infrastructure, major events and maintenance works;
- Support the day to day management of the network enhancing the resilience of the network operation, improving local control and enabling greater regional coordination;
- Regional coordination of major incidents affecting the network;

- Provide reliable and trusted information about the performance and disruptions to the network to residents, businesses and visitors in order to mitigate the impacts of congestion through improved communications
- Greater joint working with the police and the ability to link into the other blue light services where appropriate; and
- Improve the management of the network during current out of hours for current operations and to enable a 24/7 capability.

- 3.25 The Steering Group has considered and reviewed a long list of options and taken forward a shorter list for further investigation to identify the benefits to the region. The services provided by these options are identified in appendix 2.
- 3.26 The FBC has been drafted but before approving this business case, further work is required to undertake a detailed design on the preferred option including both technical and organisational design. This is to enable a further robust assessment of the capital investment costs and understand any revenue implications which will need to be managed.
- 3.27 The Steering Group has recommended Option 6 for approval by the Board as it provides the greatest benefits and outcomes in relation to managing congestion, coordinating planned events and dealing with major incidents within an indicative cost benefit ratio of over 5:1. The next steps will be to undertake the detailed design referred to above and a further report will be presented to the Board to approve the FBC prior to the implementation of delivery. This work will continue to progress with the input and oversight of the Steering Group.
- 3.28 Existing Urban Traffic Management Control Centres across the region will remain at the heart of managing local traffic networks and the RTCC will not change any of the partners' existing network management duties and obligations. The RTCC will provide operational support to each authority as part of a regionally integrated system, public transport oversight, additional network resilience and the means to provide coordinated communications relating to planned works and unplanned incidents to residents, businesses and visitors.
- 3.29 The RTCC will also be a key tool for managing the transport requirements of planned major events including the delivery of HS2 and wider transport investment programme, the 2021 Coventry City of Culture, and the Commonwealth Games in 2022.

Managing Demand

- 3.30 A strategy focussed on significant road building and highway upgrades could result in capacity increases that are quickly taken up by increased demand, leaving adverse impacts of increased traffic in terms of economic, environment and social costs.
- 3.31 Overall demand to move people and goods across the transport network will continue to increase as the population and economy grows. To prevent worsening congestion as a consequence of this growth, influencing demand for journeys and encouraging these to be made in a more sustainable way, taking advantage of the new capacity being delivered, will be a key element of congestion management.

3.32 This is also critical where we have constraints on the network during the delivery of the investment programme. Suppressing traffic demand will help keep the road network moving and facilitate bus movements to ensure that this remains a reliable alternative transport mode through road works. This is particularly important for those residents who rely on bus services for access to education, skills training and employment.

3.33 A travel demand management programme is currently being developed which will support the delivery of the investment programme with targeted campaigns to promote sustainable journeys which will focus on:

- **Re-mode** – encouraging the take up of public transport and walking and cycling as viable options where appropriate;
- **Re-route** – encouraging residents and businesses to plan ahead and identify different routes away from areas of congestion or road works;
- **Re-time** – encouraging journeys to be made outside of peak periods where possible to smooth demand; and
- **Remove** – encouraging employers to promote more agile working at different locations where possible, encouraging car sharing and other options which will remove journeys from the network.

3.34 Experience within the region has demonstrated the need for a well-planned communication programme to assist with mitigation of the impacts of infrastructure projects.

3.35 The communications, supported by the RTCC, will complement the travel demand programme to support behaviour change to more sustainable forms of travel under the principles set out above. This will need to be commensurate with the scale of the investment programmes within the region and delivered in partnership with Local Authorities, HS2, Highways England and Network Rail responsible for the delivery of the investment programme.

3.36 In summary the CMP 10 point plan will:

1. Tackle congestion hotspots through further investment in roads;
2. Push for greater traffic management powers, including moving traffic offences;
3. Invest in technology to help monitor performance and manage traffic ;
4. Deliver a regional transport coordination centre for all modes in partnership with local authorities, Highways England and West Midlands Police to manage incidents/major events;
5. Invest in road safety and work with the Police and Crime Commissioner to manage road incidents more efficiently;
6. Continue to build capacity into the public transport networks;
7. Invest in communication and information tools and become a trusted source of travel advice;
8. Coordinate the delivery of the transport investment programme and minimise impact through collaboration with the Resilience Partnership;
9. Make better use of the M6 Toll; and
10. Deliver a travel demand action plan to encourage residents and businesses to re-mode, re-route, re-time or remove some journeys.

4.0 Financial implications

- 4.1 There are no direct financial implications arising from the CMP work. Projects to build additional capacity on the network are funded through various funding streams which have or will be agreed as part of the relevant investment programmes.
- 4.2 Sufficient budget has been prioritised within existing Transport Development revenue funding in order to undertake the detailed design phase of the RTCC.
- 4.3 Bids for the capital investment for the RTCC have been made to the Transforming Cities Fund as well as to Midlands Connect through their Road Hub. The detailed design stage will identify any further capital investment requirements as well as any on-going revenue implications for which the intention will be to manage and prioritise within existing resources.

5.0 Legal implications

- 5.1 By virtue of the West Midlands Combined Authority (Functions and Amendment) Order 2017, the functions of the constituent councils specified in section 39(2) and (3) of the 1988 Act (duties of local authorities in relation to measures designed to promote road safety and studies into vehicular accidents arising, etc.) are exercisable by the Mayor in relation to the combined area.
- 5.2 As a network management authority the WMCA has powers under ss. 16 & 17 of the Traffic Management Act 2004 (2004 ACT), by virtue of the West Midlands Combined Authority (Functions and Amendment Order above), to make such arrangements as it considers appropriate for planning and carrying out the action to be taken in performing the network management duty.
- 5.3 The WMCA also has powers under section 23 of the 2004 ACT to enable monitoring of anything connected with the performance by the authority of its duties under ss.16 and 17, including the use of its road network by different kinds of traffic or the effects of that use.
- 5.4 Powers which are to be exercised by the Mayor only, are more particularly set out in art 22 of Part 7 to the West Midlands Combined Authority (Function and Amendment) Oder 2017.
- 5.5 The above functions are exercisable by the Combined Authority concurrently with the constituent councils.

6.0 Equalities implications

Managing congestion and ensuring that we keep the road network moving to accommodate growth and mitigate the impacts of infrastructure delivery will ensure that any implications for equalities are addressed. In particular, maintaining bus journey times will ensure that those residents that are dependent on this form of transport for education, skills and employment are not impacted.

7.0 Other implications

There are no other implications identified.

8.0 Schedule of background papers

1. Key Route Network Global Evidence report and accompanying 23 corridor reports
2. KRN monitoring Framework

9.0 Appendices

1. Congestion Management Plan
2. Options for the RTCC and benefits assessment
3. Road Safety MoU
4. Executive Summary – Key Route Network Monitoring Framework