

Agenda Item No.



Investment Board

Date	7 July 2017
Report title	Midland Metro East Birmingham to Solihull extension and Trams 2030 – Development funding
Cabinet Member Portfolio Lead	Councillor Roger Lawrence – Transport
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Report to be/has been considered by	Technical Appraisal Panel – 7/12/16 Investment Advisory Group – 16/01/17 WMCA Management Board – 22/06/2017

Recommendation(s) for action or decision:

The Metro Board is recommended to:

- 1 Note the progress being made on the early stages of development of the East Birmingham to Solihull (EBS) Metro Extension scheme;
- 2 Approve in accordance with agreed delegations, that funding of £9.5m be approved to progress the EBS scheme through the statutory Transport and Works Act Order (TWAO) process; and
- 3 Approve in accordance with agreed delegations, that funding of £0.7m be approved to progress the Trams 2030 Programme of Works.

1. Purpose

- 1.1 To provide an update on the development of the Midland Metro EBS extension and to seek approval for funding of £9.5m to progress the project through the TWAO process and into detailed design.
- 1.2 To provide an update on the Trams 2030 work stream and to seek approval for £0.7m to complete the next phase of detailed studies.

2. Background

- 1.3 In November 2015 the Government announced the West Midlands Combined Authority Devolution Deal which confirmed its support for the work of the (then) West Midlands Combined Authority Shadow Board to develop a delivery plan, encompassing Metro extensions from Curzon to Interchange and from Brierley Hill, in order to realise the full benefits of HS2.
- 1.4 The extension of the Midland Metro from Digbeth to east Birmingham- Solihull will play a key role in delivering the full potential for growth and jobs of HS2 and provide transformational benefits to areas with a persistent and high incidence of multiple deprivation by giving people access to jobs and services, linked to the Greater Birmingham and Solihull Local Enterprise Partnership (GBSLEP) training and skills agenda.
- 1.5 The EBS project is much more than a transport project. By aligning initiatives promoted by a wide local partnership in Education, Health, Employment, Housing and Education it seeks to transform the East Birmingham and North Solihull areas, breaking the people of this area out of the past and present embedded high levels of incidence of multiple deprivation. The Metro scheme is the key backbone for this transformation, not only providing local jobs in design and construction through the Midland Metro Alliance, but by linking people to major current centres for employment and the future jobs and growth hubs in the Birmingham City Centre Enterprise Zone and UK Central, and by providing a stimulus to development along the corridor.
- 1.6 In more detail, the 16.5km extension will link growing residential areas and key community destinations such as St Andrews, Bordesley Green, Heartlands Hospital and Meadway with existing and new growth areas including Curzon HS2, Birmingham City Centre office and retail districts, Paradise Circus/Arena Central developments and Brindleyplace/Five

Ways/Edgbaston to the west, and the NEC/Airport UK Central and HS2 Interchange Station to the east. The route is shown in the plan attached as Appendix 1 to this report.

- 1 .7 Initial work in 2015-16 on the project focussed on high-level engineering studies to develop the indicative route with which to test the viability of the project through development of an Initial Outline Business Case (IOBC). This work has been carried out in partnership with Birmingham City and Solihull Councils and the IOBC demonstrates a good value for money case exists for the project.
- 1 .8 The IOBC was approved by the WMCA Technical Appraisal Panel on 7th December 2016, and the Investment Advisory Group on 16th January 2017.
- 1 .9 The Trams 2030 programme acknowledges the need to consider Metro expansion in a programme approach, seeking to ensure that project provision aligns with the wider network ambition, thus providing better value for money across the programme. Its objectives are to;
 - Ensure changes are introduced in an efficient and economic manner taking into account whole life cost and maintenance issues as well as network expansion requirements.
 - To ensure efficiencies are introduced by standardising the way we design; build and hence maintain the infrastructure.

EBS Initial Outline Business Case

- 1 .10 The submission of the Initial Outline Business Case to government was approved by the WMCA Board on 30th September 2016 and it was subsequently submitted to DCLG. Minor comments have been received and a revised version requested, initially for the end May 2017, however this has been affected by the General Election. Guidance is being sought from the Mayor for the West Midlands on how he wishes to take forward the submission to the new Government.
- 1 .11 The IOBC was approved by the Technical Appraisal Panel on 7th December 2016 and the proposed funding of the overall project endorsed by the Investment Advisory Group on 16th January 2017.
- 1 .12 In summary, the overall scheme benefits have been assessed and a DfT Webtag compliant analysis has been undertaken, showing the following economic benefits:-
 - Present Value of Benefits £455.7m (PV, 2010)
 - Present Value of Costs £281.7m (PV, 2010)
 - Net Present Value £174.1m (PV, 2010)
 - Benefit:Cost Ratio 1.6:1
- 1 .13 As well as the normal Webtag analysis it is important to consider the wider economic benefits. Closer proximity between businesses also boosts productivity, since firms benefit from being nearer to one another, sharing ideas and knowledge, and having a greater pool of potential workers from which to recruit. Within key high-value, high-skill sectors, employer skill requirements are often highly specific, and hence improvements to

accessibility maximise the ability for firms to find workers that best suit their requirements. Thanks to the connectivity delivered by the scheme, more than 298,000 extra people will be within a 45-minute commute of the rapidly emerging business cluster at UK Central Hub.

- 1 .14 The EBS Metro extension is also a key component of the East Birmingham and North Solihull regeneration project with the improved connectivity it will provide being seen as vital to delivering the improvements in housing, education and health provision across the region. A study has been commissioned by Birmingham City Council to consider the opportunities along the corridor and the benefits of the holistic approach described in paragraph 1 .5 above and this will be fed into the ongoing business case development work set out in this report, and for which funding approval is sought.
- 1 .15 Agglomeration benefits associated with the Solihull Extension could also generate an additional 15% - 20% of transport user benefits, equivalent to between £85 and £110 million of productivity benefits. Adding the £85m & £110m to the PVB (£455.7m) would increase the Benefit:Cost ratio to around 1.9:1 to 2.0:1. Not only does the Solihull Extension contribute towards bringing firms together, the productivity benefits this generates improves the attractiveness of the area as a whole to invest in. Businesses gain a competitive advantage, attracting investment and jobs, and further supporting the ambitious development plans for Birmingham Eastside and UK Central Hub

Delivery Schedule

- 1 .16 The scheme is at an early stage in its development and is expected to take a minimum of 9 years to deliver, subject to the necessary statutory processes. However this means that it could be delivered just prior to the opening of HS2 in 2026, although there is no room for delay if this is to be achieved.
- 1 .17 The initial high level construction strategy indicates the possibility that the first section of the route, from Digbeth to Heartlands Hospital, could be constructed first and open for passenger operations prior to the entire route being completed. This would allow for revenue generation prior to 2026 and also mitigate to a degree any delays caused to the scheme by third parties in the complex construction environment in the corridor in which a number of initiatives to make the most of HS2 are planned in the same period.
- 1 .18 The next key milestone is to submit an application for Transport and Works Act Order (TWAO) powers to build, maintain and operate the extension; this is planned for September 2018.

3 Impact on the Delivery of the Strategic Transport Plan

- 1 .19 Expansion of Midland Metro is an important element in the development of the Strategic Transport Plan's Metropolitan Rail and Rapid Transit Network.

4 Wider WMCA Implications

- 1 .20 Expansion of Midland Metro, as part of an integrated Rail and Rapid Transit Network, will enable better connectivity of key centres and corridors in Birmingham/Solihull and the Black

Country with the wider Combined Authority area through effective interchange with suburban and regional rail services.

5 Recent Progress and Next Steps

- 1.21 Following validation that the IOBC demonstrates that a good value for money case exists for the project a review of alternative routes has been undertaken to substantiate the case for the route. This study compared the proposed route with alternative routes (some of which have been proposed historically) to provide robust evidence that the chosen alignment best serves the scheme objectives, and was carried out using the approved WMCA budget of £1.5m allocated for the last financial year. It demonstrated that the route being taken forward into the design phase is much more preferable to the other options explored in terms of operability, patronage, infrastructure requirements and capital and operational costs.
- 5.2 Funding of £9.5m is required in order to proceed with project development with the aim of submission of a TWAO application in 2018, working with local communities and partners to clarify and optimise the route through appropriate engagement and consultation, supported by appropriate engineering design and environmental work procured through the Midland Metro Alliance. This will be used to deliver the following elements which are required as part of the TWAO submission:

Design

Surveys, ground investigation, development of designs, drawings and development of a 3D model.

Environmental Statement

Scoping report, surveys and assessments for each of the required chapters – traffic and transport, noise and vibration, air quality, greenhouse gases, townscape and visual impact, historic environment, soils, geology and contaminated land, water resources and land drainage, ecology, land use and land take, policies and plans, socio-economics, electromagnetic fields and climate resilience – and compilation of final report.

Transport Assessment

PRISM and VISSIM modelling, major junction modelling and assessment, parking surveys and assessment, non-motorised users' surveys and assessment and compilation of the final report.

Land Referencing

Identification of land required temporarily or permanently, compilation of Book of reference, land valuations.

Business Case

The IOBC will be taken forward and developed into a draft Outline Business Case suitable for presentation in evidence in the TWAO statutory process supporting the need for the scheme.

Legal Support

Parliamentary Agents for TWAO compilation and submission, Negotiations and legal agreements with stakeholders.

Stakeholder Management

Liaison with key stakeholders, public consultation.

- 5.3 A full list of deliverables is attached as Appendix 2 to this report. At 16.5km, the EBS extension is the longest in the Metro Programme and so requires considerably more design work, surveys and associated work than on previous shorter extensions, and unlike the Wednesbury to Brierley Hill project WMCA needs to seek and secure the necessary TWAO powers. This is reflected in the £9.5m total required to progress to submission of the TWAO which is considerably higher than the cost of the development phase of Metro extension schemes previously considered in the WMCA governance process.
- 5.4 The Metro Board is recommended to recommend to WMCA Management Board, and subsequent WMCA Governance Boards in accordance with agreed delegations, that funding of £9.5m be approved to progress the EBS scheme through the statutory Transport and Works Act Order (TWAO) process.

Trams 2030 Programme

Work undertaken to date

- 5.5 The requirements for the whole life cost model has been completed and discussions have commenced with the supplier of the recently built Operational Cost model to determine whether it can be expanded to include the requirements for the whole life requirements.
- 5.6 The requirements for the power and operational model has been collected and a tender has been issued to build the models, the tenders have been returned and reviewed.
- 5.7 The existing capabilities of each system has been analysed and the gaps in the existing knowledge base highlighted.
- 5.8 An assumptions log for the Network has been developed.

Next Steps

- 5.9 To provide consistency across the individual projects Design Briefs based on the assumptions that have been developed will be produced and more in-depth Design Standards will also be developed to reduce design and construction costs in the future and ultimately maintenance costs.
- 5.10 Taking into account the existing systems and the requirements of the expansion programme a report for each system under consideration will be produced highlighting at which key output the system does not become fit for purpose, due to capacity constraints or due to obsolescence.
- 5.11 With respect to progressing the complex power modelling, software requires to be purchased and the models require to be built. The outcome will be a model that covers the whole of the future network that has been validated across the existing system. Once built the models will be used to develop a robust and efficient timetable and define the power requirements of the extensions.

- 5.12 Undertaking the operational model will provide the number of trams that will be required for each project and therefore how the tram fleet and hence the maintenance and Control systems should grow overtime.
- 5.13 The outline Operational and Control room migration strategy and the depot and stabling strategy will be produced during this phase of the studies however will be finalised following the completion of the modelling work. The cost of the above is estimated at £0.7m and the Board is recommended to recommend to WMCA Management Board, and subsequent WMCA Governance Boards in accordance with agreed delegations, that funding of £0.7m be approved to progress the Trams 2030 Programme.

6 Financial implications

Costs

- 6.1 The EBS project is at a very early stage of development and therefore only a high-level cost estimate has been prepared to support the economic appraisal. At this stage it is appropriate to consider the highest levels of “Optimism Bias” in appraisal and for definition of the funding envelope. The current estimated costs are:-

Estimated Outturn Cost	£508m
Optimism Bias (50%)	£227m
Maximum Outturn Cost	£735m

Funding

- 6.2 The Devolution Deal and HS2 Growth Strategy Implementation Plan identified this scheme as a high priority and earmarked £675m for it within the £8bn package of investment to provisionally be funded from two sources; £183.3m from Birmingham City Council’s Enterprise Zone funding and £492m from a separate ask to government. Whilst the maximum cost outlined above exceeds this figure, further work to refine the scheme and the efficiencies to be developed within the Midland Metro Alliance give a good level of confidence that the project can be delivered within the originally identified funding envelope
- 6.3 A firm funding profile needs to be agreed with Government via the formal business case submission. Although WMCA will be seeking to draw down Government funding in advance of any borrowing, this cannot be guaranteed. In continuing to develop the scheme, it is expected that WMCA will be required to cash-flow the early stage works of £9.5m until the Government funding is formally awarded allowing the scheme promoters to recover these sunk costs following the award of grant.
- 6.4 A key focus for the current stage is to work with DCLG to ensure that the new Government includes the project funding contribution set out in the 2015 Devolution Deal within its firm future spending plans, to be drawn down subject to obtaining the necessary TWAO powers and demonstrating value for money in a Final Business Case. Options for this are under discussion with local DCLG officials, and may involve one or more further Devolution Deals providing capacity for borrowing to cover expenditure across the programme.

- 6.5 Any further Devolution Deal funding mechanism will need to substantiate a “realistic prospect of funding” prior to WMCA submitting a Transport and Works Act Order (TWAO), as this is a requirement of the legislation. It will be a requirement for the full anticipated cost to be covered in any application.
- 6.6 For WMCA to meet the maximum outturn costs of £735m used for the outline business case an additional funding of £59.7m contribution would be required from other sources, reducing any WMCA borrowing requirements.
- 6.7 As a final option if WMCA prudentially borrows it is important to set out the implications of that borrowing on the Authority. Assuming WMCA is required to fund the full £59.7m the impact of the borrowing on the Authority would result in an £3.0m annuity loan payment over 40 years at an interest rate of 4%.
- 6.8 The Metro cash flows are a primary revenue source against which WMCA can secure borrowing thus reducing any potential burden or impact on the WMCA budget. The borrowing will be funded from a combination of devolution grant and local taxation uplifts and it is anticipated by bringing operations in house the cost of this debt can be funded through the increase in operating revenue accruing to the authority after financing required capital renewals.

7 Legal implications

- 7.1 Any legal issues are covered within the main body of this report

8 Equalities implications

- 7.2 The extensions of Midland Metro will facilitate fully accessible journeys and access to employment, leisure and education, and link to other transport modes.

9 Schedule of background papers

- 9.1 Report to WMCA Programme Board on 30th September 2016

10 Appendices

Appendix 1 – Route plan of EBS extension

Appendix 2 - List of Deliverables for EBS extension and Trams2030 projects