



Section 1.03 Applicant Details

Applicant Details			
Lead organisation:	TfWM		
Lead contact:	Peter Adams	Position:	Development Director, Midland Metro Alliance
Phone number:	07824 547505	Email address:	peteradams@centro.org.uk
Postal address:	Midland Metro Alliance 7 th Floor 1 Victoria Square Birmingham B1 1BD		
Local Authority area (base location of lead organisation)	Transport for West Midlands		
Ward:	Ladywood and Edgbaston		
Other organisations involved in project bid:	Birmingham City Council		

Section 1.04 Content of the Business Case

Content of the Business Case	
Section A	Status of Business Case Development
Section B	Project Description and Background
Section C	Strategic case and fit to Strategic Economic Plan Themes
Section D	Economic case – Options Appraisal
Section E	Commercial case – External Procurement (if appropriate)
Section F	Financial Case – Financial Analysis of the recommended Option
Section G	Programme Management Case – Achievability of Project Components
Section H	Recommendation
Section I	Appendices <ul style="list-style-type: none">➤ Full Business Case (for submission to DfT)
Section J	➤ Monitoring and Evaluation Plan

Article II. Purpose of the FBC

The key purpose of the FBC is to:

- Revisit the OBC and new assumptions (e.g. resulting from the procurement);
- Confirm that the recommended solution continues to optimise VfM; and,
- Establish that the management arrangements for successful delivery are in place.

The aim of the Full Business Case (FBC) Stage is to provide a mechanism for appraising projects against a comprehensive set of criteria for each of the Five Business Cases. The FBC Stage will revisit the assumptions and main findings from the OBC which may have changed for example due to procurement arrangements, but will also bring forward new evidence on issues such as procurement and management strategy.

Section A: Status of Business Case Development

Section A1: Status & Progress to-date

1. Present status of the Project. i.e. is the project at a fledgling/early stage, or is the project part-way through and needs additional funding or is it more developed than that?

The consideration by WMCA of Project Proposals from the Midland Metro Alliance to construct the Centenary Square and Edgbaston extensions represents a significant milestone for the innovative procurement method, which is a trailblazer for other future WMCA initiatives. Further detail on the Alliance is provided in section [6] of this report.

The Centenary Square and Edgbaston (Five Ways) projects have TWAO powers in place.

The Midland Metro (Birmingham City Centre, etc.) Order (SI2005/1794) was made in 2005 ("the 2005 Order") and the first part was implemented in 2010 between St Paul's and Grand Central, opening to passengers in May 2016. This Birmingham City Centre Extension has seen remarkable early growth in patronage, meeting business case forecasts.

The remaining two extensions from Stephenson Street to Centenary Square (the Centenary Square Extension) and from Centenary Square to 54 Hagley Road (the Edgbaston Extension) will complete delivery of the 2005 Order powers and are planned to be combined to secure efficiencies in delivery, subject to funding approvals for the Edgbaston (Five Ways) Extension.

For the section to Centenary Square £23.5m of Local Transport Board and Enterprise Zone funding is in place from GBSLEP to deliver the next stage of the works authorised by the 2005 Order, from Stephenson Street to Centenary Square. This will provide stops at the Paradise Circus and Arena Central developments.

In order to vary the route from that which had powers under the 2005 Order and to better integrate the tramway within the highway layout for the Paradise Circus development, an additional TWAO was sought. This was the subject of a local Public Inquiry between November 2014 and January 2015 and The Midland Metro (Birmingham City Centre Extension etc.) (Land Acquisition and Variation) Order 2016 (SI2016/545) has been obtained and has come into force ("the 2016 Order"). Advance utilities diversions, undertaken utilising the 2005 Order powers commenced in January 2015 and are planned to be completed shortly.

In the Growth Deal announcement on 7 July 2014 the Government allocated provisional funding of £59.8m to GBSLEP to extend Metro from Centenary Square along Broad Street to Hagley Road, Edgbaston, just to the west of Five Ways. This will enable the use of the full extent of the powers granted in the works authorised by the 2005 BCCE Order, by 2020/21.

Formal TC1 Project Proposals have been received from the Midland Metro Alliance for the two projects and approval is being sought to accept these via WMCA in March 2017.

Although funding allocated via the 2014 Growth Deal was devolved to GBSLEP, major projects costing more than £20m have been retained by DfT as part of a national portfolio of major local schemes. DfT holds the final approval on funding release once DfT officials, Treasury officials and Ministers are satisfied with the relevant Business Cases, albeit the strategic choice to invest should remain with the local LEPs. This business case, suitably updated, will therefore be submitted to DfT in March 2017 following WMCA approval. Dialogue is ongoing with DfT on the project since early 2016 and this business case has been shared with DfT to ensure their input to and shaping of the March version can help deliver a timely Final Approval for the Growth Deal funding from Ministers.

A Webtag compliant, Full Business Case has been prepared for this project for submission to the DfT and is provided together with this template form (see Appendix I1) in order to provide the detail required to facilitate a robust assessment and scrutiny of the project. Relevant sections of this are referred to in the below document.

More detailed information regarding the project is provided in Section B below.

2. Progress achieved prior to Bid. What has been achieved so far within the project?

To date key project achievements include:

- Transport and Works Act Powers to construct, operate and maintain are in place
- £59.8m of funding provisionally secured for Edgbaston phase (phase 3)

- £23.5m of funding secured for Centenary Square phase
- Detailed design of phase 2, 90% complete
- Preliminary design of phase 3, 70% complete

Section B: Project Description and Background

Please refer to the Initial Proposal Q.1 for project description – update if necessary

Birmingham City Centre sits at the heart of the West Midlands Metropolitan Area, a thriving city region with a rapidly growing population and economy. Efficient transport links are essential to support this growing region.

The area is currently served by a number of public transport modes and services. An extensive rail network across the region serves both commuter and long-distance passengers, with a mixture of through routes and services terminating in central Birmingham. Local bus services operate throughout the region, with national coach services available from Birmingham Coach Station. Additionally, Midland Metro operates regular tram services between Birmingham City Centre and Wolverhampton St. George's. Work has recently been completed extending the route to the redeveloped Birmingham New Street, which offers improved transport links between Birmingham, Wolverhampton, the Black Country and two major rail interchanges.

The area to the west of the city centre is an important commercial hotspot, which is set to grow with the addition of a number of new developments. However, access to this high profile growth area is restricted due to the lack of a high quality public transport link. An extension of the Midland Metro from Birmingham New Street station to Edgbaston via Centenary Square is therefore proposed (henceforth referred to as 'the project').

The project will extend the Midland Metro system from the stop on Stephenson Street (New Street station) along Pinfold Street to a stop in Victoria Square serving the Town Hall and civic centre. The route then passes along Paradise Street and Paradise Circus into Broad Street where it stops in Centenary Square. The alignment along Broad Street provides Metro stops at Brindleyplace and Five Ways. The tramway will then run through the Five Ways underpass and along Hagley Road to a new terminus on the south side of the road adjacent to the 54 Hagley Road office building. The scheme would provide a 6-minute frequency tram service, as today, between Wolverhampton and Edgbaston and subsequently would link HS2 Curzon Street and Moor Street Stations via the proposed Eastside Extension, for which TWA powers are being sought separately.

This project, together with the recent investment in the system to New Street station, a new tram fleet, proposed extensions to Wolverhampton and Birmingham Eastside and the arrival of High Speed 2 (HS2), will begin to deliver a world class integrated transport network for Birmingham and the West Midlands.

WMCA funding is required in order to progress the project into the delivery phase to meet the current schedule and be operational to Edgbaston by 2021.

Section 2.01 Strategic Case

Section C: Strategic Case for Change and fit to WMCA Strategic Economic Plan Themes

Section C1: Overview and Rationale

Please refer to the Initial Proposal Qs 2-4 for Overview and Rationale

2. Rationale

The scheme aims to sustain the growth and competitiveness of the economy of Birmingham and the West Midlands through improved connectivity, increased capacity, reduced congestion and by supporting the viability of existing and new developments (including at Paradise Circus, Arena Central, within Broad Street/Brindleyplace entertainment quarter and the office complexes in the Five Ways/Hagley Road area) by linking them to central Birmingham and the redeveloped New Street station and HS2. The West Midlands Combined Authority Devolution Agreement supports schemes that create further connections across the West Midlands, and help to realise the full potential of HS2.

Westside is a significant area of growth for Birmingham, yet its transport links are limited. The Edgbaston Extension will provide a direct link to the new stop at Birmingham New Street station, via Centenary Square. This will enable a direct and convenient connection between Edgbaston with two central rail interchanges, as well as the rest of the Metro network. The major attractors of the Library, ICC, Repertory Theatre and the Arena Central complex in Centenary Square, the entertainment spaces along Broad Street and at Brindleyplace, as well as Paradise Circus and Birmingham Museum and Art Galleries from the Victoria Square stop, will be brought onto the network.

Please see section A3 of the full Strategic Case for more details.

3. Benefits

The area around the Edgbaston Extension is undergoing significant transition. Whilst already home to a number of key cultural institutions, further developments are planned to enhance the economic, retail and social offer of the area. These proposals will bring significant and much-needed benefits to the Westside quarter of the city. However, without an efficient, high quality public transport link to enable people to access these developments, their full potential will not be achieved.

The benefits of the project will also extend beyond the immediate vicinity of the route. Improving the Midland Metro network will bring economic growth and new jobs to areas along the route of Line 1 and the city as a whole, whilst also enhancing the city's image externally. **The benefits of the project including transport, economic, social, environmental and passenger benefits are described further in section A4 of the full Strategic Case.**

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.

4. People, Place or Business based?

The project predominantly intends to benefit people by improved accessibility and connectivity within the city centre. However, it will also benefit businesses along the route, offering them improved access to a potential workforce and providing opportunities for expansion of existing businesses and the creation of new developments by providing a connection to HS2, existing heavy rail services and Birmingham City centre.

The 'Place' will also benefit by an improved public realm, reducing emissions, improved safety and security.

Section C2: Strategic Economic Plan

Please refer to the Initial Proposal Qs 5-7 for Strategic Economic Plan

5. SEP Priority Programme

The following areas of the WMCA SEP are supported by this project:

- **HS2 Growth:** A programme to maximise the benefits of the largest infrastructure project in Europe for a decade to drive economic growth across the Midlands.
- **Environmental Technologies:** Action to secure environmental improvements and contribute to low carbon sustainability and by doing so enable the growth of the environmental technologies sector.
- **Housing:** action to accelerate the delivery of current housing plan and enable an increase in the level of house building to support the level of growth envisaged in this SEP;
- **Skills for the Supply Chain and Employment for All:** a programme of activity to ensure that the skills of businesses are met and that everybody has the opportunity to benefit from economic growth;
- **Medical and life sciences:** action to enable the growth of the health and care sectors in ways that improves the health and wellbeing of the area, reduces demands on public services and enables economic growth;
- **Exploiting the economic geography:** making the most of the scale and diversity of the West Midlands geography to enable economic growth and community wellbeing.

Further details of how this project meets the needs of local policy context are described further in table 4.1 of the full Strategic Case.

6. WMCA Growth Objectives

The following areas of the WMCA's growth objectives are addressed by this project:

Economic Impact
<ul style="list-style-type: none"> • Economic Growth - To improve GVA for the region in line with the UK Average
<ul style="list-style-type: none"> • Business Competitiveness - To improve the productivity (GVA) of our businesses focusing on our growth sectors
<ul style="list-style-type: none"> • Increased employment rate in target growth sectors
<ul style="list-style-type: none"> • Accessibility - To improve the connectivity of people and business to jobs and markets
Social Impact
<ul style="list-style-type: none"> • Improved life chances for all including troubled individuals
<ul style="list-style-type: none"> • Health & Wellbeing - We will have reduced our health inequalities and improved the health and wellbeing of our population including mental health
<ul style="list-style-type: none"> • Employment & Skills - To improve skills levels of all ages so that people have the skills and qualifications to access jobs – Ignite (children and young people) / Retune (employability) / Accelerate (Skills for the future labour market)
Environmental Impact
<ul style="list-style-type: none"> • Sustainability - To improve competitiveness through energy and resource efficiency and stimulate new technology and business

Further details of how this project meets the needs of local policy context are described further in table 4.1 of the full Strategic Case.

Section C3: Public Service Reform

Please refer to the Initial Proposal Q. 8 for Public Service Reform.

The project will have a positive impact on the Employment and Skills PSR area, this is detailed in the economic and social benefits of section A4 of the full Strategic Case.

Section C4: Stakeholder Involvement

Please refer to OBC Qs 4-5 for Stakeholder Involvement.

4. Key Stakeholders and Interest Areas:

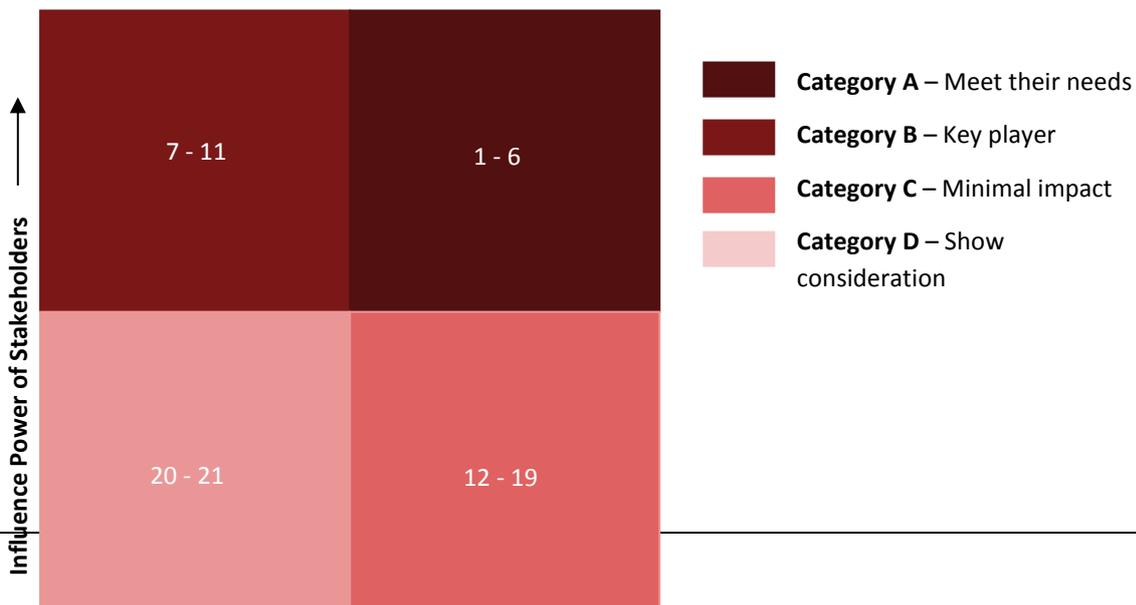
The key stakeholders relevant to the project are listed in the stakeholder map below and categorised by the following definitions. Further information on the key stakeholders can be found in full Management Case.

Category A - These are the stakeholders whose input is essential to the successful implementation of the project. TfWM may have entered into legal agreements with these stakeholders.

Category B - These are parties who will be directly affected by the project and those with whom TfWM has already or will endeavour to enter into a contractual relationship. These stakeholders include; utility companies, landowners and occupiers whose property/business will be acquired, parties who were offered undertakings by TfWM during the TWA processes.

Category C - These are parties who have expressed an interest in the project and whom TfWM will wish to keep informed on the progress of implementation. These stakeholders include; local residents and businesses, Midland Metro passengers, local interest groups, objectors and supporters to the TWA Orders; and parties adjacent to the route who were issued notices as part of the TWA process.

Category D - These are parties who have minimal impact on the success of the project. Current and potential users of the extension and Line 1 are also included in this category.



Interest of Stakeholders →

Category A	Category B	Category C	Category D
1 - WMCA	7 - Utilities	12 - Bus operators	20 - Retail units off route
2 - BCC	8 - Adjoining landowners	13 - Police	21 - Taxi associations
3 - GBSLEP	9 - Westside BID	14 - Emergency services	
4 - PCLP	10 - Councillors	15 - Amey	
5 - Arena	11 - Calthorpe Estates	16 - Occupiers of frontages	
6 - Operator		17 - Metro passengers	
		18 - Canal and Rivers Trust	
		19 - Residents associations	

5. Stakeholder Involvement

The Project Engagement Plan outlines what engagement work has already taken place and/or is ongoing and what is planned during the next year. It also addresses the communication with stakeholders and the public during the utility diversion works, which is being undertaken in advance of the main works, this is provided in appendices of the full Management Case. Further details regarding stakeholder engagement and communication can be found in section G6 of this case.

Section C5: Strategic Issues/Risks

Please refer to OBC Qs 6-9 for Strategic Issues/Risks.

6/7. Strategic Issues/Risks

The Midland Metro Alliance is committed to implementing a programme wide risk management culture and adopting best practice in the identification, evaluation and effective management of risks. The fundamental approach adopted by MMA in implementing this commitment is that risks should not be viewed as an add-on to the project management procedure but rather, risk management must be embedded into the project management procedure.

The MMA Risk Management Strategy, as set out in appendices of the full Management Case, requires a thorough assessment of risks with the objective of mitigating the risks and enhancing potential benefits by implementing action plans.

Please refer to the risk register provided in the full Management Case appendices which highlights the key strategic risks to the project and how they will be mitigated.

8/9. Project Dependencies and Constraints

Catenary Free Retrofit

The Edgbaston Extension will be constructed without overhead line equipment between Grand Central to Brindleyplace and Five Ways to Edgbaston tram stops. The project is therefore dependent on the successful completion of the retrofit of batteries to the existing Urbos 3 tram fleet.

WMCA has placed orders for the retrofit of battery equipment to the vehicles to enable “catenary free operation” along these sections of the route, within contract options in the 2012 Tram Supply Contract with CAF.

A programme for the retrofit operation has been developed, with the majority of the battery retrofits taking place at Wednesbury. The first of the trams to be retrofitted was sent back to Spain in January 2017 and will undergo routine tests prior to being sent back to Wednesbury in September 2017. The retrofit works for the remaining 20 trams will commence in December 2017 with the final retrofit being completed in January 2019.

The first tram will be tested and commissioned and accepted by December 2017. The final tram will be accepted by March 2019, which enables trams to be available for testing and commissioning of the first phase of the Edgbaston extension to Centenary Square and operation of that phase with testing and commissioning of the whole extension in accordance with the delivery schedule. The retrofit can be undertaken without impacting on Line 1/BCCE service levels. All of the trams need to be retrofitted to allow them to serve Centenary Square.

Development of Birmingham City University and other developments in Centenary Square – Land is required to permit the widening of the Paradise Circus carriageway to accommodate the new highway arrangements to support the Paradise Circus redevelopment and the proposed Metro alignment. This will require the acquisition of land from Birmingham City University (BCU)/School of Music. Birmingham City Council, a partner of the Paradise Development Joint Venture, has entered into a binding legal agreement with the BCU for the acquisition of the School of Music/Conservatoire, although this will not take place until a new School of Music building is completed in summer 2017.

Section C4: Alignment with a Broader Programme

Please refer to OBC Qs 10 for Programme Alignment.

No projects within the wider programme have suffered setbacks that affect this project.

3. Programme Alignment: Please complete the Prioritisation Template [attach as an appendix] – this will be used to evaluate this project against others within the programme and across other programmes

This scheme pre-exists the WMCA and as a consequence is included in the base programme. It therefore forms part of the key initial priorities of the WMCA delivery plan. For this reason the Prioritisation Template is not required.

Section 2.02 Economic Case

Section D: Economic Case - Options Appraisal

Section D1: Short List of Options considered

6. Please highlight any changes to the Preferred Option, Alternative Option and Reference Case option (see OBC Qs 11-15 for detail).

The scheme forms an extension to the recently opened extension from Birmingham Snow Hill to New Street station. The New Street scheme was developed in order to address the need for a high quality public transport connection to penetrate the city centre which integrated with the existing Midland Metro network. It was also necessary for the scheme to support Birmingham City Council's proposals for recasting the bus network and introducing increased pedestrianisation.

Prior to the decision to promote the New Street extension as the solution to these issues, however, a number of options were considered. These options fall into three categories: rail-based, bus-based and active mode schemes, further information of which can be found in section A2 of the full Strategic Case.

The resultant preferred option consists of the light rail scheme described at the head of this document and has not changed since the Outline Business Case. The need for the scheme, in preference to alternatives, was considered by the independent Inspector, confirmed by him and endorsed by the Secretary of State through the 2005 Order public inquiry process.

Section D2: Demand and Project Need

Please refer to OBC Qs 16-17 for Demand and Project Need

16. The Demand

The area encompassing Five Ways, Hagley Road, Brindleyplace, NIA, the Town Hall and the ICC is a thriving commercial, retail and business hub, yet it is in an area without a high quality direct public transport link to central Birmingham. The area is not connected to the redeveloped Birmingham New Street station for national rail, the proposed Curzon Street station for HS2 nor Birmingham International for Birmingham Airport. There is also no high quality direct public transport link for commuters to this area from the significant population in the north-west sector of Birmingham and the Black Country. Despite attempts to connect central Birmingham with the western side of the city via a pedestrian link, the traffic on Broad Street remains a substantial barrier to westward movement. In summary, the access to an attractive area for commuters, tourists, leisure travellers and business travellers is restricted due to the lack of a high quality, visible public transport link.

In addition, new demand has come about as a result of the regeneration of the Centenary Square area, including the Library of Birmingham, Arena Central (inc. HSBC HQ) and Paradise Circus, which is part of the Birmingham City Centre Enterprise Zone. The limited transport provision in this area of Birmingham to the west is a substantial barrier to the success of the cultural, commercial and social facilities on offer.

The existing major developments along the route, such as Centenary Square, Brindleyplace and Broadway Plaza, have stimulated new demand to access Westside from other parts of Birmingham, a trend that is set to increase as future developments progress. Currently however, the economic growth of these areas is under threat: there is neither a rail connection between the Westside area and the proposed Curzon Street Station (HS2) nor Birmingham International. Similarly, there is no rail link for commuters from the significant population north of Birmingham and the Black Country.

The Monitoring and Evaluation plan referred to in section J of this case sets out the outcomes the project is intended to achieve.

17. Market Testing

Table 2.2 presents the estimated Metro demand for the scheme compared with the Do Minimum. The Midland Metro annual patronage in 2015 was around 5 million passengers. After the opening of the Birmingham City Centre Extension (BCCE) on the 30th May 2016 the Metro Demand increased by 26.3% reaching an annual patronage estimate of 6.1m passengers. Following the introduction of door counters it has been identified that around 16% of passengers are not being recorded. Including this, the annual patronage is estimated to be around 7m passengers by end of 2016. This demand is estimated to rise to over 10 million in the forecast year 2021, with demand growth driven by the extension of Line 1 from Snow Hill to New Street station.

Year	Scenario	Annual Patronage (m)	Additional Demand (DS vs DM)
2021	Do Minimum	11.4	1.3
	Do Something	12.7	
2031	Do Minimum	11.6	2.6
	Do Something	14.2	

The above shows extending the Metro line to Edgbaston increases the patronage by 11% in 2021 and 22% in 2031. Additional information is provided within the full Economic Case.

Section D3: Additionality

Please refer to OBC Qs 18-20 for Additionality

The positive of the scheme extends beyond the local vicinity and includes benefits to the wider geographical location and on income within these areas, these additional benefits are described further in section B6 of the Economic Case.

Section 2.03 Commercial Case

Section E: Commercial case – External Procurement (if appropriate)

7. Please highlight any changes to the Commercial Case (see OBC Qs 21-28 for detail). Do they impact on any other aspects of deliverability?

The construction contract for the Birmingham Edgbaston Extension has been procured within the context of a number of Midland Metro extension projects being brought forward in a growing expansion programme. Following the government's decision in 2013 to devolve major project funding for transport to Local Transport Bodies and the subsequent Growth Deal and West Midlands Devolution Deal allocations work has been ongoing to develop future routes for the Midland Metro system and funding is either in place or expected to be in place to deliver the following extensions:-

- Edgbaston Extension (Grand Central to Edgbaston)
- Wolverhampton City Centre Extension (Pipers Row to Railway Station)
- Birmingham Eastside Extension (to link with HS2 station at Curzon Street, extending further to Digbeth)
- Wednesbury to Brierley Hill Extension
- East Birmingham – Solihull Tramway

In respect of previous projects, contractors have been procured through OJEU compliant processes on a project by project basis. The more positive expected funding position led WMCA to reconsider its strategy relating to the preparation and tender of such projects.

This led WMCA to review its strategy relating to the implementation of the Metro Extensions programme, considering a number of different contracting strategies:-

- Client design - construct only
- Design & Build
- Management Contracting
- Design Build Fund and Operate
- Prime Contracting
- Alliancing

Learning from the successful experience of clients such as Highways England, Network Rail and water companies such as Anglian Water, Alliancing was found to be the most appropriate model supporting the delivery of Value for Money through a collaborative approach. Project Alliancing was first used by BP for the North Sea Andrew Field in the 1990's, the project was delivered 6 months ahead of schedule for an actual cost £290m against an initial target of £450m.

WMCA has since undertaken a rigorous selection process and let an alliance contract with a single contractor and designer for a period of up to 10 years for the Midland Metro extensions work.

In this "Midland Metro Alliance" the designer, contractor and WMCA are working as an integrated team to develop and deliver the programme under a contractual framework where their commercial interests align with actual project outcomes. The MMA has provided a firm contract price to WMCA for this project.

For further information on alliancing, the Midland Metro Alliance and the procurement strategy that was implemented please refer the full Commercial Case which provides sufficient information to answer Qs 21-28 of the OBC.

8. If you've been to procurement, how has this impacted price?

Midland Metro Alliance (MMA) have priced the project in its current form, the final price of which is equivalent to previous pre-MMA estimates, through early contractor involvement and collaborative working MMA now have an opportunity to apply value engineering in order to reduce this target price further. The

MMA commercial model allows for sharing of the project risk through a shared pain gain mechanism incentivising each participant to work on a best for project basis and reducing the likelihood of overspend.

9. If you haven't, why not? What are your plans for doing so?

N/A

Section 2.04 Financial Case

Section F: - Financial Analysis of the recommended Option

Section F1: Costs and Cost Assumptions

10. Please highlight any changes to the Costs and Cost Assumptions (see OBC Qs 29-32 for detail).

Cost element	Status
Preparatory Costs	Actual costs incurred to December 2016 and forecast up to end March 2017.
Programme Management Costs	Forecast costs based upon the Programme Delivery team structure as set out in this Business Case
Utilities	C3/C4* cost estimates from utilities
Metro Infrastructure	Contractual Project Proposal from Midland Metro Alliance to WMCA as Owner in accordance with the Project Alliance Agreement

As recognised in WebTAG, the level of optimism bias reduces as the development of a scheme progresses. The Birmingham Edgbaston Extension scheme has undergone significant refinement, and evidence of costs is available from the current construction of the Midland Metro extension to New Street station.

WMCA has procured the works efficiently through its innovative Midland Metro Alliance, the focus of which will be drive efficiencies in development and construction through innovation and smarter working. The Midland Metro Alliance has provided a firm Project Proposal to the WMCA as Owner in accordance with the contractual provisions of the Programme Alliance Agreement. As a contractually committed price has been obtained, for the value for money appraisal an optimism bias value of 6% has been applied to the Midland Metro extension capital costs.

Section F2: Funding, Financing and Assumptions

11. Please highlight any changes to the Funding, Financing and Assumptions (see OBC Qs 33-38 for detail).

In preparing this business case, WMCA has carried out, through the Midland Metro Alliance, a thorough estimate of the costs for implementing the project in order to ensure it provides a comprehensive, robust and reliable basis for the consideration of the Financial and Value for Money (Economic) Cases. The estimated capital cost for the extension of Midland Metro from Birmingham New Street station to Edgbaston is shown in Table below;

Scheme element	Preparatory/ Advanced Works Costs	Base Scheme Costs	QRA	Total
Metro	28.1	102.0	15.5	145.6
Trams	3.6			3.6
Total	31.7	102.0	15.5	149.2

The scheme is proposed to be funded from devolved Local Transport Growth Deal Funding, and significant local funding contributions are also being made through the City Centre Enterprise Zone, developer contributions and WMCA Contribution as detailed in the table below:

	Prep/Adv	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Estimated Capital Cost (QCE)	31.7	26.4	28.0	36.2	24.1	2.8	149.2
Funded By:							
GBSLGF	7.6	0.0	0.0	0.0	0.0	0.0	7.6
BCC Enterprise Zone	11.5	5.8	0.0	0.0	0.0	0.0	17.3
Third Party Contribution	0.1	1.0	3.7	0.8	0.0	0.0	5.6
WMCA Contribution	3.5	9.5	12.0	9.9	21.2	2.8	58.9
DfT Funding	9.1	10.1	12.3	25.5	2.9	0.0	59.8
Total	31.7	26.4	28.0	36.2	24.1	2.8	149.2

Detail of the various funding sources is covered in the Financial Case C3.

The WMCA Contribution of £58.9m is funded as part of the HS2 Connectivity Package included in the WMCA devolution Investment Programme of £8bn. The Metro cash flows are a primary revenue source against which WMCA can secure borrowing, in addition the WMCA borrowing can be funded through the gain share devolution grant and or business rates supplement and growth.

Section F3: Cashflow

12. Please provide an updated Cashflow (see OBC Q.39 for detail).

The cash flow for the scheme are shown in the table below and the funding sources and detail of the various funding sources is covered in the Financial Case C3.

	Prep/Adv	2017/18	2018/19	2019/20	2020/21	2021/22	Total
Estimated Capital Cost (QCE)	31.7	26.4	28.0	36.2	24.1	2.8	149.2
Funded By:							
GBSLGF	7.6	0.0	0.0	0.0	0.0	0.0	7.6
BCC Enterprise Zone	11.5	5.8	0.0	0.0	0.0	0.0	17.3
Third Party Contribution	0.1	1.0	3.7	0.8	0.0	0.0	5.6
WMCA Contribution	3.5	9.5	12.0	9.9	21.2	2.8	58.9
DfT Funding	9.1	10.1	12.3	25.5	2.9	0.0	59.8
Total	31.7	26.4	28.0	36.2	24.1	2.8	149.2

Section F4: Benefits Profiling

13. Please provide an updated profile of the qualitative and quantitative benefits of the project (see OBC Q.41 for detail)

For qualitative and quantitative benefits please refer to the full Economic Case in the appendix.

Section F5: Affordability and Value for Money
14. Please provide evidence of affordability.

Where the WMCA prudentially borrows it is important to set out the implications of that borrowing on the WMCA through increased debt charges. Under the funding scenario in the table above, the impact of the borrowing on the WMCA is set out in the table below. The annuity loan from 2022/23 onwards would be based on £58.9m over 40 years at 3.5% and for appraisal purposes a 4% interest rate has been used before project completion.

£m's	2016/17 & Prior	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 onwards
Cumulative WMCA Borrowing	3.5	13.0	25.0	35.0	56.1	58.9	58.9
Debt Charges	0.1	0.5	1.0	1.4	2.2	2.4	2.5

* Interest assumed at 4%

In order to consider the level at which WMCA can borrow against future project cash flows, revenue forecasts have been prepared based on the Economic Case. The projected incremental revenue and incremental operating costs from 2021 to 2030 are summarised in the table below;

Cashflow and Revenue Forecast £m	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Incremental Revenue	2.7	3.1	3.5	4.0	4.5	5.0	5.5	6.1	6.7	7.4
Incremental Operating Costs	1.3	1.4	1.4	1.5	1.5	1.6	1.7	1.7	1.8	1.9
Incremental Net Revenue	1.4	1.7	2.1	2.5	3.0	3.4	3.8	4.4	4.9	5.5

15. Please provide evidence of Value for Money. For example, please provide a Benefit-Cost ratio or a Cost-Effectiveness indicator, or other means to demonstrate why this project is a good use of public monies

The scheme offers medium value for money with a BCR in the central case of 1.6:1. There is the potential for a phased opening with services operating to Centenary Square from 2019 to further strengthen the case. It is also expected that there will be benefits beyond those captured in the conventional benefits in the BCR, as the scheme will enhance the local economy through improvements in productivity, output and tax revenues.

As part of the wider Midland Metro programme of extensions, the Edgbaston Extension is expected to represent a high value for money scheme when considered as an increment to the Metro network including the Birmingham Eastside Extension (opening in 2023). In this very likely scenario the benefit cost ratio has been calculated as 2.5:1.

Evidence to support these BCRs is provided in detail in the full Economic Case.



Section 2.05 Management Case

Section G: Programme Management Case - Achievability of Project Components

Section G1: Project Plan (Extract of Key Milestones)

16. Please provide an updated list of Key Project Milestones and Gantt Chart (see [Appendix]) (see OBC Qs 42-43 for detail).

Key Milestone	Delivery Date
Completion of detailed design (Phase 2)	31/03/17
Commence main construction works (Phase 2)	19/06/17
Completion of utility diversions (Phase 2)	30/06/17
Final DfT funding approval (Phase 3)	31/07/17
Completion of detailed design (Phase 3)	19/07/19
Completion of utility diversions (Phase 3)	19/07/19
Commence main construction works (Phase 3)	22/07/19
Operational (Phase 2)	16/08/19
Operational (Phase 3)	21/12/21

Section G2: Risk Monitoring and Management

4. Please extract the details of the top 5 Risks from your project Risk Register:

Description of Risk	The risk is that construction methodology needs to be changed during construction
Impact (1-4)	4
Probability (1-4)	4
RAG rating (Red, Amber, Green)	Red
Risk owner	M. Holmes
Mitigation	Develop a robust construction programme with sufficient early contractor involvement and stakeholder consultation.

Description of Risk	The risk is the design continues to be changed between TC1 & TC2
Impact (1-4)	4
Probability (1-4)	4



RAG rating (Red, Amber, Green)	Red
Risk owner	T. Willetts
Mitigation	<ol style="list-style-type: none"> 1. Regular liaison with BCC 2. Agree a design freeze 3. Integrate council member within the alliance

Description of Risk	The risk is that additional complementary highway works are required
Impact (1-4)	4
Probability (1-4)	3
RAG rating (Red, Amber, Green)	Red
Risk owner	T. Willetts
Mitigation	<p>Early liaison with BCC</p> <p>Complete transport assessment and micro simulation (modelling the network and effect on highways) to define the CHW</p> <p>MMA to limit changes necessary due to introduction of the Metro</p>

Description of Risk	The risk is that utility requirements may change between TC1 and TC2.
Impact (1-4)	3
Probability (1-4)	3
RAG rating (Red, Amber, Green)	Red
Risk owner	W. Cockrell
Mitigation	<p>Develop detailed design based upon diversions carried out</p> <p>Consultation with stakeholders</p> <p>Modify diversions whilst detailed design is in progress</p>

Description of Risk	There is a risk that we encounter unknown utilities services or planned service diversions take longer to complete.
Impact (1-4)	3
Probability (1-4)	3
RAG rating (Red, Amber, Green)	Amber



Risk owner	W. Cockrell
Mitigation	GPR surveys. - complete. Conduct trial holes. Conduct clash detection using 2D & 3D models. Conduct utility diversions in advance of construction works. Conduct on site surveys pre-construction. Prepare as -built drawings

Please attach your full risk register as an Appendix – see full Management Case and Business Case appendix.

5. For all other risks not identified in Q. 16 (e.g. force majeure), please provide details of who will own the risk.

Owners of all risks associated with the project are defined in the risk register provided within the appendices.

Section G3: Freedom of Information

6. Please indicate whether any information in this proforma is considered exempt from release under Section 41 of the Freedom of Information Act 2000. Please outline why if so.

None

Section G4: State Aid Condition

17. Please highlight any State Aid issues that were not raised in the OBC (see OBC Q 46).

None

18. All applicants need to take steps to satisfy themselves that any WMCA funding approved does not amount to unlawful State Aid. Further confirmation to this effect will be requested at the Full Business Case stage. A declaration of compliance with EU State Aid regulations will be required prior to any WMCA funding being provided.

If your project is awarded funds from the WMCA it will be subject to a condition requiring the repayment of any WMCA funding in the event that the European Commission determines that the funding constitutes unlawful State Aid.

Please confirm your acceptance to this condition:

N/A

Yes

No

Section G5: Project Governance: Key roles & Responsibilities

7. Please set out the Key Roles in governing the Project, with named officers, which will oversee, deliver and close the project.

Project Lead – Michael Holmes

Development Manager – Tom Willetts

Construction Manager – Hilton Sanders

Engineering Manager – Andrew Kenchington and Jose Santos

8. Please outline any governance procedures that will support the successful delivery of the project

The Midland Metro Alliance governance process is detailed within section E2 of the full Management Case and is in line with the requirements of the Department for Transport (DfT) for the delivery of major capital projects to which it contributes funding. It also aligns with guidance from the Office of Government Commerce (OGC).

Section G6: Key Stakeholder engagement strategy

9. Please identify your preferred strategy for engaging key Stakeholders in making your project successful.

Midland Metro Alliance has prepared an overarching Engagement Management Plan tabled in the appendices of the full Management Case and which governs the programme-wide engagement. A project specific Engagement Plan has been prepared to complement the Engagement Management Plan and defines the Project Engagement Plan for Edgbaston and Centenary Square and is tabled in the appendices of the full Management Case. The Engagement Management Plan outlines how the Engagement Team will support the business objectives with 'high level' MMA communications objectives, highlights how key audiences (stakeholder groups and/or individuals) will be identified and managed and identifies the different methods of communications currently available or that are being planned and developed in order to aid engagement. It also highlights the potential communications opportunities and risks and sets out some recommendations for crisis communications planning, communications awareness raising and training requirements for the wider alliance staff members.

The Project Engagement Plan outlines what engagement work has already taken place and/or is ongoing and what is planned during the next year. It also addresses the communication with stakeholders and the public during the utility diversion works, which is being undertaken in advance of the main works.

Section G7: Communications Plan or strategy

10. Please identify your preferred communications strategy for Internal Stakeholders and External Stakeholders for reporting progress and gathering support.

This is covered by the response to Section G6 above.

Section G8: Issue Resolution Plan

12. Please extract the top 5 Issues from your project Issue log:

As part of the Midland Metro Alliance Risk Management Strategy issues are treated as risks with a probability of 100% and are managed in the same respect as risks in terms of mitigation and monitoring. Therefore any issues associated with this project are included in the risk register referred to in Section G2.

Section G9: Project Team

13. Please describe the experience of the project team and attach the team structure.

The Midland Metro Alliance has a strong project team with a co-located team of owner, designer and contractor non-owner participant staff bringing together world-wide expertise in a truly collaborative environment, with the skills and experience to deliver all aspects of the development and delivery of this project. The MMA has a robust, programme managed, delivery focused organisation in place, supported with the correct resources, skills and leadership. The team structure is provided within the Business Case appendices.

Section 2.06 Recommendation

Section H: Conclusion

14. Please state clearly the desired action that your Business Case supports. Please outline.

This business case is seeking confirmation of WMCA funding for this project through to completion.

Section 2.07 Section I: Appendices
I1: Full Business Case (for DfT submission)



Section 2.08 Monitoring and Evaluation Plan

Section J: Monitoring and Evaluation Plan

19. Please outline your proposed monitoring and evaluation arrangements to assess whether the project is on track to achieving its objectives and outputs, and to check to what extent the actual costs/benefits are matching the expected costs/benefits.

Note: The focus here is on economic/impact evaluation rather than on process evaluation. The project applicant will be responsible for the latter to ensure their project runs to time and budget. **Please refer to HMT Magenta Book for supporting best practice guidance on M&E.**

Within your M&E plan please highlight:

- The logic model or impact pathway (in graphical form) outlining how the funding you will receive will lead to the benefits that you have outlined.
- The key metrics on actual costs and benefits that you will measure over time and align them to the outcomes highlighted in your Business Case
- How regularly you propose to collect data to assess progress, and where you will source the data from
- How 'feedback loops' will be built in to your M&E plan to ensure that lessons learnt along the way are built back into the project plan
- Who will be responsible for ownership of the M&E aspects of your project

A monitoring and Evaluation Plan has been developed (based on DfT Guidance) that answers the above bullets, this is included in the appendices of the full Management Case for reference. Due to the interconnectivity of the cross city route between Edgbaston and Eastside the Monitoring Plan will assess these schemes as being combined. The draft has been discussed and agreed with the relevant DfT officials and all comments have been incorporated.

Section 2.09 Declaration

To be completed by the Business Case Applicant:

I hereby confirm that the information provided in this form is complete and, to the best of my knowledge, accurate.

I acknowledge that the West Midlands Combined Authority may seek to verify the information set forth herein, and agree to provide further information where it is available.

I acknowledge that any funding agreement reached with the WMCA is provisional until approved by the West Midlands Combined Authority Board and confirmed in writing.

Signed

Date

Name

Position

Organisation/Company

Section 2.10 Certificate of Approval

To be completed by WMCA staff:

I have read and understood the information provided by the applicant in this **Initial Proposal/Outline Business Case/Full Business Case** and confirm that the application has been evaluated in accordance with the West Midlands Combined Authority Assurance Framework and Project Lifecycle.

<p>Appraisal Panel</p> <p>Decision: Approve / Reject</p> <p>Signed.....</p> <p>Date</p> <p>Name.....</p> <p>Position.....</p>	<p>Investment Advisory Group</p> <p>Decision: Approve / Reject</p> <p>Signed.....</p> <p>Date</p> <p>Name.....</p> <p>Position.....</p>
<p>Management Board</p> <p>Decision: Approve / Reject</p> <p>Signed.....</p> <p>Date</p> <p>Name.....</p> <p>Position.....</p>	<p>Board</p> <p>Decision: Approve / Reject</p> <p>Signed.....</p> <p>Date</p> <p>Name.....</p> <p>Position.....</p>

This document has been prepared only for Wolverhampton City Council and the other Constituent Councils of the proposed West Midlands Combined Authority and solely for the purpose and on the terms agreed with Wolverhampton City Council. We accept no liability (including for negligence) to anyone else in connection with this document, and it may not be provided to anyone else. If you receive a request under freedom of information legislation to disclose any information we provided to you, you will consult with us promptly before any disclosure. © 2016 PricewaterhouseCoopers LLP. All rights reserved. In this document, "PwC" refers to the UK member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.