

MetroBus: Progress Update

Purpose

1. To provide an update on MetroBus progress, including the Quality Partnership Scheme (QPS) and to advise the Committee on increased forecast cost pressures. To recommend to the promoting local authorities that increased budget provision is made in response to increased forecast outturn costs.

Project Overview and Update

2. In October 2010 the Department for Transport (DfT) issued revised guidance on the funding of major transport schemes. Schemes across the country with well-developed business cases were invited to bid for major scheme funding. The new competitive major scheme process required that the scope of these schemes be reduced to find savings through changes to design and technology and that the local contribution was also increased. The three MetroBus projects outlined below were invited to submit business cases under this new competitive process.

Ashton Vale to Temple Meads (AVTM) Project

3. The AVTM Project had previously received Department for Transport 'programme entry' status on 17 March 2010, when it was invited to re-submit for DfT funding under the newly competitive funding process. Following confirmation of re-entry into the DfT major scheme programme in December 2011, powers were sought to build and operate AVTM through a Transport and Works Act Order (TWAO).
4. A review of AVTM was initiated by Bristol City Council in 2012, and there followed a change in the alignment of the scheme to avoid use of Prince Street Bridge and Harbourside, by using a Cumberland Road alignment. Following confirmation of the Transport and Works Act Order and planning permission for the revised route alignment via Cumberland Road, AVTM was granted Full Approval on 16 September 2014. DfT confirmed a grant contribution of £34.508m towards the current scheme budget of £54.546m.
5. The objectives of AVTM are as follows:
 - to extend choice of transport modes for all, in particular for private car drivers, to encourage a shift to public transport;
 - to promote sustainable development by providing high quality public transport links; and
 - to promote social inclusion by improving access to employment, retail, community, leisure and educational facilities.
6. There are four main sections of construction on AVTM which include; a new Busway from Long Ashton P&R to Cumberland Road; refurbishment of Ashton

Avenue Swing bridge; construct of a second Bathurst Basin bridge; and priority routes on Cumberland Road and within the city centre. The construction sections, contracts and programme are summarised as:

- Contract 1 has three sections: 1- Ashton Vale; 2- Skew Bridge; 3- Paxton Drive to Create Centre, and Cumberland Road. The main contractor is Balfour Beatty. Completion of construction is forecast for July 2017
- Contract 2 is refurbishment of Ashton Avenue Swing Bridge, by Volker Laser with completion of construction forecast as January 2017
- Contract 3 is construction of a new bridge alongside the existing bridge at Bathurst Basin, by Volker Laser, completion of construction forecast as April 2017
- Contract 4 is various works on Cumberland Road, and around the City. This is led by Bristol City Council's Engineering Design, completion of construction is forecast as May 2017.

7. The key challenges and risks facing the project are:

- Ashton Vale: flood plain with poor ground conditions;
- Skew Bridge: adjacent/over railway, Network Rail;
- Paxton Drive to Create Centre, and Cumberland Road: non- inert material removal, and flood defence needed;
- Ashton Avenue Swing Bridge: 100+ year old structure in need of refurbishment;
- Bathurst Basin bridge: securing land and rights; and
- City: fitting new infrastructure into busy, competing spaces.

8. Potential pressure on the risk element is shown in the table below. This shows risk at three different probability levels as follows. The mid-point risk shows a 50% probability of all risks occurring and is the recommended risk probability used by DfT.

	Forecast Outturn Cost		
Scenario	S1 – Lower Point (£m)	S2 – Mid Point (£m)	S3 – Upper Point (£m)
AVTM out-turn	54.546	55.204	56.140
Potential cost pressure	0	0.658	1.594

9. AVTM recent achievements are:

- Ashton Vale bridges have beams over, busway drainage network complete, carriageway started
- Portbury Freight Line 'Skew' Bridge piling complete, ramps and bridge steel initiated
- Ashton Avenue Swing Bridge fully encapsulated and 80% of repairs and painting complete
- Bathurst Basin Bridge started with Commercial Rd cycle route
- First stops, shelters and priority lanes in City section benefitting background bus services in advance of launch

10. The largest contract started on-site in June 2015 and is forecast to complete by summer 2017. Significant risks and additional costs have been incurred and the project team are working to manage and minimise the impact of remaining budget pressures. Completed bus stops, shelters and bus lanes in the City section are already benefitting background bus services in advance of MetroBus service launch.

North Fringe to Hengrove Package (NFHP) Project

11. Following confirmation of programme entry into the DfT major scheme programme, NFHP gained planning approval in August 2014 (BCC) and September 2014 (SGC). DfT granted full approval in March 2015 and confirmed a grant contribution of £51.1m towards the current scheme budget of £101.8m.

12. The objectives of NFHP are as follows:

- to support a buoyant economy, improve quality of life for sub-regional residents and improved local and national travel;
- to encourage the shift to new forms of public transport and realise the associated environmental, climate change, safety and health benefits;
- to tackle congestion and therefore the economic, environmental and health damage associated with it;
- to enhance the opportunities for regeneration and sustainable growth through the linking of areas of economic and housing expansion; and
- to promote equality of opportunity and security through improved connectivity to education, employment, leisure, health and retail facilities.

13. The NFHP route is approximately 40 kilometres in length and includes 2 new bridges, 2 replacement bridges and a new road. It includes public realm and public transport capacity improvements within Bristol city centre, a new bus only junction and southbound bus lane on the M32. The project is being delivered by 7 contractors across 18 construction contracts.

14. A number of risks have materialised on this project, these include protestor action and requirements for additional security; and additional design, planning and contract management costs. These risks are now being seen as budget pressures. Over the next three months a number of key milestones will have passed, with the East Fringe ring road, Bradley Stoke Way and M32 Junction either completing or nearing completion, with other contracts being further advanced. Therefore the remaining risks will be clearer with greater forecast certainty.

15. The key challenges and risks still facing the project are;

- unforeseen utility diversions and poor ground conditions;
- changes to traffic management arrangements causing delay; and
- further design changes.

16. Potential pressure on the risk element is shown in the table below. This shows risk at three different probability levels as follows. The mid-point risk shows a 50% probability of all risks occurring and is the recommended risk probability used by DfT.

	Forecast Outturn Cost		
Scenario	S1 – Lower Point (£m)	S2 – Mid Point (£m)	S3 – Upper Point (£m)
NFHP out-turn	112.1	113.3	115.3
Potential cost pressure	10.2	11.4	13.4

17. Works started in summer 2015 and construction work on NFHP is now well underway. The bridge for the M32 bus only junction and the Church Lane Bridge over the ring road were lifted into place and a number of other sections are now complete. Church Lane Bridge and Curtis Lane Bridge over the railway on the Stoke Gifford Transport Link are nearly complete. Work on the City Centre is continuing with major piling work that started in October and work on the M32 South Bound Bus Lane also started in early October. Advanced works on Hartcliffe Way are just starting with the main bus lane works starting in January.

18. Work is progressing on Bradley Stoke Way. However, another uncharted gas main has resulted in delay to the full re-opening of the Woodlands Lane Junction until Christmas. Regular updates on progress are being given to the community in the Bradley Stoke Journal. The implementation of a one way system on Stoke Lane/Coldharbour Lane is now in place and works have now started on the Stoke Lane/Frenchay Park Road junction. The impact on the overall programme and costs are being assessed.

19. Some delays have been experienced through design approvals, discharge of planning conditions, utility diversions and, traffic management approvals but the project team is working with the affected contractors to mitigate any impact. Construction works are due to complete in Autumn 2017.

South Bristol Link (SBL) Project

20. Following programme entry on 30 November 2011, planning permission was granted for SBL by both North Somerset and Bristol City Councils in 2013. A Public Inquiry in 2014 gave the scheme the required compulsory purchase order(s) and side road order(s) powers. DfT granted full approval in March 2015 and confirmed a grant contribution of £27.637m towards the current scheme budget of £46.978m.

21. The objectives of SBL are to **facilitate regeneration and growth** in South Bristol; **reduce congestion** in South Bristol and adjacent areas of North Somerset; and to **improve accessibility** from South Bristol to the City Centre and to strategic transport links and Bristol Airport.

22. Save for the A38 to railway section where earthworks are now complete and kerbing has begun, all other the main sections of construction on SBL are now 95% complete with final surfacing underway, this includes:

- 4.5 km of new road and cycleway under construction;
- 0.5km bus link to Park and Ride at Long Ashton under construction; and
- Construction of new under bridge carrying the mainline railway completed in July 2016.

23. The key challenges and risks facing the project are:

- Liability for delay costs associated with the Network Rail bridge to be agreed;
- Late additional costs being submitted by bridge contractor require resolution and agreement;
- Weather delays;
- Design delays impacting final construction works;
- Utility operator concerns over proposed final highway designs adequately accommodating their apparatus;
- Final out-turn costs from utility operators for diversion works undertaken; and
- Robustness of current order of magnitude compensation event assessments.

24. Potential pressure on the risk element is shown below. This shows risk at three different probability levels. The mid-point risk shows a 50% probability of all risks occurring and is the recommended risk probability used by DfT.

	Forecast Outturn Cost		
Scenario	S1 – Lower Point (£m)	S2 – Mid Point (£m)	S3 – Upper Point (£m)
SBL out-turn	46.978	47.404	48.568
Potential cost pressure	0	0.426	1.590

25. Works which started 2 years ago are now nearing completion with road opening only weeks away. Significant risks and significant additional costs have so far been avoided and/or mitigated. Budget pressures remain but the project team are working to manage and minimise impacts. There has been positive community engagement and many community initiatives realised.

MetroBus QPS

26. A report on the development of a QPS and Voluntary Partnership Agreement (VPA) for MetroBus was presented to JTB on the 29th January 2016, with the recommendation that Members recommend to the Authorities to make the QPS and enter into VPAs to secure operation of MetroBus in the form presented, subject to clarification on a number of issues.

27. Bus operator engagement has continued through the year and has addressed issues that were unresolved in January. This includes confirmation of the following:

- The operation of the MetroBus Performance Review Group;
- Confirmation of powers to charge an access charge through the QPS;
- Confirmation of access charging and profit share arrangements;
- Review of the QPS Schedule 2 exclusion criteria, to mitigate concerns raised over the adverse impact of the Euro IV requirement for non-MetroBus services – proposed deferral unit January 2018;
- Strengthened provisions in relation to enforcement of authorised use of the facilities, and clarification that it will be a key task for the MetroBus; Performance Review Group to monitor the effectiveness of the regime and to press for improvement if necessary;

- Clarified availability of the facilities to long distance coach operations, school services and buses used in connection with special University events; and
- Detail of ticketing arrangements – provision is made in QPS/VPA for resolution during the Preparatory Period.

28. The operator engagement on MetroBus vehicle requirements has also informed a proposed change to these minimum requirements. It is now proposed to defer the full requirement for MetroBus vehicles to be a diesel/electric hybrid or 'greener' (e.g. biofuel etc.) alternative-fuelled vehicles for a maximum period of 2 years from the commencement of MetroBus services. All MetroBus vehicles in the interim period would still be required to meet Euro VI emissions standards.

29. Services operating under a QPS are commercially provided. We have received proposals from 2 bus operators to provide services covering the majority of the MetroBus network. Further engagement is ongoing to determine how these services will be provided in the multi-operator environment, and to resolve any gaps in the network. The aim to make the QPS and sign Voluntary Partnership Agreements (VPA) with each participating operator in early November.

Finance

30. MetroBus is funded by the three partner local authorities and grant funding from the Department for Transport (DfT). In granting Full Approval for each of the MetroBus projects the Department for Transport (DfT) confirmed a maximum capped funding contribution of £113.246m as shown in Table 1. The local authorities promoting the schemes agreed a local authority funding contribution and to split the contribution based on the percentages shown in Table 1. The percentage local authority contribution also reflected the share of risk liability should project costs increase.

Table 1 – MetroBus Project Overview

Project	2015			% Local Authority Contribution		Project Local Authority Promoters
	Project Budget (£m)	DfT Project contribution (£m)	Local Authority Project Contribution (£m)			
AVTM	54.546	34.508	20.038	BCC – 80% NSC – 20%		Bristol City Council* North Somerset Council
NFHP	101.885	51.101	50.784	BCC – 50% SGC – 50% Up to Full Approval award	BCC – 39% SGC – 61% Following Full Approval Award	South Gloucestershire Council* Bristol City Council
SBL	46.978	27.637	19.341	BCC – 50% NSC – 50%		North Somerset Council* Bristol City Council
Total	203.409	113.246	90.163			

*Local Authority leading the project

31. In 2015, the estimated cost for the whole MetroBus project was £203.4m. This was an increase of just under 4% compared to programme entry in 2011.
32. At their meeting on 9 September 2016 the Joint Transport Executive Committee agreed to extend the scope of AVTM to include for two MetroBus stops at Paxton Drive and to enhance the flood defence wall for Cumberland Road. These works are funded from outside the project and increase the budget available to the project from £54.55m to £55.3m. The current base project budget without the extended scope is shown in Table 1 as £54.55m.
33. An analysis of cost pressures and risks for the three projects was undertaken in September 2016, with an assessment of forecast outturn costs above budget at three sensitivity levels. The mid-point, S2, gives a value for a risk on the basis that it has a 50% probability of occurring, the lower-point, S1, a 30% and the upper-point, S3, an 80% probability of the risk occurring. The mid-point approach is the one normally taken by Government in assessing scheme costs.
34. The current forecast outturn costs across the three risk levels are shown in Table 2 below. Table 3 shows the total forecast above budget for each of the three local authorities. This is based on the percentage funding allocations across each of the three projects.

Table 2 Sensitivity Testing by Project – Forecast Costs above Budget

Forecast Outturn Cost (£m)			
Project	S1 – Lower Point	S2 – Mid Point	S3 – Upper Point
AVTM	54.5	55.2	56.1
NFHP	112.1	113.3	115.3
SBL	47.0	47.4	48.6
Total	213.6	215.9	220.0

Table 3 Sensitivity Testing by Local Authority – forecasts above budget

Local Authority	Total Risk Forecast above project budget by Local Authority (£m)		
	S1 - lower point	S2 – mid point	S3 – upper point
BCC	3.8	5.0	7.1
SGC	6.7	7.4	8.7
NSC	0.0	0.3	1.1
Total	10.5	12.8	16.9

35. Under this analysis only known current risks are analysed. AVTM and SBL have a good understanding of current risks and costs, as these projects are much more defined and construction more progressed. This is reflected in the fact that the forecast budget pressures for both of these schemes have only increased by 1% since July 2015 forecast cost outturns. NFHP is less progressed, therefore there are more outstanding risks that may lead to further cost pressures. This

being reflected in the forecast increase of 11% for NFHP over the same period.

36. South Gloucestershire Council has already put in place temporary funding to cover their share of a forecast costs increase up to £110.5m. Further consideration is being given to identify funding to cover the SGC contribution towards the additional cost pressures as part of the 2017/18 Capital Programme budget setting process. Consideration of their contribution to the forecast cost increase will be given by Bristol City Council at their Cabinet meeting in early November.

37. The significant cost pressures have arisen as follows;

- a. Protester Action and increased security across the programme;
- b. AVTM - Network Rail design change requirement for AVTM as well as higher amounts than expected of non-inert materials found during construction, unforeseen ground conditions and a new foundation design has been required for AVTM to pass under an existing heritage structure owned by Network Rail; and
- c. NFHP cost increases across all of the main construction contracts, but mainly the M32 junction and bus lane, City Centre, Bradley Stoke Way and East Fringe.

38. As a result of these pressures, the Mid Point Forecast Outturn Cost of for MetroBus is now estimated to be £215.9m, (compared to £203.4 in July 2015). However, this assessment is based on known costs and risks.

39. It is recommended that both BCC and NSC make financial provision for AVTM and SBL up to the P80 risk level, so that if risks arise which require additional capital funding then this is available to the projects. It should be emphasised that both these projects are endeavouring to manage risks within existing budgets. It is recommended that BCC and SGC find the additional funding to cover the forecast cost increases for NFHP.

Environmental Impact Assessment

40. The schemes are designed to reduce car dependency and associated emissions. Full environmental impact assessments will be undertaken to support the necessary applications to build and operate the MetroBus major schemes.

Risk

41. The established Project Boards for the major schemes have a consistent approach to project management, risk management and governance. The schemes have been progressed by the Project Boards using this approach.

Resources (financial and personnel)

42. Resources to develop the schemes are identified through the Project Boards.

Equalities Implications

43. There are no specific implications arising from the recommendation in this report.

Recommendation

That Members:

1. Note the progress made with bus operators and agree deferment of the full requirement for MetroBus vehicles to be a diesel/electric hybrid or 'greener' (e.g. biofuel) alternative fuelled for a maximum period of 2 years from the commencement of MetroBus services;
2. Recommend to the Authorities to make the QPS and enter into VPAs to secure operation of MetroBus to incorporate the changes made in paragraph 27;
3. Recommend that both BCC and NSC make financial provision for AVTM and SBL up to the P80 risk level, so that if risks arise which require additional capital funding then this is available to the projects; and
4. Recommend that both BCC and SGC find the additional capital funding to cover the forecast cost increases for NFHP.

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