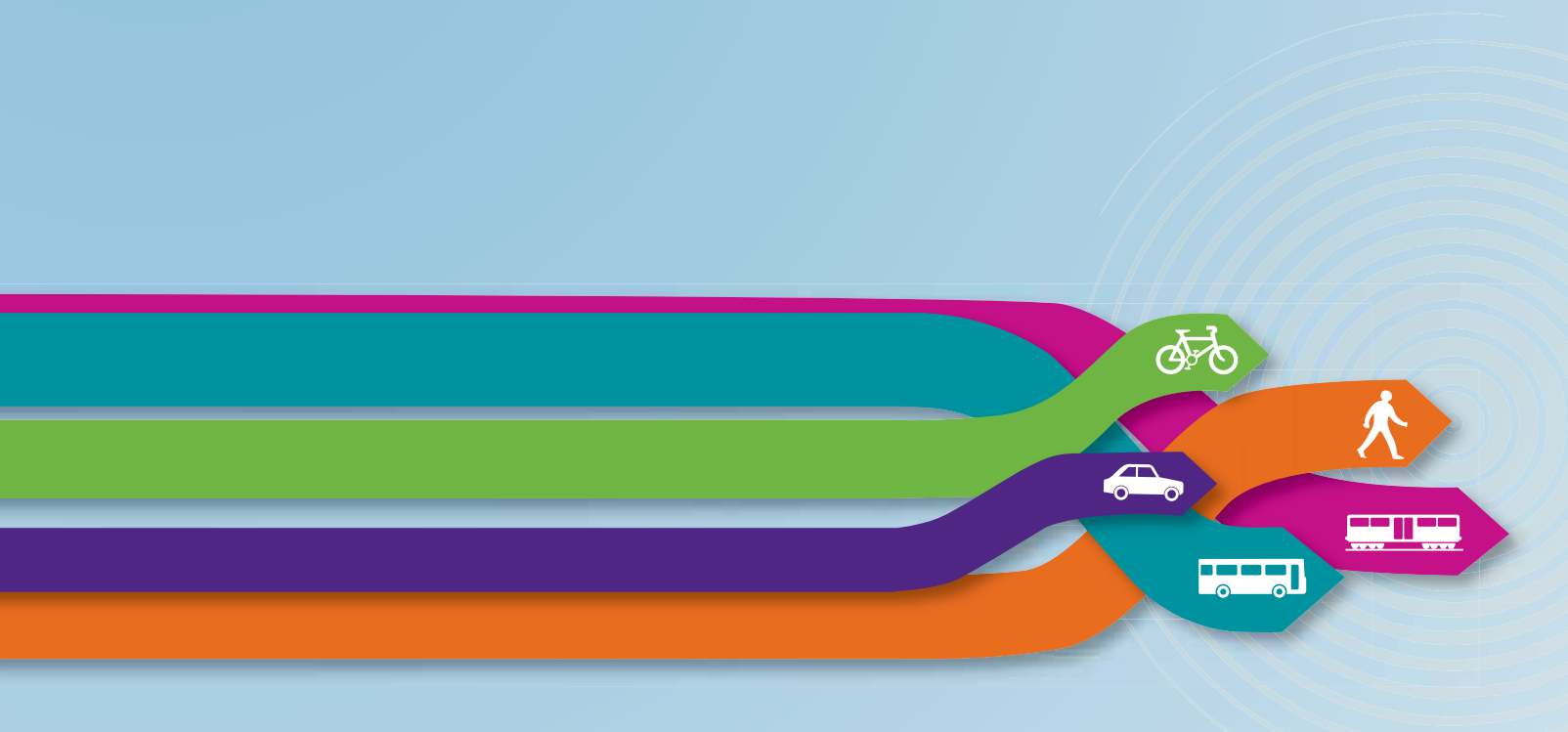




Annex 1: Summary of Scheme Changes



Annex 1: Summary of Scheme Changes

Summary of BAFFB Submission highlighting the changes from the MSBC and EOI Submissions

Introduction

Background - This summary has been prepared as part of the Best and Final Funding Bid (BAFFB) to the Department for Transport (DfT) submitted on 9 September 2011. The submission has been prepared in accordance with the “Major Scheme Business Cases: Value for Money Guidance for Development Pool Schemes” issued in May 2011, and ongoing feedback provided by the DfT.

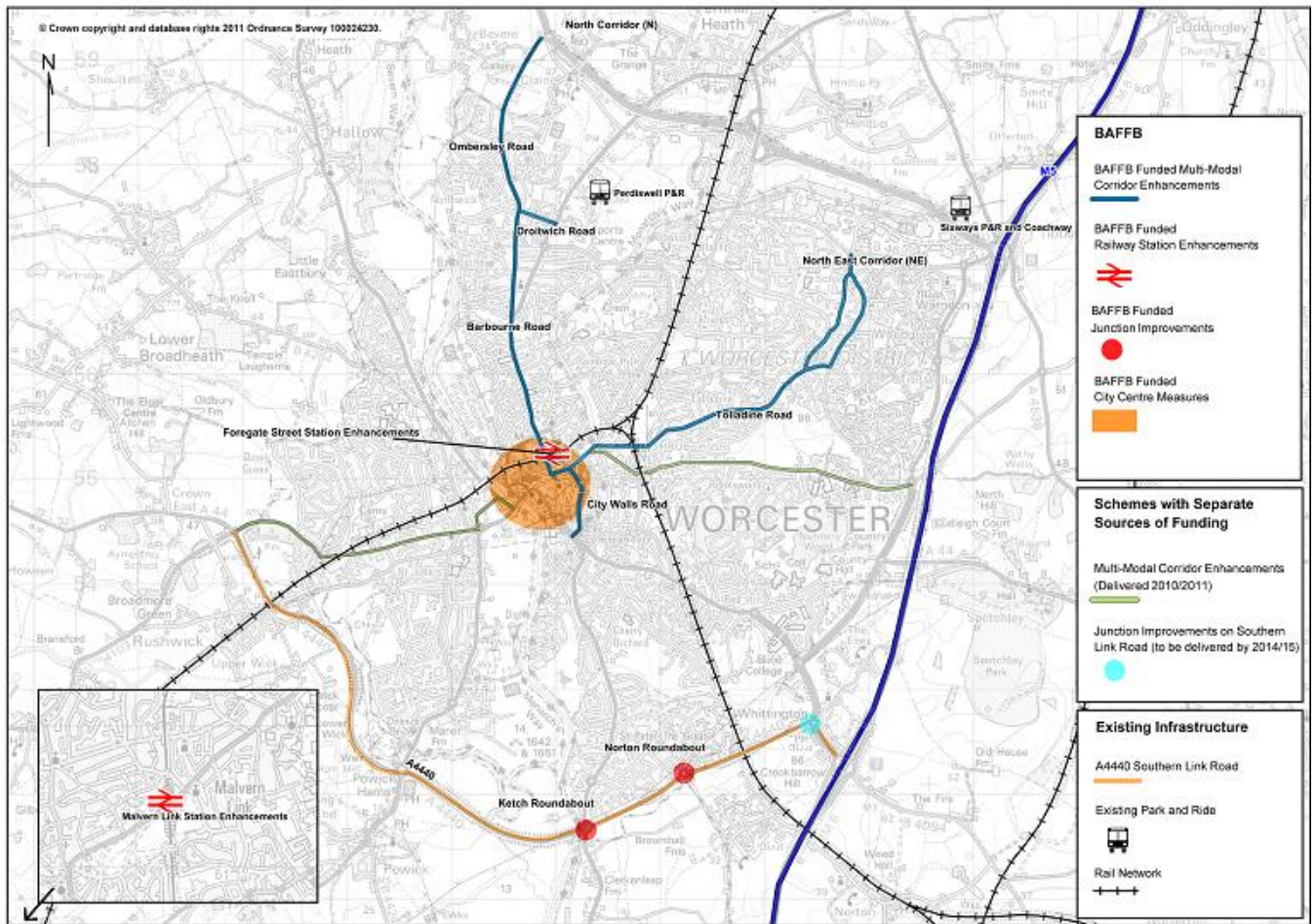
This summary highlights the changes in the Worcester Transport Package (WTS) from the MSBC (April 2010) and EOI (January 2011) submissions to the BAFFB submissions.

BAFFB Package - The BAFFB Package is a lower cost, lower risk, higher value for money version of the Worcester Transport Strategy Major Scheme Bid (WTS MSB) submitted for Programme Entry in April 2010. The BAFFB Package is based on the optimum balance of interventions and funding availability whilst retaining the fundamental principles of the original WTS MSBC Preferred Package and outcomes being sought. Table 1 compares the contents of the packages. This shows the elements of the original MSBC Preferred Package that have been retained in the BAFFB Package. Figure 1 shows the location of the individual schemes within the BAFFB Package. The BAFFB package is the same set of schemes assumed in the Affordable Local Cost Alternative (ALCA) package defined in the Expression of Interest (EOI) submitted to DfT.

Table 1: BAFFB Package and MSBC Preferred Package Contents

Intervention Type	Scheme	MSBC Schemes retained in the BAFFB Package
Multi-Modal Improvement Corridors	North West (NW) - New Road / Hylton Road	No
	South West (SW) - Bromwich Road	No
	South (S)- Bath Road / Cathedral Square / Deansway	No
	North East (NE) – Woodgreen Drive / Tolladine Road	Yes
	North (N) - Ombersley Road / City Walls Road	Yes
Demand Management	Real Time Information Bus Stops (RPTI)	Yes
	Variable Message Signing (VMS)	Yes
Rail Station Improvements	Worcester Foregate Street	Yes
	Malvern Link	Yes
Southern Link Road Junctions	Ketch Roundabout	Yes
	Norton Roundabout	Yes
Smarter Choices Measures	Marketing and Communications	No
	Education Travel	No
	Business Travel	No
	Residential Travel	No
	Shopping and Personal Business Travel	No
	Facilitating Measures	No
Walk & Cycle Schemes	County Hall to City Centre	No
	Tibberton Village to Barbourne	No
	Lower Broadheath to City Centre	No

Figure 1: Location of BAFFB Package Schemes



Reference and Supporting Documents – The following documents provide detailed additional information on previous submissions and the background to the WTS strategy that has led to the definition of the BAFFB Package, and the appraisal of its anticipated impact (these documents are included in the supporting documentation, appended to the BAFFB document):

Reference	Title
Annex 4: SD1	Major Scheme Business Case Submission: Worcester Transport Strategy, April 2010
Annex 4: SD6	Local Authority Major Schemes Pre-Qualification Pool: Expression of Interest: Worcester Transport Strategy: January 2011
BAFFB Form and Annex 3	Worcester Transport Strategy: Best and Final Funding Bid: Value for Money Report, September 2011
Annex 4: SD8	Technical Note – WTS Modelling and Appraisal Plan, 28 April 2011
Annex 4: SD9	Technical Note – Response to RAG Issues, 24 July 2011
Annex 4: SD10	Technical Note – Update on BAFFB Appraisal, 26 July 2011

DfT Engagement – There has been extensive engagement with the Department for Transport on the BAFFB bid, including meetings and the supply of technical information covering modelling and appraisal issues. References 4, 5 and 6 above cover key issues and actions from the DfT’s RAG (red / amber / green) assessments, the BAFFB guidance and workshops, and were produced as part of the no-going and effective engagement with the DfT.

BAFFB Strategy

Strategy and Desired Outcomes:

The full details of the scheme development process that led to the identification of the original WTS are provided in the MSBC Submission of April 2010 (Annex 4: Supporting Documents, SD1) and the Expression of Interest from January 2011 (Annex 4: Supporting Documents, SD6).

As part of this process it was established that the WTS ultimately progressed should meet the following objectives, and these continue to be the core objectives of the BAFFB package:

- **Support the economy** (through maximising the efficiency of the existing transport network);
- **Reduce carbon emissions;** and
- **Enabling greater participation in the local community.**

Achievement of these three overarching objectives has remained a priority throughout the changing course of funding availability. Having established the need to undertake a reduction in the scope of the WTS MSBC preferred package, it was deemed essential that the BAFFB Package continued to contribute to each of these objectives. Worcestershire County Council (WCC) is aware that the reduced scope of the BAFFB Package in comparison to the MSBC package, will to some extent limit the performance against the outlined objectives. Accordingly WCC remain committed to delivering elements of the WTS MSBC Preferred Package (and the wider WTS) that have not been included within the BAFFB Package, as public and private sector funding availability allows.

Derivation of the BAFFB Package

The BAFFB Package is based on the optimum balance of interventions and funding availability. It is the result of considering which of the WTS MSBC Preferred Package measures represent the best value for money and present the greatest opportunity to realise benefit, whilst recognising the limitations on funding at this time. We have resisted reducing the quality of the individual package elements as to do so would undermine the ability to realise the full benefits that can be achieved in meeting the agreed objectives of the WTS. Our revised proposal does not therefore simply seek to reduce the cost and/or scope of all elements of the MSBC Preferred Package. The BAFFB Package will ensure that WCC will continue to deliver measures to the quality required to make a real difference in transport network performance and travel behaviour with associated benefits to the economy, environment and quality of life.

The rationale for identifying the BAFFB Package has been based on the following criteria:

- Consideration of MSBC Preferred Package measures that would be difficult to deliver in the revised funding window;
- Consideration of the responses from the public and key stakeholder consultation, in particular those elements of the MSBC Preferred Package with the greatest support (recognising that 83% of respondents were in favour of the Preferred Package);
- Recognising that there may be some changes to the delivery timescales of planned housing and commercial developments;
- Identifying where planned housing and commercial developments now provide a greater opportunity to seek private funding for package elements; and
- Finding alternative ways of delivering the outcomes (particularly related to behavioural change) being sought through existing Worcestershire County Council initiatives and alternative funding sources.

Updates to BAFFB Schemes – Since the submission of the MSBC in April 2010 continued work has taken place to enhance the case for funding of the BAFFB Package. The Expression of Interest submitted in January 2011 showed which individual schemes were to be included within the reduced scoped package, and this selection has remained constant through to this BAFFB submission. The components of the individual schemes have seen modifications throughout this period as further detailed work has been undertaken on the design, costs, consultation, risks and programme. Key points to note are listed below:

- **Costs:** All scheme costs have been reviewed to latest constructions costs and scheme design assumptions;

- **Funding:** The total third party contribution is £0.78m, with the local contribution increased to £4.12m. Excluding pre-Programme Entry preparation costs and forecast Part 1 claims, the total non-DfT funding of the BAFFB package is now £4.90m, an increase of £3.43m from the amount quoted in the January 2011 EOI.
- **Risks:** The QRA has been reviewed and updated in accordance with the cost and scheme changes. The total QRA value is now £2.7m at 2009 prices, a reduction of 13% from the value assumed in the EOI.
- **Programme:** A revised programme of works has been defined to reflect the outcomes of consultation with key stakeholders, to ensure more efficient delivery of the schemes within the package by reducing funding requests in key years, notably 2013/14, and to minimise disruption during construction. The key changes to the programme are the earlier completion of the Southern Link Road junctions and later completion of the multi-modal corridor improvements.
- **Modelling and Appraisal:** The modelling and appraisal of the BAFFB package has been completed in the WTS transport models previously developed for the MSBC package. The modelling has incorporated RAG issues highlighted by DfT, and the appraisal includes areas highlighted in the BAFFB guidance. This includes use of NTEM / Temprow 6.2, TUBA 8.1 and the latest economic assumptions in WebTAG. Work on social and distribution impacts has also been completed based on the latest DfT BAFFB guidance (WebTAG 3.17).

Costs and Funding

The revised cost of the package and funding requests are summarised below, and highlight the changes from the MSBC and EOI submissions. The key points to note for the BAFFB package, as shown in Table 3, are a saving of £31.4m to DfT in funding request (a £3.6m reduction on the EOI request), with DfT funding contributing 75% of the total funds, a reduction of over 15% from the MSBC and EOI.

The BAFFB costs exclude Part 1 Claims of £600,000 and pre-programme entry costs of £125,000 (net change from MSBC to BAFFB submission). Pre-PE costs were excluded from the MSBC submission. Evaluation costs at a total of £80,000 are included in the on-going costs of the scheme.

Table 2: Package Costs – MSBC v EOI Packages

Source £m's	MSBC Package	EOI Package	Saving
DfT Contribution	£46.0	£18.2	-£27.8
Third Party	£0.0	£0.0	£0.0
Local Contribution	£4.4	£1.5	-£2.9
Total Cost	£50.4	£19.7	-£30.7
Percentage DFT *	91%	92%	1%

Note: Out-turn costs, including preparation, supervision, QRA, excluding OB and P1 Claims (£m's). Values exceed 90% as previous bid included Part 1 claims in Local Contribution.

Table 3: Package Costs – MSBC v BAFFB Packages

Source £m's	MSBC Package	BAFFB Package	Saving
DfT Contribution	£46.0	£14.6	-£31.4
Third Party	£0.0	£0.8	£0.8
Local Contribution	£4.4	£4.1	-£0.3
Total Cost	£50.4	£19.6	-£30.8
Percentage DFT *	91%	75%	-16%

*Note: Out-turn costs, including preparation, supervision, QRA, excluding OB and P1 Claims (£m's). * Values exceed 90% as previous bid included Part 1 claims in Local Contribution.*

Table 4: BAFFB Package Profile Costs

Cost	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	Total
BAFFB							
DfT Funding	£0.00	£0.00	£3.55	£3.14	£7.96	£0.00	£14.65
Third Party	£0.00	£0.13	£0.31	£0.35	£0.00	£0.00	£0.78
Local Funding	£0.00	£0.28	£0.76	£1.10	£1.98	£0.00	£4.12
Total	£0.00	£0.41	£4.62	£4.59	£9.94	£0.00	£19.55

Note: Out-turn costs, including preparation, supervision, QRA, excluding OB and P1 Claims (£m's).

Value for Money

Economic Appraisal – Economic Appraisal – The economic appraisal has been updated to reflect the following changes in accordance with the requirements of the BAFFB guidance:

- Engagement with DfT
- Use of latest WebTAG assumptions to ensure consistency in modelling and appraisal cases;
- Use of TUBA 8.1 and Temprow / NTEM 6.2
- Review of local development assumptions and uncertainty log
- Sensitivity and package tests to demonstrate the robustness of the package
- SDI analysis work to fit with requirements of WebTAG 3.17
- Review of costs – investment, maintenance and operating costs
- Review of commercial and financial case for the package
- Inclusion of wider range of benefits including WEBs and reliability, and review of annualisation methods.

Chapters 4 and 5 of the Value for Money Report (Annex 3) explain the changes and assumptions, plus report the results of the revised economic case.

Table 5 shows the changes in BCR from the MSBC to EOI, and then BAFFB package. The reasons for the changes from EOI and BAFFB are the revised WebTAG assumptions, new demand forecasts, inclusion of WEBs and reliability benefits, treatment of indirect tax, and the revised costs and funding profiles.

Table 5: BCR Values and Assumptions

Option	PVB	PVC	NPV	BCR	VfM
MSBC	£232.94	£53.62	£179.32	4.34	Very High
EOI	£102.88	£21.96	£80.93	4.69	Very High
Change from MSBC	-£130.06	-£31.67			
BAFFB	£151.87	£23.95	£127.92	6.34	Very High
Change from EOI	£48.98	£2.00			

The changes in results between EOI and BAFFB are summarised below in Table 6.

Table 6: Change from EOI to BAFFB

Option	PVB	PVC	NPV	BCR	VfM
EOI	£102.88	£21.96	£80.93	4.69	Very High
Changes due to Models and WebTAG assumptions	£22.95	£2.31			
Changes due to costs and profiling	£0.00	-£0.31			
Reliability	£13.65	£0.00			
WEBs	£12.39	£0.00			
BAFFB	£151.87	£23.95	£127.92	6.34	Very High

The Economic Efficiency of the Transport System (TEE), Public Accounts (PA) and Analysis of Monetised Costs and Benefits (AMCB) tables are presented in Figure 2:

Figure 2: BAFFB Economic Tables

Economic Efficiency of the Transport System (TEE)

	ALL MODES	ROAD	BUS and COACH	RAIL	OTHER
Consumers - Commuting					
User benefits	TOTAL	Private Cars and LGVs	Passengers	Passengers	
Travel time	£62,722	£32,446	£19,909	£5,622	£4,745
Vehicle operating costs	£2,076	£2,076	£0	£0	£0
User charges	-£6,807	-£2,792	-£1,616	-£2,399	£0
During Construction & Maintenance	£0	£0	£0	£0	£0
NET CONSUMER BENEFITS	£57,991 (1a)	£31,730	£18,293	£3,223	£4,745
Consumers - Other					
User benefits	TOTAL	Private Cars and LGVs	Passengers	Passengers	
Travel time	£25,659	£13,273	£8,145	£2,300	£1,941
Vehicle operating costs	£849	£849	£0	£0	£0
User charges	-£2,785	-£1,142	-£661	-£981	£0
During Construction & Maintenance	£0	£0	£0	£0	£0
NET CONSUMER BENEFITS	£23,724 (1b)	£12,980	£7,484	£1,319	£1,941
Business					
User benefits		Business Cars &			
Travel time	£75,402	Goods Vehicles	LGVs	Passengers	Freight
Vehicle operating costs	£439	£797	£48,569	£5,339	£0
User charges	-£3,865	-£178	£617	£0	£0
During Construction & Maintenance	£0	£0	-£1,586	-£917	£0
Subtotal	£71,975 (2)	£619	£47,601	£4,422	£0
Private sector provider impacts				Freight	Passengers
Revenue	£9,119			£3,670	£0
Operating costs	-£7,650			-£7,650	£0
Investment costs	£0			£0	£0
Grant/subsidy	-£5,449			£0	£0
Subtotal	-£3,980 (3)			-£3,980	£0
Other business impacts					
Developer contributions	-£503	-£503	£0	£0	£0
NET BUSINESS IMPACT	£67,493 (5) = (2) + (3) + (4)				
TOTAL	£149,207 (6) = (1a) + (1b) + (5)				
Present Value of Transport Economic Efficiency Benefits (TEE)					

Notes: Benefits appear as positive numbers, while costs appear as negative numbers.
All entries are discounted present values, in £000's 2002 prices and values

Public Accounts

	ALL MODES	PACKAGE	BUS and COACH	RAIL	OTHER
Local Government Funding					
Revenue	TOTAL	INFRASTRUCTURE			
Revenue	£6,342	£0			£6,342
Operating Costs	£4,284	£9,675			-£5,391
Investment Costs	£9,452	£9,452			£0
Developer and Other Contributions	£503	£503	£0.0	£0	£0
Grant/Subsidy Payments	£0	£0	£0.0	£0	£0
NET IMPACT	£20,580 (7)	£19,629.0	£0.0	£0.0	£951.4
Central Government Funding: Transport					
Revenue	£0	£0			£0
Operating costs	£0	£0			£0
Investment Costs	£8,823	£8,823			£0
Developer and Other Contributions	£0	£0	£0.0	£0	£0
Grant/Subsidy Payments	-£5,449	£0	£0.0	-£5,449	£0
NET IMPACT	£3,374 (8)	£8,823	£0	-£5,449	£0.0
Central Government Funding: Non-Transport					
Indirect Tax Revenues	£5,541	£3,635	£767	£1,139	£0
TOTALS					
Road Transport Budget	£23,954 (10) = (7) + (8)				
Wider Public Finances	£5,541 (11) = (9)				

Notes: Costs appear as positive numbers, while revenues and 'Developer and Other Contributions' appear as negative numbers.
All entries are discounted present values in £000's, 2002 prices and values.

Analysis of Monetised Costs and Benefits

Noise	£0	(12)
Local Air Quality	£1,348	(13)
Greenhouse Gases	£2,045	(14)
Journey Ambience	£3,810	(15)
Accidents	£1,000	(16)
Economic Efficiency: Consumer Users (Commuting)	£57,991	(1a)
Economic Efficiency: Consumer Users (Other)	£23,724	(1b)
Economic Efficiency: Business Users and Providers	£67,493	(5)
Wider Public Finances (Indirect Taxation Revenues)	£0	-(11) - sign changed from PA table, as PA table represents costs, not benefits
Option Values	£0	(17)
Present Value of Benefits (see notes) (PVB)	£151,869	(PVB) = (12) + (13) + (14) + (15) + (16) + (1a) + (1b) + (5) + (17) - (11)
Broad Transport Budget	£23,954	(10)
Present Value of Costs (see notes) (PVC)	£23,954	(PVC) = (10)
OVERALL IMPACTS		
Net Present Value (NPV)	£127,915	NPV=PVB-PVC
Benefit to Cost Ratio (BCR)	6.34	BCR=PVB/PVC

Note: This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.

Eight sensitivity tests have been carried out against the BAFFB package for Worcester Transport Strategy. These are described earlier in this section of the report. The headline results of these tests

are presented in Table 7, and show the package is “very high” value for money in most tests, and even in the “worst case” the BCR is 2.82 and “high” value for money.

Table 7: Sensitivity Tests on BAFFB Package

Sensitivity Test	PVB	PVC	BCR	VFM
BAFFB package	£151.87	£23.95	6.34	Very High
1. High Growth	£171.81	£23.63	7.27	Very High
2. Low Growth	£102.75	£23.77	4.32	Very High
3. Increased Capital Costs	£151.87	£25.78	5.89	Very High
4. Exclude WEBs and Reliability	£118.47	£23.95	4.95	Very High
5. Lower Inflation	£151.87	£21.50	7.06	Very High
6. Higher Inflation	£151.87	£26.75	5.68	Very High
7. Worst Case Scenario	£80.15	£28.40	2.82	High
8. Best Case Scenario	£171.81	£21.18	8.11	Very High

Four decremental tests have been carried out against the BAFFB package for Worcester Transport Strategy. The headline results of these tests are presented in Table 8, and show three mode package are “very high” value for money with BCR values all exceeding 4.0, and the ITS package having a “high” BCR of 2.11. The overall package effects show an increase of 11.3% of having a package over the individual schemes. This compares to 16.0% for the full MSBC package.

Table 8: Decremental Tests on BAFFB Package

Sensitivity Test	PVB	PVC	BCR	VFM
BAFFB package	£151.87	£23.95	6.34	Very High
DT1 – Multi-Modal Corridors	£33.36	£7.70	4.33	Very High
DT2 – ITS	£17.48	£8.30	2.11	High
DT3 – Rail	£12.77	£0.94	13.64	Very High
DT4 – SLR Junctions	£71.07	£7.02	10.12	Very High
Sum of Tests	£134.68	£23.95	5.62	Very High
Package Effects	-11.3%	0.0%		

Appraisal Summary Table – This section includes the Appraisal Summary Table (AST) for the BAFFB Package, and brief analysis as to how it performs under the headings Economy, Environmental, Social and Public Accounts. The AST is shown in Table 9.

The approach to deriving each impact in the new AST is summarised in Table 10.

Economy– the package will deliver business benefits of £75.7m and a “very high” BCR of 6.34. The wider economic benefits of the scheme are strong with increased travel demand to the City Centre from the package that will generate agglomeration and labour supply benefits to the main centre in the County. Over 90% of scheme benefits fall in the West Midlands region, so this will help reduce the GDP gap with the rest of the UK.

Table 9: Approach to Deriving Impacts for Sub-Objectives

Impact	Sub-Impact	Approach taken in BAFFB Appraisal
Economy	Business users & transport providers	Based on revised TUBA outputs
	Reliability impact	Percentage of time savings based on local traffic journey time data and evidence from other studies
	Regeneration	Based on results in MSBC and updated for recent changes in developments.
	Wider Impacts	Percentage of time savings based evidence from other studies and guidance
Environmental	Noise	Results taken from MSBC
	Air Quality	Results taken from MSBC
	Greenhouse gases	Based on revised TUBA outputs
	Landscape	Results taken from MSBC
	Townscape	Results taken from MSBC
	Heritage of Historic resources	Results taken from MSBC
	Biodiversity	Results taken from MSBC
	Water Environment	Results taken from MSBC
Social	Commuting and Other users	Based on revised TUBA outputs
	Reliability impact	Percentage of time savings based on local traffic journey time data and evidence from other studies
	Physical activity	Results taken from MSBC
	Journey quality	Results taken from MSBC
	Accidents	Results taken from MSBC
	Security	Results taken from MSBC
	Access to services	Results taken from MSBC
	Affordability	Results taken from MSBC
	Severance	Results taken from MSBC
	Option values	New assessment based on WebTAG
Public Accounts	Cost to Broad Transport Budget	Based on revised TUBA outputs
	Indirect Tax Revenues	Based on revised TUBA outputs

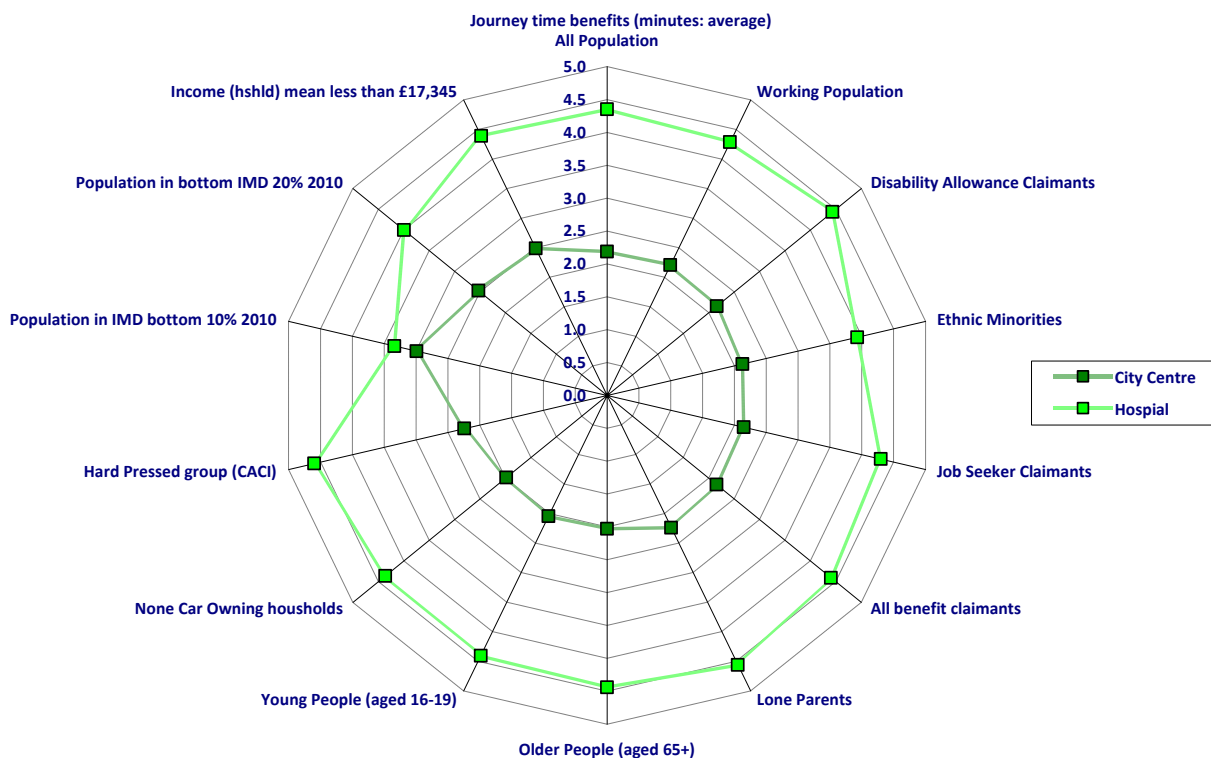
Environmental – The package shows strong benefits for air quality, noise and emissions (linked to Air Quality Management Areas - AQMAs), plus increased accessibility, reliability and connectivity, resulting in wider economic benefits to the city and the region. The package will also provide increased journey reliability notably to bus passengers, reduced severance and increased security for all travellers. There are slight adverse environmental impacts, however many will be mitigated as schemes are progressed to the detailed design stage.

Social – the package will deliver consumer and other benefits of £77.4m. Other benefits include accidents, noise and air quality. Accessibility benefits to key services, including jobs in the City Centre and health services at the hospital result, with strong benefits to vulnerable groups such low IMD areas. Benefits are illustrated in Figure 3.

Public Accounts – The local government cost is £20.6m, made up of £9.5m local contribution, £4.3m operating and maintenance costs and £6.3m parking revenue losses. The central Government cost is £3.4m, including a £5.5m saving from reduced rail subsidy. The loss of indirect tax includes £3.6m from less fuel due to a reduction in highway mileage, and £1.9m from income spent on public transport fares and not other taxable items.

Table 10: BAFFB Appraisal Summary Table		Date Produced	9 September 2011			Contact	
Name of scheme:	Worcester Transport Strategy BAFFB Package		Name			Steve Harrison	
Description of scheme	Multi-Modal Package of Transport Measures, including public transport corridor improvements and local highway junctions		Organisation			Worcestershire County Council	
Impacts	Summary of key impacts		Quantitative		Qualitative	Monetary £(NPV)	Distributional 7-pt scale
Economy	Business users & transport providers	The package delivers time saving benefits to business trips. Over 73% trips will have a time saving, and 36% will be over 2 minutes of travel time, and 10% over 5 minutes.	Value of time changes(£)		£m's 2002PV	£57.0m	Large Beneficial
			Net journey time changes (£)				
			0 to 2min	2-5min			
	Reliability Business	Car business and goods travel times will all benefit from reliability improvements as traffic flows and congestion are reduced	11% saving in travel times.		£m's 2002PV	£6.3m	
Regeneration	Worcester is not an identified Regeneration Area (RA), so an appraisal of this impact is not required	n/a		n/a	n/a		
Wider Impacts	Overall WEB assessment estimated to be £12.4m. Strong regional benefits to West Midlands.	Estimated based on evidence from other studies		£m's 2002PV	£12.4m		
Environmental	Noise	There will be an overall reduction of up to 100 in terms of the number of people annoyed. This is due to an accumulation of many of the links showing a small reduction in noise level and therefore number of people annoyed.	Estimated Population Annoyed		Slight Beneficial	n/a	Slight Beneficial
	Air Quality	There is likely to be a small reduction in the overall NO and PM score due to reductions in traffic flow.	n/a		Slight Beneficial	n/a	Slight Beneficial
	Greenhouse gases	The Scheme is predicted to lead to a decrease in carbon emissions due to a reduction in vehicle trips. There will be zero traded CO ₂ emissions from the Scheme.	Change in non-traded carbon	-15,000	£m's 2002PV	£1.6m	
	Change in traded carbon over	0					
	Landscape	Increase to the extent of urban and highway features within the urban fringe and rural landscape, and result in the loss of trees and native hedgerows in some locations. Impacts will be small and sensitive design / replanting will help mitigate any adverse effects.	n/a		Slight Adverse	n/a	
	Townscape	Adverse effects relating to highway adjustment as part of the Multi-Modal Improvement Corridors at Tolladine Road and also for the Ketch Roundabout proposal; these relate to the loss of Green Network, in the main the features affected are considered substitutable.	n/a		Slight Adverse	n/a	
	Heritage	Potential for archaeological deposits to be affected by the proposals where land take occurs. Listed Buildings will be potentially affected in terms of setting.	n/a		Slight Adverse	n/a	
Biodiversity	Minor loss of hedgerows and fragmentation of habitat at Ketch roundabout.	n/a		Slight Adverse	n/a		
Water Environment	The effects on all water environment features are predicted to be of low adverse with regard solely to flood risk.	n/a		Slight Adverse	n/a		
Social	Commuting and Other users	The package delivers time saving benefits to commuters and other trips. Over 73% trips will have a time saving, and 26% will be over 2 minutes of travel time, and 14% over 5 minutes.	Value of time changes(£)		£m's 2002PV	£66.9m	Large Beneficial
			Net journey time changes (£)				
			0 to 2min	2 to 5min			
	Reliability Commuting Other	Car, goods and bus travel times will all benefit from reliability improvements as congestion are reduced, and with the package. Bus benefits are significant as current services are very unreliable.	17% saving in travel times.		£m's 2002PV	£7.4m	
	Physical activity	There are no measures specifically directed at pedestrians / cyclists, but the modal shift from private car to rail and bus services will promote a healthier lifestyle. Furthermore residents will benefit from better access to leisure facilities.	Percent of total benefits for Leisure trips		Neutral	n/a	
	Journey quality	Improvements to bus services and rail station facilities will ensure passengers will be better provided for in terms of waiting environment and access to the network. The provision of RTI and VMS will improve confidence and reduce stress.	n/a		Moderate Beneficial	n/a	
	Accidents	Assessments in COBA show the reduction in traffic flows, plus upgrading of junctions on the Southern Link Road will result in accident savings.	Based on COBA		Slight Beneficial	£1.0m	Slight Beneficial
	Security	Better lighting, footways, facilities at interchanges, plus increased travel demand for bus and rail will all help reduce levels of transport related crime.	n/a		Moderate Beneficial	n/a	Moderate Beneficial
	Access to services	Improved journey time reliability, frequencies, journey times and physical access to the bus network. There are particularly strong benefits relating to access to healthcare. There are no overall detrimental impacts on any vulnerable social groups.	Accessibility assessments and mapping reported in the VFM Report		Moderate Beneficial	n/a	Moderate Beneficial
Affordability	Increased payments from public transport fares are offset by less parking charge payments, vehicle operating costs and car purchases	Assessed in Economics		Neutral	n/a	Neutral	
Severance	Modal shift will reduce congestion and with it dynamic severance, whilst the Ketch roundabout upgrade will provide a new crossing facility for pedestrians and cyclists. Further crossing enhancements are included in the Multi-Modal Improvement Corridor proposals.	n/a		Slight Beneficial	n/a	Neutral	
Option values	The package is making better use of existing infrastructure and services, and are not adding new modes and services to the network.	n/a		Neutral	n/a		
Accounts	Cost to Broad Transport Budget	The local government cost is £20.58m, made up of £9.45m local contribution, £4.28m operating and maintenance costs and £6.34m parking revenue losses. The central Government costs is £3.37m, including a £5.45m saving from reduced rail subsidy.	Assessed in TUBA		£'s 2002 PV	£23.9m	
	Indirect Tax Revenues	The loss of indirect tax includes £3.64m from less fuel due to a reduction in highway mileage, and £1.91m from income spent on public transport fares and not other taxable items.	Assessed in TUBA		£'s 2002 PV	£5.5m	

Figure 3: Travel Time Benefits by Social Group



SDI Analysis – Work has been completed following WebTAG 3.17 and shows that the package will make a wide range of employment, training, social and other opportunities more easily accessible. The scheme will also have a positive effect in reducing the number of trips and car kilometres made by private car with a resultant reduction in exposure to emissions and danger for vulnerable road users. There is a strong correlation between the conditions and factors that make road users more vulnerable and conditions and factors that can result in social exclusion. Overall impacts are summarised below in Table 10.

Table 10: Overall Statement of Social and Distributional Impacts

Impact	Qualitative Summary	Assessment
User Benefits	Benefits are widespread and will be experienced by a variety of income groups. The Northeast Multi-Modal Improvement corridor will specifically benefit the lower income areas of Tolladine and Great Meadow.	Large Beneficial
Noise	There are no low income groups or local schools that could be adversely affected in the immediate vicinity of the Southern Link Road junction enhancements. The Northeast Multi-Modal Improvement corridor will deliver minor benefits to the low income areas of Tolladine and Great Meadow, whilst both the Northern Multi-Modal Improvement corridors run in close proximity to local schools delivering benefits through modal shift.	Slight Adverse
Air Quality	Benefits will be experienced across a wide geographic area arising from modal shift from the private car and enhanced efficiency of the existing transport network. The benefits that will be accrued by children and those on low incomes will be broadly proportionate to other social groups, although it is anticipated that the Multi-Modal Improvement corridors will provide benefits specifically to these groups.	Slight Beneficial
Accidents	The overall reduction in traffic flows and the enhancements to the existing transport network are expected to result in a slight decrease in accidents. This benefit will occur over a widespread area and it is deemed unlikely that the benefits accrued by vulnerable groups will significantly exceed those attributed to society overall.	Slight Beneficial

Impact	Qualitative Summary	Assessment
Security	Overall the provision of better lighting, footways, facilities at interchanges, plus increased travel demand for bus and rail will all help to reduce levels of transport related crime and affect a range of social groups across a wide geographical area. Public perceptions will be enhanced which will encourage vulnerable groups of society to use the public transport network further contributing to the package objectives.	Large Beneficial
Severance	The benefits are anticipated to be relatively minor and widespread across society. This is based on the assumption that reductions in congestion and traffic flow will limit the impact of dynamic severance.	Slight Beneficial
Accessibility	The package is expected to provide benefits to a wide range of social groups across an extensive geographical area. There is variance in the impact of individual measures with the rail station enhancements having the potential to affect a wider area than the more concentrated impacts that will accrue to low income groups as a result of the Multi-Modal Improvement corridors for instance. However, having considered the overall impact it is considered that no one particular social group can be seen to have an obviously different level of benefit.	Large Beneficial
Affordability	The impact of the package on affordability is considered to be neutral.	Neutral

Desired Outcomes – Table 11 shows how the package will deliver the desired outcomes of WTS. This shows show the package of measures is able to deliver considerable benefits.

Table 11: Fit of Desired Outcomes to Package Outcomes

Desired Outcomes	Individual Scheme Contribution				Overall Measure of Achievement
	Multi-Modal Corridors	Rail Station Enhancements	SLR Junction Upgrades	ITS Measures	
Support the economy					
Maximise the efficiency of the existing transport network and services	✓✓✓	-	✓✓✓	✓✓✓	✓✓✓
Reduce congestion and transport costs	✓✓✓	✓	✓✓✓	✓✓	✓✓✓
Increase journey time reliability	✓✓✓	✓	✓✓✓	✓✓	✓✓✓
Reduce journey times, especially by sustainable transport modes	✓✓✓	✓	✓✓	✓✓	✓✓✓
Improve access to markets, businesses to better access their customers	✓✓	✓	✓✓	✓	✓✓
Improve access between jobs and workers, supporting business growth	✓✓✓	✓	✓✓✓	✓	✓✓✓
Support growth, by addressing constraints on network performance	✓✓✓	✓	✓✓✓	✓✓✓	✓✓✓
Reduce carbon emissions					
Improve the performance, attractiveness and user perception of sustainable transport modes	✓✓✓	✓✓✓	✓✓	✓✓✓	✓✓✓
Reduce dependence on the car for journeys to/from/within Worcester	✓✓✓	✓✓	✓	✓	✓✓
Deliver mode shift to public transport, cycle and walk modes of transport	✓✓✓	✓✓✓	✓	✓✓	✓✓✓
Reduce the volume of through traffic operating via the city centre /AQMA's	✓✓✓	✓✓✓	✓✓	✓✓	✓✓✓
Deliver health benefits	✓	✓	✓	✓	✓

Enabling greater participation in the local community					
Increase travel choice	✓✓	✓	✓	✓	✓
Improve labour market connectivity across all transport modes	✓✓✓	✓	✓✓✓	✓	✓✓✓
Improve connectivity between key services and opportunities	✓✓✓	✓	✓✓✓	✓	✓✓✓

Key

Large benefit	✓✓✓	Moderate benefit	✓✓	Slight benefit	✓
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Delivery

Programme: The reduced scope of the BAFFB Package in comparison with the MSBC Preferred Package, enables the BAFFB Package to be delivered within the appropriate (i.e. spending review) timeframe. The BAFFB Package has been developed to reduce risk, increase deliverability, and enable flexibility in the funding profile as required to best fit with available DfT budgets. The latter is a key strength of the package, where the different elements of the BAFFB package can be delivered independently of each other.

The programme is based on DfT Full Approval Award in June 2012 and funding from financial year 2012/13. No planning consents are required, although new Traffic Regulation Orders are necessary. Construction of the package is forecast to commence in July 2012, only 3 months later than the MSBC package, with the full package expected to be completed by March 2015, one year earlier than the MSBC package. The BAFFB package delivery programme is summarised in Table 12:

Table12: BAFFB Package Delivery Programme

Milestone	MSBC	BAFFB
Programme Entry MSBC Submission	Apr 2010	Apr 2010
Programme Entry BAFFB Submission	n/a	Sept 2011
MSFI Framework Contract Award	April 2010	Sept 2011
Programme Entry Award	Oct 2010	Dec 2011
Tender Prices Confirmed	Dec 2011-Dec 2013	June 2012-Jan 2013
DfT Full Approval Award	March 2012	October 2012
Start of Construction	April 2012	November 2012
End of Construction	March 2016	Mar 2015
Full Scheme Opening Year	2016/17	2015/16

The programme assumes that revised Programme Entry Approval is granted in December 2011 and Full Approval is granted in October 2012, and that WCC takes full responsibility for confirmation of scheme tender prices after this point.

Governance – The project management for the BAFFB Package has been based on PRINCE2 principles and the Project Management Handbook for Local Authorities, Version 5: Programme, Project and Change Management. It also considers the Office of Government Commerce (OGC) guidelines for delivering projects. It has been specifically tailored to meet the requirements of the Worcester Transport Strategy project, including:

- Project Organisation and Responsibilities - involved parties and their roles
- Presentation of Project – deliverables, division into work units and time plan
- Project Planning and Control – technical approval, progress measurement and monitoring
- Communications Plan – meetings, decisions & action logs, highlight reports and open issues log

Specific attention has been given to Governance, to provide a clearly defined structure for the role of the Cabinet, Project Board and Project Team.

Procurement – WCC has an integrated team comprising officers, consultancy services and contractors for delivery of transport projects. There is extensive in house procurement expertise available to WCC, with a depth of knowledge and experience in various contract types.

Design and construction for this project will be procured through a number of parallel frameworks, comparable with the current framework structure. Most frameworks follow the conventional procurement route (design, tender, build).

The main works frameworks to deliver the BAFFB Package are as follows:

- Medium Schemes Framework – Scheme Cost £0 – 12m;
- Small Schemes Framework – Scheme Cost <£2m;
- Intelligent Transport Systems and Electrical Contract.

The Medium Schemes Framework (MSFI) has been set up by the Midlands Highway Alliance (includes the Highways Agency and local authorities). This framework will cover works for the majority of schemes, including Ketch & Norton Roundabouts and multi-modal corridor measures in the BAFFB Package. The four suppliers will be invited to tender for works through ‘mini-competition’ in 2012 post Programme Entry award.

WCC will procure smaller elements of the BAFFB Package through MSFI or through setting up a new contract with a single supplier.

WCC has established a Traffic Signal and Intelligent Transport Systems (ITS) contract. This contract with a single supplier will be used to procure Real Time Information at bus stops, Variable Message Signing (VMS) on approaches to the city centre and traffic signal upgrades for Selective Vehicle Detection (SVD) on multi-modal corridors.

Stakeholders and Consultation – As part of the development of the WTS and this associated BAFFB Package, WCC has consulted widely with key stakeholders and the public. The scheme has enjoyed strong support from stakeholders and members of the public alike with 80% in favour of the MSBC Preferred Package, rising to 83% in the case of residents of the City of Worcester.

The percentage of respondents ‘supporting’ or ‘strongly supporting’ the individual measures included in the BAFFB Package were as follows:

- Rail Station Improvements 87%
- Local highway improvements 83%
- Multi-Modal Corridor improvements 77%
- Intelligent Transport Systems 75%

Approximately 82% of respondents were in favour of measures that encourage the use of sustainable modes (defined in the consultation as walk, cycle, bus and rail). This highlights the strong support for measures such as the multi-modal corridors, rail station improvements and real time information, which will improve the quality of service, and information for sustainable transport users.

A Communications Plan has been established and implemented to continue the dialogue with major stakeholders and the public post Programme Entry submission up to investment benefits realisation. The proposed nature and frequency of communication with stakeholders varies depending on their role. Methods employed include meetings, press releases, letters, newsletters, presentations and an informative, up-to-the-minute website.

The support for the package of measures contained within the WTSMSBs is clearly demonstrated by a selection of support letters submitted with this application.

Key Points

- The overarching plan for the Worcester area is to improve its economic performance, encourage economic growth and accommodate future growth in population in an economically and environmentally sustainable way. If this overarching goal is to be achieved then doing nothing is not an option. A transport strategy to effectively and efficiently manage the increased demand for travel is required.
- The proposed strategy is designed to deliver the outcomes of reduced congestion, improved accessibility, increased economic activity and greater levels of travel by sustainable modes, in order to ensure that the latest national and local policies are actively supported.
- The overall Worcester Transport Strategy (WTS), based on detailed research and best practice from comparable cities, includes a package of integrated multi-modal schemes, focussing on making better use of existing assets where possible (with targeted investment at identified pinch points), prior to investing in new infrastructure. The strategy will be phased in line with public and private sector funding availability.
- The BAFFB package is based on the findings of the WTS MSBC submission (April 2010), and represents a reduced package to fit with available funding. The BAFFB package of measures represents the first phase of the WTS and fits the immediate needs of City, County and regional travel markets, so offering benefit to the maximum number of people forecast to travel to and within the Worcester area given the level of funding available;
- Support for the BAFFB Package is very high, with approximately 80% of responses to the consultation process indicating positive support (higher within the city itself). There is also a very high level of support from key stakeholders.
- The cost of the BAFFB package is £19.6m (outturn costs excluding optimism bias), with 75% DfT funding of £14.6m. This represents a saving of £31.4m to DfT in funding request (a £3.6m reduction on the EOI request), with DfT funding contributing 75% of the total funds, a reduction of 15% from the MSBC. Worcestershire has the ability to underwrite the third party funding if necessary.
- The BAFFB package shows very high value for money, with a Benefit to Cost Ratio (BCR) of 6.34. Decremental testing of the BAFFB package shows that it generates £17m of benefits greater than the sum of the individual schemes within it. It shows a package effect of approximately 11%. This highlights the clear synergy of schemes and the importance of delivering the improvements as an integrated package over a shorter period of time than as separate measures over a longer period.
- Overall, the BAFFB package strongly meets the objectives and desired outcomes of the wider WTS at the national and local policy level. The package delivers strong benefits for connectivity, travel choice and accessibility, reliability, severance and security, plus noise and air quality.
- The package is highly deliverable, with low risk levels of factors such as planning processes, statutory works and complexity, often associated with transport schemes. Risks have been reassessed for BAFFB, and reduced in scope as the project has progressed.
- Construction of the package is forecast to commence in Autumn 2012, with the full package expected to be completed by March 2015, one year earlier than the MSBC package.
- There is flexibility in the delivery programme, as elements within the package can be delivered independently of other elements, hence the slightly amended funding request would be possible should DfT request such a change.

The case for progressing with the BAFFB package is very strong. It will provide excellent value for money, has excellent fit to national and local objectives, is very strongly supported by stakeholders and the public and is deliverable within the proposed timescales. Any and all associated risks can be managed by the County Council, with schemes procured through existing frameworks.