

QUICKER, SMARTER, SMOOTHER.

IN SOUTH YORKSHIRE



BETTER BUS AREA FUND.
PROJECT SUMMARY REPORT
FOR THE DEPARTMENT
FOR TRANSPORT
SEPTEMBER 2014

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This report has been prepared by South Yorkshire BBAF partners

1. INTRODUCTION

In February 2012, Local Authorities across the country were invited to submit bids to the Government for funding from the Better Bus Area Fund (BBAF). Submissions had to demonstrate how bus services could support growth and reduce carbon emissions, by improving bus patronage through a programme of targeted investment over a two year period.

On 23rd March 2012, the Department for Transport (DfT) announced that South Yorkshire's bid was successful – with funding made available from 1st April 2012. The award was for £4.91m capital and revenue funding for partners. Since then, Barnsley, Doncaster and Rotherham Metropolitan Borough Councils, Sheffield City Council (SCC), South Yorkshire Passenger Transport Executive (SYLTE), and bus operators First and Stagecoach, have worked together to develop and implement this project.

The key aim of the funding was to support the partnership approach to increasing bus occupancy and increasing modal shift in congested urban areas, in order to free up valuable road space and thus reduce carbon. In line with this, a two year programme of targeted investment that would make a real difference to bus travel in South Yorkshire was implemented. The project incorporated three core objectives – to make bus travel '*Quicker, Smarter and Smoother*'.

- **QUICKER:** by providing bus priority measures at key junctions and also reducing boarding times
- **SMARTER:** by providing 'smart-enabled' ticketing products (smartcards) that are valid on all buses, and to enable customers to buy their tickets online and through their mobile phones
- **SMOOTHER:** by improving traffic flow at key pinch-points and hotspots, and ensuring bus lanes are clear of other traffic

This report begins by setting the context for the bus market in South Yorkshire and the challenges facing the BBAF partnership. We establish how BBAF fits within the other funding streams available for transport investment in South Yorkshire, in particular in relation to the common aims and objectives of the economy and carbon reduction. Finally we describe the improvements made possible by BBAF, and the emerging evidence that demonstrates the positive impact that BBAF has made to the South Yorkshire bus network.

2. BACKGROUND

Buses are the most widely used mode of public transport in South Yorkshire¹. Our commercial bus market is made up of two main operators – First and Stagecoach – complemented by a number of smaller operators. SYLTE and Local Authorities work closely together in partnership with the operators to help ensure that bus services are attractive and accessible.

Following a period of decline, bus usage is once again growing in popularity in South Yorkshire. Bus patronage increased by 3.4% in the year to March 2014 – up 3.6 million from 104.9 million to 108.5 million – compared to a national growth² of 1.5% over the same period. Whilst this has been driven primarily by the implementation of the Sheffield Bus

¹ 83% of all public transport travel in South Yorkshire during 2013-14 was by bus. *Source: Operator supplied data, SYLTE Data Services & Strategic Intelligence and Performance.*

² *Source: Department for Transport Statistical Release (Quarterly Bus Statistics); 17th June 2014.*

Partnership (SBP), it was underpinned by investment from many sources including the BBAF. The SBP was launched in October 2012 with the key aims of making buses more reliable, and to cut pollution on our roads. Improvements in bus usage have also been observed in both Doncaster and Rotherham, and it is anticipated that the introduction of the Rotherham Bus Partnership (RBP) will give rise to further improvements.

Alongside funding from the BBAF, the bus network in South Yorkshire has seen the introduction of smart tickets and environmentally friendly buses, as well as investment in bus stops, bus lanes and other traffic management measures. It follows that improvements have been observed in the punctuality of bus services – with punctuality across South Yorkshire increasing by 0.9 percentage points year-on-year, from 88.7% to 89.6%. It is anticipated that performance will improve further in 2014-15 and into 2015-16, as the range of BBAF funded schemes mature.

Public Perception / Customer Experience

When assessing improvements in punctuality, an important factor aside from the analysis of Real Time Information (RTI) is customer feedback. The most common complaints received by both the operators and SYPTTE alike are related to journey timekeeping i.e. whether or not a service runs early, late or doesn't run at all. Evidence from the operators shows that complaints regarding timekeeping are falling, and this is supported by data from SYPTTE's Customer Relationship Management (CRM) system whereby timekeeping complaints have fallen from 888 in 2011/12 to 733 in 2013/14 – a reduction of 17.5%.

National Research

Research³ conducted by the Institute of Transport Studies (ITS) at the University of Leeds reiterates the importance of buses to the economy. It claims that bus users (in urban areas of more than 200,000 population excluding London) make up 29% of city centre spending, and that they spend an average of £54 per trip. It also states that almost one third of shoppers rely on buses as they have no access to a car.

In support of this research, 2013-14 survey data⁴ shows that 34% of bus passengers in South Yorkshire used buses as part of their shopping trips, whereas a quarter (25%) used buses to commute to/from their place of work. Additionally, 15% of bus passengers were travelling to training or education establishments. The remaining 26% comprise of leisure and other trips.

The ITS report also highlights a strong relationship between bus service access and employment, in addition to a high level of dependence on buses amongst job seekers. Over half of job seekers do not have a full driving licence, and nearly 80% have no regular access to a car, van or motorbike.

Claire Haigh, the Chief Executive of Greener Journeys said: *“Transport is about much more than getting from A to B; what is crucial is what that movement facilitates in our economy, our society and our lives. The role of transport in bringing about economic and social prosperity is often significantly underestimated. This report is a key breakthrough in demonstrating just how important the bus is in creating and underpinning jobs and growth”.*

³ Source: *“Buses and The Economy II”*: Johnson, Mackie and Shires; July 2014.

⁴ SYPTTE 'Journey Purpose' surveys, carried out by uniformed survey audit staff onboard the vehicle.

Local Partnerships

Partnership is already fairly well established in South Yorkshire, and investment in infrastructure to improve public transport performance is directed by the Public Transport Board (PTB) which is made up of senior representatives of the bus and train operators and Network Rail, Senior Highways and Transportation Officers from the four South Yorkshire Local Authorities, and officers from SYPTE.

Underneath this sits a number of working groups tasked with developing detailed programmes for investment. These too have representatives from the respective highway authorities, SYPTE and bus operators.

BBAF was one of the first opportunities to work with bus operators to prepare a joint funding bid, and to target investment of BBAF and local match funding to add value to some of the schemes. A good example is the introduction by Stagecoach of six new buses in Barnsley to complement the Barnsley 'Smarter Management' project. Feedback from the lessons learned session has identified that the operators welcomed the opportunity to input into the detailed design of some of the schemes.

The establishment of the award winning SBP has built on the successful partnership working with BBAF, and recently the RBP was launched. This has been recognised by the award from DfT of the designation of Sheffield as a Better Bus Area.

2.1 Project 'Fit' with other Funding

In developing our BBAF bid, we sought to maximise the benefits to our existing and potential customers, whilst not duplicating effort or being dependent on other sources. The BBAF investment attracted over £7 million of match funding, including over £3 million from bus operators in recognition that proposals would reduce costs and increase revenue. As with our Local Sustainable Transport Fund (LSTF) bid, the BBAF bid targeted investment in the places where we would gain the greatest benefits.

A consistent theme linking both BBAF and LSTF projects is that South Yorkshire places sustainable access to employment at the heart of the transformation of its economy. Our transport system and travel culture are an integral part of this change, because they need to facilitate employment opportunities and maximise efficiency, whilst minimising carbon emissions and any other adverse impact on our area's high-quality natural environment.

Figure 1 shows our LSTF investment corridors (four shaded areas on the map) and the relationship to the physical investment made through BBAF schemes. It can be seen from this map that our investment was focused in the key urban areas of South Yorkshire. This approach helped us to ensure we gain the greatest benefits from both of the funds.

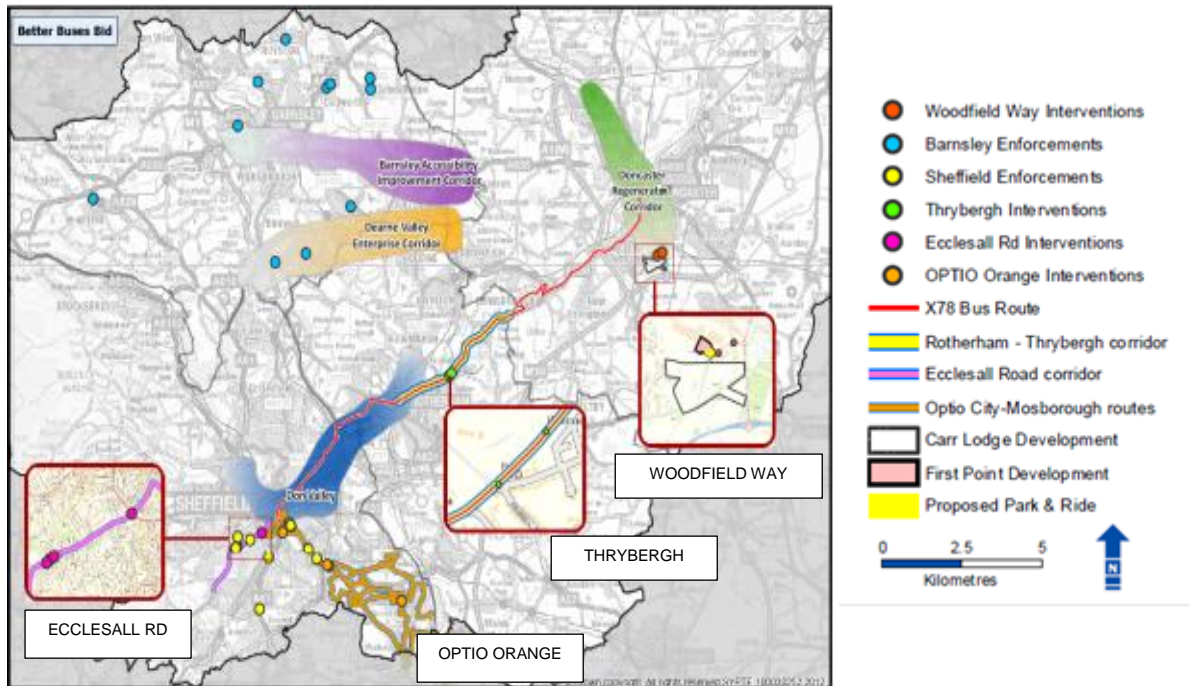


Figure 1: Relationship of BBAF and LSTF Investment

3. PROGRESS & KEY HIGHLIGHTS

3.1 Expenditure

With regard to BBAF funding specifically (and excluding funding allocated to / already spent on Smart Ticketing schemes), 93% of DfT’s contribution was spent by the end of the original funding period⁵. Table 1 shows a breakdown of the funding sources, associated projects, predicted cost and actual spend. There is a continued focus to complete any outstanding works related to the various schemes within the programme, and these will be funded from local contributions. As agreed with the DfT, the remaining 7% of BBAF funding will be allocated to deliver the remainder of the ‘Smart Ticketing’ project.

Total spend across the programme was £10.6m at the end of the funding period. Expenditure from the BBAF award represented in excess of a third (38.1%) of this total, with a local contribution of 61.9% comprising of: bus operator spend (31.7%); SYPTE (16.7%); Local Authorities (12.5%); and developer contribution (1%).

Project Name	Type of Funding	Predicted Cost (£)	Actual Spend (£)	Variance (%)
Smart Ticketing	Revenue	1,023,835	267,526	-74
	Capital	0	0	0
	Local	3,836,500	3,533,247	-8
	TOTAL	4,860,335	3,800,773	-22
Targeted Ticketing	Revenue	390,000	208,524	-46
	Capital	0	0	0
	Local	219,000	125,633	-43
	TOTAL	609,000	334,157	-45
Ecclesall Road	Revenue	86,000	85,800	0
	Capital	138,000	92,523	-33
	Local	300,000	251,060	-16
	TOTAL	524,000	429,383	-18

⁵ BBAF funding period ended 31st March 2014.

Rotherham Thrybergh	Revenue	90,000	151,398	68
	Capital	545,000	629,400	15
	Local	635,000	791,380	25
	TOTAL	1,270,000	1,572,178	24
Woodfield Way	Revenue	5,000	0	-100
	Capital	125,000	98,233	-21
	Local	320,000	220,000	-31
	TOTAL	450,000	318,233	-29
Sheffield Halfway (Optio Orange)	Revenue	224,000	233,513	+4
	Capital	670,000	774,697	+16
	Local	235,000	59,687	-75
	TOTAL	1,129,000	1,067,897	-5
Sheffield and Barnsley Management	Revenue	498,000	427,815	-14
	Capital	1,034,000	917,147	-11
	Local	1,726,000	1,686,087	-2
	TOTAL	3,258,000	3,031,049	-7
Monitoring / Project Management	Revenue	80,000	11,799	-85
	Capital	0	0	0
	Local	0	0	0
Grand Totals	Revenue	2,396,835	1,386,375	-42
	Capital	2,512,000	2,512,000	0
	Local	7,271,500	6,667,094	-8
ALL FUNDING TOTAL	TOTAL	12,180,335	10,565,469	-13

Table 1: BBAF Expenditure – Predicted Cost vs. Actual Spend vs. Variance

3.2 Data Analysis






Data has been collected and analysed to provide context to key measures including passenger numbers, journey performance (i.e. punctuality) and carbon emissions across the range of BBAF interventions. Raw data has been provided from a number of sources, with particular emphasis on real-time journey information using ACIS⁶; this has then been modelled to provide comparison against measures outlined in the original bid document.

Some of the data required within the performance tables is not available at the time of writing. Work is progressing to obtain and analyse this data as part of the ongoing monitoring and evaluation processes; this includes evaluation of any schemes that have yet to be completed.

3.3 Smart Infrastructure (Bus Priority Measures)

This section of the report looks at the variety of schemes that were implemented in order to make bus journeys 'QUICKER' and more reliable in South Yorkshire, by introducing bus priority measures at key junctions. Data has been collected and analysed to provide context to performance thus far. A simple visual indicator of performance to denote the position relative to target is attached to the reporting framework tables. In the case of satisfaction, scores relate to surveys across the relevant district and are not route specific.

The visual indicator symbols are:

				
Above Target	On Target	Mixed Outlook	Little Sign Of Improvement	Deteriorating

⁶ Advanced Communications and Information System.

Optio Orange: Sheffield – Mosborough (Sheffield Halfway) Key Bus Route

Budget: £1.13m; Actual Spend: £1.07m; Variance: -£0.06m (-5.3%)

Optio Orange⁷ represented one of the leading partnership routes in Sheffield, where operators and Sheffield City Council worked together to improve the service for the customer. It was also a trial for the successful Sheffield Bus Partnership, which has since superseded the Optio brand. For the purpose of this report, the services along the route will be referred to as Optio Orange.

Analysis of real-time bus journey time data, coupled with feedback from operators and customers, demonstrated that there was a clear need to implement a range of interventions with the aim of improving bus journey time punctuality and passenger infrastructure along the route. The majority of the planned BBAF funded interventions were successfully completed along this corridor in 2013-14, including:

- Upgrading 76 bus stops to improve accessibility to bus services along the corridor; this included the addition of bus stop clearways, raised kerbs for level boarding and tactile paving
- 23 new bus shelters were installed along the corridor, with Real Time Information (RTI) displays at eight stops
- Camera enforcement of bus lanes along the route
- Highway improvements at three pinch-point locations to improve bus journey time and bus punctuality:
 - A new junction & traffic signalisation at Birley Moor Road / Occupation Lane
 - Road widening on Ochre Dike Lane
 - An inbound bus lane on Mansfield Road (approach to Manor Top)
- Real-time Intelligent Detection (RID) technology at six new locations – and subsequent management of these in order to minimise delays experienced along the route

Planned bus priority works, particularly the creation of an outbound bus lane on City Road, were delayed due to Traffic Regulation Order (TRO) consultation. This work will now be completed in 2014-15, as local funding remains available. In addition to this, there will also be an extra 24 bus stop improvements along the corridor – also funded locally.

Passenger Growth

There has been a notable increase in passenger numbers⁸ across Optio Orange services over the previous two years. This success can be attributed to a number of factors – chiefly maintaining a good customer offer in terms of low fares and variety of ticketing options, and a frequent, punctual and reliable service offered by all operators⁹.

⁷ Optio Orange initiative commenced 24th July 2011. The range of 'Optio' ticketing products was withdrawn from 30th March 2014, but operators have continued to accept each other's daily and weekly tickets on 'Optio' routes – thus minimising the impact to customers.

⁸ 17.8% increase in patronage when comparing 2013/14 to baseline of 2011/12.

⁹ Service 120, operated by both First and Stagecoach, runs every 4 minutes during the daytime.

Most recent passenger growth, during the latter part of 2013-14, has been due, in part, to the shift in passengers from the Sheffield Supertram network – whereby track replacement works and suspension of a key tram service has led to passengers using the Optio Orange bus services as viable alternatives. Early indications show that some of these ‘displaced’ passengers are continuing to use the bus rather than returning to the tram.


Operator investment in 40 new, environmentally friendly, hybrid buses has been well received by passengers. However, analysis has shown that, whilst emissions of fine dust particles are falling through the use of new engine / exhaust technology, nitrogen dioxide (NO_x) emissions are likely to reduce more slowly. This means that the required reduction in NO_x concentrations from traffic will be difficult to achieve in the short-term, although the trend is still positive.

Anecdotal evidence from bus operators suggests that all of the interventions have been well received and are already producing journey time and reliability benefits at key pinch point locations. However, it should be noted that roadworks associated with the scheme have impacted adversely on the measures used to assess success¹⁰ during the construction period.

One of the first interventions to be completed was the Mansfield Road bus lane at the approach to the Manor Top junction, and analysis has shown that journey times have improved by 24 seconds in the AM peak just at this location. Therefore, whilst punctuality and journey speeds have shown reductions, particularly during 2013-14, the overall impact of the scheme will be positive.

Overall Impact

The full impact benefits of the scheme will not be realised until the final intervention is complete in 2014-15, and also when all temporary roadworks (unrelated to BBAF) are removed from the route. Therefore, the first full year of benefits will be 2015-16 and the outlook as set out below should be viewed on that basis. It is anticipated that the combined impact of all of the interventions along the route will give improvements to journey time reliability and punctuality, based upon the success of the Mansfield Road intervention.

Passenger Numbers & Journey Performance: Optio Orange						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Total Number of Passenger Journeys: Optio Orange	Maintain (8.07m)	SYPTE Scaled Fares Origin & Destination Data Financial Year To Date (FYTD)	8.07m	8.91m	9.51m	

¹⁰ A six-week period during September and October (measured annually) has been used to provide data which informs modelling and appraisal calculations as per DfT guidance. ‘Data Source’ is provided as part of the commentary within the table.





Passenger Numbers & Journey Performance: Optio Orange						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	82%	Calculations from supplied ACIS data (Sept-Oct)	81%	83%	75% ¹¹	
Variability by route – (Std dev of wait times mins/trip)	4.5	Calculations from supplied ACIS data (Sept-Oct)	6.4	6.1	7.1	
Bus Speed (inc. Dwell Times)	Improve ¹²	Calculations from supplied ACIS data (Sept-Oct)	30.4kph	28.6kph	26.4kph	
Satisfaction with Public Transport (Bus)	Improve	1.Overall 2.Bus User 3.Non-Bus User (Sheffield)	56.1% 59.0% 41.1% (Nov 11)	54.4% 56.2% 42.6% (Nov 12)	61.2% 63.0% 52.3% (Nov 13)	

Table 2: Performance Measures – Passenger Numbers & Journey Performance (Optio Orange)

Sheffield: Ecclesall Road (A625 Corridor)

Budget: £0.52m; Actual Spend: £0.43m; Variance: -£0.09m (-17.3%)

Ecclesall Road is a vibrant community in its own right, with a large range of bars, restaurants and independent boutiques, as well as providing important access to many residential communities in the south west of Sheffield, including local schools and a large University campus. Fundamentally, the corridor is a key arterial route to the education, work and training opportunities in the city centre. The popularity of Ecclesall Road means that there is a historical problem with congestion – particularly at peak times.

Analysis of the bi-annual surveys, undertaken by SCC on this route since 2002, showed that delays were worsening year-on-year and remedial action was necessary to avoid gridlock.

Our BBAF funded interventions were designed to increase the attractiveness of the bus as a viable alternative to the private car along Ecclesall Road. Measures were introduced to improve bus journey time, reliability and punctuality, and to improve the experience for the passenger by introducing upgraded facilities at bus stops along the corridor. In 2013-14, we successfully delivered the following:

- Upgrading of 24 bus stops and real time displays at 9 shelters
- Works to ensure bus lanes and urban clearways can be easily enforced

¹¹ Measure affected due to ongoing roadworks (construction of the interventions en route).

¹² Target is to improve bus speeds, albeit accepting that increased patronage increases dwell time.






- Civil works and associated Traffic Regulation Orders (TROs) at one pinch point location
- Review of the Real-time Intelligent Detection (RID) system at 14 sites

The pinch point scheme at Hunters Bar was withdrawn due to site constraints on the pedestrian crossing installation. Additionally, a TRO regarding the removal of an outbound bus lane at Hunters Bar roundabout received objections and the Cabinet Highway Committee made a decision to defer the removal of the bus lane until an advisory cycle lane is provided in the future. The construction of improvements at six bus stops was delayed due to consultation issues, but these have now been resolved and will be delivered during the financial year 2014-15.

The intervention at Bents Green had a delayed start on site due to the need to coordinate with Sheffield's PFI maintenance programme. This will now be completed in the autumn of 2014 and funded from local contributions.

Punctuality Maintained

Table 3 shows that average journey times have fallen on this corridor, and punctuality of services has been maintained. It is expected that improvements will be observed later in 2014-15 and beyond, when the interventions have matured.

Journey Performance: Ecclesall Road (A625)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	80%	Calculations from supplied ACIS data (Sept-Oct)	80%	81%	80%	
Variability by route – (Std dev of wait times mins/trip)	3.4	Calculations from supplied ACIS data (Sept-Oct)	5.5	5.7	6.3	
Average Vehicle (Bus) Journey Times	64mins	Calculations from supplied ACIS data	65mins	60mins	56mins	
Satisfaction with Public Transport (Bus)	Improve	1.Overall 2.Bus User 3.Non-Bus User (Sheffield)	56.1% 59.0% 41.1% (Nov 11)	54.4% 56.2% 42.6% (Nov 12)	61.2% 63.0% 52.3% (Nov 13)	
Accessibility to Workplace & Jobs	+2.9%	Accession Modelling	0%	+2.2%	+3.0%	

Journey Performance: Ecclesall Road (A625)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Carbon Emissions Effect of Efficiency	339	Calculated from Shift in Car Use	345	Data Not Available	Data Not Available	-

Table 3: Performance Measures – Journey Performance (Ecclesall Road)

Rotherham: Thrybergh (A630 Doncaster Road / Oldgate Lane)

Budget: £1.27m; Actual Spend: £1.57m; Variance: +£0.30m (+23.6%)

This scheme complements the A630 Balby Road scheme, which was completed in 2012-13, and provided bus priority and bus stop improvements on the X78 route¹³ as it enters Doncaster. Other minor pinch points along the inter-urban route have also been addressed, and the Highways Agency completed works at the A1(M)/A630 junction in April 2014 to address congestion and safety issues. This included the partial signalisation of the motorway roundabout.

Doncaster Road (A630), to the north-east of Rotherham town centre, is part of the key arterial route between Rotherham and Doncaster connecting communities such as Conisbrough, Hooton Roberts and Thrybergh. It is also a significant part of the main cross-county bus route for the X78 service, which provides an important link from Doncaster to Sheffield via Rotherham and the Don Valley corridor – including Meadowhall shopping centre. In addition to this, the road passes through the Dalton area of Rotherham; an area which suffers from social deprivation and is dependent on good public transport for access to jobs, education and other amenities.

The junction of Oldgate Lane and the A630 at Thrybergh has, for a long time, suffered significant delays – thus adversely affecting journey times and punctuality, particularly in the morning peak. The junction also forms an access point into Tata Steel, one of the major employers in the local area, with over 800 employees.

Works to deliver bus priority and improved customer facilities at this location was substantially completed in January 2014. This scheme sought to address a pinch-point at the junction of the A630 Doncaster Road and Oldgate Lane by the delivery of:

- A new junction to better manage traffic flow and ensure priority is given to the main route (A630)
- A 290m bus lane on the A630 at Whinney Hill with associated pre-signals in order to bring buses to the front of the queue and;
- Three traffic light controlled pedestrian crossings to improve accessibility to the bus
- Bus stop clearways, raised kerbs, tactile paving and new bus shelters with real-time information displays at the two stops associated with the works – these were operational from the end of April 2014

¹³ X78 is an express bus service between Sheffield, Meadowhall, Rotherham and Doncaster.

The original estimates for this intervention were preliminary, and provision for this was made in the Quantified Risk Assessment (QRA). The outturn costs were higher than originally estimated for the bid, with a number of items being over budget – but this was managed via the QRA within the overall programme. This included:

- £50,000 for additional water storage in the highway drainage system
- £25,000 for additional ducting to link the signals installed as part of this scheme to those on the rest of the corridor, the actual traffic signals work taking place in 2014-15. This will provide additional control on the corridor and completing the work as part of the scheme has negated the need to excavate new carriageway as part of the further corridor improvement
- Arising from the consultation process - £10,000 for accommodation works to an adjacent car sales business arising and £18,000 for landscaping work to minimise visual impact
- £72,000 additional statutory undertakers costs
- £20,000 additional site supervision fees due to extended period of time on site due to delays caused by adverse weather conditions

Punctuality Improving

Planned works to synchronise the signals along the corridor remains to be completed in 2014-15; even so, bus punctuality has improved steadily over the two years and it is anticipated that this will further improve once the synchronisation is complete.




Journey Performance: Rotherham (Thrybergh)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	89%	Calculations from supplied ACIS data (Sept-Oct)	80%	82%	84%	
Variability by route – (Std dev of wait times mins/trip)	2.3	Calculations from supplied ACIS data (Sept-Oct)	4.1	3.4	3.6	
Satisfaction with Public Transport (Bus)	Improve	1.Overall 2.Bus User 3.Non-Bus User (Rotherham)	53.1% 55.3% 46.7% (Nov 11)	43.1% 45.9% 41.3% (Nov 12)	51.6% 56.6% 42.6% (Nov 13)	
Accessibility to Workplace and Jobs	+4.7%	Accession Modelling	0%	Data Not Available	Data Not Available	-
Carbon Emissions Effect of Efficiency	1,189	Calculated from Shift in Car Use	1,174	Data Not Available	Data Not Available	-

Table 4: Performance Measures – Journey Performance (Rotherham Thrybergh)

3.4 Traffic Flows & Smarter Management

This section of the report looks at the variety of schemes that were implemented in order to make bus journeys 'SMOOTHER' in South Yorkshire, by maximising the effectiveness of existing Intelligent Transport Systems (sylTS) and introducing new ones. This has also been achieved by introducing camera enforcement to ensure that vehicles violating TROs cause minimal disruption to buses – and thereby improve punctuality and reliability.

Smart Management

Our investment in 'Smart Management' aims to ensure that our interventions fully realise their expected benefits of reducing bus journey times, improving punctuality, easing congestion and reducing harmful emissions in both Barnsley and Sheffield. Established partnership working has enabled us to identify pinch points in the network, and to use sylTS technology to maximise efficiency of the network. Overall, this ensures that bus priority interventions operate at maximum efficiency whilst retaining their effectiveness.

In order to speed up journey times and improve punctuality, bus priority and other traffic management measures¹⁴ have previously been implemented across South Yorkshire. However, if these are not enforced, the benefits to buses and other vehicles can be eroded as motorists abuse the various orders. The Transport Act 2000 gave Local Authorities the power to carry out enforcement – and with the 'Smart Management' project, we have addressed perception issues and raised awareness of their importance.

Anecdotal evidence from bus operators indicates that just one badly parked vehicle can have a very large impact on bus journey times and punctuality. We have introduced camera enforcement for the minority of motorists who continue to fail to comply, and results are demonstrating that the introduction of camera enforcement at several key junctions in Sheffield has already proved successful.

Smarter Management – Barnsley & Sheffield (including Barnsley RIDs)

Budget: £3.26m; Actual Spend: £3.03m; Variance: -£0.23m (-7.1%)

Barnsley

We successfully delivered improvements to sylTS at six important junctions on key bus services in Barnsley, all of which connect outlying communities with the town centre employment and education sites. Microprocessor Optimised Vehicle Actuation (MOVA) and Real-time Intelligent Detection (RID) was installed at the junctions to not only maximise the efficiency of the signals (to improve traffic queues and waiting times of all vehicles), but to also enable late-running buses to have priority through each junction to maintain punctuality.

In recognition of the benefits to bus services, Stagecoach introduced six new buses to the network in January 2013.

¹⁴ Measures in accordance with the Road Traffic Regulation Act 1984.

The following junctions have seen improvements:

- A6135 Allots Corner Crossroads (Hoyland Common)
- A628 Bridge End Junction (Penistone)
- A629 Sheffield Road (Thurgoland Crossroads)
- A635 Huddersfield Road / Rowland Road (Wilthorpe)
- A6133 Racecommon Road / Broadway (Kingstone)
- A633 Rotherham Road / Burton Road (Monk Bretton)

Works to implement signal upgrades, bus clearways and mobile enforcement are now complete; bus hotspots work is complete as far as possible. Where MOVA packs have been installed to automatically update signal timing and provide bus priority signals, traffic patterns are still being monitored. Traffic management works on Eldon Street, a key bus route within Barnsley town centre, were completed in 2012-13.




Journey Performance: Barnsley RIDS						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	Improve	Calculations from supplied ACIS data	64%	75%	82%	
Average Vehicle (Bus) Journey Times	48.7 mins	Calculations from supplied ACIS data	49.4 mins	49.1 mins	Data Not Available	
Satisfaction with Public Transport (Bus)	Improve	1.Overall 2.Bus User 3.Non-Bus User (Barnsley)	60.5% 66.6% 45.0% (Nov 11)	59.8% 67.4% 39.5% (Nov 12)	65.2% 66.9% 59.8% (Nov 13)	
Carbon Emissions Effect of Efficiency	1,682	Calculated from Efficiency (inc. bus speed)	1,712	Data Not Available	Data Not Available	-

Table 5: Performance Measures – Journey Performance (Barnsley RIDS)


Journey Performance: Barnsley (Smart Management)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	Improve	Calculations from supplied ACIS data	88%	87%	89%	
Average Vehicle (Bus) Journey Times	46.24 mins	Calculations from supplied ACIS data	49.37 mins	Data Not Available	Data Not Available	-
Carbon Emissions Effect of Efficiency	2,506	Calculated from Increased Bus Speeds	2,551	Data Not Available	Data Not Available	-



Table 6: Performance Measures – Journey Performance (Barnsley Smart Management)

Sheffield

This project was completed in 2013-14, and we were able to deliver further interventions due to cost savings.

- 23 capital schemes were progressed; 18 highway improvements and associated Traffic Regulation Orders completed
- Detailed design of five schemes has been completed – and will be implemented in 2014-15 using other funding sources (combined with Streets Ahead programme)
- Three additional enforcement cameras are in place – so there are now seven in total
- Full delivery has taken place on the consultation / information and awareness training

Some interventions were changed from enforcing 'point' restrictions, to 'corridor wide' peak hour loading and waiting restrictions. The ability to buy additional cameras, both through reduced costs of equipment and reduced costs of implementation at two sites, also enabled the sites to fund their own cameras rather than relocating existing ones.

Journey Performance: Sheffield (Smart Management)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Punctuality by route (% of services 'on time')	97%	Calculations from supplied ACIS data	90%	91%	92%	
Variability by route – (Std dev of wait times mins/trip)	3.9	Calculations from supplied ACIS data	5.5	5.7	6.3	

Journey Performance: Sheffield (Smart Management)						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Average Vehicle (Bus) Journey Times	18.34 mins	Calculations from supplied ACIS data	19.66 mins	Data Not Available	Data Not Available	-
Carbon Emissions Effect of Efficiency	4,201	Calculated from Increased Bus Speeds	4,830	Data Not Available	Data Not Available	-

Table 7: Performance Measures – Journey Performance (Sheffield Smart Management)

Doncaster: Woodfield Way

Budget: £0.45m; Actual Spend: £0.32m; Variance: -£0.13m (-28.9%)

In June 2013, the Woodfield Way spine road was opened to traffic as part of a £250 million housing development providing 1,500 homes – led by the Homes and Communities Agency (HCA) on land at Carr Lodge in Doncaster. The road connects the A60 Tickhill Road with the A6182 White Rose Way, and provides access to: the housing site; the First Point employment site; the White Rose Way Park & Ride; and onward access to Doncaster town centre and other key employment sites. Delivery of the housing development started in September 2013.

The White Rose Way Park & Ride site was constructed as a planning condition by the developer of a new supermarket, and they also committed to funding the dedicated bus service for a five-year period.

Our project aims were to maximise the effectiveness of the Park & Ride service, and provide a viable alternative to car journeys into Doncaster town centre – from both the new and existing residential development, and the commuter traffic coming into Doncaster along the A6182 White Rose Way from the M18.

Moreover, the free-flow of buses is an aide to bus performance and is critical in reducing emissions. We constructed a 150 metre dedicated bus lane on Woodfield Way, from the Park & Ride site to White Rose Way. This was the first BBAF funded project to be completed¹⁵, and with significant cost savings.

¹⁵ The project was completed on the 31st May 2013.






Passenger Numbers & Journey Performance: Woodfield Way						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Total Number of Passenger Journeys (Increase)	+0.15m	Operator Supplied Data + Scaled Fares Origin & Destination Survey Data	No Service	0.014m	0.14m	
Average Vehicle (Bus) Journey Times	Maintain	Calculations from supplied ACIS data	No Service	7.32mins	7.32mins	
Satisfaction with Public Transport (Bus)	Improve	1.Overall 2.Bus User 3.Non-Bus User (Doncaster)	No Service	49.4% 52.0% 40.2% (Nov 12)	58.7% 61.0% 52.3% (Nov 13)	
Bus Mode Share	Increase (+1.71%)	Calculated from Shift in Car Use	No Service	0.2%	1.7%	
Carbon Emissions Effect of Efficiency	-1.8	Calculated from Shift in Car Use	19.9	19.8	19.8	

Table 8: Performance Measures – Passenger Numbers & Journey Performance (Woodfield Way)

In terms of measuring impact, unlike other BBAF schemes, the Woodfield Way intervention is measured using a number of ‘zero’ or ‘no service’ baselines as there were no regular bus services operating there before works began. The service was launched in January 2013.

In addition to the bus lane, Stagecoach provided two new vehicles as part of the match funding; these entered service¹⁶ in 2013, serving the Park & Ride site. The site attracted an average daily usage of 156 cars from January 2013, compared to the predicted 180. It is worthy of note that patronage has continued to rise, and the site now attracts an average of 194 cars daily.

The service has attracted car users who would normally have driven into town – the main attraction being a quicker journey over the car using the priority bus lane incorporated into the scheme, complemented by value for money fares making the bus a cheaper option than parking the car in the town centre. Two additional services¹⁷, which benefit from the scheme, are now commercially viable which further demonstrates the attractiveness of the scheme.

The success of increased patronage was aided by a joint marketing plan in November 2013, developed in partnership between SYPTTE and Stagecoach, to further promote the Park &

¹⁶ Service 70 (Doncaster – White Rose Way) operated by Stagecoach.

¹⁷ Services 72 & 73 (Doncaster – Lakeside) operated by First.

Ride site. According to operators, this scheme alone has eased congestion and should begin to improve the air quality through less traffic travelling into Doncaster town centre. Continued growth of this service is envisaged as the aforementioned housing development progresses and boosts patronage further, as the service becomes the preferred option for these people rather than taking the car into Doncaster.

The Park & Ride service commenced on the opening of Morrison's Supermarket in January 2013, but the key to provision of the bus lane was for it to be in place ahead of the new link road opening on Woodfield Way. This was achieved, meaning that the bus lane has been operational since the opening. Enforcement of the bus lane has not been necessary as driver behaviour has been appropriate. The successful White Rose Way improvement scheme has also meant that there are no delays to bus services as a result of congestion as traffic management through the signalised junction continues to be very effective. Upon opening of the Finningley and Rossington Regeneration Route Scheme (FARRRS)¹⁸, it is anticipated that demand for the Park & Ride service will increase further as travel patterns in the area change.

3.5 Smart Ticketing

This section of the report considers the variety of schemes that were implemented in order to make bus journeys 'SMARTER' in South Yorkshire; by providing 'smart-enabled' ticketing products (smartcards) that are valid on all buses, and to enable customers to buy their tickets online and through their mobile phones.

Smart Ticketing

Budget: £4.86m; Actual Spend: £3.80m; Variance: -£1.06m (-21.8%)

In South Yorkshire, we had already made advances in the delivery of smart ticketing products and associated infrastructure, and BBAF gave us the opportunity to deliver the remaining steps required to achieve our vision of a multi-operator, multi-modal smart ticketing solution. Since then, we have worked in partnership with TravelMaster, YorCard and the operators to utilise technological advances which in turn improved the customer offer of both smart ticketing and self-serve ideology.

The programme to deliver the retail infrastructure to support 'smart' public transport ticketing in South Yorkshire is broadly on track. However, although the main operators' Electronic Ticket Machines (ETMs) were in place early in the programme, it became evident that the work needed for them to all accept multi-operator smart tickets had been underestimated. SYPTE brought this to the attention of DfT in November 2013 and it was agreed that a delivery extension to future years would enable the partners to achieve better value from the scheme.

This meant that a number of work packages were placed on hold until 2014-15. The key points to date are:

- In November 2013 Stagecoach Bus and Tram reached a position where their vehicles were equipped with electronic ticket machines (ETMs) capable of accepting

¹⁸ FARRRS projected completion / opening is in the spring of 2016.

smart tickets, and SYPTE could begin to sell extended period TravelMaster products in smart format. These could also be accepted as a flash pass on non-equipped vehicles

- In April 2013, First completed the installation of ETMs so were also ready to accept smart tickets
- The public launch took place on 15 August 2014 with a range of 7 and 28 day zonal and county wide multi modal/multi operator products
- The balance of the BBAF funding will be used to complete the smartcard project this year


Smartcard & Smart Ticketing: Rollout, Passenger Numbers & Emissions						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Progress on rollout and update of new ticketing options	150,000	Ticket sales	0	0	700	
Low or non-bus user uptake	50,000	Ticket sales	0	Data Not Available	Data Not Available	-
Shift from car use	0.42m	Appraisal Assumptions	0	Data Not Available	Data Not Available	-
Total number of passenger journeys generated in South Yorkshire	+1.0 million	Smartcard Data	0	Data Not Available	Data Not Available	-
Carbon emissions effect of shift from car use	183,049	Calculated from 10,000 shift in car use	183,079	Data Not Available	Data Not Available	-

Table 9: Performance Measures – Rollout, Passenger Numbers & Emissions (Smart Ticketing)

Due to the delays in the smartcard project, the target of issuing 150,000 smartcards into circulation will not be achieved during the original projected time frame. To assist in the wider distribution of smartcards, English National Concessionary Travel Scheme (ENCTS) passes have already been issued in smart format, and we intend to issue MegaTravel and MiCard¹⁹ pass holders with a smartcard.

In addition to this, participants of the BBAF Targeted Ticketing scheme and LSTF busboost scheme will also receive a smartcard. Stagecoach have launched their own smartcard product and currently have a large number in circulation for use on both buses and Supertram.

¹⁹ MegaTravel & MiCard passes for young people in South Yorkshire.

Testing Phase

ETMs on all vehicles of the two major operators in South Yorkshire, First and Stagecoach, are now set up to accept TravelMaster passes in smart mode – having been set up to accept English National Concessionary Travel Scheme (ENCTS) passes for a couple of years previously. Testing is underway to establish if this is indeed the case, with SYPTE staff encouraged to use their staff TravelMaster as part of the testing phase. Employees have given feedback via eCRM²⁰ with regards to any problems encountered – and reports are passed to the operators' project teams on a regular basis.

First, TravelMaster and SYPTE are holding weekly project meetings to oversee the implementation of acceptance of smart TravelMasters. Sheffield Community Transport (SCT) has advised that ticket machines on their vehicles are now set up to accept TravelMasters in smart mode, and testing of these will begin in September 2014.

Marketing and Website Development

To assist in the promotion of smartcards, and therefore encourage an increased uptake, marketing strategies have focused on promotion of smart ticketing and related benefits, such as reduced boarding times thus leading to quicker journey times. Associated with this is the smartcard website which was launched on 15th August 2014²¹.

Smart Kiosk and Mobile Top-Up

Smartcards are now available for sale at TICs and automated kiosks. Work is ongoing to increase the range of products available. In addition to this, a function has been incorporated into the website which enables customers to purchase their smart ticket using their mobile phone.

Initial uptake has been positive; by the 6th of September (21 days after launch), 605 kiosk transactions and 1,540 over-the-counter transactions had taken place for 7 and 28 day TravelMaster products.

Mobile Top-Up & Project Counterparts

Mobile phone application functions have been incorporated into the website, which enables customers to purchase their smart ticket using their own mobile phone. The benefits of this will be realised post-launch of the website on 15th August 2014. In addition to this, project counterparts are to be introduced during the initial sales period to resolve the issues relating to the sale of tickets valid for rail travel.

David Young, SYPTE Deputy Interim Director General said: *“SYPTE is committed to making travel on public transport easier and more convenient for customers. This milestone for smart ticketing in South Yorkshire is the next step in revolutionising the way in which our passengers travel. We are excited to continue to progress South Yorkshire’s smartcard project, and carry out our promise to expand the range of tickets that are smart-enabled, to modernise and future-proof our public transport network”.*

²⁰ SYPTE’s Customer Relationship Management database.

²¹ <http://www.travelsouthyorkshire.com/smart/>

Duncan Roberts, TravelMaster chairman said: “Getting from A to B can currently sometimes mean using different products with different operators. Making TravelMaster 7 and 28 Day tickets available as smartcards means a variety of journeys can be made using just one ticket - and people can buy tickets conveniently and easily using our new smartcard kiosks”.

Targeted Ticketing



Budget: £0.61m; Actual Spend: £0.33m; Variance: -£0.28m (-45.9%)

SYLTE enjoys a proven track record of working with young people, by providing ticketing products and travel advice to assist them into work or training. Our BBAF targeted ticketing scheme aimed to provide over 2,000 young people who were previously unemployed with up to three months free travel when they start work and/or training.

The original proposal was to work exclusively in partnership with Jobcentre Plus to deliver the project; however, we realised that this meant that we were missing opportunities to work directly with schools, colleges and work programme providers – and therefore expanded the scope to include these. This has already proven extremely successful.

By the end of March 2014, 3,481 free travel tickets had been issued to 2,044 individuals. These were issued as ‘paper’ tickets rather than smartcards due to the delays in the wider smart ticketing project. Those starting an apprenticeship (807 customers) were entitled to three months free travel whereas those on work-placements (1,237 customers) were entitled to free travel for one month.

It is estimated that over 174,000 journeys have been supported by this scheme, assuming that a monthly ticket is used to make 50 journeys. SYLTE holds the personal details of all these young people and will utilise some of the remaining BBAF funding to incentivise them to come and obtain personalised smartcards when practical to do so. The revised target for this is to be complete by the end of March 2015.

Targeted Ticketing: Rollout, Passenger Numbers & Emissions						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Progress on rollout of free smartcards	2,250	Update from Tickets/Concessions Manager	0	0	2,044	
Bus Usage	+0.02% (+9,000 trips p.a.)	Update from Tickets/Concessions Manager	0	0	174,050	
Shift from Car Use	-51,000 car trips p.a.	Modal Shift (Cordon Data)	0	0	Data Not Available	-

Targeted Ticketing: Rollout, Passenger Numbers & Emissions						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Carbon emissions effect of shift from car use	102,534	Calculated from Shift in Car Use	102,536	Data Not Available	Data Not Available	-




Table 10: Performance Measures – Rollout, Passenger Numbers and Emissions (Targeted Ticketing)

3.6 Vehicle Fleet Profile & Facilities Management

In order to improve the fleet of buses which serve the public of South Yorkshire, significant investment has been made by operators to introduce buses with better performing engines and thus reduce harmful emissions to the atmosphere. This was a key requirement of both Rotherham and Sheffield Bus Partnerships.

In direct support of the BBAF programme, Stagecoach have provided eight new vehicles – six in Barnsley to support the Smarter Management project, and two in Doncaster to support the Woodfield Way scheme.

The percentage of the vehicle fleet which is low floor has risen by 1.7 percentage points over the two year period, to 98.3%. The average age of the fleet has also fallen by one year over the previous twelve months to 8.4yrs. In support of our aims to progress with smart ticketing, 100% of the fleet in South Yorkshire now have smart-enabled ETMs – which demonstrates a marked improvement on the 81% of buses with such technology in 2011-12.

Vehicle & Facilities Management						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Overall Fleet Profile by Euro Engine Type	Improve	(Biannual Data) Operator Supplied	March 2013	September 2013	March 2014	
		EURO I	25	23	14	
		EURO II	268	224	226	
		EURO III	381	378	375	
		EURO IV	191	192	194	
		EURO V	110	152	155	
EURO EEV	40	40	40			
% of vehicle fleet that is LOW FLOOR	Increase	(Six Monthly) Operator Supplied Data	March 2013 96.6%	September 2013 97.3%	March 2014 98.3%	
Average AGE of vehicle fleet	Reduce	(Six Monthly) Operator Supplied Data	March 2013 9.3yrs	September 2013 8.6yrs	March 2014 8.4yrs	


Vehicle & Facilities Management						
Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
% of vehicle fleet that has Smartcard ticketing technology with RID interface	100%	Periodic Operator Updates	81%	98%	100%	

Table 11: Performance Measures – Vehicles & Facilities Management

4. **SUMMARY & KEY FINDINGS**

The partnership responsible for delivery of BBAF interventions in South Yorkshire comprises SYPTE, Barnsley, Doncaster and Rotherham Metropolitan Borough Councils, Sheffield City Council and the bus operators Stagecoach and First. Together we have been responsible for the successful delivery of the BBAF programme and, with the exception of Smart Ticketing, have achieved a total spend of 92% - and have delivered virtually all of the outputs set out in our bid within the funding period. The small amount of outstanding interventions will be delivered in the current financial year using local funding contributions.

The BBAF investment has contributed to improvements in punctuality and reliability with patronage and customer satisfaction increasing on bus services on the relevant bus corridors. Accessibility has been improved to workplaces and modal shift has contributed to reductions in carbon emissions. As the schemes mature it is expected that these positive trends will continue.

4.1 **Overall Performance Summary**

In order to place the impact of the BBAF programme in a wider context, a series of overarching performance measures have been considered. These include measures against the key aims of enabling passenger growth, improving punctuality and reducing carbon emissions. Table 12, overleaf, provides a snapshot of performance thus far.

Overall Performance Summary

Comparison to proposal within bid document (2012)

- Enable growth of 1,225,000 new passenger trips
- Save 756 tonnes of carbon
- Reduce boarding times for all bus users in South Yorkshire






Measure	Target	Data Source & Commentary	Baseline (2011/12)	Year 1 (2012/13)	Year 2 (2013/14)	Outlook
Total number of bus passenger journeys in South Yorkshire	+1.225 million	SYPTTE Operator Supplied Bus Patronage Year To Date (YTD)	110.9m	104.9m	108.5m	
Gross Value Added (GVA) in South Yorkshire	Increase	Latest data from the Centre for Economics & Business Research (CEBR)	£22,594m (2012)	£22,940m (2013)	£23,514m (2014)	
Excess Waiting Time in South Yorkshire	Reduce	DfT stats table BU0903	1.8mins	2.0mins	Data Not Available	
Performance of South Yorkshire Network - Punctuality (% of services 'on time')	Improve	Fares Origin & Destination Survey Data	89.7%	88.7%	89.6%	
Car traffic (kilometres) in South Yorkshire p.a.	-0.001bn vkms	DfT stats table TRA0206 (Cars & Taxis)	4.7bn vkms (2011)	4.7bn vkms (2012)	4.6bn vkms (2013)	
Employment in South Yorkshire (% 16-64 employed)	Increase	NOMIS: Population Survey ONS (YTD)	64.5%	68.1%	69.0%	
Skills in South Yorkshire (% with NVQ4+ or equivalent)	Increase	NOMIS: Population Survey ONS (Annual)	25.7% (2011)	27.5% (2012)	28.3% (2013)	
CO ₂ in South Yorkshire p.a.	-0.76kT CO ₂	Ricardo-AEA: 'Local & Regional CO ₂ Emissions' – Road Transport (A & Minor Roads)	1,600kT CO ₂	1,569kT CO ₂	Data Not Available	

Table 12: BBAF Overall Performance Summary – Key Measures

Passenger Numbers

A number of the schemes, particularly those relating to Optio Orange and Woodfield Way, have given rise to notable increases in patronage on services in those areas. Indeed bus patronage in South Yorkshire increased by 3.4% in the year to March 2014, up 3.6 million from 104.9 million to 108.5 million. This is a clear reversal of the historic decline. Success can be attributed to a number of factors – chiefly maintaining a good customer offer in terms of low fares and variety of ticketing options, and the provision of a frequent, punctual and reliable service.

It should be noted that there has been a marked increase in fare paying passengers across South Yorkshire, particularly in Sheffield. Analysis has shown that this is due to measures implemented as part of the SBP, BBAF, LSTF and other funding streams.

Punctuality

BBAF funded schemes have sought to address punctuality issues across the bus network in South Yorkshire. Broadly speaking, improvements have been observed and, in particular, anecdotal evidence from operators shows that our interventions have given rise to improvements in timekeeping. Customer complaints have fallen, and continue to reduce.

Carbon Emissions

Improvements to bus services, including shorter journey times, cheaper tickets, and a more punctual/reliable service, encourages people to shift from the private car to bus for their daily commute. This contributes to reduced congestion on the roads and a reduction in harmful emissions.

5. PROJECT MANAGEMENT, MONITORING AND LESSONS LEARNED

5.1 Project Management

At the time of the bid submission, budgets and programmes were based on preliminary estimates and this had led, in part, to the variances in final costs and completion dates.

To address the above, a Quantified Risk Assessment (QRA) was carried out and allowances made within the cost plan included in the bid. This was managed across the programme by the Programme Manager. Risk monies were released and savings transferred, where needed, to maximise delivery.

The success of this approach is reflected in the fact that whilst there have been variations on individual schemes, overall, with the exception of the spend relating to Smart and Targeted Ticketing, total spend is very close to that estimated in the bid. Table 13 details the variance of completion dates of different schemes within our BBAF programme.

Project Name	Planned Completion Date	Actual Completion Date	Variance (Months)
Smart Ticketing	March 2014	March 2015	12
Targeted Ticketing	March 2014	March 2014	0

Project Name	Planned Completion Date	Actual Completion Date	Variance (Months)
Ecclesall Road	March 2014	September 2014	6
Rotherham Thrybergh	May 2013	February 2014	9
Woodfield Way	May 2013	May 2013	0
Sheffield Halfway (Optio Orange)	March 2014	March 2015	12
Sheffield & Barnsley Management	March 2014	March 2014	0
Monitoring & Project Management	March 2014	March 2014	0

Table 13: BBAF Project Variance – Planned Completion vs. Actual Completion

Generic risks identified that did arise include:

- Accuracy of estimates – provision was made in the QRA and managed across the programme
- Delays caused by adverse weather – this did impact on delivery of the Rotherham Thrybergh intervention, but was underestimated as the workforce in the event had to be redeployed elsewhere on the network to deal with emergency issues

A generic issue that arose and wasn't identified as a risk was the downsizing of the partner organisations, the four South Yorkshire Local Authorities and SYPTE. A reduction in design staff and loss of key personnel delayed in particular the detail design process, and meant that project and programme management lacked continuity in some areas.

Specific-scheme related risks were also identified and whilst some did arise, others, in particular those related to Smart Ticketing, were underestimated, and a reconfiguration of the project as agreed with DfT was necessary. The impact of the Sheffield Highway Maintenance Private Finance Initiative (PFI) was also underestimated, as this impacted on the timescales for delivery, as with Ecclesall Road.

One issue that was unexpected was the Government's consultation upon the proposed changes to camera enforcement for traffic offences. The smart management scheme in Sheffield is, broadly speaking, camera enforcement of bus priority measures and investment was already well underway when the consultation was published. If the proposals had gone ahead as per the consultation document, this would have meant that the investment was to a large extent abortive. Fortunately, the proposals were subsequently amended and camera enforcement of bus priority is still permitted.

The governance structure and project management arrangements set out in the bid, based upon PRINCE2, did not change during the course of the project. There were changes in the named individuals carrying out each role due to changes in personnel at some of the delivery partners, however, the programme was managed effectively and this was recognised as a 'strength' during the lessons learned process.

5.2 Programme Monitoring

The monitoring required to quantify the benefits is on-going. Whilst the data measuring the effectiveness (or otherwise) of the project is currently being evaluated, informal feedback from the operators is very positive.

It must be noted however that the presence of roadworks associated with the scheme has impacted adversely on the measures used to assess success. It follows that the first full year of accrued benefits will be 2015-16.

5.3 Lessons Learned

A 'lessons learned' session regarding the delivery, management and governance of BBAF was held in early August. The results are being evaluated and will, where appropriate, inform future ways of working.

At the same time, on-going monitoring of the implemented schemes will assist in informing future investment opportunities.