

Unlocking Our Potential: The Economic Benefits of Transport Investment in the West of England

ATKINS

Atkins and West of England Authorities, November 2012



Plan Design Enable

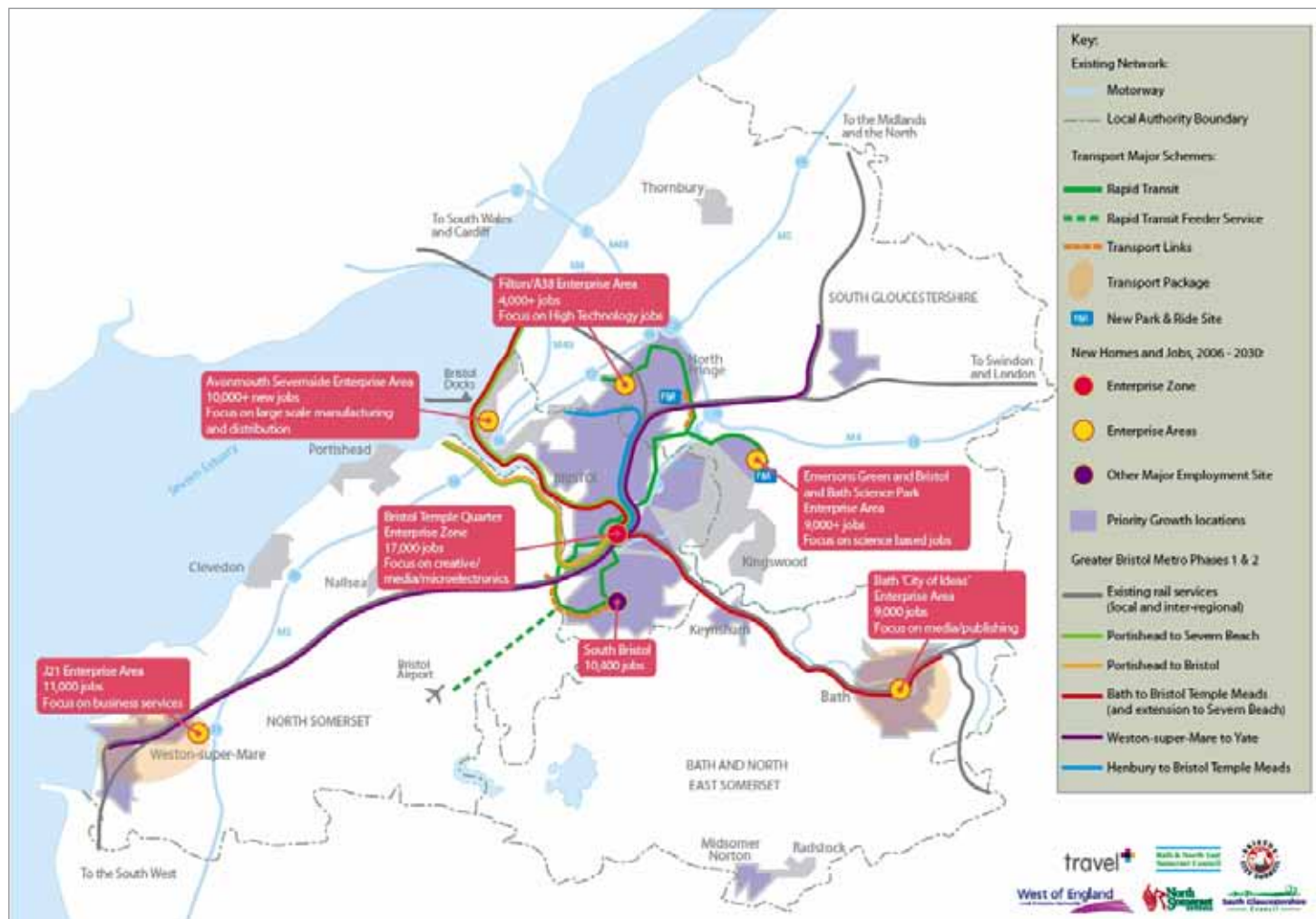
In October 2012, Atkins was commissioned by the West of England authorities – Bath and North East Somerset, Bristol, North Somerset and South Gloucestershire – to assess the impacts of major transport schemes on Gross Value Added (GVA), economic activity and regeneration in the West of England.

These schemes are:

- Bath Transportation Package
- Weston Package
- Ashton Vale to Temple Meads Rapid Transit
- North Fringe to Hengrove Package
- South Bristol Link
- Greater Bristol Metro Phases 1 and 2 and New Stations Package
- Temple Quarter Transport Package
- M49 New Junction.

Atkins is a major consultancy with expertise in transport, development and economics. This document sets out the key findings from our work. A separate technical report provides the full detail of our approach and detailed evidence to support our findings.

Our methodology included interviews with businesses, property agents and representative organisations across the West of England to explore in detail the problems caused by the transport network and the potential impacts of the transport schemes. We also analysed the West of England economy and transport network to forecast the impacts of the schemes. The evidence shows that transport is a major barrier to economic growth in the West of England, and that investment in the schemes will play a critical role in unlocking new growth.



Transport investment and unlocking growth

Transport investment is a critical ingredient in unlocking future economic growth in the UK's major urban areas. Our review of national research has shown that major transport schemes have the potential to unlock large numbers of new jobs and economic output in places where the underlying growth potential exists.

For example, the Manchester Hub, which will deliver a major improvement to rail links across the North, is forecast to unlock up to £2.8 billion additional GVA in the northern economy. When compared with the costs of the scheme, this could deliver up to £3 additional output every year for each pound invested in the project. Rapid transit projects also deliver large returns: a planned bus rapid transit project connecting Sheffield and Rotherham, via the Don Valley regeneration area, is forecast to deliver over £7 additional output every year for each pound invested.

Well-planned transport projects, which unlock new jobs in areas where the economic potential already exists, can deliver very high returns on investment.

For the West of England:

- The underlying conditions for growth exist;
- The primary constraint to unlocking growth is the transport network, with particular challenges in the areas that will be the focus for growth;
- The transport schemes will help tackle access problems in these areas, unlocking new jobs; and
- The schemes are cost-effective solutions that will deliver a high return on investment.

Barriers to growth in the West of England

Our research shows that the transport network matters in different ways to different sectors of the economy. Different parts of the West of England have particular locational advantages, based on their access to the motorway, rail and local transport networks. For example, access to the motorway network is important for the production and movement of goods. Rail connections matter for Professional Services businesses in giving efficient access to London and other major UK cities. Effective operation of the strategic road, rail and local transport networks is critical to the competitiveness of the economy.

There are problems on the transport networks in the West of England. Local roads are often congested, buses are seen as expensive and slow, rail services are infrequent and only cover certain areas, and some areas have poor access to the motorway network. Our modelling shows that increased numbers of people living and working in the West of England will place much greater strain on the network. Failure to improve local bus and rail services will constrain people's travel choices, and significant increases in traffic will cause widespread and severe congestion.

The shortcomings of the bus and rail networks are likely to increasingly impact on the competitiveness of the area. Public transport will become more important as businesses seek to locate in places with good quality access to the labour market and good strategic connectivity to markets. Limited local rail services and longer journey times by bus within the urban areas will constrain the labour market and limit the potential for business clustering benefits.

In many areas it is not possible to deliver major increases in road capacity to accommodate large increases in traffic. Without action to encourage a greater shift in travel away from the car, there will be large increases in traffic delays. This will increase the time taken to travel to work and will impact on business costs through longer journey times and worsened journey reliability. This will significantly constrain new development by reducing the confidence of potential investors.



Businesses told us:

'If the schemes do not go ahead there will be real limitations on businesses' ability to grow, as poor transport infrastructure is a significant restraint on growth.'

A large part of the future growth in the West of England will be delivered through the Temple Quarter Enterprise Zone, five Enterprise Areas and the South Bristol Regeneration Area. Failure to provide adequate connections to these growth areas will significantly constrain the future economic prospects of the West of England. There are transport problems specific to each area, but common challenges include constrained road networks and insufficient public transport capacity, which together reduce accessibility and constrain potential job creation.

'Businesses in the south of Bristol are at a real disadvantage compared with the north of the City due to poor transport connections.'

'The area needs a public transport network that is part of daily life as it is in London and that allows people to use public transport as a default choice.'



Addressing the challenges

The transport schemes have been developed to focus on the most critical transport problems in the West of England. They will deliver a combination of more attractive public transport services, reduced need to travel by car and faster and more reliable journeys for all users of the transport network.

The transport packages for Bath and Weston have been designed to address the specific public transport and congestion problems in each area. The package for Bath will increase the capacity of Park & Ride for travel into the city, whilst major improvements to bus routes will significantly improve the attractiveness of buses for travel within the city. The Weston Package will improve local bus and rail access and will significantly reduce the delays experienced at Junction 21, which has been identified as a critical barrier to unlocking new employment in the town.

The three schemes in the Bristol urban area will improve public transport access on key corridors and significantly reduce traffic delays. Ashton Vale to Temple Meads Rapid Transit will dramatically reduce the time taken to travel from Long Ashton to the city centre and will improve access to Temple Quarter. The North Fringe to Hengrove Package will transform transport links between the North Fringe and South Bristol, which will help to unlock growth at Filton and Emersons Green, as well as in the city centre and South Bristol.

The South Bristol Link will provide a step-change in access to this area, through a large reduction in journey times for cars, goods vehicles and public transport.

There was clear support for the five schemes in Bath, Weston and the Bristol urban area, including over 100 letters of support, the majority from business, during the development of the funding submission to Government.

The Greater Bristol Metro will open up new areas to the rail network (Portishead, Henbury) and improve services in other areas (Severn Beach line, Yate to Weston-Super-Mare and Temple Meads to Bath corridor). This will reduce dependence on the car for journeys within the West of England and improve access to growth areas at Temple Quarter, Bath and Filton. The Temple Quarter Transport Package, meanwhile, will unlock the potential of Temple Quarter through a package of road access improvements, new walking and cycling routes and new bus links. The M49 new Junction will dramatically improve road access to Avonmouth/Sevenside, which will enable this area to accommodate new logistics and industrial activity.



‘The package of transport measures...provide a significant opportunity to transform public transport services across the sub-region’.

Robert Sinclair: CEO, Bristol Airport

‘The major transport schemes...represent a unique opportunity to begin a programme of improvements which will significantly upgrade the public transport system and the infrastructure necessary to access education, training, jobs and businesses.’

Keith Elliot CBE: Principal and Chief Executive, City of Bristol College



Economic impacts

All of the schemes will make significant contributions to economic growth by helping to improve the productivity of businesses in the West of England. Reduced journey times and operating costs and more reliable journeys will directly impact on the bottom line of businesses. However, this approach to assessing productivity benefits is focused on net economic benefits at the national level, and does not identify the ways in which they would affect local economies, including the West of England.

The primary benefits of the transport schemes will be in helping to unlock the potential for growth in the West of England economy, which will be largely focused on the seven priority growth areas. Improved accessibility to these areas will help existing businesses to expand, improve the attractiveness of the sites to inward investment and provide the necessary uplift in infrastructure capacity to enable new development to take place.

'These schemes...form an essential element of the LEP's delivery plans to achieve its key targets for growth in employment and economic activity. This will enable the West of England to play the fullest role in securing the UK's economic recovery'.

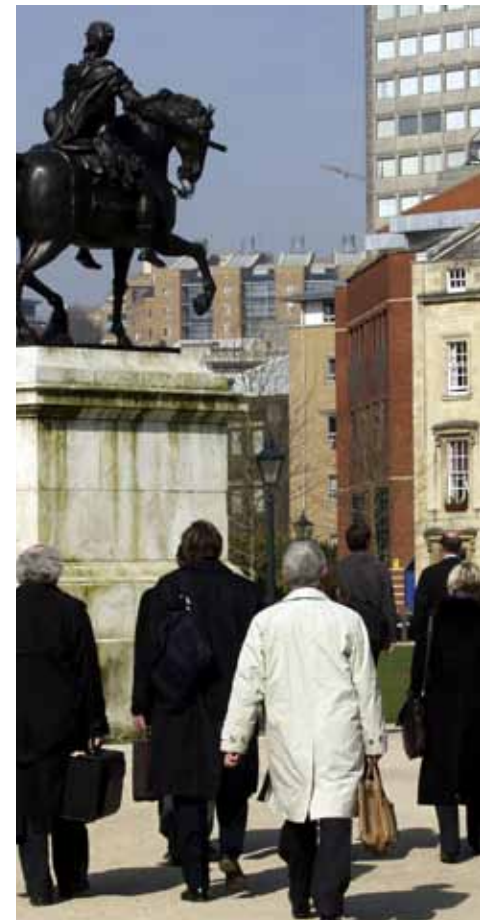
Colin Skellett: Chair, West of England Local Enterprise Partnership

'Our members have consistently informed us that the increasing difficulty in movement is having a direct ability on their ability to both operate and grow. The major transport schemes...represent a unique opportunity for major public transport and infrastructure investment into our city region for its future growth and prosperity'.

James Durie: Director of the Initiative and Chamber

Our approach to estimating these benefits was to first assess the potential number of jobs that could be delivered at each location if no transport improvements are made. We then assessed the number of jobs that could be delivered following the transport improvements. The difference between the two is the number of jobs that would be 'unlocked' by the transport improvements. These are shown in the table overleaf.

These numbers of jobs are based upon our current understanding of the infrastructure needs of these growth locations, which in some cases are still to be fully assessed, and therefore may be subject to change.



Growth Area	Potential No of Jobs in each Growth Area	No of Jobs: (No Transport Schemes)	No of Jobs: (With Transport Schemes)	Gross No of Jobs 'Unlocked' due to Schemes
Temple Quarter EZ	17,000	3,400	9,300	5,900
South Bristol	10,000	1,000	5,000	4,000
Avonmouth-Sevenside	10,000	2,000	5,500	3,500
Bath City of Ideas	9,000	1,800	4,000	2,200
Emerson's Green	9,000	2,200	3,100	900
Filton/A38	4,000	1,200	1,700	500
J21, Weston	11,000	2,700	5,500	2,800
Total	70,000	14,300	34,100	19,800

We estimate that, if no transport improvements are made, only around 14,000 jobs would be created out of the total potential of 70,000 jobs in the seven growth areas by 2030. If the transport improvements are made, we estimate that around 34,000 jobs could be delivered, which means that the transport improvements would effectively unlock around 20,000 jobs (gross) in the growth areas.

From this, we estimated the net number of additional jobs that will be created in the West of England. These take into account effects relating to the numbers of people living and working in the area, the proportion of jobs that would be displaced from elsewhere in the area and the 'multiplier effects' due to supply chain and income multiplier effects. We estimate that approximately 19,000 net additional jobs would be created.

The next step was to estimate the total impacts on Gross Value Added (GVA) resulting from these new jobs created in the West of England. We used data on average GVA per worker for the area and Government projections of real growth in output over the period to 2030. Our estimates of the GVA impacts of the transport schemes are shown below.

We predict that the transport schemes will unlock a large increase in the future economic output of the West of England, of around £1.2 billion per annum by 2030. Of this, around £600 million could be unlocked through the five major schemes currently being delivered, and the balance would be unlocked from rail schemes, Temple Quarter Package and M49 New Junction.

Scheme	Increase in GVA (2030) (£)
Bath Transportation Package	£73m
Weston Package	£172m
Ashton Vale to Temple Meads Rapid Transit	£74m
North Fringe to Hengrove Package	£145m
South Bristol Link	£199m
Rail schemes (Metro, New Stations)	£153m
Temple Quarter Transport Package	£142m
M49 New Junction	£242m
All schemes	£1,200m



Returns on investment

We also estimated the economic returns on investment, by comparing the GVA impacts of each scheme with the costs. This analysis is shown below.

Scheme	Costs (Present Value) (£m)	Increase in GVA (2030) (£)	Increase in GVA per Unit Cost
Bath Transportation Package	£29m	£73m	2.5
Weston Package	£9m	£172m	19.0
Ashton Vale to Temple Meads Rapid Transit	£42m	£74m	1.8
North Fringe to Hengrove Package	£84m	£145m	1.7
South Bristol Link	£38m	£199m	5.2
Rail schemes (Metro, New Stations)	£77m*	£153m	2.0
Temple Quarter Transport Package	£42m*	£142m	3.4
M49 New Junction	£16m	£242m	15.1
All schemes	£337m	£1,200m	3.6

* Initial estimates of costs for rail schemes and Temple Quarter Transport Package

The package of schemes will deliver a very high return of capital investment, totalling on average £3.60 additional annual GVA in the West of England per unit of cost, if the full value of the GVA associated with the jobs is compared against the costs of the transport schemes. This assumes that all investment in other requirements for development has already been undertaken. Very high levels of return are forecast in Weston and Avonmouth/ Severnside, and high levels of return are also expected from investment at Temple Quarter and South Bristol.

From this study we conclude that the transport schemes will be critical in helping to support planned economic growth in the West of England. But these analyses also show that further major improvements will be required in the future, beyond the timescale of the current programme, to fully unlock the planned number of jobs in the area.

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