UNIVERSITY OF BATH
SCHOOL OF MANAGEMENT

GATEWAY 2 GROWTH

The business and social case for investment in a new junction from the M4 near Emersons Green

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September 2015

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Executive Summary

Over the last 25 years, Emersons Green near Bristol has become a strategically important area for high-technology, and was designated an Enterprise Area in 2012. However, the subsequent rise in traffic congestion, particularly on the A4174, and the poor access to the area's business parks are now acting as significant constraints upon business and future growth (see Section 3).

This report seeks to present a business and social case for the creation of a new junction (18a) between junctions 18 and 19 on the M4 motorway (known locally as M4 Link) to provide easier access to Emersons Green. The report argues that by providing direct motorway access to Emersons Green, the new junction would ease traffic congestion along the A4174 ring road and help realise the potential of the whole Enterprise Area. In particular, the report highlights that the new M4 Link would:

1. Reduce congestion costs and the current transport related constraints upon businesses at Emersons Green. This alone would reduce operating costs and deliver productivity gains for existing businesses.

2. Attract new business investment and highly skilled employment to the Emersons Green Enterprise Area, particularly in high technology industries. Higher business occupancy rates at Emersons Green also raise the tax base of the West of England Local Enterprise Partnership (LEP), providing public revenue streams to support other socio-economic projects across the wider West of England.

3. Enhance the potential for the Bristol & Bath Science Park (BBSP) to become a regional hub for science, research and innovation. Better connectivity enhances 'knowledge transfer' and 'synergies' between co-located firms and also those located elsewhere. Improved access would provide BBSP with more opportunities to hold national (and international) business meetings, seminars and conferences. These activities enhance innovation and growth.

4. Improve labour market flexibility and participation, not only in terms of absolute employment numbers but also among higher skilled employees, due to easier commuting. This would also enhance workplace productivity.

5. Better connectivity would improve the work-life balance of commuters and local residents, reducing journey times into and out of Bristol and providing easier access to local amenities.

6. Significantly reduce traffic on inappropriate alternate routes currently being used, in particular through Pucklechurch and Westerleigh Road.

West of England's economy worth £26 billion per year.

One of the UKs most productive core city LEPs with hourly GVA of £28.60 per capita.

UK's largest high-tech cluster outside London.

Increasing transport congestion, constraining growth.

1. Introduction

1.1 Overview

This report was commissioned in July 2015 by the Gateway2Growth campaign, which is a group established with cross-party support in March 2015 to campaign for the creation of a new junction (18a) between junctions 18 and 19 on the M4 motorway (known locally as M4 Link) to provide easier access to Emersons Green, near Bristol. The report seeks to present a clear business and social case for the new junction to ease travel congestion along the A4174 ring road, provide direct motorway access to Emersons Green and realise the potential of the whole Enterprise Area.

Proposals for an M4 link to Emersons Green are longstanding and were initially considered in 1985 as part of a wider regional development plan, which included the A4174 ring road and the development of Emersons Green[1]. However, while Emersons Green has since become a strategically important regional Enterprise Area with a focus upon attracting high technology investment (see Section 2), the M4 Link proposal was not carried through. The subsequent rise in traffic congestion, particularly on the A4174, and the lack of direct motorway access to the area's business parks are now acting as significant constraints upon business and growth (see Section 3).

1.2 Transport Issues to Address

Access to Emersons Green is primarily along the A4174 ring road, which serves the eastern fringe of Bristol and leads to motorway connections via the M32 and M4/M5 corridors at Junction 19 on the M4. There are no direct rail links to Emersons Green, with the closest railway station being Bristol Parkway 5 miles to the east. The only public transport options are local bus routes, which primarily operate along the A432 corridor at the western edge of the locality, and serve the local residential area. However bus accessibility is currently considered poor[2], although work has begun on the Emersons Green Park and Ride, part of the MetroBus scheme[3]. Both the A4174 and A432 become heavily congested, especially at junctions and at the M32 interchange and particularly during the peak time 'rush hours'.

Motorway access to Emersons Green is currently via junction 19 on the Bristol M4/M32 interchange, and then via the A4174. An alternative route is at junction 18 (Bath) on the M4, and then via an unclassified single-carriageway (Westerleigh Road) for 7 miles, passing through several small villages. Bristol & Bath Science Park actually advises visitors coming from the east to the site to use this second option, to avoid the congestion on the A4174.

Several initiatives have been launched to reduce congestion and the reliance on solo car journeys, including designated car-sharing lanes along parts of the A4174 ring road and, soon, the new MetroBus scheme. However, since 2002 traffic along the A4174 between Emersons Green and the M32 has become a significant issue[4]. Indeed, in severe cases of traffic congestion, traffic 'tailbacks' can occur for several miles along both the A4174 ring road and onto the M4 (from the M32 interchange), and this can in-turn back-up as far as the Almondsbury Interchange with the M5. The South Gloucestershire Core Strategy now lists an M4 Link as a long-term objective to *"relieve congestion to the M4 Junction 19, M32 Junction 1, the A4174 eastbound and within the communities of the north east Bristol fringe area"*[5] (p.60).

1.3 Nature and Scope of the Report

The analysis in this report was undertaken between July and September 2015. The evidence base draws upon existing public documents, reports and publications by central government, local authorities and consultancy firms in relation to transport infrastructure and the development of Emersons Green and the wider West of England. In addition, this report also draws upon insights from a series of interviews with key stakeholders, which include local business leaders and representatives from the West of England LEP and South Gloucestershire Council. This report does not provide any new estimates of the social and economic impact of a new junction. However, it should be noted South Gloucestershire Council with Highways England will shortly be undertaking a full data driven transport feasibility study for the area, which will include consideration of the proposed M4 link.

This report's objective is to highlight the potential business and social benefits that a new M4 Link will bring to Emersons Green and the wider West of England economy. The remainder of this report is set out as follows.

- Section 2 provides some context in presenting the socio-economic geography of Emersons Green.
- Section 3 outlines the current impact of traffic congestion upon local businesses and economic growth.
- Section 4 then considers the justification for a new M4 link and outlines the wider business and economic benefits from easier access to the motorway.
- Section 5 presents some of the wider benefits of better transport connectivity for residents and commuters.
- Section 6 notes some recent local and national transport infrastructure projects to support the development of enterprise areas.
- Section 7 summarises the report's main findings and concludes.

Emersons Green Enterprise Area.

Technology focus.

Includes Bristol & Bath Science Park and National Composites Centre.

Up to 7,000 new jobs by 2026.

180,000 sqm of commercial floor-space within 10 years.

2. Context: Socio-Economic Geography

2.1 The West of England LEP

The West of England LEP consists of four unitary authorities (Bath and North East Somerset, Bristol, North Somerset and South Gloucestershire). These districts serve an estimated population of 1.1 million (2010), which is expected to rise by 19% in 2026 (see figure 1)[6]. To meet this growing population, the region's core strategies policy documents anticipate the need to build 87,400 new homes by 2026[5, 7, 8 and 9].

The West of England's economy is worth £26 billion a year and is one of the UK's most productive core city LEPs with an hourly Gross Value Added (GVA) of £28.60 per capita[10]. The area is at the cutting edge of high tech manufacturing and is the UK's largest high-tech cluster outside London[11]. The Financial Times fDi Intelligence magazine recently recognised Bath and Bristol as being the seventh strongest economic area in Europe, with Bristol alone being ranked second for economic potential. There is expected to be a 21% increase in employment by 2030, with £1 billion new private capital investment by 2017. Academically, the area has two leading GW4 research-intensive universities, the University of Bath and the University of Bristol and also the University of the West of England (UWE) and Bath Spa University. The West of England also has one of the UK's highest graduate retention rates (42%[12]) and the highest concentration of PhD graduates in the UK[13].

The West of England currently has one Enterprise Zone at Temple Quarter in the centre of Bristol and five Enterprise Areas, one of which is at Emersons Green. The City Deal, agreed in 2012[14], includes five elements, the most important of which (for this report) is the Growth Incentive Proposition allowing local authorities to retain 100% of the growth in business rates raised from the Enterprise Zone/ Areas for a 25 year period. This income is projected to be worth an estimated £1 billion over the course of the deal.

2.2 Emersons Green Enterprise Area

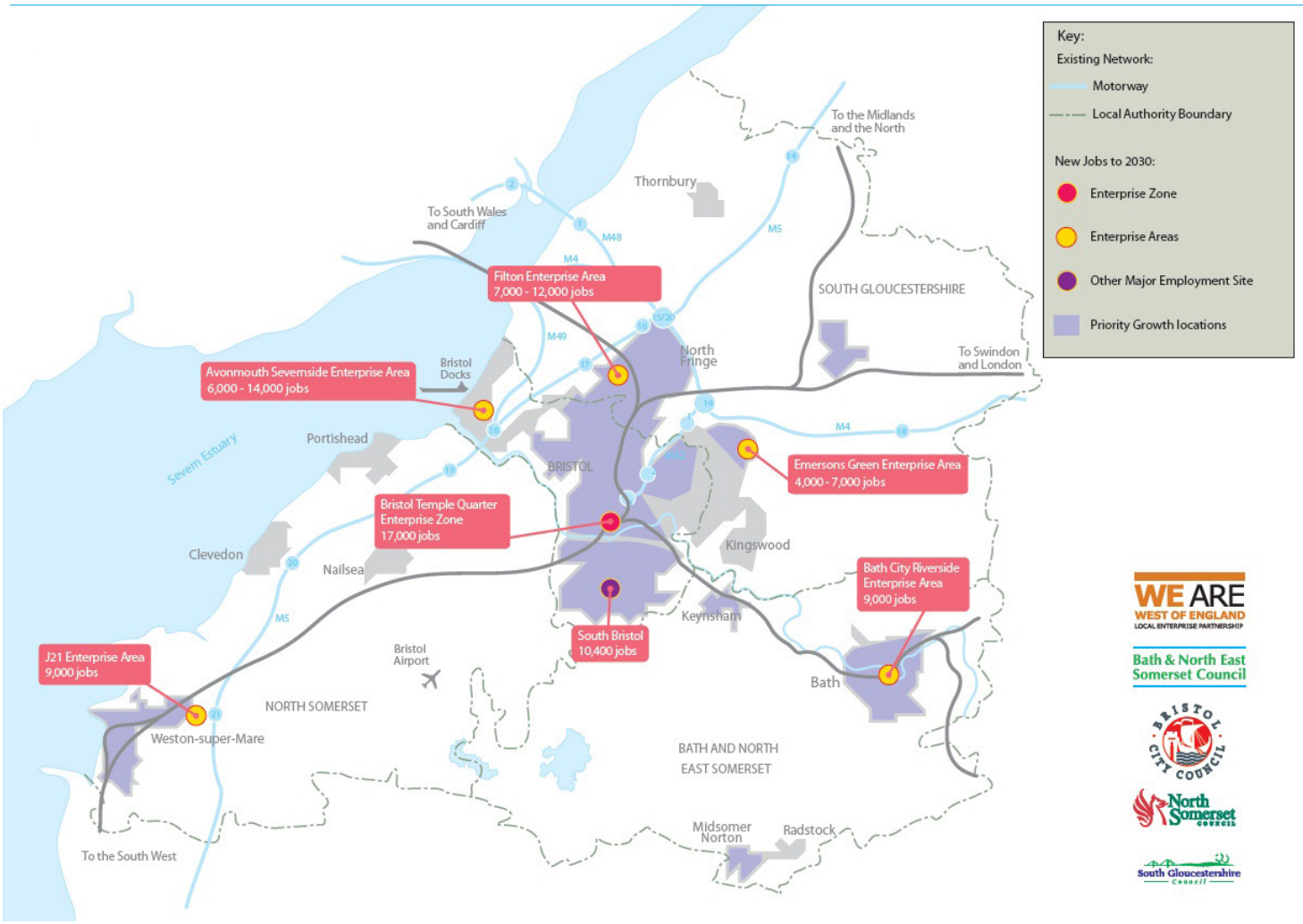
Emersons Green is located in South Gloucestershire in the east fringe of Bristol, either side of the A4174 ring road and adjacent to the M4. Emersons Green is designated as a technology focused Enterprise Area (shown in figure 2 and highlighted in figure 3) and is home to a number of business parks, including Bristol & Bath Science Park (BBSP), Emerald Park, Harlequin Office Park and the new Vertex Park. It consists of a 40 hectare site, with 22 hectares at BBSP and a further 18 hectares of employment land throughout Emersons Green East. It has an estimated potential job growth of up to 7,000 direct jobs by 2026, delivering 90,000 square metres of commercial floor-space within 5 years and 180,000 square metres within 10 years[13].

2.3 Bristol & Bath Science Park (BBSP)

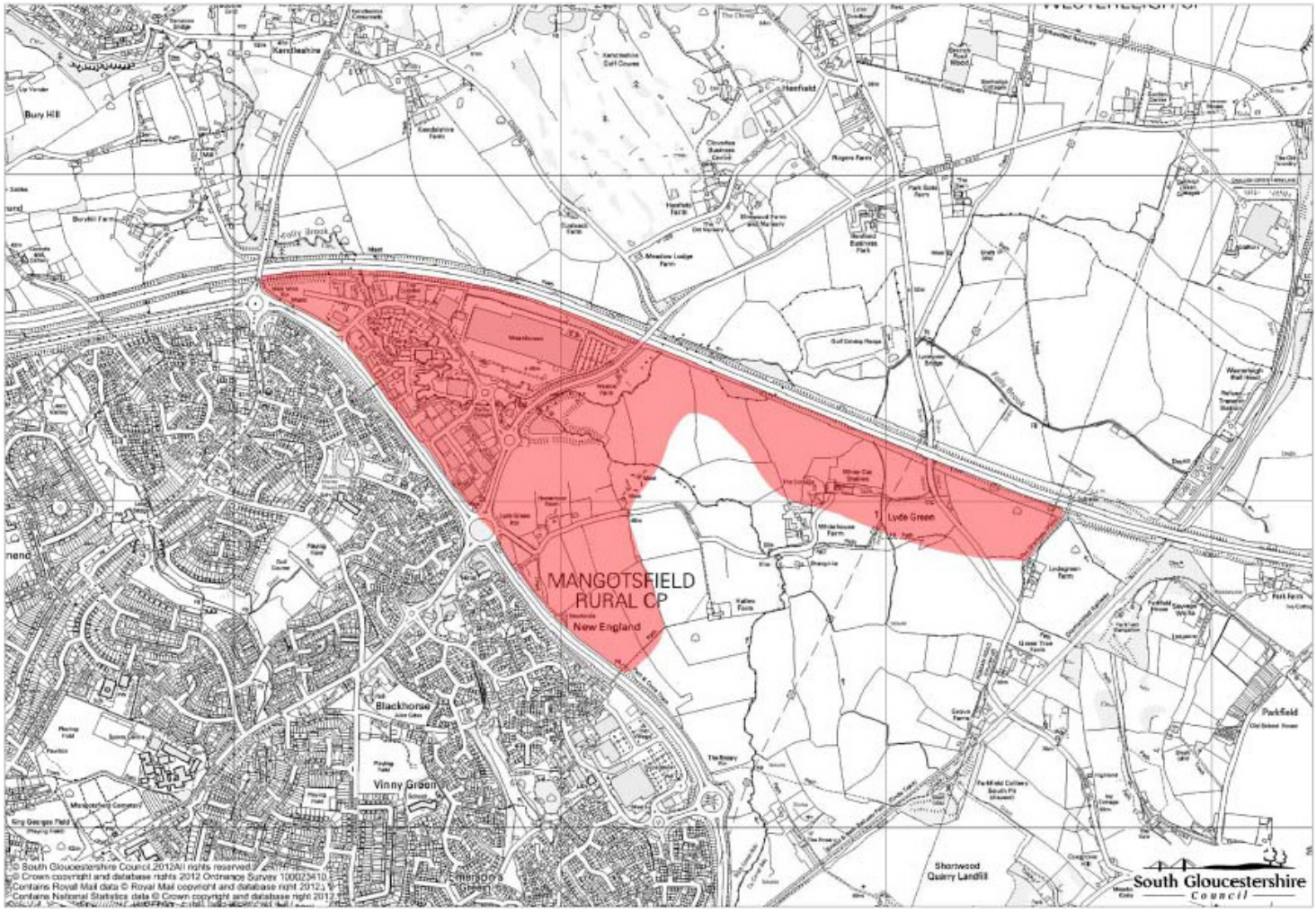
Bristol & Bath Science Park opened in 2011 and is the central focus of the Emersons Green Enterprise Area. The main BBSP One building provides the Forum, a central reception and meeting space open to all, with additional meeting rooms for hire. There is also the Innovation Centre providing office space for start-up firms and small teams along with hot-desking and virtual offices. The Grow-On Centre offers flexible and adaptable workspace for firms to grow into as they expand[15]. BBSP operates a Gateway Policy, which describes the preferred occupier as science, research and technology based firms. The objective of the policy is to support the development of diverse and robust research and business communities[15].

There are just over 50 tenants currently within the BBSP One building. These are mainly small and medium sized firms operating in a range of high-technology based industries. The site is also host to the National Composite Centre (NCC), one of Innovate UK's 10 designated catapult centres. The NCC is an open-innovation centre specialising in the design and manufacture of composites for use in

1 The West of England and Unitary Authorities



2 The West of England with Enterprise Zone/Areas highlighted



3 The Emersons Green Enterprise Area

science and industry[16]. There are currently more than 40 tenants in the NCC, including Airbus, BAE Systems and Rolls Royce, along with the University of Bristol, which also holds a stake in the project. There are high quality employment opportunities on the BBSP site, where the mean salary is approximately £45,000pa[17]. This is well above both local and national average salaries (and approximately more than double the average salary in Tech City in London).

There is, however, still 22 hectares of spare capacity on the BBSP site and take-up of the remaining plots has been slow. There is evidence that some firms have been deterred by the poor access to the M4 (see Section 3). BBSP is proactive in ongoing negotiations with potential partners to attract new investment to the site. In this respect, the University of Bath is currently exploring the possibility of leading an international consortium to establish the Institute of Advanced Automotive Propulsion Systems (I-AAPS) on the site. The University is highly regarded for its world class Powertrain and Vehicle Research, and it is envisaged that the new Institute would support open innovation projects, bringing together leading multinational companies, supply chain partners and universities in multi-party collaborations.

2.4 Other Business Parks

In the Enterprise Area to the east of Westerleigh Road lie a number of business parks: Brook Office Park, the Cobden Centre, Emerald Park East, Harlequin Office Park and Monarch Court. Tenants include Avon and Somerset Constabulary, Mitie, three NHS centres and a Sainsbury's distribution centre. Harlequin Office Park is currently developing its next phase to build three new office buildings totalling 84,500 square feet of floorspace[18]. The new Vertex Park is located to the west of Westerleigh Road alongside the M4 with flexible sites for warehousing, office space and distribution. Recently, plans have been approved for ALD Automotive to relocate to a bespoke new £12 million, 36,000 square foot office building at this new park[19 and 20]. Further afield, the Emersons Green Retail Centre offers a number of retail outlets including a Sainsbury's supermarket.

In total, 18 hectares of employment land have been identified in these other business parks. The aim is to create 90,000 square metres of commercial floor-space within five years, expanding to 180,000 square metres within 10 years[21].

No direct access from Emersons Green to the M4.

Increasing congestion on the A4174 ring road and the M32 junction.

High congestion reduces productivity and competitiveness.

High congestion deters investment and growth.

Longer journey times for residents and commuters.

3. Transport Issues: Constraints on Growth

There are increasing concerns that the transport issues outlined in Section 1.2, and particularly those relating to access to the M4 motorway, are becoming a constraint upon business and economic development. The Atkins Report (2012)[2], for the West of England authorities, noted that numerous local stakeholders had complained about the relative distance and (because of congestion) long journey times to access the motorway network. Our own consultations with local businesses and policy-makers expressed similar concerns.

"The (A4174) ring road can get very congested at any time - not just the 'rush hour' - for no apparent reason, taking up to 40 minutes to reach the M4 from the Science Park."

Senior Manager,
business based at BBSP

"Anything west of the BBSP is completely inaccessible during peak times. The great resources at BBSP and of the wider area, such as at Filton and also facilities such as Bristol Parkway station, are not easy to access and so are not utilised. The networking opportunities at BBSP have expanded our business opportunities - BBSP does exactly what it should do - but getting here is a significant problem."

George Hopkins, Engineering Manager,
HiETA Technologies

High congestion costs can have a negative impact upon productivity, reducing competitiveness and constraining the growth of resident firms in Emersons Green. Indeed, hosting visitors, scheduling meetings with external partners and holding conferences has become problematic for a number of firms. Many firms choose to schedule such activities at alternative and often inconvenient times of day (i.e. outside 'peak' congestion times) or conduct such business elsewhere (i.e. off-site). This can have adverse implications for business operations and efficiency and also the BBSP's conference facilities, which are not always fully utilised.

There are also concerns that if congestion worsens, some firms may consider re-locating:

"Accessibility is the single biggest issue that affects our business. Other than access, BBSP offers an attractive environment for the growing science and technology community to gather and network. However, when the lease is up we may consider alternatives if the traffic situation does not improve."

Sam Paice, Chief Operating Officer,
Centre for Modelling and Simulations (CFMS)

There is some evidence that firms have been deterred from investing into the BBSP site, citing poor motorway access and high traffic congestion as a primary factor. This includes one major investor, which had considered investing in a new plot on the BBSP, but decided on an alternative site which had better motorway access[17]. Continuing concerns about motorway access and congestion will also reduce the attractiveness of the BBSP site for the University of Bath led I-AAPS bid.

"BBSP needs new and larger firms to become a 'fully blown' technology campus, you want the cluster to form quickly and the danger is that without good access and proper transport infrastructure, other firms won't come to the park."

Paul McCafferty, Co-Founder
JustOne Database

Finally, high congestion and poor motorway access creates a poor impression for visitors, including many international visitors to Emersons Green and the BBSP site. This again has implications for potential new investment.

Improved connectivity would:

Unlock science, technology and innovation.

Enhance Emersons Green as a high-tech business cluster.

Improve labour market participation.

Reduce transport and business operating costs.

Stimulate new investment.

4. Emersons Green: Wider Business and Economic Benefits of an M4 Link

4.1 Wider Economic Benefits of Transport Infrastructure

The Greater Bristol Strategic Transport Study (in 2006)[22] suggested there was a 'strong economic case' for an M4 Link, which had an estimated net present value of £274.4 million (2002 prices). This estimate was calculated using a conventional transport feasibility methodology[23], where potential benefits largely accrue from reducing journey times and cutting vehicle operating costs from anticipated falls in congestion. This study was also based upon a junction *"restricted to only eastbound access to the M4 and westbound egress from the M4"*[22] (s.6, p.31). A full M4 Link junction with each way access was not formally appraised.

It is now accepted that there are potentially wider economic benefits of transport infrastructure investment, which have not previously been considered in conventional transport feasibility studies but which are now recognised by the Department for Transport[23 and 24] (and also the National Planning Policy Framework, NPPF). This is particularly pertinent in the case of Emersons Green, where there has been a significant increase in socio-economic activity over last decade (see Section 2.1). These wider economic benefits (of improved transport links) include:

1. Promoting specialist clusters and economies of agglomeration. The benefits of agglomeration economies arise due to the clustering of business activity in the same and/or similar industries and relate to access to infrastructure, local skilled labour markets and, critically, knowledge sharing between firms.

2. Reduced transport costs should increase output in predominantly transport-using sectors (e.g. in logistics/ distribution).

3. Better transport links may encourage new business start-ups and investment by lowering operating costs, allowing firms to take advantage of increasing returns to scale and/or agglomeration economies.

4. Lower commuting costs (and shorter commuting times) should also improve labour market participation, not only in terms of absolute employment numbers but also among higher skilled employees, who will have easier commutes.

While future feasibility studies should consider these wider economic benefits they are, in practice, notoriously difficult to estimate. Recent econometric studies do, however, suggest public investment in transport infrastructure has had a generally positive impact upon business and economic performance[25]. This is particularly the case with regard to improvements in the UK road network, which is by far the country's most important type of transport infrastructure and in which there has historically been a shortfall in public investment to meet rising demand[26]. In short, public investment in transport infrastructure has the potential to raise returns to private investment and, in effect, crowd in private capital. These wider economic benefits should in turn raise the tax base and, so long as the public investment offsets the negative impact of higher taxation on incomes required to fund it, the rate of economic growth.

4.2 Future Potential Scenarios for Emersons Green

While this report does not provide any new feasibility estimates, it is useful to outline some potential future scenarios for the economic development of Emersons Green. In Scenario 1 we assume a full M4 Link, while in Scenario 2 we assume the project does not go ahead. In both scenarios we assume that existing proposals, such as MetroBus, do go ahead as planned.

4.2.1 Scenario 1 (Full M4 Link): Realising Potential

Unlocking Science, Technology and Innovation

Improved access to and from the M4 and reduced congestion on the local road network may unlock the potential of Bristol & Bath Science Park. Better transport links facilitate the continued growth of specialist clusters by supporting the local business eco-system and improving the site's access to suppliers, clients and highly skilled labour markets. Critically, improved connectivity will enhance 'knowledge transfer' and 'synergies' between co-located firms within this high-tech cluster, and between local firms (and employees) and other firms/actors located elsewhere. This arises because improved access provides BBSP with better opportunities to hold national (and international) business meetings, seminars and conferences/events. These sort of networking and engagement activities facilitate the 'exchange of ideas', enhancing innovation and productivity.

The development of BBSP would enable the site to maintain its Gateway Policy in attracting new start-up firms and larger scale investments in predominantly science, research and technology industries. This should generate high quality and well paid employment - possibly realising the 7,000 jobs predicted by the LEP[27] - while enabling Emersons Green to become a regional hub for scientific research and innovation. Indeed, should the I-AAPS open on the site, it will represent the next major development on the park, alongside the expanding National Composites Centre.

Realising the potential of BBSP will complement and enhance the wider West of England's existing strengths as the largest high tech cluster outside London. The continued development of this cluster is particularly critical for the vitality of the wider area's manufacturing base. Indirectly, sustained growth in manufacturing and high quality (and well paid) employment also supports local and regional ancillary industries and services, along with the retail sector.

Logistics and Distribution Centres

Improved access to and from the M4 is particularly beneficial for logistics firms, distribution centres and retailers. Existing businesses in Emersons Green would benefit from lower transport costs and higher productivity, and could take the opportunity to expand their own operations. In addition, easier motorway access could attract new investment on neighbouring sites, such as Emerald Park, the Cobden Centre and the new Vertex Park, from national firms in logistics and distribution related industries. This will enhance local employment opportunities, although the skill and salary levels are unlikely to be as attractive as those offered in the high-tech sector.

It is possible that new investments in logistics and distribution (where short run returns are higher) will compete for land space with investments in science, research and technology (where greater returns are often achieved in the long run). Finally, growth in logistics employment will provide an indirect stimulus for other local service industries and the retail sector.

Utilisation of Office Space

Improved access to the M4 and reduced congestion should also help the commercial development of Harlequin Office Park and the new Vertex Park. Indeed, Harlequin Park is currently in its next phase and is building three new office buildings totalling 84,500 square feet of floor-space, which will require new tenants. In total 18 hectares of employment land have been identified in this area for development (in addition to a further 22 hectares at BBSP). Better connectivity to these sites should attract new professional service and commercially based firms, widen the available labour market pool and ensure that the sites are fully utilised.

Higher Tax Revenues

From a public policy perspective, a higher business occupancy rate across all the business parks at Emersons Green raises the tax base of the West of England Enterprise Zone/Areas, providing the West of England LEP with a higher stream of revenues from business rate growth. These revenue streams can then be used to support future socio-economic projects across the wider West of England.

4.2.2 Scenario 2 (No M4 Link): Maintaining the Status Quo

In this scenario, the M4 Link is not built. An optimistic view is that the area will continue to grow according to current projections. However, the access problems identified in Section 1.2 remain, and will worsen due to rising congestion from the new housing and business developments in Emersons Green. While public transport initiatives such as the MetroBus may alleviate some commuter congestion, the reliance on roads and lack of direct rail links to Emersons Green will mean that overall congestion rises. This will place constraints upon future economic development.

In the worst case, these rising congestion costs would have a negative impact upon economic growth, as existing firms reconsider their current location in Emersons Green, while new investors are deterred. There may be particular pressures on BBSP, where a failure to attract high quality investment could compromise the next phase of the park's development. The feasibility of the current Gateway Policy relies upon a high occupancy rate and usage of remaining land space on BBSP. If this is not achieved, the remainder of the site may remain fallow or lead to a reconsideration of the Gateway Policy, which is currently focused upon attracting science, research and technology firms. This would adversely affect the area's high-tech industries, in the vicinity of Emersons Green and the wider West of England, since their future competitiveness relies upon being part of a vibrant, dynamic cluster.

5. Connectivity: Residential Issues

High congestion and accessibility issues also adversely impact upon the work-life balance of both commuters and local residents in Emersons Green. Longer travel to work times make it more difficult for people to manage domestic arrangements (such as childcare), can adversely affect personal relationships, and can lead to stress-related health issues. This in turn may affect performance at work. In addition, the use of some local roads (used as 'rat runs') which are unsuitable for above-average volumes of traffic (such as Westerleigh Road), is dangerous for local cyclists, pedestrians and children, and raises (local) road maintenance costs.

The issue of congestion in Emersons Green is likely to become even more significant over the next few years, particularly with new housing developments. Since the late 1990s, 2,800 new houses have been built on the west side of the A4174 and more recently there has been an expansion into Emersons Green East, at Lyde Green, with 2,950 new homes expected over the coming decade[28]. In the wider area, several sites close to the A4174 have also been identified for housing development, including 400 possible new homes in Kingswood and 550 at Stoke Gifford[29]. Further afield in Bath and North East Somerset, more than 1,000 new homes are expected near Keynsham.

These new residents will have immediate access to the A4 and the A4174 ring road and this will place additional demands on the existing road network, particularly at Hicks Gate roundabout and along the A4174 ring road towards Emersons Green and the M32 interchange. This will further lengthen journey times and raise both the social and economic costs of commuting. The use of alternative routes on unsuitable roads may also increase. In addition, there would be further constraints on public transport, such as the new Emersons Green Park and Ride scheme and MetroBus, which would be caught in the congestion and may become unattractive to potential users.

An M4 Link: Addressing the issue

A new M4 Link may go some way to alleviating some of the area's transport problems. The majority of traffic from the M4 not bound for central Bristol is likely to use the new M4 Link. This should reduce traffic flows at junction 19 on the M4, at the M32 interchange and along the A4174 to and from Emersons Green. The segregation of traffic should reduce congestion and overall journey times, and ensure traffic flows are more evenly spread between the two motorway junctions (18a and 19) on the M4. Further, inappropriate use of alternate routes should fall, particularly through Pucklechurch and along Westerleigh Road, as the new M4 Link will allow for quicker, direct access to the motorway.

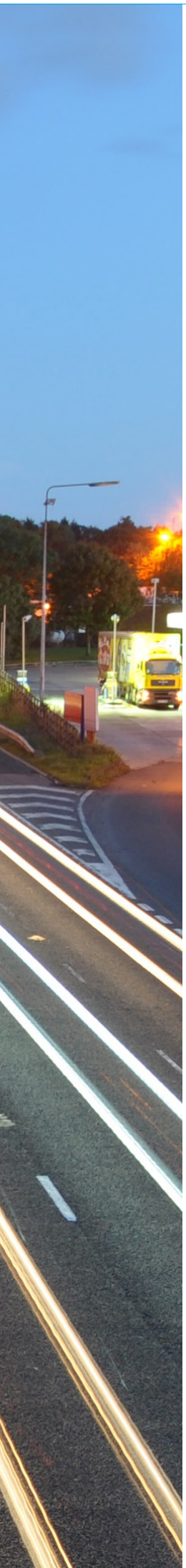
The prospect of shorter journey times in and around Emersons Green would benefit commuters and local residents, who would have easier access to the area's local amenities, particularly on Emersons Green Retail Centre. Furthermore, less congested roads should also make public transport and schemes such as MetroBus more attractive to users.

Recent transport infrastructure projects focusing on facilitating easier access to science and business parks:

M49 new junction.

i54 South Staffordshire new bespoke junction.

M5 junction 29 improvements for Exeter Science Park and beyond.



6. Other Transport Infrastructure Projects

6.1 Local Projects

The West of England Joint Local Transport Plan 3[30 and 31] includes several measures currently being implemented throughout the area, including the North Fringe to Hengrove Package that incorporates the new Park and Ride site at Emersons Green and the MetroBus scheme. Further work includes the South Bristol Link, connecting Hengrove with the Long Ashton Bypass at the Long Ashton Park and Ride, and this includes road, pedestrian, cycleway and MetroBus routes[32].

While this does not directly affect the Emersons Green area, it has been a long-standing objective to improve connectivity between the north and south Bristol metropolitan areas. It is possible that future discussions on transport infrastructure will include proposals to connect the South Bristol Link with the A4174 ring road, where it meets the A4 at Hicks Gate. This would create a more complete circular road network around Bristol and should improve traffic flows along the route, including at Emersons Green.

6.2 National Projects

In exploring the case for a new M4 Link to Emersons Green, it is worth noting three recent national projects that have sought to improve motorway access to strategically important business and technology parks.

M49 Junction, Avonmouth
(Agreed, December 2014)

This new junction on the M49 will provide a direct link to the Avonmouth-Severnside Enterprise Area and will provide easier connections to the M4 and M5 in both directions. Along with improvements to rail services, this will make the Avonmouth-Severnside Enterprise Area one of the most well connected in the area, which will include road, rail and a deep-water container terminal at the port[33]. The site itself is estimated to create up to 14,000 new jobs by 2030[34].

i54 South Staffordshire M54 Junction
(Junction Opened, December 2014)

This new junction connects the i54 South Staffordshire business park with the M54 motorway, which is at the centre of the Black Country Enterprise Zone. Like Emersons Green, it already has a number of major employers, including Jaguar Land Rover, Moog, Eurofins and ISP, and the site is supported by three unitary authorities - Staffordshire City Council, Wolverhampton City Council and South Staffordshire Council35. The new junction was specifically designed to serve the business park. Indeed, as Philip Atkins, the leader of Staffordshire County Council, said: *"normally business sites are built near existing motorway junctions but here we are turning this approach on its head, creating a junction to solely serve this development site"*[36].

M5 Junction 29, Exeter Science Park
(Due for Completion, 2016)

Exeter Science Park also shares similarities with Emersons Green and BBSP in offering space for businesses of all sizes, from the smallest start-ups to the largest multinational companies. The site is home to the UK Met Office headquarters, with further plans for wider business and residential development, consisting of approximately 10,000 new jobs and 14,000 new houses, in addition to ongoing expansion at Exeter Airport and significant development at the new town of Cranbrook nearby, where 6,500 homes are projected.

Currently, there is major re-construction of the nearby M5 junction 29 and the addition of a new entryway link road to provide more direct access between the M5 and the Science Park[37]. This scheme's objectives include "*unlocking constraints to delivering new housing and employment sites*" and to *"reduce the likelihood of congestion"*[37] (p.5), further stating that "*this is the direct high quality access that the development needs as a catalyst to enable the employment site to flourish*"[37] (p.6).

For more information, please contact the Gateway2Growth campaign at:

gateway2growth.co.uk

7. Conclusions

This report supports the recommendation for a new junction (18a), the M4 Link, between junctions 18 and 19 on the M4 motorway to relieve traffic congestion on the A4174 and provide easier access to the Emersons Green Enterprise Area. Table (1) summarises the key issues, impacts and the main potential benefits of an M4 Link.

Key challenges to be addressed	Key impacts of M4 Link	Main Potential business and social benefits
Congestion at the A4174-M32-M4 interchange.	Direct access to (and from) Emersons Green to the M4.	Reduced congestion and operating costs for business facilitating productivity gains.
Reliance on inappropriate ('rat run') alternate routes.	Traffic split across M4 junctions, the new 18a and 19.	Attract new business investment and high skilled employment to Emersons Green.
Poor access to Emersons Green for business clients and visitors.	Reduced congestion and journey times at M4 (junction 19), M32 and A4174 and between M32 and Emersons Green.	Realise the potential for BBSP to become a regional hub for science, research and innovation.
Constrained business and job growth caused by traffic.	Enhanced public transport reliability.	Raise business occupancy rates on Emersons Green, widening the local tax base.
Additional traffic created by housing developments.	Reduced use of alternate ('rat run') routes.	Improve labour market flexibility and participation.
		Reduced journey times into and out of Bristol, improving the work-life balance of commuters and local residents and providing easier access to amenities.
		Reduced traffic on alternate ('rat run') routes, particularly through Pucklechurch and Westerleigh Road.

1 Table Summary

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