The New Tyne Crossing
An Economic Impact Assessment

Prepared for
Tyne & Wear Integrated Transport Authority
November 2012

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Contents

Key Findings

- Just over half of businesses interviewed were able to cite financial benefits to their business resulting from the opening of the New Tyne Crossing.
- The scale of financial impact that businesses were able to estimate was in most cases relatively modest (despite our sample being skewed towards larger businesses) only 7% citing direct financial benefits of over £10,000 per annum
- Over two thirds (70.1%) of the businesses with vehicle operating costs considered that the opening of the New Tyne Crossing had had a positive impact on their business by reducing vehicle operating costs. Similarly two thirds (68.2%) of respondents considered that improved business travel time reliability had had a positive impact on their business
- Other positive impacts included greater Journey security / reliability and increased journey flexibility
- A minority (5%) of the businesses interviewed identified an increase in market share (5 out 6 located in South Tyneside Arc Zone 3)
- Overall the **majority of impacts were slightly positive** rather than significantly positive perhaps stemming from the typically moderate proportion of deliveries, business travel and travel to work that crosses the Tyne using the Tyne Tunnel
- None considered that the opening of the New Tyne Crossing had been significant enough to have already had an impact on employee numbers
- Reduced travel to work times were considered by the majority of businesses to bring a range of positive impacts. Indeed over two thirds (70.7%) of businesses considered that reduced travel to work times for those using the Tyne Tunnel had had a positive impact. Positive impacts for businesses included improvements to:
    - Employee Morale
    - Punctuality
    - Productivity / effectiveness
- The New Tyne Crossing has increased the potential for businesses to recruit from a wider catchment area potentially both reducing recruitment costs and increasingly the quality of those recruited. Several respondent businesses identified an increased potential to recruit staff from opposing sides of the Tyne
- Businesses across a wide range of activity types were found to have been positively affected by the New Tyne Crossing. Different types of business have been affected in different ways:
    - As expected Transport / Logistics businesses were most likely to cite positive impacts resulting from the New Tyne Crossing and in particular they were more likely to cite positive impacts in relation to delivery times, vehicle operating costs, reliability of delivery times, and overall business performance. They were however less likely cite positive impacts from changes in the relating to employee retention / turnover and workforce morale
    - Contact centres were more likely than businesses from other industry groups to cite positive impacts in relation to travel to work length / time, employee retention / turnover, punctuality, recruitment, and journey flexibility but less likely cite positive impacts from changes in the reliability of business travel times, employee effectiveness and overall business performance.

  - Knowledge Intensive Business Services were more likely to cite positive impacts in relation to reliability of business travel times, market share, workforce morale and improved effectiveness but were less likely to cite positive impacts from changes in the reliability of delivery times and vehicle operating costs.
  - Manufacturing businesses were across the overall range of potential impacts less likely to cite positive impacts than businesses from the other industry groups
  - Other Activities (including construction and other services) were slightly more likely to cite positive impacts than manufacturing businesses but were less likely than our other industry groups
- Businesses located A19 South Tyneside Arc (Zone 3) within South Tyneside but not immediately adjacent to the Tyne Tunnel were across the overall range of potential impacts, the more likely to cite positive impacts. Zone 3 businesses were more likely to cite positive impacts in relation to reliability of business travel times, employee effectiveness, market share, workforce morale, and overall business performance but less likely to cite positive impacts in relation to employee retention / turnover and reliability of delivery times.
- As expected, businesses located further away from the Tyne Tunnel, beyond the boundaries of North Tyneside and South Tyneside (Zone 4) were across the overall range of potential impacts less likely to cite positive impacts
- Importantly no unintended negative consequences of reduced Tyne Tunnel crossing times were reported by any businesses interviewed
- In the context of weak commercial and industrial property market demand no evidence was reported by property agents of any significant rise in demand for commercial or industrial property resulting from the Tyne Tunnel. However, anecdotal evidence was reported by property agents of a greater willingness of businesses considering moving to locations on opposite banks of the Tyne
- The various forms of impact could be expected to occur increase over a **longer timescale** as proportion of deliveries, business travel and travel to work that crosses the Tyne using the Tyne Tunnel steadily rise, adapting to the potential afforded by the reduced crossing times and greatly increased route capacity
- Also in the longer term, the relative development potential of sites is likely improve within the A19 Corridor and most notably in North and South Tyneside

1 Introduction

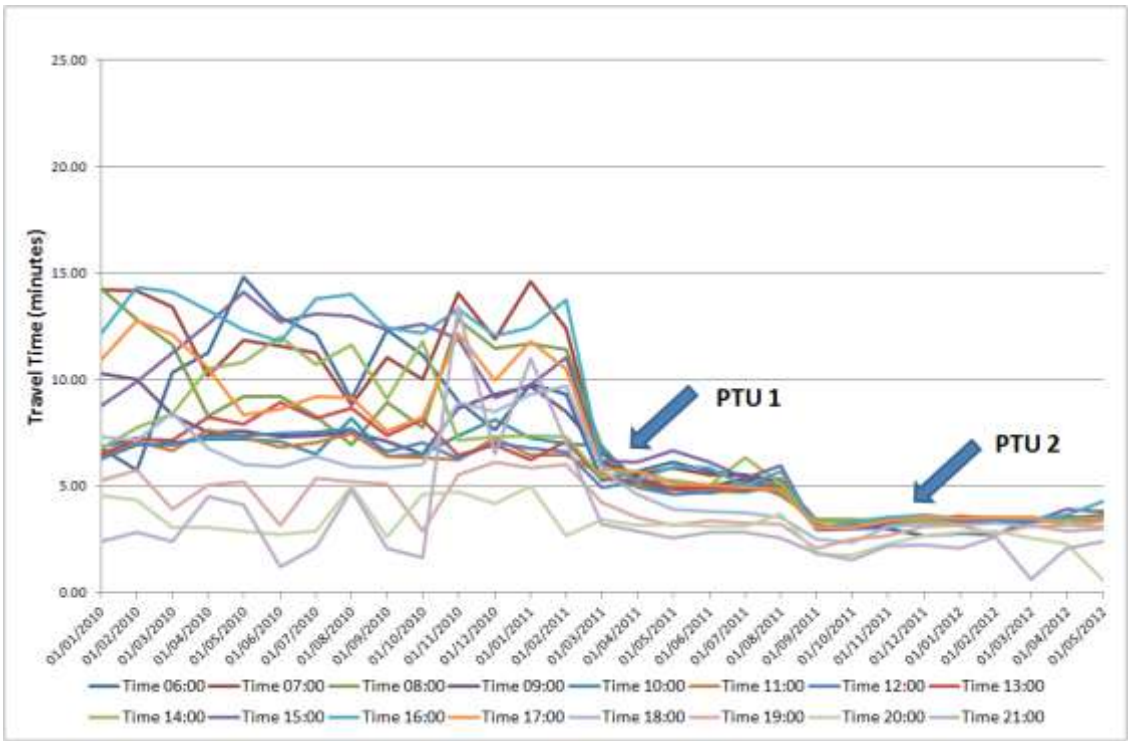
The Centre for Urban and Regional Development Studies (CURDS), Newcastle University was commissioned in August 2012 to carry out an assessment of the economic impacts on local businesses resulting from the New Tyne Crossing. We have approached this by not only examining impacts which are already identifiable but also potential future impacts and possible additional transport infrastructure improvement which would support these impacts.

The original vehicle Tyne Tunnel opened in 1967. It was designed for a daily traffic throughput of 24,000 vehicles, although in recent years it regularly served 38,000 customers per day. One consequence of the high daily traffic flows through the Tyne Tunnel was growing levels of congestion at peak journey times.

A new southbound vehicle tunnel was built as part of the New Tyne Crossing project completed in February 2011 and then the second phase of the project which was completed almost one year ago and opened on 21 November 2011. The scheme makes the A19 a dual carriageway all the way from Northumberland to North Yorkshire and has greatly increased the daily throughput capacity to some 78,000 vehicles per day.

Since the opening of the New Tyne Crossing the journey times to cross the River Tyne using the A19 route have reduced significantly. The increased capacity of the crossing and resultant reduction in congestion has resulted in a switch from other routes to the Tyne Tunnel crossing resulting in a reduction in the traffic flows and journey times for those using other routes to cross the Tyne.

The impact of the second tunnel opening on travel times along the A19 has been assessed using TrafficMaster data provided by Newcastle City Council. TrafficMaster provides speed and travel time data between junctions of the trunk road network using Automatic Number Plate Recognition (ANPR) technology. Figures 1 illustrates very graphically the impact of The New Tyne Crossing (PTU2) on journeys between A185 at Jarrow and A193 at Wallsend.



Source: TrafficMaster data

Figure 1 Northbound Travel Times through the tunnel between January 2010 and May 2012

In 2012, it is estimated that a total of **3,120 hours are saved each week day** compared to travel times through the tunnels in 2010 (Anita Mauchan Consultant Limited).

The purpose of this study is to examine the nature and extent of the impacts resulting from these improvements in crossing times on local businesses to date and to identify potential future impacts on businesses and the local economy resulting from the New Tyne Crossing. Our study also examines perceived changes to date in the market potential of employment sites and premises and the priorities of local businesses for future transport investment.

It was agreed at the outset that our study would not attempt to produce estimates of the total value of time saved as a result of reduced congestion.

Our research has not included **a separate traveller survey** (covering tourists, other personal travellers, commuters, public transport users). Our research has not attempted to gauge **other potential impacts** for example those on:

- Local migration and housing market areas
- Nearby residential property values
- Shares of proposed and completed commercial / industrial floorspace in A19 corridor
- Shares of take up of available commercial / industrial floorspace in A19 corridor
- Use of other routes to cross the Tyne and wider impacts on congestion levels and traffic flow

Substantial further research using different methods would be required to assess these forms of impact.

Our report is structured as follows:

- Impacts on local businesses and employees
- Potential future impacts on local businesses
- Market Potential of Employment sites and Premises
- Priorities for transport infrastructure investment identified by local businesses

2 Impacts on local businesses and their employees

2.1 Introduction

Our research has focused on the **perceptions and estimates** of 120 local businesses interviewed by us in October 2012 to assess the nature and scale of impacts resulting from the New Tyne Crossing.

The questionnaire used for the research was developed following a review of the literature to identify different forms of impact on businesses of road infrastructure improvements (summarised in Annex 1).

Our interviews with businesses covered:

- Key employers located within the A19 corridor such as Nissan, Post Office Cash Handling and Distribution, Vantec, Tesco Bank, Hashimoto, Stagecoach NE, NE Press, Hayes Travel, Greggs, Rohm and Hass UK Ltd
- manufacturing, logistics, knowledge intensive business services, contact centres and other sectors

We selected a purposive sample of businesses focussing on businesses that might be expected to have been impacted in some way. Our sample was stratified by zone, industry type and size, with a particular focus on manufacturing and transport / logistic businesses. Our sample was spread across businesses of different sizes but weighted towards larger activities. Almost two fifths of the businesses interviewed employed more than 50 employees.

Our interviews with businesses were focussed solely on activities located within A19 corridor through North Tyneside, South Tyneside and Sunderland.
The A19 Corridor north and south of the Tyne Tunnel was divided into 4 zones

Table 1

Company Location/Postcode	Percentage
Zone 1 A19 Corridor close to Tyne Tunnel	36.7
Zone 2 A19 North Tyneside Arc	11.7
Zone 3 A19 South Tyneside Arc	36.7
Zone 4 A19 Corridor outside N & S Tyneside	15.0

Base = 120

The post codes included within the four Impact Zones were as follows:

Table 2 Impact Zones

ZONE 1	A19 Corridor close to Tyne Tunnel	NE28, NE29, NE31, NE32
ZONE2	A19 North Tyneside Arc	NE12, NE25, NE26, NE27
ZONE 3	A19 South Tyneside Arc	NE33, NE34, NE35, NE36,
ZONE 4	A19 Corridor outside N&S Tyneside	NE23, NE24, NE37, NE38, SR1, SR2, SR3, SR4, SR5, SR6, SR7, SR8

Table 3

Industry Groups	Percentage
Contact Centres	2.5
Knowledge Intensive Business	16.7
Manufacturing	42.5
Transport/Logistics	24.2
Other	14.2

Base = 120

It should be noted that a number of respondents to each question varied (the base). **Businesses were only expected to answer questions which they judged to be relevant**. For example most office based activities and manufacturing businesses using third party logistics providers did not consider the question "what impact has the opening of the New Tyne Crossing had on your vehicle operating costs" to be applicable (a base of just 77 respondents)

Our analysis has grouped the range of impacts into three broad headings:

- **Impact on costs, efficiency and employment** including:
  - Business performance
  - Vehicle operating costs
  - Delivery times
  - Journey Changes
  - Business Travel Times and travel reliability
  - Market share
  - Employee numbers
- **Benefits for employees** including:
  - Travel to work journey time and length
  - Improved reliability of journey times and reduced stress relating to congestion
  - Work finish times
- **Other business benefits** including:
  - Employee Morale
  - Punctuality
  - Absenteeism
  - Efficiency and performance of staff
  - Employee retention and employee churn

- Recruitment potential
- Journey security and journey flexibility

2.2 Impact on business performance, costs, efficiency and employment

Overall Business Performance

Half of respondents considered that the opening of the New Tyne Crossing had had a positive impact on 'overall business performance'.

Table 4 Impact of the New Tyne Crossing on overall Business Performance

	Overall Business Performance
Significantly Positive	3.3%
Slightly Positive	46.7%
No Impact/ Neutral	50.0%
Slightly Negative	0.0%

Base 90

Transport / Logistics businesses were more likely than businesses located within the other Zones to identify an overall improvement in business performance attributable to the New Tyne Crossing. Businesses located in Zone 3 A19 South Tyneside Arc were also more likely than businesses located within the other Zones to identify an overall improvement in business performance.

Moreover just over half of respondents were able to cite financial benefits to their business resulting from the opening of the New Tyne Crossing. Overall, just under a third of respondent businesses had experienced an increase in their company profits.

Table 5 Estimate of annual financial saving attributable to the New Tyne Crossing

	%	Number of Businesses
Nothing	49.2	58
Under £2,500	26.3	31
£2,500 – £4,999	6.8	8
£5,000 – £9,999	10.2	12
£10,000 – £19,999	5.1	6
£20,000 – £29,000	0.0	0
£30,000 +	1.7	2

Base 117

Vehicle Operating costs

Over two thirds (70.1%) of businesses with vehicle operating costs considered that the opening of the New Tyne Crossing had had a positive impact on their business by reducing vehicle operating costs.

Table 6 Impact of the New Tyne Crossing on Vehicle Operating costs

	Vehicle Operating Costs
Significantly Positive	18.2%
Slightly Positive	51.9%
No Impact/ Neutral	28.6%
Slightly Negative	1.3%

Base: 77

As expected transport / logistics businesses were more likely than businesses located within the other industry groups to identify an overall improvement in vehicle operating costs attributable to the New Tyne Crossing. Businesses located in Zone 2 A19 North Tyneside Arc were also more likely than businesses located within the other Zones to identify an overall improvement in business performance.

Businesses using the Tyne Tunnel for a high proportion of their deliveries were not surprisingly more likely to have experienced a significant reduction in vehicle operating costs.

Table 7 Proportion of Deliveries using the Tyne Tunnel and changes in Vehicle Operating costs attributable to the New Tyne Crossing

	Vehicle Operating Costs			
Deliveries	Significantly Negative	No effect	Slightly Positive	Significantly Positive
Under 5%	0.0%	55.6%	44.4%	0.0%
5-25%	3.6%	14.3%	67.9%	14.3%
25-75%	0.0%	9.5%	61.9%	28.6%
Over 75%	0.0%	50.0%	0.0%	50.0%

Reduced vehicle operating costs were explained by respondents in terms of:

- Reduced use of fuel stop-starting in congested traffic
- Reduced driver time spent in queues
- More deliveries per driver / per truck per day

"Time management now much better and better fuel efficiency" Transport, Zone 3

"Remarkable difference to journey times". Improved the flow of traffic from Port of Tyne to Washington. It has freed up a lot of the stoppage time and is much faster and more efficient. Transport, Zone 3

"More of our drivers time is "productive" time and we are saving money on fuel by not stop starting in queues." Transport, Zone 2

"Reduced journey times through the Tunnel have cut a significant amount on wage costs. about 2500 man hours saved!" Other, Zone 4

"Vans can now do more deliveries in one day. Productivity improved on the Berwick run. We can now put more tonnage on, saving using a 2nd vehicle. Far better usage of the fleet" Transport, Zone 3

"It's a fantastic difference. Saving time in vehicles and fuel costs - improving productivity. 5% time saving on jobs. Other, Zone 3

Reliability of delivery times

Two thirds of respondents (67.5%) considered that greater delivery reliability attributable to the New Tyne Crossing had benefitted their business.

Table 8 Impact of the New Tyne Crossing on the Reliability of delivery times

	Reliability of Delivery Times
Significantly Positive	22.9%
Slightly Positive	44.6%
No Impact/ Neutral	32.5%
Slightly Negative	0.0%

Base: 83

Examples of businesses identifying benefits from more reliable delivery times included:

"Big improvement on delivery times. We can now guarantee delivery times" Transport, Zone 3

"The New Tyne Crossing has reduced congestion and delays along the A19 corridor making it easier to predict delivery times for customers Transport, Zone 3

"The new tunnel is great! We can now give customers more reliable delivery times because we don't have to queue, especially during rush hour". Transport, Zone 2

"Logistically a big difference we can now do more deliveries and can have more exact pick-up and delivery times. Big benefit". Manufacturing , Zone 1

"Before the opening of the new Tyne Tunnel, we tended to completely avoid travelling during rush hours when at all possible, in order to minimise fuel consumption. The new tunnel means that our vehicles can be out on the road by 8 am or earlier helping us to provide a more reliable, efficient service". Transport, Zone 4

Transport / logistics businesses were more likely than businesses located within the other industry groups to identify greater delivery reliability attributable to the New Tyne Crossing.

Businesses located in Zone 2 A19 North Tyneside Arc were also more likely than businesses located within the other Zones to identify greater delivery reliability attributable to the New Tyne Crossing.

Journey Changes

Several businesses considered that they had achieved efficiency gains as a result of transferring more of their deliveries from other routes across the Tyne to the Tyne Tunnel.

"Being located at Balliol, Longbenton we are conveniently located for the Tyne Tunnel and since the opening of the second tunnel, we now have 6 vehicles per day using it instead of one. The absence of the queues during rush hour also means that we can now put more produce on each lorry and service more shops per journey. Manufacturing, Zone 2

"We have re-routed much of our work from the A1 Western By-pass to the A19 since the opening of the New Tyne Tunnel. This has helped with delivery times and fuel economy, although the latter is partially offset by rising toll charges". Transport, Zone 4

"Dramatically reduced time wasted. Big positive for us. We were diverting vans onto other routes but that was costly in fuels and mileage. Productivity has improved dramatically. Employees spend more time on site and less time in vans." Other, Zone 3

"Not only has the New Tyne Crossing solved congestion problems, helping to minimise fuel consumption and improve delivery times; it has also helped to ease congestion on the A1 Western By-pass." Transport, Zone 2

Overall only a small minority (9%) of businesses considered they had shifted deliveries from other Tyne crossings.

Table 9 Businesses experiencing a change in the proportion of Deliveries using the Tyne Tunnel over the past 12 months

	Businesses
Significantly Higher	1.1%
Slightly Higher	7.7%
No Impact	91.2%
Base	91

Business Travel

Two-thirds (66.3%) of businesses considered that business travel time reliability had improved following the opening of the New Tyne Crossing. A slightly higher proportion (

68.2%) considered that improved business travel time reliability had had a positive impact on their business

Table 10 Impact of the New Tyne Crossing on the reliability of Business Travel journey times

Reliability of Business Travel Times	Proportion of businesses
Significantly Positive	15.9%
Slightly Positive	52.3%
No Impact/ Neutral	31.8%
Slightly Negative	0.0%

Base: 88

"We have another office in Cramlington and staff commute between the two. It makes it a million times better like chalk and cheese. Directors travel daily between the two and in the past could have been waiting for an hour to get through the Tunnel" Knowledge Intensive Business Service, Zone 1

"We have twenty five people per day travelling between North and South Tyneside to deliver on site learning development programmes for clients. The new tunnel is saving them a combined 2,000 minutes per day in business travelling time, thereby increasing their individual productivity and minimising non-fee earning work time". Knowledge Intensive Business Service, Zone 1

One in ten respondents considered that the proportion of their business travel journeys that use the Tyne Tunnel had risen. All of these businesses were found to be located in either North or South Tyneside. It is important to note that less than one in five respondent businesses estimated that they use the Tyne Tunnel for more than a quarter of their business travel trips.

Table 11 Proportion of Business Travel using the Tyne Tunnel

Proportion of Business Travel using the Tyne Tunnel	% of Businesses
None	31.6%
Under 5%	10.3%
5-25%	41.0%
25-75%	12.0%
Over 75%	4.3%
All	0.9%

Base 117

Knowledge intensive business services (KIBS) were more likely than businesses located within the other industry groups to identify improved business travel time reliability attributable to the New Tyne Crossing. Regular face to face client contact forms a critical part of the delivery of many such businesses. Businesses located in Zone 2: A19 North Tyneside Arc were more likely than businesses located within the other Zones, to identify improved business travel time reliability attributable to the New Tyne Crossing.

Market share

Only a small minority of businesses considered that the opening of the New Tyne Crossing had had a positive impact on their market share. This is could in part be because some of their competitors have also benefited from the New Tyne Crossing.

Table 12 Impact of the New Tyne Crossing on Market share

	Market Share
Significantly Positive	0.0%
Slightly Positive	5.4%
No Impact/ Neutral	94.6%
Slightly Negative	0.0%

Base: 93

Businesses located in Zone 3: A19 South Tyneside Arc accounted for 5 out of the 6 businesses to identify a positive impact on their market share attributable to the New Tyne Crossing.

Job Creation

Despite weak growth across both the North East and UK economy over the past year just over a third of the businesses interviewed had expanded their number of employees.

However, whilst the majority of business respondents were able to cite a range of benefits to their business brought about by the opening of the New Tyne Crossing somewhat surprisingly none considered that the impacts from the opening of the New Tyne Crossing had been significant enough to have already had an impact on employee numbers.

2.3 Benefits for employees

Businesses identified a range of benefits for their employees that use the tunnel these included:

- Reduced travel to work journey durations
- Improved reliability of journey times

- Reduced stress relating to congestion
- Earlier finishing times

Several businesses referred to staff being less stressed and frustrated as a result of reduced congestion and greater reliability of travel to work times.

"twenty of our sixty strong workforce are very content saving two hours a week or more on travelling to work" Manufacturing, Zone 1

"Magnificent and huge improvement for people using the tunnel" Transport, Zone 2

"Big impact on work-life balance - Big positive for workers. More time with families etc" Manufacturing, Zone 1

Two businesses suggested that currently much of the potential efficiency gains resulting from faster journey times through the Tunnel were enjoyed by employees rather than the business directly:

"Staff are able to finish work a lot earlier because they are salaried (rather than paid per trip)" Transport, Zone 3

"Drivers save a few minutes on each delivery. The time saving is however too short to add in another delivery per shift so they simply finish slightly before the end of their shift" Manufacturing, Zone 4

Overall the combination of these benefits to employees led 70.7% of respondents to consider that the reduced travel to work journey durations had had a positive impact on their business.

Table 13 Impact of the New Tyne Crossing on journey to work times

	Travel to Work Length/ Time
Significantly Positive	24.4%
Slightly Positive	46.3%
No Impact/ Neutral	29.3%
Slightly Negative	0.0%

Base: 82

Contact centres were more likely than other industry groups to consider that reduced journey to work durations had had a positive impact on their business. Businesses located in Zone 2: A19 North Tyneside Arc were more likely than businesses located within the other Zones to identify reduced travel to work journey durations attributable to the New Tyne Crossing.

2.4 Other business benefits

Other benefits that were identified by businesses included:

- Improved morale
- Improved punctuality
- Improved productivity and effectiveness

Approaching two thirds of respondents considered that morale in the workplace had improved since the opening of the New Tyne Crossing. In some cases this was limited to those that used the Tyne Tunnel in order to travel to work.

"Around ten of our workforce use the Tyne Tunnel to travel to and from work every day. Since the opening of the second tunnel they get to work faster, arrive on time and in a better frame of mind. In my opinion a happier worker is a more efficient worker, which can only be good for business". Knowledge Intensive Business Service, Zone 1

Well over a third of respondents (38%) considered the opening of the New Tyne Crossing to have had a positive impact on punctuality.

"Before the opening of the new Tunnel there was a 10-20% chance of lateness now there are no issues with punctuality" Manufacturer, Zone 1

Moreover over two fifths (41%) considered the reduced congestion resulting from the opening of the New Tyne Crossing had helped to improve the effectiveness of employees. Several noted positive impacts on businesses were noted both at the start of the day and the end of the day:

"The most significant thing is that people come to work in a better frame of mind, and ready to work. They sometimes come in earlier, and they are not frustrated!" Other , Zone 3

"*In the past staff in the team after three thirty would start looking at the Tyne Tunnel web cam and if they saw a reduction in delays would make a mad dash to leave. Since the opening of the new tunnel they are less anxious to leave on-time.*" *Knowledge Intensive Business Service*, Zone 2

The majority of businesses however felt that reduced congestion and reduced travel to work times had had no discernible effect on the performance of employees, absenteeism or punctuality.

"Our employees arrive at work well in advance of the start of their shift. Our business is not affected in any way by improved traffic flows through the Tyne Tunnel" Manufacturer, Zone 4

Table 14 Impact of the New Tyne Crossing on Punctuality, Workforce Morale and Employee Effectiveness

	Punctuality	Effectiveness	Workforce Morale
Significantly Positive	11.2%	1.1%	14.1%
Slightly Positive	25.8%	39.3%	48.9%
No Impact/ Neutral	62.9%	59.6%	37.0%
Slightly Negative	0.0%	0.0%	0.0%
Base:	89	89	92

Generally absenteeism was not found to be a concern of businesses. Just two respondents considered the opening of the New Tyne Crossing to have helped to reduce absenteeism.

Employee retention and employee churn

The overwhelming majority (94.4%) of respondents considered that the opening of the New Tyne Crossing had had no impact on helping to retain staff or reduce employee turnover. The remainder some 6% of businesses considered that the opening of the New Tyne Crossing had a slightly positive impact on helping to retain employees. These were spread across contact centres, knowledge intensive business services and manufacturing businesses.

Table 15 Impact of the New Tyne Crossing on Employee Retention

	Employee Retention/ Turnover
Significantly Positive	0.0%
Slightly Positive	5.6%
No Impact/ Neutral	94.4%
Slightly Negative	0.0%

Base:90

Labour market catchment potential

Travel to work patterns tend to adjust gradually over time it was therefore surprising to find that already a minority of respondents (13.3%) considered the opening of the New Tyne Crossing had helped to make recruitment easier. Most of these respondents were knowledge intensive business services.

Table 16 Impact of the New Tyne Crossing on ease of recruitment

	Recruitment
Significantly Positive	**3.3%**
Slightly Positive	**10.0%**
No Impact/ Neutral	86.7%
Slightly Negative	0.0%

Base: 90

Several businesses have already changed their views in relation to the potential to recruit employees from different sides of the Tyne:

"Before the opening of the new Tunnel we wouldn't have considered it possible to recruit blue collar workers but now we feel if we needed to recruit there are workers with industry relevant skills north of the river" Manufacturer, Zone 1

"In a recent round of recruitment we took on a number of new workers who live in the Sunderland/South Shields area. Before the new tunnel opened we would never have even considered these applicants due to concerns over travel to work and punctuality". Manufacturer, Zone 1

"We opened up a large call centre operation at Quorum in 2010 as its national insurance centre. As a brand new operation it was essential that a large proportion of the initial workforce had general insurance experience. The opening of the New Tyne Crossing has helped us to achieve this as many experienced employees were recruited from Sunderland which has a concentration of insurance-based businesses. For them, the absence of queues and extreme congestion during rush hour was no longer a barrier to travelling north of the Tyne for work". Contact Centre, Zone 2

"The Tyne Tunnel has helped to open up the region. We are now able to provide clients with better candidates from across a wider area. For example Sunderland firms are more likely to be able to attract accountants from the Newcastle area and vice versa". Gary Harrison, Hayes Recruitment

Already, the change in the potential to successfully recruit employees from opposite sides of the Tyne appears to be further evidenced by a rise in the proportion of Cobalt Business Park employees that currently live in the A19 corridor south of the Tyne Tunnel.

Table 17 Cobalt Business Park Employee Place of residence[1]

Area	October 2012	April 2011
A19 North of Tyne	83.8%	84.2%
A19 South of Tyne	7.8%	6.8%
Further south/west	7.5%	8.1%
Outside North East	0.8%	0.9%
TOTAL (codable)	4,895	9,357

Table 18 Cobalt Business Park Employee Place of residence

Area	October 2012	April 2011	Change since April 2011
Inner SouthTyneside	1.3%	1.3%	0.2%
Outer SouthTyneside	2.5%	2.1%	19.2%
Rest of A19 corridor south	4.0%	3.4%	19.2%

Un-intended consequences

We found no evidence from respondents of a consequent or anticipated rise in competition from across a wider area / longer corridor We also found no evidence of the emergence of new distribution / service delivery zones leading to the contraction of branch networks, closure of sites or expansion of others

3 Market Potential of Employment sites and Premises

3.1 Market demand

It was generally agreed by the property agents consulted that weak market conditions this year combined with the short period of time since the opening the new Tyne Tunnel meant that there was no concrete evidence of a shift in demand

Several agents perceived a greater willingness of businesses to consider property on a different side of the Tyne to where they are currently located. This included a large North Tyneside business potentially considering a move to South Tyneside. Another agent sited an example of a Boldon based business considering a site north of the Tyne. There was however a mixed view amongst agents as to whether this greater level of locational flexibility was a result of a relative shortage of certain sizes of industrial / warehousing space

[1] Data supplied by Cobalt Park of the home address post code of current Cobalt more card holders and of Cobalt Community card members April 2011 www.cobaltpark.co.uk

or a shift in market perception resulting from the improved accessibility afforded by the New Tyne Tunnel. As one agent put it "the Tyne is still a mental barrier".

Several agents felt that that the market potential of industrial sites along the A19 corridor would be raised, particularly sites north of the river. It was suggested that whilst historically logistics activities had tended to locate south of the Tyne and close to locations that could access the A1 south could potentially consider locating north of the Tyne.

One of the agents noted that development of new additional floorspace on Enterprise Zones benefitting from tax relief on investment in new developments would extend the considerable overhang of surplus office floorspace relative to demand.

3.2 Uplift in rents and land and property Values

Given the depressed nature of both residential and commercial property markets there have been fewer transactions than would normally be anticipated. It would therefore be difficult to determine the true extent of any impact that has occurred to date.

Discussions with agents revealed no evidence to date of any absolute or relative increases in rents. Office rents in particular were described as being at a "rock bottom level" with occupiers able to negotiate substantial rent free periods or significantly lower rents. Where owners have sold modern office properties there were examples cited of them being sold at values barely half that of current new build costs.

4 Longer term consequences of the New Tyne Crossing

The majority of business respondents considered that the New Tyne Crossing would bring a range of benefits for their business.

Table 19 Likely long term Impacts of the New Tyne Crossing

	Reduced Delivery Times	Road Congestion	Travel to Work Times	Reliability of Business Travel	Market Area/Share or Catchment Potential	Recruitment /Labour Market Potential	Business Performance
Significantly Positive	18.1%	27.2	16.8	9.2	1.0	6.0	3.3
Slightly Positive	49.4%	60.2%	44.2%	51.0%	11.2%	43.0%	52.2%
No Impact/ Neutral	32.5%	12.6%	38.9%	39.8%	87.8%	51.0%	44.6%
Slightly Negative	0%	0%	0%	0%	0%	0%	0%
Base	83	103	95	98	98	100	92

7

"In the longer term, the tunnel and associated road layout improvements will continue to have a significant positive impact of road congestion, delivery reliability and travel to work

times. However, the benefits gained will be offset if toll prices rise much higher than their current levels". Manufacturing, Zone 1

There appear to be a number of different forms of inertia that might be expected to have limited the scale of perceived impacts to date but which might be realised in the future.

Several manufacturing businesses were aware of efficiency gains for their product suppliers and distributors as a result of reduced congestion through the Tyne Tunnel but were tied to existing delivery contracts. Future contract negotiations might be expected to result in some of the vehicle operating cost savings currently enjoyed by distribution businesses being transferred through competition to local manufacturers.

High levels of congestion, in the past, at the entrances to the Tyne Tunnel can be expected to have contributed to the currently modest levels of deliveries, visits to clients and travel to work. These long established patterns can be expected to take time to adjust to the new situation.

Recruitment Consultants considered that in the longer term, employee travel to work using the Tyne Tunnel to travel to work would increase. One respondent (located in the A19 North Tyneside Arc) considered that the proportion of employees that use the Tyne Tunnel for their journeys to and from work had already risen significantly. Given the typically gradual adjustments of local labour markets it can be expected that the New Tyne Crossing will in the future, subject to charging policies, further extend the labour market catchment potential of businesses and other activities within the A19 Corridor between Blyth and Seaham.

Leading industrial and commercial property agents in the region considered the improvement in the relative accessibility and thus attractiveness of employment sites along the A19 corridor and particularly close to the Tunnel would in the longer term be reflected in property values.

It was also suggested that benefits of improved accessibility might be felt across a wider area:

"Once the Silverlink roundabout has been improved this will improve the relative attractiveness of the A19 corridor. Although as well as improving the accessibility of A19, the new Tyne Tunnel this has helped to free up capacity on the A1 reducing congestion" Leading Industrial Property Agent

Importantly **none of the respondents anticipated any negative long term consequences**.

5 Priorities for further transport infrastructure investment

Given that our sample of businesses was drawn from those located within the A19 Corridor it is therefore of no surprise that further incremental improvements to the A19 were among

the identified priorities for further transport infrastructure investment. Several businesses noted the need to improve key junctions to realise the full potential of the improvements afforded by the New Tyne Crossing. Both Silverlink and Testo's roundabouts, were highlighted as still suffering from traffic bottlenecks.

What was surprising given the focus of our research on businesses within the A19 corridor was the extent to which improvements to the A1 emerged as the dominant priority of local businesses. It is likely that this reflects the solving of the major bottleneck along the A19 corridor.

Several respondents commented that further improvements to the A19 are still required in order to maintain this positive impact, particularly around the Silverlink and Testo's roundabouts, which still suffer from traffic bottlenecks.

Table 20 Important Strategic Transport Improvements identified by local businesses

Important Strategic Transport Improvements	% of businesses
A1	47.7
A19	19.2
A66	4.2
A69	4.2
City centre congestion	4.2
Links between major roads/transport hubs and businesses	7.5
Public Transport	5.0
Other	10.8

Base = 120

Annex 1 Literature review to identify different forms of impact on businesses of road infrastructure improvements

Impact	Evidence	Reference	Link
Delivery times	Humber Bridge - 20% of businesses surveyed achieved more flexible delivery times with their suppliers.	Mackie, P. J. and Simon, D. (1986) "Do Road Projects Benefit Industry? A Case Study of the Humber Bridge", Journal of Transport Economics and Policy, 20, 3, 377-384.	http://www.bath.ac.uk/e-journals/jtep/pdf/Volume_XX_No_3_377-384.pdf
	Kristiansund, Norway (tunnel and bridges) – Improved prediction of journey duration.	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	Severn Bridge - bridge reduced journeys between the two sides of the estuary by up to 50 miles and 2 hours travelling time.	Cleary, E. J. and Thomas, R. E. (1973) The Economic Consequences of the Severn Bridge and its Associated Motorways, Bath: Bath University Press.	No link available.
Delivery costs / vehicle operating costs	Crossrail - lower commuting costs.	Bannister, D. (2007) "Quantification of non-transport benefits from rail investment", Transport Studies Unit, Oxford University Centre for the Environment, Working Paper No. 1029.	http://www.tsu.ox.ac.uk/pubs/1029-banister.pdf.
	Appalachian Development Highway System - Time efficiency benefits of USD 16.50/hour (auto – business use); ii) USD 7.64/hour (auto – non-business use); iii) USD 21.48 to USD 28.95/hour (HGV – depending on type).	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	Channel Tunnel - Higher volumes of freight than expected. CT has higher market share of freight than expected. Freight travel time savings reached £15ma per year by 2003.	Anguera, R. (2006) "The Channel Tunnel—an ex-post economic evaluation", Transportation Research Part A: Policy and Practice, 40, 4, 219-315.	http://www.sciencedirect.com/science/article/pii/S0965856405001126
Market potential	Humber Bridge – Average increase in cross-estuary commercial journeys of	Mackie, P. J. and Simon, D. (1986) "Do Road Projects Benefit Industry? A Case Study of the Humber Bridge", Journal	http://www.bath.ac.uk/e-journals/jtep/pdf/Volume_XX_No_3_377-384.pdf

	5.8%. Average increase in turnover from cross-estuary activity of 7.1%. 22 firms increased market penetration within existing market areas.	of Transport Economics and Policy, 20, 3, 377-384.	
	M25 - Rise in market potential and accessibility in most areas. Travel time savings.	Linneker, B. and Spence, N. (1996) "Road transport infrastructure and regional economic development: The regional development effects of the M25 London orbital motorway", Journal of Transport Geography, 4, 2, 77-92.	http://www.sciencedirect.com/science/article/pii/0966692396000014
	Channel Tunnel - Cross-Channel unitised freight market has seen continued growth since1994. Freight market stabilised in 2001 at just over 41 million tonnes.	Anguera, R. (2006) "The Channel Tunnel—an ex-post economic evaluation", Transportation Research Part A: Policy and Practice, 40, 4, 219-315.	http://www.sciencedirect.com/science/article/pii/S0965856405001126
Travel to work times	M11 - considerable time savings for freight and commuters making trips to and from London and Cambridge. Accessibility benefits are greatest close to the site of new links.	Gibbons, S., Lyytikainen, T., Overman, H., Sanchis-Guarner, R. and Laird, J. (2010) "Evaluating the Productivity Impacts of Road Transport Schemes: Report on pilot study findings", Report Commissioned by the Department for Transport, August 2010, 1-89.	http://assets.dft.gov.uk/publications/pgr-evaluation-evaluationguidance-evalprodimpacts/final-report.pdf
	Stockholm road network - road-pricing trial had potential to reduce the car travel time by 15%.	Armelius, H. and Hultkrantz, (2006) "The politico-economic link between public transport and road pricing: An ex-ante study of the Stockholm road-pricing trial", Transport Policy, 13, 2, 162-172.	http://www.sciencedirect.com/science/article/pii/S0967070X05001551
	A55, Wales - Improvements up to 1995 reduced journey times from Manchester to Bangor by over 90 minutes.	Bryan, J., Hill, S., Munday, M. and Roberts, A. (1997) "Road infrastructure and economic development in the periphery: the case of A55 improvements in North Wales", Journal of Transport Geography, 5, 4, 227-237.	http://www.sciencedirect.com/science/article/pii/S0966692397000203
Travel to work routes	Severn Bridge – Created a "modal shift" in journey patterns.	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	M62 - Provides an "all-	Dodgson, J. S. (1974)	http://www.tandfonline.com/doi/ab

	weather" route across the Pennines, linking the conurbations of West Yorkshire and South-East Lancashire, making journeys possible throughout the year.	"Motorway Investment, Industrial Transport Costs, and Sub-Regional Growth: A Case Study of the M62", Regional Studies, 8, 75-91.	s/10.1080/09595237400185061
	Madrid ring-road M-40 – Reduced traffic and congestion in the urban centre.	Monzon, A. and Villaneuva, J. (1996) "Impact of the Madrid M-40 ring road on emission from road traffic", The Science of the Total Environment, 189/90, 119-124.	http://www.sciencedirect.com/science/article/pii/0048969796051996
Absenteeism / sickness	Amadiba Road, Mbizana, Eastern Cape Province, South Africa - Increased accessibility to the local school in all weather, reducing absenteeism of both students and teachers.	Mashiri, M. A. M. (2005) "Community-based labour-intensive road construction: Findings of an impact study on the Amadiba road", Proceedings of the 24th Annual Southern African Transport Conference and Exhibition, Volume 2, p 856-871, Pretoria, South Africa, 11-13 July 2005.	http://137.215.9.22/bitstream/handle/2263/7022/099.pdf?sequence=1
Work arrival and departure times			
Productivity	Spain – 1980-94 - Transport infrastructure improvements increased accessibility to output markets and inputs suppliers, increasing local profit opportunities.	Holl, A. (2004) "Manufacturing location and impacts of road transport infrastructure: empirical evidence from Spain", Regional Science and Urban Economics, 34, 3, 341-363.	http://www.sciencedirect.com/science/article/pii/S0166046203000590
	Transport infrastructure has an impact on private capital and labour productivity. Time and cost savings, and gains in accessibility and reliability, arising from the transport infrastructure would allow productivity gains to be achieved by improving production and distribution.	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	Skye Bridge – 1995-2006 user benefits from the bridge equate to £100 million. The bridge benefits users by a net total of around £12.2	Reference Economic Consultants (2007) "The Economic Impacts of Fixed Links and Enhanced Ferry Services in the Highlands and Islands", Report to Highlands	http://www.google.co.uk/url?q=http://www.hitrans.org.uk/Documents/The_Economic_Impacts_of_Fixed_Links_Enhanced_Ferry_Services_In_The_Highlands_and_Islands.pdf&sa=U&ei=eV4OUK7vI6LX0QXXp4CoCQ&ved

	million per year.	and Islands, May 2007, 1-27.	=0CBIQFjAA&usg=AFQjCNFKH2mIb7pc9K4dJka6Ikn3RDXZMA
Lateness of arrival			
Labour market catchment potential	Crossrail - labour market area. More competition between businesses and more innovation/efficiency.	Bannister, D. (2007) "Quantification of non-transport benefits from rail investment", Transport Studies Unit, Oxford University Centre for the Environment, Working Paper No. 1029.	http://www.tsu.ox.ac.uk/pubs/1029-banister.pdf.
	Urban areas have larger labour market catchment zones, partly because of their better transport infrastructure.	Papps, K. L. and Newell, J. O. (2002) "Identifying Functional Labour Market Areas in New Zealand: A Reconnaissance Study Using Travel-to-Work Data", IZA Discussion Paper No. 443.	http://papers.ssrn.com/sol3/papers.cfm?abstract_id=304439
Profitability, Business Turnover and employment	A4042 – Wales. Possible sub-regional impact on employment; definite sub-regional impact on industrial/commercial development; definite local impact on retail development; definite local impact on housing development; and definite impact on operational efficiency of businesses.	Welsh Assembly Government (2004) Economic Effects of Road Infrastructure Improvements: Stage 3 Report, Edinburgh: DTZ and Pieda Consulting.	http://new.wales.gov.uk/about/aboutresearch/econoresearch/completed/roads/?lang=en
	Berneray and North Uist Causeway - 1991-2001 - An increase in the employment rate for women from 50% to 76% on Bernaray. Improved access to employment off the island.	Reference Economic Consultants (2007) "The Economic Impacts of Fixed Links and Enhanced Ferry Services in the Highlands and Islands", Report to Highlands and Islands, May 2007, 1-27.	http://www.google.co.uk/url?q=http://www.hitrans.org.uk/Documents/The_Economic_Impacts_of_Fixed_Links_Enhanced_Ferry_Services_In_The_Highlands_and_Islands.pdf&sa=U&ei=eV4OUK7vI6LX0QXXp4CoCQ&ved=0CBIQFjAA&usg=AFQjCNFKH2mIb7pc9K4dJka6Ikn3RDXZMA
	USA – Interstate highways - A high density of interstate highways attracts both population and employment growth.	Mills, E. S., Carlino, G. (1989) "Dynamics of county growth", in Andersson, A. E., Batten, D., Johansson, B. and Nijkamp, P. (Eds), Advances in spatial theory and dynamics. Amsterdam: North-Holland. Ch. 13, pp. 95-105.	http://www.iiasa.ac.at/Admin/PUB/Documents/XB-89-001.pdf#page=209
	Road infrastructure has the potential to support jobs in areas of high unemployment.	Webster, D. (2000) "The geographical concentration of labour-market disadvantage", Oxford Review of Economic Policy, 16, 1, 114-128.	http://oxrep.oxfordjournals.org/content/16/1/114.full.pdf+html
Investment	Creation/stimulation of	Tunnell, C. J. (2003) New Tyne	http://www.google.co.uk/url?q=http

decisions - Reinvestment / Inward investment / business start up / relocation / planned developments	successful economic clusters following road development, e.g. M8 in Scotland (Silicon Glen); A4, M4, M11, M23, M25 corridors in SE England; M40/M42 and A45 West Mids; and M57 in Greater Manchester.	Crossing: Proof of Evidence on the Wider Economic Effects, Newcastle upon Tyne: Ove Arup & Partners Ltd.	://www.newtynecrossing.info/sites/default/files/13Proof1.pdf&sa=U&ei=ybQOUOn6FKu00QX79oG4Bw&ved=0CBQQFjAB&usg=AFQjCNHDSiwpNWi02Otbm2yFWyRednqe7g
	Chicago - Transportation agglomeration benefits have led to greater business clustering and economic growth associated with manufacturing.	US Treasury (2012) "New Economic Analysis of Infrastructure Investment", Department of the Treasury and the Council of Economic Advisers, 23rd March, 2012, 1-36.	http://www.google.co.uk/url?q=http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf&sa=U&ei=r7UOUJPLE6Wq0AWbv4CwCg&ved=0CBMQFjAA&usg=AFQjCNELyRqoXdvmJFFyNe3uXBHlwGC-dQ
	Humber Bridge - Nine firms responded by reorganising internally; closing depots and/or changing inter-depot boundaries. Some concentrated production in fewer locations and increased transport usage.	Mackie, P. J. and Simon, D. (1986) "Do Road Projects Benefit Industry? A Case Study of the Humber Bridge", Journal of Transport Economics and Policy, 20, 3, 377-384.	http://www.bath.ac.uk/e-journals/jtep/pdf/Volume_XX_No_3_377-384.pdf
	Podlaskie Voivodship, Poland - Road tunnel on bypass of Bialystok - Increased number of investors seeking investment opportunities in locations whose accessibility has been upgraded through project.	European Commission (2004) "Podlaskie - Road tunnel on bypass of Bialystok", Report produced for the EC, Désirée Number: PL0008.02.04, 1-6.	http://www.google.co.uk/url?q=http://ec.europa.eu/enlargement/fiche_projet/open_document_fp.cfm%3Fdo_id%3D28659&sa=U&ei=THEOULmfBPOa1AWS9oGADw&ved=0CBQQFjABOAo&usg=AFQjCNGt8Gb03ja-i9fLQbvthsF64InrmA
	North East England – Nissan Case Study – It is increasingly untenable to regard infrastructure as an independent variable influencing the regional distribution of mobile investment.	Peck, F. W. (1996), "Regional development and the production of space: the role of infrastructure in the attraction of new inward investment", Environment and Planning A, 28, 2, 327-339.	http://www.envplan.com/abstract.cgi?id=a280327
Un-intended consequences	Social Inclusion – Kristiansund – A 24-hour open connection is now available.	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	Increased safety for pedestrians - 14.5 mile stretch of highway between Dayton and	US Treasury (2012) "New Economic Analysis of Infrastructure Investment", Department of the Treasury	http://www.google.co.uk/url?q=http://www.treasury.gov/resource-center/economic-policy/Documents/20120323Infrastr

	Cincinnati over a three-year period after guard rails and cables were installed. Estimate to save more than 110 lives during the next twenty years.	and the Council of Economic Advisers, 23rd March, 2012, 1-36.	uctureReport.pdf&sa=U&ei=r7UOUJPLE6Wq0AWbv4CwCg&ved=0CBMQFjAA&usg=AFQjCNELyRqoXdvmJFFyNe3uXBHlwGC-dQ
	Environmental benefits - Berrima and Mittagong Bypass - Reduced level of automotive traffic in the town and virtually eliminating all heavy vehicles.	OECD (2002) Impact of Transport Infrastructure on Regional Development, Paris: OECD.	http://www.oecd-ilibrary.org/transport/impact-of-transport-infrastructure-investment-on-regional-development_9789264193529-en
	Health Benefits – Linkages between traffic congestion and psychophysiological stress of bus drivers.	Evans, G. and Carrere, S. (1991) "Traffic congestion, perceived control, and psychophysiological stress among urban bus drivers", Journal of Applied Psychology, 76, 5, 658-663.	http://psycnet.apa.org/journals/apl/76/5/658/
Uplift in rents	Jubilee Line Extension - Total positive impacts on property values of up to £78,092,604 in Southwark and £2,117,297,322 in Canary Wharf respectively.	AtisReal and Geofutures (2005) "Property value study – Assessing the changes in values attributable to the JLE", Report for Transport for London, May, 1-46.	http://www.tfl.gov.uk/assets/downloads/JLE-Final-Report-May-2005.pdf
	Major regional access points have a strong upward influence on the level of rents; key nodes (e.g. motorway junctions) create a rent premium.	Wyatt, P. (1999) "Can a geographical analysis of property values aid business location planning?" Royal Institute of Chartered Surveyors Research Conference, The Cutting Edge, 6-7 September 1999, University of Cambridge, UK. University of West England.	http://www.rics.org/site/scripts/download_info.aspx?fileID=2029
	M40 – Changed land-use patterns. Created pressure to build on greenbelts. Increased the land value.	Headicar, P. and Bixby, B. (1992) Concrete and Tyres: Local Development Effects of Major Roads. M40 Case Study, London: Council for the Protection of Rural England.	No link available.
	Dallas Light Rail – Increase in total valuations around light rail stations was approximately 25% greater than in similar neighbourhoods not served by the system.	Clower, T. L. and Weinstein, B. L. (2002) "The impact of Dallas (Texas) Area Rapid Transit Light Rail Stations on Taxable Property Valuations," Australasian Journal of Regional Studies, 8, 3, 389-400.	http://www.anzrsai.org/system/files/f8/f4/f25/o103/AJRS%208(3)%202002.pdf#page=155
Broader Regional	EU - Trans European Networks contribute to	Bannister, D. (2007) "Quantification of non-	http://www.tsu.ox.ac.uk/pubs/1029-banister.pdf.

Competitive-ness	growth in EU GDP of 0.25% and in employment of 0.11% over 25 years.	transport benefits from rail investment", Transport Studies Unit, Oxford University Centre for the Environment, Working Paper No. 1029.	
	US Treasury - Persistent neglect of infrastructure will impact America's competitive position *vis-à-vis* the rest of the world. The US spends approximately 2% of GDP on infrastructure. China, India and Europe, by contrast, spend close to 9%, 8%, and 5% of GDP on infrastructure, respectively.	US Treasury (2012) "New Economic Analysis of Infrastructure Investment", Department of the Treasury and the Council of Economic Advisers, 23rd March, 2012, 1-36.	http://www.google.co.uk/url?q=http://www.treasury.gov/resource-center/economic-policy/Documents/20120323InfrastructureReport.pdf&sa=U&ei=r7UOUJPLE6Wq0AWbv4CwCg&ved=0CBMQFjAA&usg=AFQjCNELyRqoXdvmJFFyNe3uXBHlwGC-dQ
	Roads or other transportation improvements are built with a specific intention of spurring economic development in the area where they are upgrading the level of transportation services and access.	Weisbrod, G. (1996) "Distinguishing Wide and Local Area Business Impacts of Transportation Investments", Transportation Research Record: Journal of the Transportation Research Board, 1552, 27-31.	http://trb.metapress.com/content/f6t214160m27v6n6/

Annex Consultees

Property Agents

Several of the region's leading property agents were interviewed as part of the research each currently managing a significant portfolio of commercial or industrial property within the A19 corridor. Our interviews with leading agents sought to gather opinions and evidence relating any relative changes in:

- Land values
- Rents
- Yields
- Site marketability

Interviewees:

Patrick Matheson Knight Frank

Simon Haggie, Knight Frank

Bill Naylor, Naylors

Aiden Baker, BNP Paribas

Nick Atkinson, DTZ

Richard Scott, Sanderson Weatherall

Danny Crammond, GVA

Other consultees

Our interviews with employer representative groups and others covered a summary of the same range of issues as those with individual businesses.

Malcolm Dodds, Road Haulage Association

Malcolm Bingham, Head of Road Network Management Policy

Simon Hanson, Federation of Small Businesses

Liz Mayes, CBI North East

Sarah Belton, Entrust / Service Network

Gary Harrison, Hayes Recruitment