PARSONS BRINCKERHOFF

March 2013

A27 Arundel Bypass Wider Economic Impact Study

ARUN DISTRICT COUNCIL
WEST SUSSEX COUNTY COUNCIL
HORSHAM DISTRICT COUNCIL

Stage 1 Report

3512302A-PTL

Final

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LIST OF ABBREVIATIONS

ADC	Arun District Council
AST	Appraisal Summary Table
DaSTS	Delivering a Sustainable Transport System
DfT	Department for Transport
GOMMS	Guidance on Multi Modal Studies
GOSE	Government Office for the South East
GVA	Gross Value Added
HA	Highways Agency
HDC	Horsham District Council
LTP3	Local Transport Plan (3)
RES	Regional Economic Strategy
SDP	Strategic Development Plan
SDNP	South Downs National Park
SoCoMMS	South Coast Multi-Modal Study
WCSS	West Sussex County Council
WebTAG	Web-based Transport Appraisal Guidance

EXECUTIVE SUMMARY

Introduction and Approach

Parsons Brinckerhoff has been commissioned to undertake a preliminary assessment of the wider economic impacts of constructing the A27 Arundel Bypass in West Sussex. Based on the outcome of this preliminary assessment, more detailed analysis may be commissioned.

As the principal trunk road along the south coast, the A27 is important to the local economy of the area. The A27 is a dual carriageway to the east and west of Arundel. However, the road narrows to single carriageway as it passes the southern fringe of the town, causing a bottleneck and congestion problems. The Highways Agency (HA) has also stated that the A27 is one of the most unreliable trunk road in England.

The principal 'journey unreliability' is in the corridor from Chichester to the A259 in East Sussex. In addition, eastbound traffic from Bognor Regis that would otherwise use the A27 tends to use the A259 to avoid bottlenecks on the former. This places further strain on the road network in the area.

The report builds upon the previous scheme assessment by considering the *'wider economic impacts'* of the A27 Arundel Bypass. This allows for a more comprehensive understanding of the economic benefits that the bypass will deliver to the local economy and will help develop a robust business case for the scheme.

The objectives of this Stage 1 study are:

- To review previous work relating to the appraisal of the A27 Arundel Bypass scheme;
- To conduct initial research, including surveys and a workshop, to identify the perceived economic impacts and benefits of constructing the Arundel Bypass;
- To identify the different types of economic impacts and benefits that will accrue from the scheme; and
- To provide an indication of whether there is a good case or not for promoting the bypass on wider economic grounds and proceeding with more detailed appraisal of the wider economic impacts.

If there is found to be a case for examining the wider economic impacts in more detail, this will be undertaken during Stage 2.

In this preliminary Stage 1 work, the following key tasks have been undertaken:

1. Establishing the economic baseline in the study area and scheme history;
2. Development and implementation of business surveys and a stakeholder workshop;
3. Analysis of findings;
4. Segmentation of wider economic impacts; and
5. Preparation of this report.

Economic and Transport Baseline

The current economic context and transport situation in the study area was reviewed, along with the history of the Arundel Bypass proposal.

Within West Sussex, the dominant sectors (as measured by Gross Value Added, GVA) are distribution, transport, accommodation / food and public administration. Arun District also has strong horticulture, knowledge-based manufacturing, tourism and health and social care sectors.

Several of these activities rely extensively on good road transport and distribution links being available at all times. The current 'bottleneck' on the A27 at Arundel is an impediment to efficient distribution patterns within the area and for time-critical deliveries involving horticulture produce, the alleviation of these bottlenecks is a necessity.

The enhanced connectivity and improved transport links due to the Arundel Bypass will also enhance the economic prospects of some of the more deprived wards in the study area (i.e. those in Adur, Arun and Worthing) Improved transport access will, for example, help bring more inward investment to the coastal area and will also enhance the growth prospects of existing businesses, thus generating more economic activity and employment opportunities.

To demonstrate the importance of this, Arun has 8 wards in the most deprived areas nationally (as measured by the Index of Multiple Deprivation, IMD), 3 of which are in the most deprived 10%. In addition, Arun has relatively high unemployment levels compared to those in West Sussex and so the ability of the bypass to help boost economic activity in the area will greatly assist measures to help reduce unemployment. The least deprived parts of the study area are Mid Sussex (ranked 315th of all 326 Local Authorities) and Horsham (ranked 304th of 326), with 326 representing the least deprived area.

Given that the A27 forms the main east-west corridor through West Sussex, it is an essential piece of transport infrastructure and serves many different travel markets, from 'peak-time' commuting through to key distribution and logistics movements by commercial vehicles. In essence, it is a critical part of the region's transport infrastructure and the congestion currently experienced at Arundel acts as a brake to the continued economic prosperity of the nearby districts.

The congestion also causes traffic to take environmentally damaging short cuts on alternative routes through Storrington within the Horsham District. These short cuts are also attributable to congestion on the A27 at both Chichester and Arundel. This places considerable strain on Arundel as well as generating environmental and additional congestion disbenefits. As noted in Horsham District Council's Storrington Air Quality Action Plan of October 2012, Storrington village has been assigned 'Air Quality Management Area' (AQMA) status given that pollution levels in the village exceed prescribed limits. This is attributed to the high volumes of traffic passing through the village, a large proportion of which are vehicles taking diversionary routes due to congestion on the A27 near Arundel.

The bypass thus has an important role in eliminating 'rat running' in addition to boosting economic activity.

Since first being proposed in 1987, there have been several permutations of the proposed Arundel Bypass. Following the July 2003 announcement by the Secretary of State for Transport that the bypass would not be taken forward due to environmental issues, there has been further work to investigate various options. The Arun Draft Local Plan of July 2012 includes the bypass in a key diagram of transport infrastructure whilst also confirming that the "pink" / "blue' route will be protected for scheme delivery in the long term.

Economic Impacts

- The different types of economic impacts analysed and assessed at this preliminary stage were: *Economic activity-related:* e.g. GVA;

- *Employment-related:* covering 'headline' employment generated as well as financial impacts such as taxation payments to Government and welfare payment savings (e.g. Jobseekers' Allowance savings);
- *Tourism-related:* such as increase in visitor numbers, visitor spending and the related increase in the number of employees in the sector who will be supported by the increase in visitor spending;
- *Land use and development-related:* i.e. to what extent will new developments come forward as a result of the improved road infrastructure and to what extent will metrics such as land values increase due to the improvements?; and
- *Other impacts:* including those relating to the benefits of increased disposable income from the various generated employment opportunities. Increased disposable income in the region will in turn support additional employment. Transport benefits, including improvements in connectivity, reliability and resilience are described in Section 5.8.

Indicative quantified estimates of the impacts on economic activity, employment and selected other impacts have been made in this report. The impacts on tourism and land use are discussed in outline terms and can be investigated further during Stage 2.

Based on the extensive Business Survey undertaken in the area and initial analysis, the preliminary results indicated the following:

Economic activity-related:

- An additional £493m would be added to total West Sussex GVA of £15.257bn;

Employment-related:

- Employment Impact: an additional annualised total of 12,600 jobs would be added throughout the seven districts in West Sussex;
- Personal Income Tax Receipts: across all seven districts, an annualised total of £82m would accrue to Government in the form of personal income tax receipts from new employment;
- Reductions in Jobseekers' Allowance: across all seven districts, Government would gain approximately £38m from reductions in Jobseekers' Allowance payments;
- Increase in Disposable Income: the increases in employment will support additional disposable income being spent in the county. The preliminary estimate of this is £108m throughout all seven districts;

Tourism-related

- Tourism spend: based on analysis of the survey results,, there would be an overall net positive impact on tourism spend within the businesses completing the survey. With the bypass, tourism spend within the businesses completing the survey would increase by £338,547 per annum to £7.60m. This includes an increase in spend of £446,987, offset by a reduction in spend with some businesses totalling £108,441;

Land use and development-related

- Attracting investment: the existence of the Arundel Bypass will remove the current bottleneck on the A27 and will significantly improve the 'attractiveness' of the corridor in terms of attracting investment and inducing land development (through distribution centres and business parks etc);
- Increase in land value: the impacts of these developments will include increases in land values (and land sale values) as planning permission is given for specific developments;

- Additional impacts: additional impacts such as employment gains at the new sites will also accrue;

Other impacts:

- Additional Employment Supported by Disposable Income: based on the estimate of increased disposable income spent in the county, this would support another 4,000 direct jobs. The increase in disposable income would also support approximately 1,300 'indirect' jobs and 650 'induced' jobs. Direct jobs refer to new employment opportunities generated directly within companies benefitting from construction of the bypass. Indirect jobs refer to those jobs generated in 'supply' industries, i.e. those not directly generated by the bypass but supported by the activities of those companies benefitting from new, direct employment. Induced jobs refer to employment opportunities generated by the expenditure of those directly employed as a result of building the bypass; and
- Further Taxation / Jobseekers' Allowance Benefits: the additional employment stemming from increases in disposable income spent in the area will generate further income taxation revenue streams as well as savings from Jobseekers' Allowance payment reductions. Income taxation receipts would increase by approximately £39m per annum whilst Jobseekers' Allowance reductions would total £18m.

It must be emphasised that these results are indicative and preliminary at this stage. More detailed analysis will be undertaken as part of the Stage 2 work.

Survey Results

To inform the wider economic impact analysis, the views of businesses which use the A27 at Arundel were sought through an online survey and stakeholder workshop. In total the survey contained 35 questions covering areas including: business overview; turnover; A27 Arundel bypass specific questions; movement of goods and business travel; tourism and a section for final comments.

The survey was open between Friday 7th September 2012 and Sunday 7th October 2012. 330 responses were received.

The key survey findings are:

- 30% of firms said the A27 at Arundel was very important for their business, followed by 43% who said it was important;
- Journey time reliability was identified as a major problem by 60% of respondents, and a moderate problem by 35% of respondents. Journey times were less of a problem, although 51% still reported that they were a major problem, and 43% said they were a moderate problem. Only 5% of respondents said they did not have a problem with either journey time reliability or absolute journey times;
- 68% of business reported major disruption to business travel, followed by 63% who reported major disruption to both customer travel and staff travel;
- 42% of businesses expected no change in turnover as a result of the bypass, followed by 35% who expected an increase of 0-10%. 3.6% of businesses (9 firms) expected the bypass to reduce their turnover;
- Based on analysis of the results, a predicted increase in turnover of £41.02m per annum was identified, increasing the total for businesses surveyed from £1.20bn to £1.24bn per annum. This includes a total increase of £46.11m, offset by a reduction of £5.09m;
- 38 responses were received from businesses in the tourism sector. 33% of tourism businesses estimated that 75% of their visitors use the A27 at Arundel;

- The 38 businesses in the tourism sector were asked to predict the impact of the Arundel bypass on their visitor numbers. Most businesses (45%) expected their visitor numbers to increase by up to 10%. 27% predicted an increase of over 10%. 15% of business predicted a reduction in visitor numbers;
- Based on analysis of the results, overall, there would be a net positive impact on tourism spend with the businesses completing the survey. With the bypass tourism spend with the businesses completing the survey would increase by £338,547 per annum to £7.60m. This includes an increase in spend of £446,987, offset by a reduction in spend with some businesses totalling £108,441; and
- 48% of respondents reported travelling through Storrington on a regular basis to avoid congestion on the A27. 3% of people travelled through Storrington on a daily basis and 23% travelled through several times a week. Most people (43%) ravelled through it 2 or 3 times a month. 81% of respondents said that the A27 Arundel bypass would make them less likely to drive through Storrington.

Conclusions

This preliminary analysis of the wider economic impacts of the Arundel Bypass has indicated that there are positive impacts in terms of job creation, increased economic output and tourism growth.

Based on the initial assessment of the wider economic impacts of the A27 Arundel Bypass, there would be benefit in proceeding with Stage 2 to carry out a more detailed assessment of the scale of these benefits.

Recommendations and Next Steps

Recommendation 1: Progress with Stage 2 of the Project. Based on the conclusions from Stage 1 of the project, we recommend proceeding with Stage 2, to further assess and quantify the economic impacts of the Arundel Bypass. Given that several other transport schemes are 'competing' for scarce Government resources at the present time, it is important that the Stage 2 progresses as soon as is practicably possible. There are several advantages in progressing with Stage 2 now as significant amounts of preliminary work have already been undertaken and thus it will be a relatively quick exercise to move on to more detailed analysis.

Recommendation 2: To ensure Stage 2 offers maximum benefit and alignment with the latest Government priorities, discussions on the best approach should be held with DfT before proceeding. To initiate discussions, PB will prepare a draft "Range of Options" letter, for agreement with West Sussex, Arun and Horsham Chief Executives and issue to DfT prior to a meeting. PB can provide specialist staff with experience of economic appraisal and working with the DfT to support these discussions if required.

Recommendation 3: In order to develop a scheme business case, a route proposal incorporating estimated current costs should be prepared. This cost information is required in order to complete the re-appraisal of the scheme and estimate its full benefit:cost ratio (BCR). It is recommended that the scheme business case is developed proactively, to ensure any additional Government funding becoming available can be accessed within the necessary time period.

Recommendation 4: To develop a business case for the scheme, a full re-appraisal of the scheme impact and benefits should be completed. The most recent appraisal of the Arundel Bypass was completed in 2002. Since this time traffic flows, emissions levels and accident statistics will have changed and so a re-appraisal is required. This should be completed in line with the latest DfT WebTAG guidance. Traffic Economic Efficiency (TEE) impacts are not currently included within the scope of Stage 2. It is recommended that the scheme business case is developed proactively, to ensure any additional Government funding becoming available can be accessed within the necessary time period.

Recommendation 5: Work to address traffic and air quality issues at Storrington should continue, particularly to develop short term measures and to consider the potential for wider solutions which could complement the Arundel Bypass. The survey results suggest the Arundel Bypass alone will not be sufficient to address the identified problems at Storrington. Also, as the bypass would most likely be delivered in the medium term it would be beneficial to explore other, more immediate solutions to the issues at Storrington.

Recommendation 6: Dialogue should be maintained with businesses and local communities as well as the SDNP and other organisations with a keen interest in the proposal, so that they are aware of the benefits and costs of the bypass and any relevant issues can be addressed earlier rather than later in the development of the business case. It is recognised that the bypass proposal will generate some opposition and potentially some misinformation. In this context it is important that the debate is focussed on clear and transparent evidence. A co-ordinated approach to maintaining this dialogue should be agreed between West Sussex County Council, Arun District Council and Horsham District Council and should be related to other proposed transport schemes in the area.

CHAPTER 1

INTRODUCTION

1 INTRODUCTION

1.1 Introduction

1.1.1 Parsons Brinckerhoff has been commissioned to carry out an assessment of the wider economic impacts of constructing the A27 Arundel bypass in West Sussex.

1.1.2 As the principal trunk road along the south coast, the A27 is important to the local economy of the area. The A27 is a dual carriageway to the east and west of Arundel. However, the road narrows to single carriageway as it passes the southern fringe of the town, causing a bottleneck and congestion problems. The Highways Agency (HA) has also noted that the A27 is the most unreliable trunk road in England. In addition, eastbound traffic from Bognor Regis that would otherwise use the A27 tends to use the A259 to avoid bottlenecks on the former. This places further strain on the road network in the area.

1.1.3 A bypass around Arundel that links the dual carriageways on either side of the town would facilitate improved journey times and journey reliability along the Portsmouth – Chichester – Worthing – Brighton corridor.

1.1.4 The standard transport benefits of an Arundel bypass have been well documented, most notably in the South Coast Corridor Multi Modal Study (SoCoMMS) that was prepared for the Government Office for the South East (GOSE) in 2002.

1.1.5 However, the standard cost/benefit analysis focussed on journey time savings, vehicle operating cost savings and safety benefits. It did not examine the wider economic benefits of the scheme. In the decade since the publication of the SoCOMMS report, the DfT have issued guidance on how these 'Wider Impacts' (WIs) should be captured in scheme appraisal. These wider economic benefits represent how a scheme would support the economy. It is a government priority to support economic growth and as such it is important that any scheme being put forward for funding demonstrates it's impact in this regard.

1.1.6 The report builds upon the previous scheme assessment by considering the 'wider economic impacts' of the A27 Arundel bypass. This allows for a more comprehensive understanding of the economic benefits that the Arundel bypass will deliver to the local economy and will help develop a robust business case for the scheme. This is illustrated in Figure 1 below.

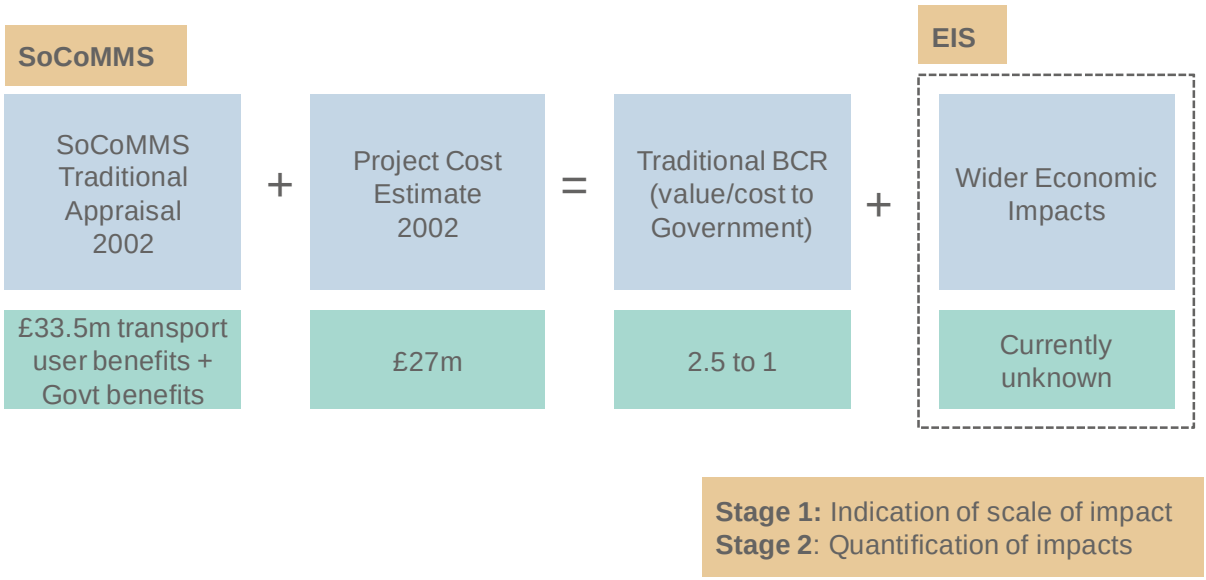


Figure 1: Difference between this study and previous analysis

1.1.7 This study forms 'Stage 1' of the wider economic impact analysis and comprises a preliminary analysis of the extent and likely magnitude of the wider benefits of the scheme. The findings of this Stage 1 work will enable a decision to be made as to whether to proceed with Stage 2 of the project whereby a full economic impact model will be developed.

1.2 Study Objectives

1.2.1 The objectives of the Stage 1 study are:

- To review previous work relating to the appraisal of the A27 Arundel Bypass scheme;
- To conduct initial research, including surveys and a workshop, to identify the perceived economic impacts and benefits of constructing the Arundel Bypass;
- To identify the different types of economic impacts and benefits that will accrue from the scheme; and
- To provide an indication of whether there is a good case or not for promoting the bypass on wider economic grounds and proceeding with more detailed appraisal of the wider economic impacts.

1.2.2 If there is found to be a case for examining the wider economic impacts in more detail, this will be undertaken during Stage 2.

1.3 Study Area

1.3.1 The study area extends beyond the A27 at Arundel. To capture the wider economic benefits the area considered extended form Portsmouth in the West, to Brighton and Hove in the East and Crawley (including Gatwick Airport) in the North. Although this was the main area considered for the appraisal of economic impacts, the boundary has been treated as indicative only, and in some cases economic impacts will accrue beyond this. This is discussed further in Chapter 5.

1.3.2 The study area is shown in Figure 2.

Figure 2: Study Area

1.4 Structure of the Report

1.4.1 The remainder of this report is structured into the following Chapters:

- Chapter Two: Study Approach;
- Chapter Three: Economic Baseline;
- Chapter Four: Scheme History and Previous Appraisals;
- Chapter Five: Wider Economic Impacts Segmentation Survey Results;
- Chapter Six: Survey Methodology;
- Chapter Seven: Survey Results; and
- Chapter Eight: Conclusions and Next Steps.

1.4.2 There are also two Appendices. Appendix A contains the business survey used. Appendix B contains a summary of the workshop discussion.

CHAPTER 2

STUDY APPROACH

2 STUDY APPROACH

2.1 Overview

2.1.1 The study approach has been based on Department for Transport (DfT) WebTAG appraisal guidance. This guidance has been developed over several years and has been greatly expanded recently to cover both the 'wider' impacts and 'regeneration' impacts of new transport infrastructure. The DfT has stated recently that the approach should be followed by the new Local Transport Bodies in appraising new Local Major schemes.

2.1.2 The DfT guidance recognises, for example, that transport schemes generate economic impacts far beyond the 'traditional' impacts of monetised journey time savings, accident reductions and decongestion benefits. The more recent WebTAG guidance specifies how appraisals of new schemes can incorporate several wider economic impacts, especially those relating to employment opportunities and how these can be generated / opened up by new transport infrastructure.

2.1.3 In this preliminary Stage 1 work, the following key tasks have been undertaken:

1) Establishing the economic baseline in the study area and scheme history;
2) Development and implementation of business surveys and a stakeholder workshop;
3) Analysis of findings;
4) Segmentation of wider economic impacts; and
5) Preparation of this report.

2.1.4 These stages, and how they will be developed in Stage 2 are shown in Figure 3 below.

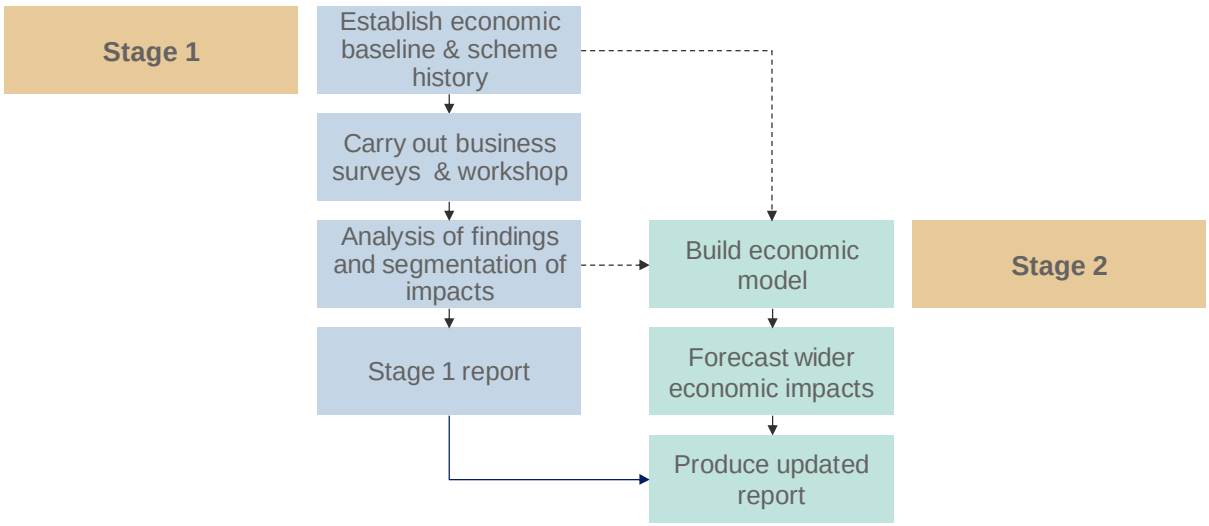


Figure 3: Overall approach to Stage 1 and Stage 2

2.1.5 Stage 2 builds on the findings of Stage 1. It would take the data representing the economic 'baseline' and using the results of the survey(s), will incorporate these within an economic forecasting model to produce a series of economic impacts segmented by different types of impacts. This segmentation is discussed in more detail below. Additional data collection may also be carried out in Stage 2, including further business surveys, workshops and meetings.

2.1.6 The model will generate values for the number of jobs created and monetised economic impact of the bypass (i.e. on Gross Value Added, increases in taxation and reductions in welfare payments).

2.2 Segmentation of Impacts

2.2.1 There is a range of possible wider economic impacts that could accrue to the local economy and region following construction of the Arundel Bypass. We have followed DfT WebTAG guidance in the first instance to identify the various employment-related impacts that could arise both within the vicinity of the bypass and further afield in the areas served by the A27 corridor.

2.2.2 As well as employment-related impacts (measured in terms of jobs generated and jobs accessed), there will be other impacts such as those on Gross Value Added (GVA) in West Sussex as well as various financial benefits accruing to Government from new employment and business development.

2.2.3 In addition, the area has a sizeable tourism sector with large numbers of tourists visiting attractions such as Arundel town and Arundel Castle, the various coastal towns, the National Park and other attractions in West Sussex. Construction of the bypass is likely to facilitate additional visitor trips as improved connectivity, reliability and resilience will generate additional leisure trips.

2.2.4 Segmentation can also take place by geographical area as well as by category of impact. To demonstrate this, the extent of the GVA impact will be focussed at the county level as GVA is not disaggregated below this level. Employment impacts can, however, be focussed in specific areas and detailed employment data is available at the district level within the county.

2.2.5 A more complete description of the segmentation process is contained in Chapter 6.

2.3 Survey Overview

2.3.1 The views of businesses which currently use the A27 route were sought, to understand how the corridor currently affects their operations and how this may change if the bypass is built.

2.3.2 The survey was designed to comply with the DfT guidance in WebTAG Unit 3.5.12 and responses were received from 330 businesses.

2.3.3 A full summary of the methodology is available in Chapter 6 and the results are given in Chapter 7.

CHAPTER 3

ECONOMIC BASELINE

3 ECONOMIC BASELINE

3.1 Introduction

3.1.1 This chapter sets out the economic context of the study area, in line with the DfT WebTAG guidance requirement for detailed economic 'baseline' information. The contents of this chapter include demographic characteristics, economic performance, labour market characteristics and tourism statistics. It draws on economic data from various sources, including NOMIS and the UK Treasury, as well as reports which have been produced about the study area.

3.1.2 The chapter also provides the economic context for the wider study area. For the purposes of the 'baseline', the most detailed information covers the districts of Arun and Horsham. Information about West Sussex as a whole, as well as the districts of Adur, Chichester, Worthing, Crawley and Mid Sussex is included, as these will also be affected by the scheme.

Geographical Context

3.1.3 There are three distinct sub-regional economic areas within West Sussex: Coastal West Sussex (including Arundel); Rural West Sussex and the Gatwick Diamond. These are shown in Figure 4. The largest economic impacts from the Arundel Bypass are likely to accrue within the Coastal West Sussex area.

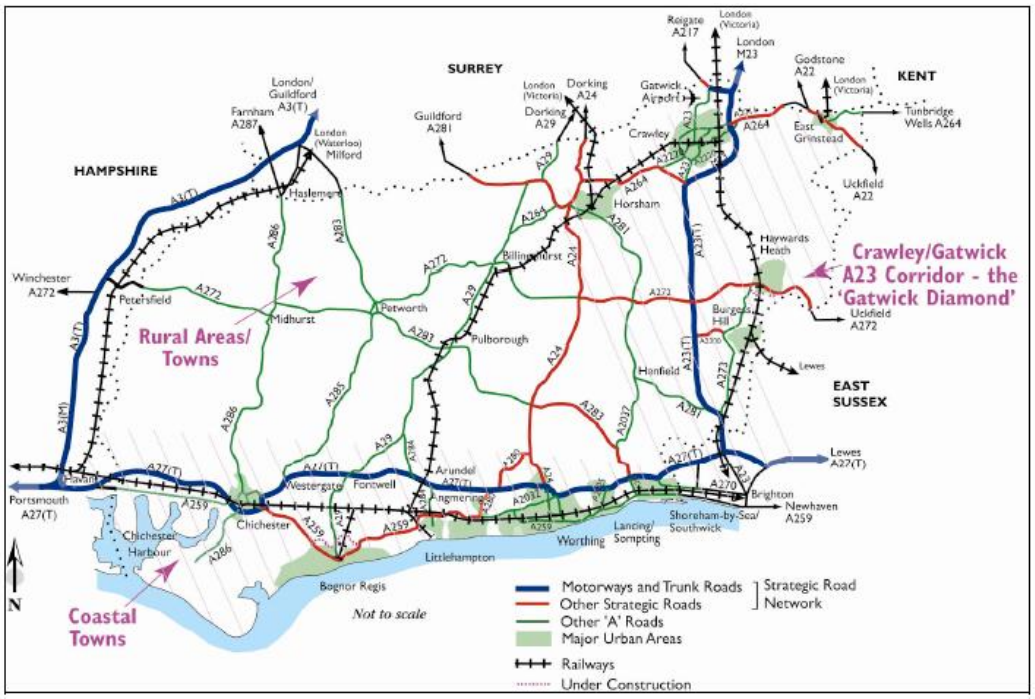


Figure 4: Map of West Sussex showing Coastal West Sussex, Gatwick Diamond and Rural West Sussex (Source: West Sussex Local Transport Plan 3, 2011)

3.1.4 Coastal West Sussex covers Adur, Worthing, Chichester and Arun. It has more than 18,000 businesses, around 159,000 employees and a further 11,000 self-employed residents (West Sussex Economic Strategy, 2012). Of the 254,000 working age residents, around 74% were employed in 2011. Population projections suggest the area could grow by an additional 6,000 working age residents by 2020. Examples of

international companies in the area include Ricardo, B&W speakers and Rolls Royce. Further details about the business sector in the area are given later in this chapter.

3.1.5 Horsham covers an area of over 53,000 hectares and is one of the larger districts in west Sussex. Horsham District is included both within the Gatwick Diamond and Rural West Sussex areas. Horsham borders all of the other districts in West Sussex apart from Worthing. Horsham town is the most significant urban centre within the Gatwick Diamond sub-region. The town of Storrington can be considered part of Rural West Sussex and as discussed in more detail in this report, some drivers travel through Storrington to avoid the A27 at Arundel when it is congested.

3.1.6 Beyond the immediate study area, the economic characteristics and impact on the adjoining areas of Portsmouth (to the West), Brighton (to the East) and the Gatwick Diamond (to the North) should also be considered.

3.1.7 The Gatwick Diamond covers parts of Horsham, Mid Sussex and Crawley. It is the main employment centre in West Sussex and also provides employment for residents in other areas, such as Brighton and Hove. Gatwick Airport is a large employer in its own right and provides transport links to international markets.

3.2 Economic and Policy Context

South East Plan (Government Office for the South East)

3.2.1 The South East Plan (2009) is the Regional Spatial Strategy for the South East of England and remains a statutory planning document. The South East Plan identified highway capacity issues on the A27/A259 at Arundel and Worthing.

Regional Economic Strategy (South East England Development Agency)

3.2.2 The South East Regional Economic Strategy (RES) (2006-2016) included the "Coastal South East". It identified three objectives for the South East:

- Global competitiveness (investing in success);
- Smart Growth (lifting underperformance); and
- Sustainable prosperity (supporting quality of life).

3.2.3 The RES identified a series of priorities for the Coastal South East area, including "improving connectivity along the coast and with key hinterlands and London". The M27/A27/A259 South Coast artery was identified as in need of improvement and the A27 at Arundel and Worthing was identified as a priority.

An Economic Strategy for West Sussex, 2012-2020 (West Sussex County Council)

3.2.4 'Supporting Economic Growth in West Sussex' (2012-2020) sets out a high level approach to supporting sustainable economic growth in West Sussex. It has identified challenges facing the county with respect to the number of people in low paying jobs and with low skill levels. It notes that *"east-west transport connections are a source of frustration for many businesses, and there is limited employment space to attract significant new inward investment or to help existing businesses to grow."*

3.2.5 The Arundel Bypass could support three of the seven strategic priorities in the strategy:

- Adapt and respond to new funding conditions to ensure that West Sussex secures investment to support its economic development priorities;
- Deliver transport and communications infrastructure that businesses and residents need; and
- Support the creation of a range of jobs that enable people to participate in the labour market in a way that best reflects their needs at different life stages.

3.2.6 One of the strategic outcomes of the strategy is to create an improved level of business and resident satisfaction with transport and communications infrastructure. One of the three indicators of success for this is to maintain or improve the reliability of journey times on the A27.

Arun Economic Strategy (Arun District Council)

3.2.7 In 2009 Arun District Council published 'Open for Business: An Economic Strategy for Arun (2009-2026)', which provided a thorough analysis of the economic conditions in the district. It set out a vision for the growth of the districts economy: *"To create a vibrant, competitive and sustainable place to live, work and do business."*

3.2.8 The Arundel Bypass could support four of the six objectives of the strategy:

- Increase business competitiveness and growth – with a focus on Arun's existing businesses;
- Encourage the level and rate of new investment, particularly in high growth sectors, with a focus on new start-ups and inward investors;
- Maintain and improve the area's infrastructure, facilities and physical environment; and
- Maintain and improve transport networks across the district and wider area.

3.2.9 Two key characteristics set out in the Arun Economic Strategy (2009) are that it has significant net out-commuting and that on average, those people who work in Arun earn less than residents of the district who work elsewhere. When the competitiveness of Arun's economy was assessed using the 'drivers of productivity' framework developed by HM Treasury, it was shown that Arun performs relatively weakly overall, particularly in relation to skill levels and general 'enterprise' initiatives available within the district.

3.3 Economic Performance – GVA and Economic Composition

Gross Value Added (GVA)

3.3.1 In the South East, total GVA in 2011 was £186.9bn. GVA per head was £21,924, higher than the UK average of £20,849 (ONS, 2011).

3.3.2 In West Sussex, GVA increased from £9.6m in 1997 to £15.3m in 2009. The trend over time has mirrored that in the UK as a whole, with a decline between 2008 (from £15.64m) and 2009 due to the recession. Between 1997 and 2009 GVA per head increased from £13,025 to £19,241. This is below the UK average of £20,498 and the South East average of £21,924 (Regional GVA Statistics, 2011).

3.3.3 GVA data is collected and collated within the European Union (EU) at three different levels. Referred to as 'Nomenclature of Territorial Units for Statistics' or "NUTS', the three levels are "NUTS 1" (regional level, i.e. South East), "NUTS 2" and "NUTS 3" (lowest level, at county, town/city or district level). In the case of the area served by the

Arundel Bypass, the lowest level at which GVA data is available is that at the NUTS 3 designation of West Sussex.

3.3.4 We would point out that since GVA data at both the "NUTS 2" and "NUTS 3" levels has not been published since 2009, we are not able to provide a more up-to-date indication as to how the county's economy has performed during the current economic downturn. We have, however, contacted the Head of Regional Economic Analysis at the Office for National Statistics (ONS) and understand that data at the regional level will be available in December 2012.

Economic Composition

3.3.5 Table 1 below shows GVA by sector across West Sussex. The dominant sectors are distribution, transport, accommodation & food and public administration. There are low levels of GVA arising from agriculture and other services and information and communication.

Sector	GVA (£m, 2009)	GVA (%, 2009)
Agriculture, forestry and fishing	£136	0.9%
Production	£1,989	13.0%
Construction	£964	6.3%
Distribution, transport, accommodation & food	£3,681	24.1%
Information and communication	£816	5.3%
Financial and insurance activities	£1,268	8.3%
Real estate activities	£1,405	9.2%
Business services	£1,815	11.9%
Public administration, education and health	£2,655	17.4%
Other services and household activities	£528	3.5%
Total	**£15,257**	**100%**

Table 1: GVA by sector in West Sussex (Regional GVA Statistics, 2011)

Business sectors

3.3.6 The Arun Economic Strategy (2009) identifies that the District has particular strengths in: horticulture; knowledge-based manufacturing; tourism and health and social care. Transport links for moving produce are particularly important for the horticulture sector.

3.3.7 Horsham District has a strong administrative and service sector, as well as sector strengths in agriculture, manufacturing, construction and motor trades. Major employers include Royal and Sun Alliance, RSPCA Headquarters and Sony DADC UK Ltd. The largest number of businesses is in the financial and business services sector, followed by distribution, hotels and restaurants (Horsham Spatial Area Factsheet, WSCC, 2011).

3.4 Economic Performance - Further Information

Business size

3.4.1 Table 2 shows the size of small businesses in areas across West Sussex. West Sussex has a higher proportion of small businesses than the UK average, but a smaller proportion than in the South East. The proportion of small businesses is highest in Horsham, with 88.5% of businesses employing 10 people or fewer.

3.4.2 The proportion of large businesses is highest in Crawley, where nearly 4% of businesses have 100 or more employees. This is significantly higher than the national or regional average.

Area	% 1 to 10 employees	% 11 to 24 employees	% 25 to 99 employees	% over 100 employees
Adur	87.6%	6.8%	4.8%	n/a
Arun	87.0%	7.2%	5.0%	n/a
Chichester	86.9%	7.3%	4.9%	1.0%
Crawley	75.8%	10.8%	9.3%	3.6%
Horsham	88.5%	6.3%	4.3%	n/a
Mid Sussex	88.1%	6.7%	4.3%	0.9%
Worthing	84.1%	8.4%	5.9%	1.7%
West Sussex	86.0%	7.4%	5.2%	1.3%
South East	86.2%	7.4%	5.1%	1.3%
UK	84.4%	8.2%	5.9%	1.6%

Table 2: Size of businesses in west Sussex by no of employees (WSCC, 2007)

Economic Competitiveness

3.4.3 The UK Competitiveness Index provides a composite measure of competitiveness, describing the extent to which firms in the South East are able to sell their goods and services in domestic and international markets. The measure takes into account input factors (e.g. GVA per head, exports and imports) and output factors (e.g. income and unemployment).

3.4.4 In 2010 the South East scored 110.5, above the UK index of 100, placing it as the most competitive region in the UK. This represents an increase since 2008 when it was the second most competitive location behind London.

3.4.5 The cities within the study area which are the most competitive are Chichester (9th in the UK); Brighton & Hove (10th in the UK) and Portsmouth (23rd in the UK). None of the wider localities within the study area are in either the top 25 or the bottom 25 in terms of competitiveness.

3.4.6 Arun has fallen significantly in the rankings between 2009 and 2010. It scored 95 points in 2009 (ranked 201st) and has fallen to 91.4 points in 2010 (ranked 250th). Horsham increased its 'score' very slightly between 2009 and 2010 from 107.9 to 108.1, and remained in the same overall position of 66th.

Deprivation and Regeneration

3.4.7 DfT guidance on economic appraisal places a higher value on the economic benefits accruing in Regeneration Areas (RAs). The guidance defines a RA as a place where reductions in unemployment will be given priority by policy makers. However, there is no official national designation of regeneration areas. These are generally classed as areas with regeneration priorities in the RES.

3.4.8 The Index of Multiple Deprivation (IMD) is the Government's official measure of relative deprivation across the UK. It is reported by Lower Layer Super Output Areas (LLSOAs).

3.4.9 Within the study area there are areas of deprivation in Adur, Arun, Crawley and Worthing. For the combined IMD (2012), Arun has 8 wards in the most deprived areas nationally, 3 of which are in the most deprived 10%. Worthing has six 4 LOSAs in the bottom 20% of wards nationally, Adur has 4 and Crawley has 1 (Source: West Sussex JSNA, 2011). The least deprived parts of the study area are Mid Sussex (ranked 315th of all 326 Local Authorities) and Horsham (ranked 304th of 326), with 326 representing the least deprived area.

3.4.10 The relative levels of deprivation across West Sussex are shown in Figure 5, highlighting the most deprived areas along the coastal strip.

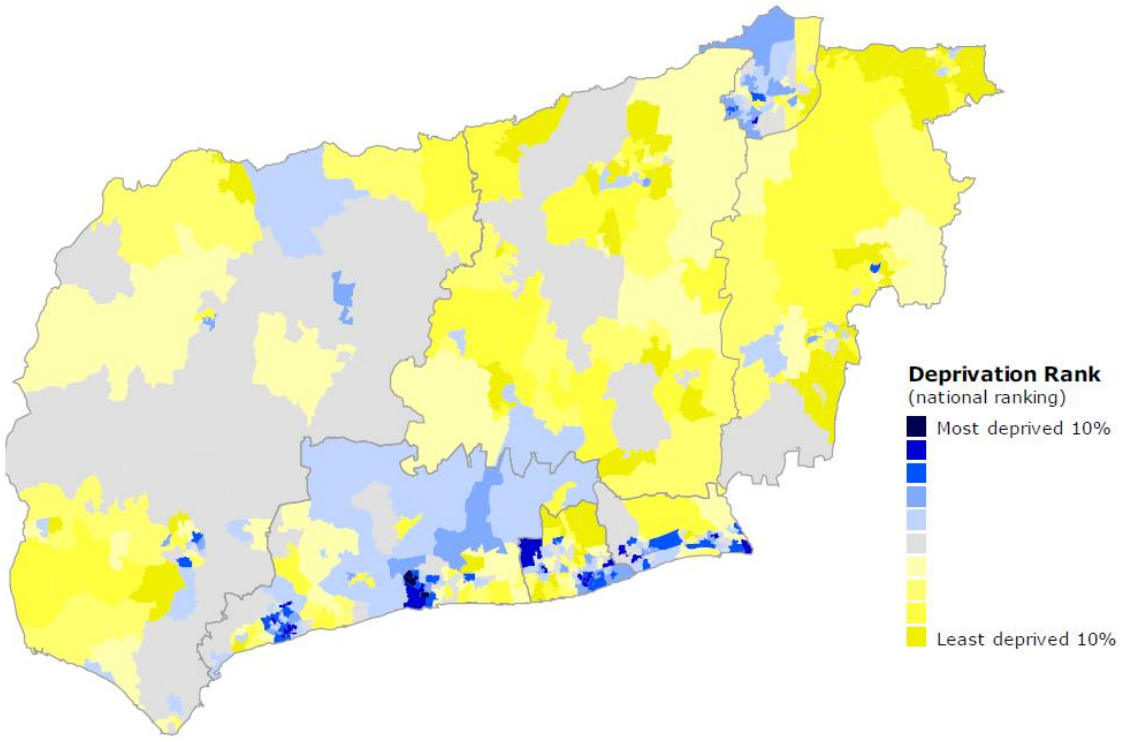


Figure 5: Index of Multiple Deprivation Scores (2010) for West Sussex (Source: West Sussex JSNA, 2011)

3.4.11 Bognor Regis and Littlehampton suffer from relatively poor economic performance and are comprehensively out-performed by other towns, particularly Chichester. Both towns have comprehensive regeneration strategies in place and detailed Master Planning work has either been completed or is underway. These form the focus for economic development and regeneration work in the district (Arun Economic Strategy, 2009).

3.5 Labour Market Characteristics

3.5.1 Across West Sussex, 69% of people employed are in full-time employment, and 31% are part time. This is very similar to the South East and UK wide figures (NOMIS, 2012).

Employment and Economic Activity (April 2011-March 2012)

3.5.2 Table 3 shows a summary of economic performance data for areas across West Sussex. West Sussex generally performs at levels equivalent to the average across the South East and UK. Crawley, Mid Sussex, Worthing and Horsham have higher levels of economic activity than the West Sussex average. The lowest levels of economic activity are in Chichester, Arun and Adur.

3.5.3 Unemployment across West Sussex is below the South East and UK average. Within the study area the highest unemployment levels are in Adur, Arun, Crawley and Worthing. These are also the areas with the highest level of JSA claimants. Horsham performs well with the second lowest level of unemployed people and JSA claimants.

Area	Economically active (% aged 16-64)	Unemployed	Job Seekers Allowance (JSA) claimants
Adur	80.7%	6.7%	2.6%
Arun	78.2%	6.2%	2.5%
Chichester	78.0%	5.1%	2%
Crawley	84.4%	6.1%	2.9%
Horsham	82.2%	4.6%	1.6%
Mid Sussex	83.8%	3.7%	1.3%
Worthing	83.1%	6%	3.1%
West Sussex	**81.5%**	**5%**	**2.2%**
South East	**79.4%**	**5.9%**	**2.5%**
UK	**76.5%**	**8.1%**	**3.8%**

Table 3: Economic activity, unemployment and benefits claimants across West Sussex (NOMIS)

3.5.4 The Arun Economic Strategy (2009) identified that compared to the proportion in the South East, Arun has a higher percentage of people working in “personal service occupations” and “sales and customer service occupations”. In Arun this accounts for almost 20% of employment, compared to 15% in the South East. Conversely, Arun has a lower percentage of “managers and senior officials” and people with “professional occupations” (29%) compared to the South East average (32%).

3.5.5 In Horsham District, the distribution, hotels and restaurants sector employs the most people (27%), followed by financial and business services (20%) and public administration, education and health (20%) (Horsham Spatial Area Factsheet, WSCC, 2011).

Job Density

3.5.6 Job density is the ratio of total jobs to population aged 16-64. Total jobs include employees, self-employed people, government supported trainees and HM Forces. Table 4 shows the number of jobs in each part of the study area, and their job density. Chichester and Crawley both have job densities over 1, meaning they have more than 1 job per working age resident, which is likely to result in in-commuting. In comparison, Adur and Arun both have low job densities (0.54 and 0.56 respectively), meaning residents of the area are likely to commute out to work elsewhere. Arun therefore has the second worst ratio in West Sussex. Horsham also has a job density below 1, meaning that there is relative out-commuting from the area, mainly comprising those who live in Horsham and work in London.

Area	No of jobs	Job density
Adur	20,000	0.54
Arun	48,000	0.56
Chichester	71,000	1.07
Crawley	91,000	1.26
Horsham	64,000	0.79
Mid Sussex	61,000	0.75
Worthing	49,000	0.77
West Sussex	405,000	0.83
South East	**-**	**0.8**
UK	**-**	**0.77**

Table 4: Number of jobs and job density by areas (Source: NOMIS, 2012)

Skills Levels

3.5.7 Table 5 shows skills levels across the study area. Mid Sussex, Chichester and Horsham have relatively high skills levels and that these are above the West Sussex average. Arun has the lowest level of people with NVQ4, NVQ3 and above qualifications. Adur, Arun and Crawley both have relatively high levels of people with no qualifications.

Area	NVQ 4 and above	NVQ 3 and above	No qualifications
Adur	35.8%	61.2%	12.7%
Arun	26.7%	46%	9.7%
Chichester	44.5%	65.9%	7.2%
Crawley	33.0%	52.5%	9.6%
Horsham	34.2%	53.9%	5.1%
Mid Sussex	40.6%	64.0%	-
Worthing	35.6%	57.8%	-
West Sussex	**35.5%**	**56.7%**	**6.9%**
South East	**36.2%**	**56.7%**	**7.9%**
UK	**32.9%**	**52.7%**	**10.6%**

Table 5: Skills levels in Districts and Boroughs across West Sussex (NOMIS, 2012)

Public and Private Sector Employment

3.5.8 Within the UK, 23% of workers are employed in the public sector (ONS 2011). Worthing and Chichester employ a higher amount of people in the public sector than the UK average, at 28.4% and 27.2% respectively. The lowest level of public sector employment is in Crawley (12.6%) and Horsham (12.8%).

Salary Levels

3.5.9 Salary levels vary by residence across West Sussex and these are shown in Table 6. Horsham, Chichester and Mid-Sussex all have average salary levels that are above the West Sussex average, and Horsham is also above the South East average. Salary levels are lowest in Adur, followed closely by Arun.

Area	By residence
Adur	£411.20
Arun	£424.40
Chichester	£519.20
Crawley	£499.30
Horsham	£586.50
Mid Sussex	£517.90
Worthing	£494.50
West Sussex	**£511.70**
South East	**£554.40**
UK	**£503.10**

Table 6: Average weekly earnings for full-time workers by residence (NOMIS, 2012)

3.5.10 The Arun Economic Strategy (2009) identified that weekly earnings for people working in Arun were £404, whereas the average for Arun residents was £455. This shows the extent to which those who work in Arun earn less than those who live there but work elsewhere. There are several possible explanations of this:

- People commute out of Arun to work as they can earn more elsewhere;
- People who work in Chichester and Worthing choose to live in Arun as the cost of living is lower; and
- There is a low job density in Arun so it is easier to find work elsewhere.

3.6 Tourism

3.6.1 In 2010 there were 16.37m domestic tourism trips to the South East, accounting for £2.2bn of spend (Tourism Alliance, 2011).

3.6.2 Within West Sussex there are approximately 6,400 employers in tourism, hospitality and retail, with around 65,000 employees. An additional 7,000 people are self-employed in the sector. 55% of roles are full-time, and the remaining 45% are part time. 24% of workers work on a shift system (WSCC, 2012).

3.6.3 The average weekly pay in the sector is around £250 before tax, equivalent to around £13,000 per annum. This figure includes full-time workers who typically earn £440 per week (23,100 per year) and part time workers who typically earn £115 per week (£6,000 per year).

3.6.4 In Arun it is estimated that the tourism sector employees around 4,000 people (Arun Economic strategy, 2009), mostly in hotels and catering. A major employer is Butlins in Bognor Regis

South Downs National Park

3.6.5 The South Downs National Park (SDNP) was 'designated' in 2009 and became a legal entity in 2011. It covers an area of over 1,600 square kilometres and 110,000 people live within its boundaries. The SDNP covers the area to the north of Chichester, and passes through part of Arundel. It also passes just south of the village of Storrington.

3.6.6 The South Downs National Park Authority (SDNPA) has a statutory remit to both conserve and enhance the park's natural beauty and to promote opportunity for understanding and enjoyment of the park by the public. The SDNPA also has a duty in terms of the economic and social well-being of those that live in the Park. Given this remit, any negative environmental impacts associated with the Arundel Bypass will need to be offset by the economic and other benefits visitors will bring to the park.

3.6.7 The western extent of the Red-Blue route for the Arundel bypass passes, for example, through the SDNP.

3.7 Transport and the Economy

3.7.1 This section covers transport and the economy. Further details of the transport context in the study area are provided in Chapter 4.

3.7.2 As highlighted in Arun's Economic Strategy, there is a consensus in the area that the region suffers from poor transport infrastructure. This is directly applicable to the section of the A27 through Arundel as this has been considered for several years to be a barrier to economic growth.

3.7.3 The West Sussex "Local Transport Plan 3" notes *that "Arundel experiences congestion during peak hours on weekdays and is a honey-pot destination at weekends, causing off-peak congestion on the edge of the SDNP. The unimproved section of the road was designed to be used by around a third of current traffic flows, the majority of which is through traffic. In addition to causing significant congestion at Arundel, this also leads to heavy traffic flows through nearby villages as vehicles divert to avoid the queues".* (WSCC LTP3, 2011). The Plan also points out that the current route causes severance problems in the South of Arundel and has a poor safety record.

3.7.4 Some key sectors in the study area such as horticulture firms are particular affected by these delays. These firms are given, for example, 15 minute 'windows' to deliver their products, and as such delays can have an impact on their overall business given the resulting increases in the cost of making these deliveries.

3.7.5 The Arun Economic Strategy also indicates that the area has significant net out-commuting. The 2001 census showed:

- Just over 8,000 people commuted into Arun from outside it; and
- 22,580 Arun residents commuted to work outside of Arun.

3.7.6 The main destinations for out-commuting are Chichester and Worthing, to the west and east of Arun respectively. Commuting into and out of Arun is largely contained within the

coastal West Sussex area. These patterns mean a high proportion of travel to work trips made by car are likely to use the A27 at Arundel.

3.8 Demographic Characteristics and Population Growth

3.8.1 The 2008 and 2010 population of the different Boroughs and Districts in the study area is shown below in Table 7. Arun has the largest population of any of the Boroughs and Districts (150,600) and Adur has the lowest (61,600). All areas experienced an increase in population between 2008 and 2010 of around 1%, with a significantly higher level in Crawley (3.5%)

Area	2008 population	2010 population (NOMIS)	Percentage increase
Adur	61,000	61,600	1.0%
Arun	149,600	150,600	0.7%
Chichester	111,800	113,500	1.5%
Crawley	104,000	107,600	3.5%
Horsham	129,200	130,800	1.3%
Mid Sussex	130,900	132,500	1.2%
Worthing	102,100	103,200	1.1%
West Sussex	**788,600**	**799,700**	**1.4%**

Table 7: Population in Districts and Boroughs in West Sussex (2008) (Source: NOMIS)

CHAPTER 4

ROUTE HISTORY AND PREVIOUS APPRAISAL

4 ROUTE HISTORY AND PREVIOUS APPRAISALS

4.1 Transport Context

4.1.1 The A27 is the main east-west road corridor through West Sussex and passes directly through Arun District. The road links Portsmouth and Chichester towards the west with Brighton and Eastbourne towards the east.

4.1.2 The route between Chichester and the west of Arundel on the A27 consists of two dual lane carriageways, mainly with at-grade roundabouts or priority junctions. The A27 through the southern fringe of Arundel is a single carriageway road. It also carries traffic between sections of the A284, which links Littlehampton with the A29 at Whiteways Roundabout. There is a traffic signal junction at the Crossbush interchange where the A27 meets the A284 from Littlehampton. To the east of the Crossbush roundabout at Arundel, the A27 reverts to a two-lane dual carriageway with at-grade junctions and continues at this standard to the outskirts of Worthing.

4.1.3 Along the A27 there are a number of other locations where transport improvements are required, including those at Chichester and Worthing. These issues are considered at a high level in this report.

4.1.4 There are a number of north-south routes within the study area:

- The A29, which provides a route from Bognor Regis towards London. The A29 is a single carriageway route through the villages of Westergate and Aldingbourne. The A29 intersects the A27 at the Fontwell and Slindon Common roundabouts;
- The A24 runs from Worthing up to Horsham and is a principal link between Coastal West Sussex,Gatwick Airport, Surrey, the M25, and London;
- The A23 between Brighton and Crawley. In the Crawley area, this becomes the M23 which provides an alternative strategic route between the coast and Gatwick airport and the M25;
- The A284, provides a connection from Littlehampton in the south, through Arundel to meet the A29 at Whiteways Roundabout. The route is single carriageway and meets the A27 at the Crossbush junction and the western-most of the two Arundel roundabouts.

4.1.5 The town of Arundel is located just north of the A27 between Chichester and Worthing. The A27 passes through parts of Arundel, effectively severing the historic north and newer south of the town.

4.1.6 There is a long distance diversionary route that is used by some drivers to avoid congestion on the A27. A long distance diversionary route in this context refers to an alternative road link that drivers can use in place of the frequently congested A27. This route runs between the A27 at Fontwell and comprises the A29, the B2139 to Storrington and the A283 from Storrington to the A27 at the Adur viaduct. Some drivers also use part of the eastern or western part of the route to travel between the A24 and the A27. This leads to an increase in traffic through the South Downs National Park as well as congestion and air quality problems at Storrington.

4.1.7 Horsham District Council's 'Storrington Air Quality Action Plan' of October 2012 contains details of why the village has been designated as an Air Quality Management Area (AQMA). These areas are set up when air quality targets are not being met and in the case of Storrington, the high volumes of road traffic passing through the village are generating various harmful emissions. Section 9.3.3 of the Action Plan report describes,

for example, how the volume of traffic passing through villages such as Storrington is influenced to some extent by problems associated with the main A27 trunk route.

4.1.8 The report also states that the high volumes of traffic in Storrington are at least partly attributable to drivers avoiding renowned bottlenecks on the A27 at Arundel (and Worthing), where there is considerable congestion particularly at peak times.

4.1.9 Section 9.3.3 in the report concludes by stating that it is important to include the improvement of the A27 as an 'action plan' measure. This measure will therefore be to campaign to the Highways Agency for improvements to the A27 on air quality grounds. The Storrington Air Quality Action Plan (AQAP) steering group will determine the most effective means of auctioning this measure and progress will be reported via the Defra Local Air Quality Management (LAQM) Progress Report.

4.1.10 In addition to air quality impacts, the Highways Agency Regional Network Report (2008) indicates that the predicted 'stress factor' performance indicator on the Arundel bypass will be over 150% by 2026, one of the highest figures in the South East region.

4.1.11 Figure 6 below shows the single and dial carriageway sections on the A27 between Portsmouth and Chichester. There are sections of single carriageway which cause congestion problems at Arundel, and also at Worthing.

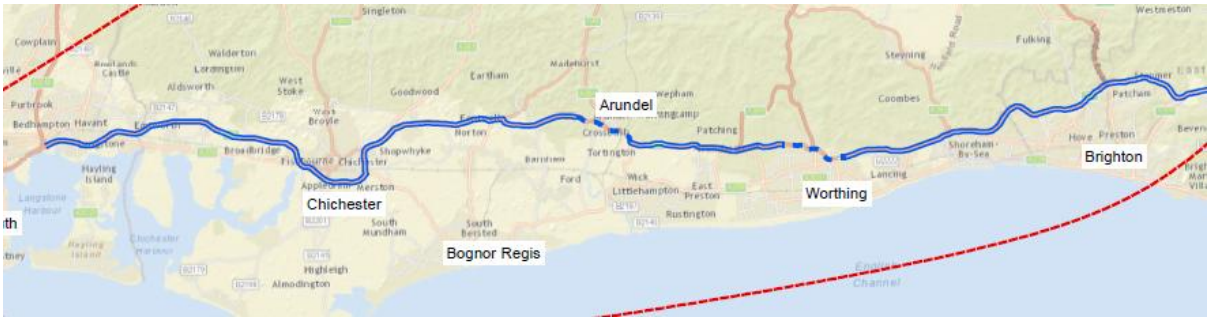


Figure 6: Single and dual carriageway sections of the A27 between Portsmouth and Chichester

4.2 Overview of Route History

4.2.1 The A27 Arundel Bypass scheme dates back to 1987 when it was first proposed. An overview of the key events in the development of the proposal are shown in Figure 7 below, and are discussed in this chapter.

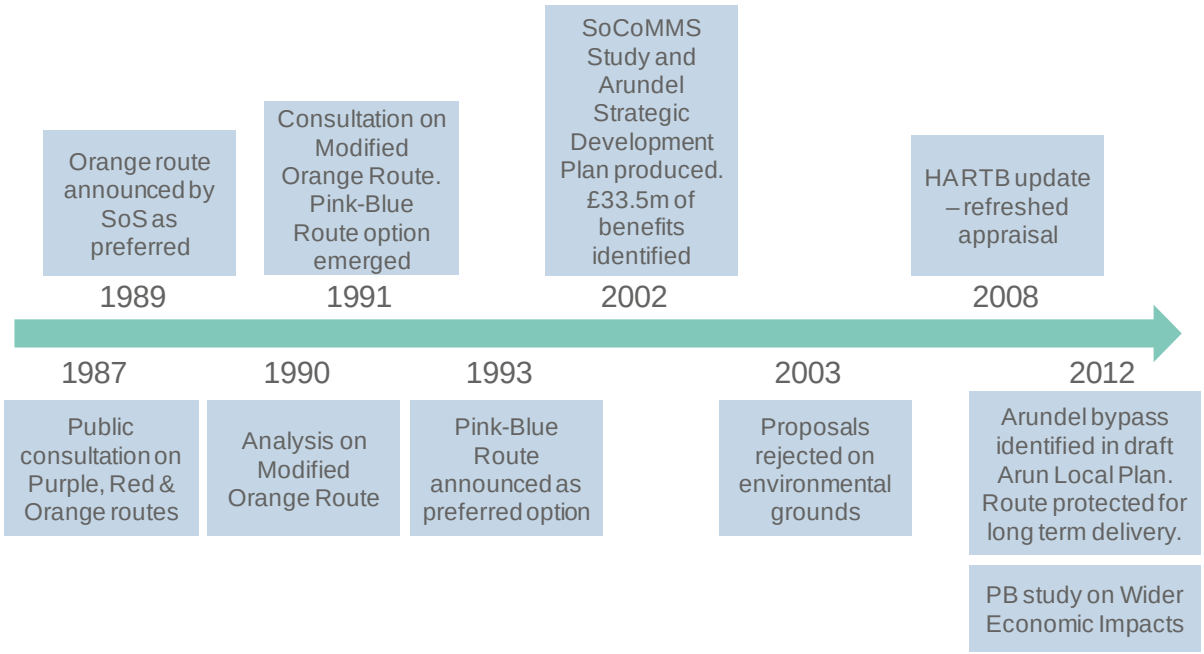


Figure 7: Timeline of development of A27 Arundel Bypass

4.3 Initial Route Development (1987 to 1989)

4.3.1 When first proposed in 1987, a public consultation into the Arundel Bypass was held by the Department of Transport (DfT). The stated objective of providing the bypass was '*to reduce the present conflict between through and local traffic, to enable the trunk road to function efficiently and safely, and to improve the environment for the residents of property adjacent to the sections of A27 which will be bypassed*'[1].

4.3.2 The consultation put forward three alternative routes: Purple, Red and Orange. Each route runs to the south of Arundel, and each follows the same alignment for the eastern section of the route: between the A284 Lyminster Road at Crossbush and the existing A27 at Poling. They differ in their alignment along the western section, as shown in Figure 8.

4.3.3 A three day public consultation was held in Arundel in May 1987 and copies of the consultation brochure were distributed to households in the area, local authorities and other interested bodies. Around 750 people visited the exhibition and over 1,000 questionnaires and letters were received.

[1] Department of Transport (1987) *A27 Arundel Bypass: Exhibition Brochure*

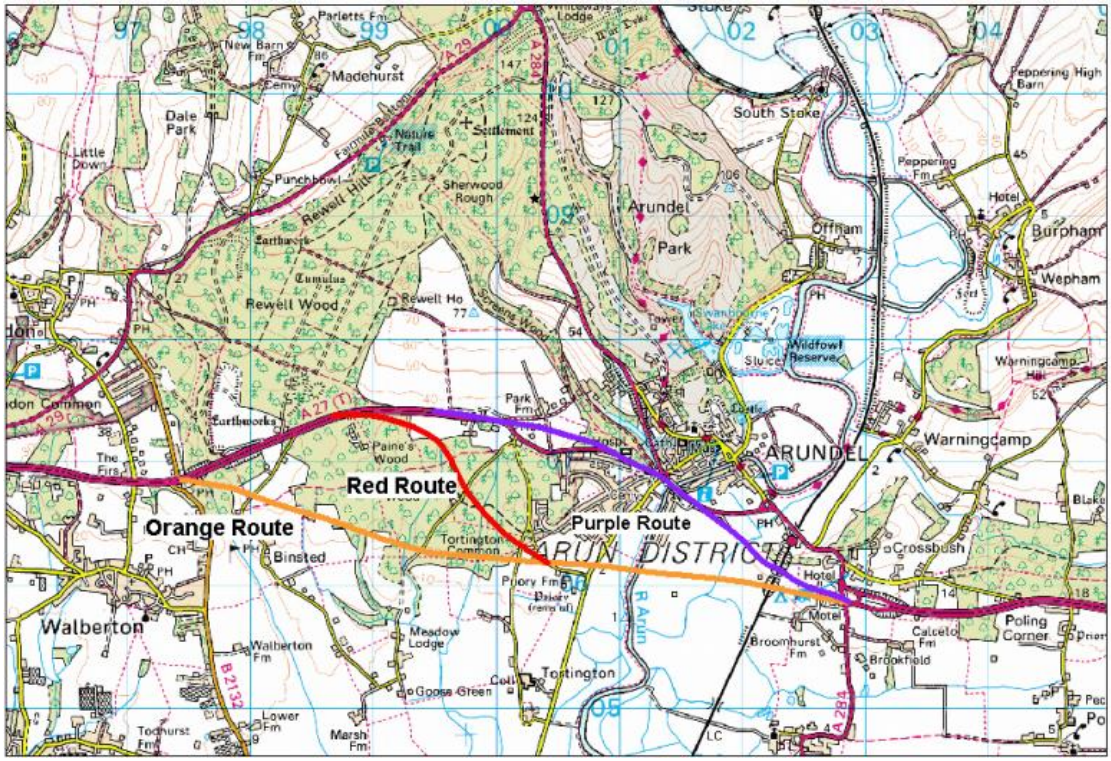


Figure 8: Orange, Red & Purple Route Options from 1987 Public Consultation (Source: SoCoMMS 2002)

4.3.4 From the consultation, the Orange route emerged as the most popular option (supported by 65% of respondents), followed by the Red and then the Purple route. In June 1989 the Secretary of State for Transport announced the Orange route as the preferred route.

4.4 Development of the Pink / Blue Route (1990 – 1997)

4.4.1 Following the announcement of the Orange route as the favoured option in 1989, public support remained for a Modified Orange route. This had been raised as a viable alternative during the consultation period.

4.4.2 The DfT carried out further investigations into this Modified Orange route and in 1991 a further consultation was undertaken seeking comment on the previously announced Orange route plus amendments.

4.4.3 As a result of this consultation the Pink / Blue route emerged, and this was declared as the Preferred Route by the Secretary of State in 1993.

4.4.4 The Pink / Blue route is shown in Figure 9. It leaves the existing A27 in the vicinity of Havenwood Park, curves southwards through the mainly coniferous woodland of Paines Wood and Tortington Common, crosses the valley of the River Arun and the railway, and rejoins the A27 at the Crossbush Junction. The Pink / Blue route is 5.4km in length and consists entirely of dual-two all-purpose carriageway.

4.4.5 The Arundel Bypass Action Committee (ABAC) proposed a further alternative which they named the Green option, which itself contained three variations. Green (4) was considered the best option in comparison with the Pink/Blue route. However, the DfT rejected the Green (4) route (on the ground of additional land required, increased

severance impacts, additional cost and reduced local support) and favoured the Pink/Blue route.

4.4.6 The Pink / Blue Route remains the preferred option to date and is shown in Figure 9. The route is protected from development in accordance with the provision of Article 15 of the Town and Country Planning General Development Order 1988.

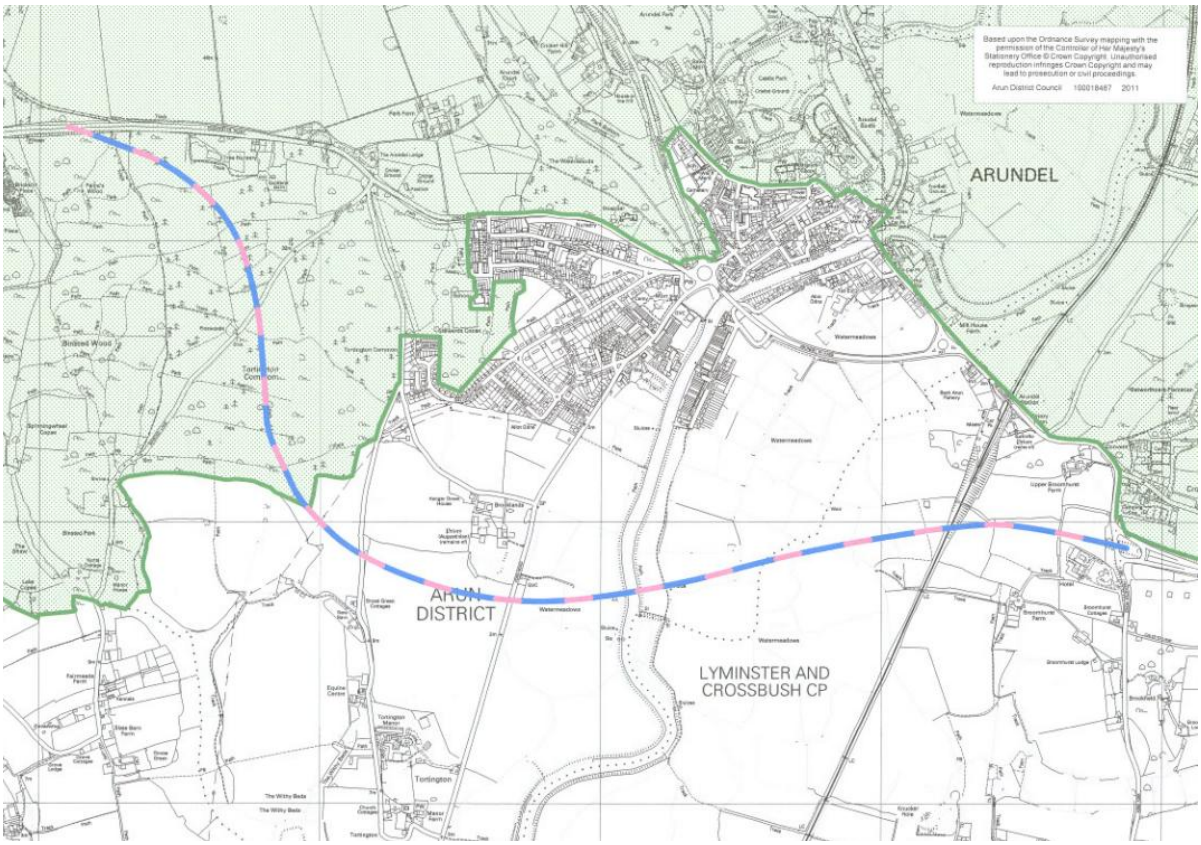


Figure 9: The Pink / Blue Route (Source: Arun District Council, 2011)

4.4.7 In 1996 the scheme was included in the DfT's main road programme, to be implemented when funding became available. However, following a change of Government in 1997, the scheme was removed from the programme pending further review.

4.5 The South Coast Multi Modal Study (SoCoMMS) and Arundel Strategic Development Plan (2002)

SoCoMMS and SDP Overview

4.5.1 The South Coast Corridor Multi Modal Study (SoCoMMS) was one of the second tranche of multi-modal studies undertaken on behalf of the Government to review transport provision in the country. It was commissioned by the Government Office for the South East (GOSE) in 2002.

4.5.2 SoCOMMS covered the area along the south coast between Thanet in Kent and Southampton. The study aimed to:

- Identify and investigate congestion, safety and environmental problems of transport along the south coast between Southampton and Thanet; and
- Propose measures aimed at resolving these problems and improving access to and between regeneration areas and other areas of economic activity.

4.5.3 Under the SoCoMMS study nine Strategic Development Plans (SDPs) were developed in order to illustrate detailed aspects of the strategy and to refine a number of key measures. An SDP was developed for Arundel which considered the Arundel Bypass as a central development option, as well as a range of multi-modal measures.

4.5.4 The Arundel SDP (produced by Halcrow Group in 2002) is the most comprehensive report covering the background of the Arundel Bypass, and is therefore an important source of information for this report.

Traffic Issues

4.5.5 Traffic counts were undertaken for the SoCoMMS study in June 2002 at the location where the A27 crosses the River Arun. The traffic counts found that over a period of 12 hours, the flow at this location was 24,000 vehicles in both directions. Comparisons with counts at Poling over the same time period show that that the single carriageway section of the A27 through Arundel is carrying the same flow as the dual carriageway section of the road.

4.5.6 An analysis of traffic speeds was also undertaken for SoCoMMS using data from the Highways Agency. This found that the high traffic flows on the A27 resulted in congestion at Arundel. Between Arundel and Angmering Park, the average daily speed was found to be 43mph in each direction. In the peak periods, the peak direction speed falls to 28mph over the same 5km section.

Road Safety

4.5.7 The SoCoMMS study contained an analysis of the accidents that took place within the study area between 1999 and 2002. The analysis identified 'black spots' where a large number of collisions occurred on a short length of road. These were identified in the following locations:

- A27 in the vicinity of the Boxgrove roundabout;
- A27 in the vicinity of the B2132 junction;
- A27 in Arundel between the eastern roundabout south of the town centre and Crossbush – there was, for example, a particularly high proportion of 'killed or seriously injured' casualties and a high proportion of motorcycle accidents.

SoCoMMS Consultation

4.5.8 The SoCoMMS study included two phases of consultation. The first phase of consultation included a series of workshops that were held along the corridor that sought to identify problems and issues with the transport system in the area. Some of the local issues that were identified include:

- Congestion on the A27 at Arundel;
- Safety issues on the A27;
- The high flows on the A27 split the town of Arundel causing severance;

- Traffic 'rat running' through the villages near Arundel (e.g. Storrington) to avoid the A27; and
- Congestion on the A259 and its relationship to the A27.

4.5.9 The second phase of consultation sought opinions from stakeholders on the potential solutions for the study area. Considerable support for the Arundel Bypass emerged from the second consultation.

Arundel SDP Appraisal

4.5.10 The appraisal of the A27 Arundel Bypass in the SoCOMMS study is based on the Guidance on the Methodology for Multi-Modal Studies (GOMMMS).

4.5.11 The Appraisal Summary Table (AST) gives a summary of the appraisal against five objectives for transport: environment, safety, economy, accessibility and integration. A summary of the main results is shown in Table 8.

Appraisal category	Impact Assessment Summary
Environment	
Noise	Beneficial impact (to Arundel)
Local Air Quality	NO_2 estimate: -164,355 PM10 estimate: -259,399
Greenhouse gases	Increase of 26.99 tonnes of CO_2 for 2016 against future do minimum
Landscape	Large negative
Townscape	Neutral
Heritage of historic resources	Large negative
Biodiversity	Neutral
Water environment	Impact dependent on design
Physical fitness	Beneficial impact
Journey ambiance	Large beneficial
Safety	
Accidents	Beneficial impact
Security	Large beneficial impact
Economy	
Transport Economic Efficiency	User benefits: NPV £33.5m Benefit Cost Ratio: 3.499 Value / Cost to Govt ratio: 2.5
Reliability	Moderate beneficial impact
Wider Economic Impacts	Beneficial impact
Accessibility	
Option values	Beneficial impact
Severance	Beneficial impact
Access to the Transport System	Large beneficial impact
Integration	
Transport interchange	Large beneficial impact
Land use policy	Beneficial impact
Other Government policies	Beneficial impact

Table 8: Summary of SoCoMMS (2002) Appraisal Summary Table

4.5.12 The cost of the preferred route was calculated as £27 million in 2001 prices. The scheme shows user benefits of NPV £33.5m, a positive cost/benefit ratio of 3.499, and a value/cost to Government ratio of 2.5. Full details of the calculations and values used in the Transport Economic Efficiency calculations were not included in the report.

4.5.13 For Wider Economic Impacts the table noted that the scheme will "improve access to priority regeneration areas in West Sussex."

4.5.14 Changes in traffic flows and collision data since 2002 will mean the values will need to be reviewed and revised to be brought up to date.

4.5.15 The area covered by the SoCoMMS study was relatively small compared to the area considered for this study (as shown in Figure 2 earlier in the report). The area extended from Amberley to the sea and from Angmering to Fontwell. This is the area over which the benefits cited above have been modelled.

SoCOMMS Recommendations and Appraisal Overview

4.5.16 SoCoMMS recommended that the Arundel Bypass should be taken forward on the Pink-Blue Preferred Route as one of the Government's targeted road-based improvements.

4.5.17 The approach taken in the SoCoMMS study is based on conventional appraisal techniques. It therefore does not incorporate the 'wider economic impacts' of the scheme. Table 9 provides a summary of these 'wider economic impacts' and how they compare to the conventional appraisal.

Appraisal Type	Appraisal impact
Conventional Appraisal (i.e. SoCoMMS)	Business user benefits (i.e . journey time savings, vehicle operating costs)
	Other user benefits (i.e. commuting, leisure)
	Safety impacts
	Environmental Impacts (i.e. CO_2, air quality)
'Wider Impacts' (WI) and 'Regeneration' Appraisal	**'Wider Impacts' (WI)** is suited to densely populated, urban areas and typically comprises 'agglomeration', 'output change in imperfectly competitive markets', 'labour supply impacts' and 'move to more or less productive jobs'
	'Regeneration' (adopted to date for this study) is suited to more rural contexts where improved transport infrastructure will improve access to jobs as well as helping generate new jobs in a defined 'Regeneration Area' (RA). This approach uses business surveys extensively to help identify and quantify potential impacts

Table 9: The relationship between conventional appraisal and wider impacts appraisal (Source: DfT (2012) WebTAG Unit 2.8 Wider Impacts and Regeneration)

4.6 Further Developments (2003 – 2012)

4.6.1 Following the SoCoMMS study in 2002, the Secretary of State announced in July 2003 that the bypass was rejected as *"in my view (it) has environmental consequences that are unacceptable and avoidable"*. Since 2003, however, there have been some further studies of the route and these are summarised below.

Regional Transport Board Prioritisation

4.6.2 In 2008 the Highways Agency strategically re-appraised the scheme as part of the South East England Regional Assembly (SEERA) Regional Transport Prioritisation. This identified the BCR of the scheme as 8:1 based on TUBA calculations, 2001 prices and a 60 year appraisal period. The Net Present Value of the Transport Economic Efficiency

impacts (i.e. journey times) for providers and consumers were £41.6m and £42.6m respectively.

West Sussex Coast DaSTS

4.6.3 The West Sussex Coast Delivering a Sustainable Transport System (DaSTS) Study was undertaken in 2011 as part of a programme of similar studies around the UK. The study developed seven packages of multi-modal transport options for the West Sussex Coast area and strategically appraised these against the delivery of high level objectives (including supporting economic growth).

4.6.4 The A27 Arundel Bypass was included within Option 5b and Option 6 of the DaSTS Study. Option 5b included the baseline package of investment, plus a medium level of Integrated Demand Management, the Arundel Bypass and online improvements at Worthing. Option 6 built on Option 5b, with the addition of offline improvements at Worthing.

4.6.5 When assessed against the three objectives of the South East Plan, the options produced the 'scores' as show in Table 10. The report recommended that if either of these options are taken forward, they should be in conjunction with innovative funding mechanisms to increase their affordability.

Option	Improving Global Competitiveness	Smart Growth	Sustainable Prosperity	Deliverability
Option 5b	Medium positive	Medium positive	Small negative	4 (low)
Option 6	Large positive	Medium positive	Medium negative	5 (v low)

Table 10: DaSTS (2011) appraisal summary

Local Policy and Planning Documents

4.6.6 The West Sussex County Council (WSCC) third Local Transport Plan (LTP3) 2011-2026 was published in February 2011. Economic performance was identified as an issue affecting the county, and it was noted that: *"On the coast, the A27 is widely considered by businesses to cost them money and inhibit economic performance due to its unreliability and frequent congestion."* Promoting economic growth is a key objective of the LTP. Major road network improvements on the A27 at Chichester, Worthing and Arundel were identified as necessary. One of the key aims for Arun is *"major improvements to the A27 at Arundel, such as a bypass, to reduce congestion and rat running, and to improve the safety record and community cohesion".*

4.6.7 The Arun Draft Local Plan was published in July 2012 for public consultation. The draft Local Plan included the A27 Arundel Bypass in the key diagram and confirmed the ongoing protection of the line of the pink / blue route for delivery in the long term.

4.7 Conclusions

4.8 The history of the proposed Arundel Bypass scheme includes a number of studies, reports, proposals and consultations undertaken over a period of several years. Whilst these provide useful information, changes in several factors in more recent years (including changes in traffic patterns, accident rates, policy priorities and other factors)

should be taken into account when considering the relevance of this work for any future assessment.

4.8.1 Various studies have identified the need for a dual carriageway on the A27 at Arundel so that congestion and safety problems can be alleviated. This need very much remains in place today. A series of viable engineering solutions have been proposed for the scheme, with varying costs and benefits.

4.8.2 The Arundel Bypass has been shown to demonstrate several potential benefits in terms of economic activity, safety, accessibility and integration. There are, however, environmental impact factors that will need to be taken into account. In addition, any future evaluation of the scheme will need to take account of changing traffic patterns, accident statistics and other factors that have changed since the original appraisals were undertaken. The environmental disbenefits of the scheme will now include an impact on the recently created South Downs National Park, so any future proposals will need to look at how any negative impacts associated with this can be minimised or mitigated.

4.8.3 In terms of evaluating the impacts of new infrastructure schemes and the ways in which funding is allocated, Government priorities have changed since the scheme was cancelled (on environmental grounds) in 2003. There is an increasing focus on promoting sustainable economic development and given the potential economic benefits of the bypass, there is an opportunity to secure funding for the scheme by demonstrating the extent of these benefits under current DfT guidance.

4.8.4 Given current pressures on Government funding, the high cost-benefit ratio(s) demonstrated in appraisals undertaken in previous years will not necessarily be sufficient to secure funding for the scheme. Any future appraisal should include consideration of additional and potentially innovative funding sources to reduce the total cost of the scheme to central Government.

4.9 Updating Previous Work in Stage 2 Analysis

4.9.1 The previous appraisal work undertaken will need to be revised and updated if a full new business case for the scheme is to be established. The business case will comprise both an updated 'transport economics' appraisal of the scheme (including quantified journey time savings, accident reduction benefits and scheme cost data) as well as the more detailed 'wider economic impact' assessment that is discussed in this report.

4.9.2 For the 'transport economics' appraisal, the modelling approach and methodology will remain similar to that used in the previous studies described above. To demonstrate this, the work undertaken for SoCoMMS in 2002 can be updated with more recent data covering predicted traffic volumes and scheme costs. This will then be used to calculate a new Benefit:Cost Ratio (BCR) for the scheme. These results form part of the Transport Economic Efficiency (TEE) outputs and are reported in a series of tables specified in DfT appraisal guidance

4.9.3 The Stage 2 'wider economic impact' work will be a separate part of scheme evaluation and will highlight, for example, the employment and regeneration impacts of the scheme on the local economy.

4.9.4 Both the TEE and wider economic impact results will be summarised in Appraisal Summary Tables (ASTs) that form part of the DfT's WebTAG appraisal guidance.

4.9.5 The extent to which the previous TEE appraisal work needs to be updated and the format with which these results are combined with the outcome of the wider economic impact analysis should be discussed beforehand with the DfT. These discussions are addressed in Chapter 8 under 'Recommendations' for the next stage of work (see section 8.3.3).

CHAPTER 5

WIDER ECONOMIC IMPACTS – SEGMENTATON

5 WIDER ECONOMIC IMPACTS – SEGMENTATION

5.1 Introduction

5.1.1 This chapter sets out the approach to evaluating the wider economic impacts of the A27 Arundel Bypass at this preliminary Stage 1 phase. A key theme discussed here is the disaggregation of impacts into different categories. This is necessary as some of the impacts can be quantified in terms of a 'revenue stream' that will accrue to Government, local businesses and/or tourism organisations.

5.1.2 By contrast, other economic impacts such as headline employment generation and GVA impacts can be quantified but not necessarily in the form of a revenue stream that is attributable to a particular beneficiary. These items are, however, discussed in this chapter as they are robust indicators of economic impact.

5.1.3 It is also necessary to recognise that some impacts are more likely to be realised within the vicinity of the A27 Arundel Bypass whereas other impacts will be realised in more distant locations, such as in areas and districts not directly located in the scheme corridor.

5.1.4 The approach taken for these types of assignments is to take 'baseline' measures of economic performance in the region and then consider how these will change once the works have been completed. Impacts will be quantified in monetary terms during Stage 2.

5.2 Types of Impacts

5.2.1 The different types of impacts analysed are as follows:

- *Economic activity-related:* e.g. GVA;
- *Employment-related:* covering 'headline' employment generated as well as financial impacts such as taxation payments to Government and welfare payment savings (e.g. Jobseekers' Allowance savings);
- *Tourism-related:* such as increase in visitor numbers, visitor spending and the related increase in the number of employees in the sector who will be supported by the increase in visitor spending;
- *Land use and development-related:* i.e. to what extent will new developments come forward as a result of the improved road infrastructure and to what extent will metrics such as land values increase due to the improvements?; and
- *Other impacts:* including those relating to the benefits of increased disposable income from the various generated employment opportunities. Increased disposable income in the region will in turn support additional employment.

5.2.2 Transport benefits, including improvements in connectivity, reliability and resilience are described in Section 5.8.

5.3 Background to Methodology Used

5.3.1 As discussed in the introductory chapter, we based our high level analysis on DfT guidance as contained within the WebTAG appraisal guidelines.

5.3.2 The most recent DfT guidance (updated in August 2012) focuses on two different approaches to assessing economic impacts. WebTAG Unit 2.8, for example, describes the following approaches:

- Wider Impacts (WI) and
- Regeneration.

5.4 Wider Impacts & Agglomeration

5.4.1 The Wider Impacts (WI) approach is primarily intended for densely populated, urban environments such as those in major towns and cities whereby transport improvements will improve accessibility between, for example, workers' places of residence and employment opportunities. The key measure of this is "agglomeration", a technical term referring to the concentration of economic activity over an area.

5.4.2 In the context of using agglomeration when appraising the impact of the Arundel Bypass, the WebTAG guidance states that *"if the scheme being appraised is in a rural location and not close to a particular economic or employment centre, the impact of the scheme on agglomeration and resulting impact on productivity and welfare is likely to be negligible"* (DfT WebTAG Unit 2.8, p5, August 2012).

5.4.3 In addition, the areas defined by DfT as being suitable for agglomeration analysis are termed 'Functional Urban Regions' (FURs) and in the Sussex / Hampshire coastal region, are focused on Brighton and Portsmouth.

5.4.4 It is for these reasons that the 'WI' and agglomeration approach have not been assessed further at this stage. This can be reviewed and discussed further prior to the commencement of Stage 2.

5.5 Regeneration

5.5.1 Regeneration analysis takes place in areas classified as 'Regeneration Areas' (RAs). RAs will usually have a policy objective of increasing local economic activity and employment. The assessment of the regeneration impact of a scheme is incorporated within a Regeneration Report (RR). The report is prepared by the promoters of a transport scheme seeking funding from the Department for Transport (DfT) in all cases where the proposal may impact on the economic activity of a regeneration area.

5.5.2 As stated in the DfT's WebTAG guidance, the Government attaches considerable importance to regional economic development. The regeneration of under-performing areas is important to promoting regional economic growth because measures which improve the performance of such areas will encourage development at the regional level.

5.5.3 Areas which are identified as regeneration areas are characterised by their failure to function as well as other areas. They are likely to be more prevalent in under-performing regions which often exhibit many different sub-regional problems which add up to a below average performance.

5.5.4 As specified in the DfT's WebTAG guidance, Regeneration Reports require extensive business surveys to be undertaken and this approach has been adopted for the Stage 1 work. Surveys are necessary and important for two reasons:

- They enable information to be gathered on the current 'baseline' situation in the local economy (covering various employment characteristics); and

- They provide information, metrics and data on how businesses will adjust their activities if the scheme under analysis goes ahead.

5.5.5 Two key elements of the 'regeneration' guidance are 1) the scope it gives to those conducting the economic impact appraisal to demonstrate the specific benefits that will accrue from the scheme and 2) the importance of basing the findings on extensive surveys.

5.6 Use of Business Surveys

5.6.1 Given that the DfT guidance makes extensive reference to the use of surveys, an extensive survey programme formed the centrepiece of the Stage 1 work.

5.6.2 As well as independent research conducted on various measures of economic performance, the analysis was enhanced by both the Business Survey and information gained from the workshop held with key stakeholders. In addition to providing indicative results for Stage 1, the results from the surveys will form inputs into the economic impact modelling during Stage 2.

5.7 Different Types of Economic Impacts

5.7.1 The following sections describe the different types of economic impacts that accrue from infrastructure improvements.

GVA Impacts

5.7.2 Gross Value Added (GVA) is the primary monetary measure of economic output and activity at the regional level. It is the regional equivalent of Gross Domestic Product (GDP), the latter being the measure of economic activity and output at the national level. GVA is an important 'headline' measure of regional economic activity and it is frequently used to show how a regional economy is performing over time and also, how it is performing relative to other regions in the United Kingdom.

5.7.3 The Office of National Statistics (ONS) publishes comprehensive historical GVA data according to 'Nomenclature of Territorial Units for Statistics' (NUTS) regions in the European Union.

5.7.4 As discussed previously, the data is available at the overall 'South East' regional level ("NUTS 1") as well as more detailed "NUTS 2" and "NUTS 3" levels. The latter covers, for example, individual counties and major urban areas. At the "NUTS 2" level, data is available for the 'Surrey East and West Sussex' area and at the lowest "NUTS 3" level, data is available for West Sussex.

5.7.5 At this preliminary stage, forecast increases in GVA due to the A27 Arundel Bypass are based on the results of the Business Survey. In the survey, responding companies give clear indications as to how much their turnover will increase in proportionate terms if the bypass is built. The responses on potential turnover increases are provided in a series of quantified 'bands'.

5.7.6 As increases in turnover are linked to increases in economic activity, the proportionate increase in turnover is used as a proxy for increases in GVA. Going forward, the annual increases in GVA are based on analysis of historical GVA growth within West Sussex.

5.7.7 The output from this process is a series of increased GVA forecasts for those "NUTS 3" areas most applicable to the A27 Arundel Bypass. At the present time, we envisage the

impacts to take place primarily within the 'West Sussex' area. There may, however, be scope to extend these out towards other "NUTS 3" areas such as 'Brighton and Hove', 'East Sussex CC', 'Surrey' and 'Portsmouth'.

Employment-Related Impacts

5.7.8 There are likely to be various employment-related economic impacts. Firstly, 'headline employment' numbers are those that are primarily referred to in the DfT WebTAG appraisal guidance. The guidance specifies, for example, that the wider economic impact of a particular scheme should be quantified in terms of new jobs generated in the defined 'regeneration area'.

5.7.9 To comply with this, we obtained National Online Manpower Information System (NOMIS) data from the ONS covering historical as well as the latest employment data at the district level within the study area. The data covers those in employment and those currently classified as unemployed (within the pool of those categorised as 'economically active').

5.7.10 Based on the survey results and the extent to which respondents stated how the turnover of their businesses would increase, it will be possible to estimate the proportionate increases in employment within each area. This is again based on the realistic assumption that a specified increase in turnover will result in a similar proportionate increase in employment.

5.7.11 By adopting proportionate increases in turnover / employment based on the survey sample (251 businesses responded to the questions relating to increases in turnover), this will enable us to quantify the typical impact of these increases across the whole of the business sector in the study area.

5.7.12 In financial terms, the employment impacts can also be expressed in terms of taxation gains to central Government as well as 'welfare payment' savings when those who are currently unemployed are able to work. These impacts will be calculated in more detail in Stage 2 and will use data from the NOMIS labour market database as well as personal taxation information from HMRC. For welfare payment-related impacts, data on Jobseekers' Allowances (JSA) will be obtained directly from the JSA online database.

5.7.13 The outputs from the employment-related impact analysis therefore include 'headline' employment totals as well as an indication of the likely magnitude of financial 'revenue streams' from the taxation and welfare payment reduction benefits accruing to Government.

5.7.14 Additional economic benefits stemming from the increase in disposable incomes of new employees is discussed below.

Tourism-Related Impacts

5.7.15 Tourism related impacts can be calculated according to 1) total tourism-related expenditure in each district, 2) the number of employment opportunities these support and 3) the related financial impacts of employment in the sector (such as taxation impacts).

5.7.16 During Stage 2, detailed current tourism data (including expenditure data) will be obtained from the relevant South East tourism agencies and will cover items such as visitor expenditure.

5.7.17 The results of the Business Survey also indicated the proportionate increase in visitor numbers that tourism businesses anticipate once the bypass has been opened. Of the 330 businesses that responded in total, a relatively small proportion of these (33 businesses, 10% of the total) are from the tourism sector. As noted in the following chapter on the survey results, of these 33 responses, 24 firms in the tourism sector anticipate increases in visitor numbers if the bypass is built. Of the other 9 responses, 4 anticipate no impact and 5 anticipate reductions in visitor numbers.

5.7.18 Clearly, this is a small sample size and although it will be possible to use the results to estimate the proportionate increase in visitor numbers, we suggest discussing the need for a more detailed tourism survey as part of the Stage 2 work. This will be influenced by the relative importance of the tourism sector in the local economy and the extent to which this merits separate examination compared to other business sectors.

5.7.19 Based on the increases in visitor numbers, subsequent increases in visitor spending at the county or district level can be calculated in Stage 2, as well as the increases in employment that this expenditure will support. Additional financial benefits (including the taxation gains / welfare payment reductions accruing from generated employment in the tourism sector) can also be calculated during Stage 2.

5.7.20 Based on the results of the 'tourism sector' element of the Business Survey, we have nevertheless produced some preliminary estimates of impacts on the tourism sector and these are described in Section 7.9 of Chapter 7.

Land Use and Land Value Gain

5.7.21 To establish the extent to which the Arundel Bypass can have a positive impact on land development, land value gain and new employment opportunities, these can be discussed with various land development agencies in the area.

5.7.22 It is important to establish the range of impacts that could occur when the scheme is completed. These are summarised below:

- The existence of the Arundel Bypass will remove the current bottleneck on the A27 and will significantly improve the 'attractiveness' of the corridor in terms of attracting investment and inducing land development (through distribution centres and business parks etc.);
- The impacts of these developments will include increases in land values (and land sale values) as planning permission is given for specific development. Impacts such as these are also likely to take place in those areas where there are specific land designations in Local Plans. This means that the developments are likely to take place in conjunction with what is proposed in these various plans;
- The 'beneficiaries' of these financial impacts will be 1) the private developers who would gain from the increase in saleable land values and 2) central Government through increases in corporation tax (levied on the basis of the increased turnover of land development companies); and
- Additional impacts such as employment gains at the new sites will also accrue.

5.7.23 Evidence from comparable transport corridors such as the A55 in North Wales shows that a fully dualled road can attract significant land development, especially in terms of new business parks and distribution centres. Both these types of developments are principally 'marketed' on the basis of the excellent transport links provided.

5.7.24 Residential and retail developments could also be built adjacent to the corridor given the improved transport connectivity.

5.7.25 Based on our discussions with land agents as part of similar previous exercises, the following are typical examples of land development examples and experience:

- Business parks and distribution centres: although important generators of land use development and employment opportunities, these types of development are not as likely to be able to contribute to 'infrastructure development funds' compared to residential and retail developments – this is due to 1) business parks being developed on a speculative basis whereby it takes time for occupying companies and organisations to move in and 2) distribution centres being built on very tight financial margins where the potential for contributions to wider infrastructure funding needs is relatively low; and

- Residential and retail developments: through mechanisms such as 'Section 106' and other funding systems (some of which, such as Tax Increment Funding and Community Infrastructure Levies, are still being assessed by the Government), local agents perceive these developments as being more likely to contribute financial revenue streams to infrastructure schemes.

5.7.26 To demonstrate the potential for development in the A27 corridor, there are examples of business parks that are either already built or are at the planning stage. These include:

- Ford Land Business Park; and

- The Ford Enterprise Hub.

5.7.27 Given the current economic climate, the continuing development of these business parks and other new developments will be enhanced if the A27 Arundel Bypass is delivered. The perceived as well as actual improvements in connectivity, journey reliability and journey resilience will play a key part in the ability of these business parks to attract new companies and organisations to the area.

5.7.28 We propose to undertake further research into these as part of the Stage 2 work.

Impacts from Increases in Disposable Income

5.7.29 Further economic impacts will also occur due to the increases in real disposable income of those who are employed as a result of implementing the scheme. This will be assessed in Stage 2 and will identify:

- Increase in disposable income in each respective area;
- Increase in taxation revenue streams from those employees supported by the increases in disposable income; and
- Reductions in welfare payments due to increased employment.

5.8 Transport Related Benefits (Non-Quantified)

5.8.1 As well as the wider economic impacts discussed above, there are a series of other impacts related to the transport system which it will not be possible to quantify during Stage 2.

5.8.2 Based on the survey findings reported earlier as well as the extensive workshops conducted in the region, there are several stated and perceived benefits of the A27 Arundel Bypass.

Improved Connectivity

5.8.3 By constructing the A27 Arundel Bypass, the current single carriageway bottleneck will be removed and connectivity in the area will be greatly enhanced. As the survey results have indicated, a high proportion of firms have stated that they would potentially expand their businesses on the basis of improved connectivity.

5.8.4 Improved connectivity will benefit several sectors and hence the overall economic performance of the area. It is important to state that there are two principal dimensions of improved connectivity and how these will positively impact business development and economic activity in the area:

- 'Actual' transport benefits – these refer to the connectivity enhancements associated with actual reductions in journey times between specified points on the A27; and
- 'Perceived' transport benefits – as well as the directly measureable journey time savings and other transport benefits, the perceptions of improved connectivity will greatly support economic development as both existing and new businesses will view the area as being far more accessible once the bypass has been built.

5.8.5 The perception of improved access is an important factor when assessing wider economic impacts. In the case of the A27 at Arundel, even accounting for potential bias in responses, there is clear evidence from the surveys that businesses perceive the current situation as a major drawback to growth potential. Once this perception has been addressed, there is strong evidence that improved connectivity will boost economic activity.

Improved Reliability

5.8.6 Given the 'bottleneck' on the A27 at Arundel, journeys on the road are subject to variable levels of reliability. This applies to both journey times as well as the general 'journey experience' of drivers.

5.8.7 Based on the traffic data collected for previous studies, average speeds and hence journey times can fluctuate considerably depending on the time of day and time of year. Bottlenecks can develop quickly and this reduces the overall 'reliability' of the roads.

5.8.8 By building the bypass, there will be a step-change in reliability as drivers will be able to plan their journeys with confidence as the availability of the bypass will greatly reduce the build-up of congestion and delays that are common on single carriageway roads.

5.8.9 The improved reliability will be another factor adding to the perceived benefits of the scheme. Also, by improving reliability, the generation of the benefits associated with the scheme are far more likely to be achieved as the overall perceived quality of the A27 as a major corridor in the area will be enhanced.

5.8.10 Even with the Arundel Bypass constructed, there will be capacity constraints associated with the 'bottlenecks' at Chichester and Worthing. To realise the full economic potential of the corridor, these issues will need to be addressed in the longer term as drivers'

perceptions of the overall corridor will continue to be influenced by the bottlenecks at both locations. The series of roundabouts on the outskirts of Chichester, for example, will continue to hinder traffic flows at busy times and will need separate analysis in terms of how improvements here could also have a wider economic impact.

Improved Resilience

5.8.11 The A27 Arundel Bypass will make the route more resilient during the following:

- Times of inclement weather;
- Occasions when unforeseen road works are required (the bypass will assist traffic movement during these periods); and
- Periods when the road is put under additional 'pressure' due to closure and incidents on other corridors.

5.8.12 The bypass will thus improve overall resilience to unforeseen events and will therefore add to the 'perceived' benefits of the scheme.

5.8.13 Similar to improved connectivity and reliability, improved resilience will be another impact that although not directly quantifiable, will nevertheless contribute to the wider economic benefits of the bypass scheme.

5.8.14 Although impacts such as those above cannot be directly quantified, it will be possible to rank these impacts based on a 'scoring' system if this is required.

5.8.15 Resilience issues were discussed with key stakeholders at the project workshops. Some of the key points raised at the workshop are summarised in section 6.5 and Appendix B.

Impact on Storrington

5.8.16 The impact on Storrington is discussed in Section 7.10.

5.9 Preliminary Impact Results

5.9.1 Based on the results of the Business Survey and the application of these results to 'baseline' economic data in the area, a series of preliminary results have been produced to give an indication as to the likely magnitude of economic impacts.

5.9.2 Prior to the more detailed Stage 2 work being undertaken, these preliminary results show the key impacts on the local economy and the level of disaggregation that is possible.

5.9.3 There are several assumptions and caveats associated with the preliminary results and these are as follows:

- The 'headline' impact is on additional GVA in West Sussex – 'West Sussex' comprises one of several "NUTS 3" areas in the UK as designated by the EU – "NUTS 3" represents the most disaggregated geographical area for which GVA data is available;
- There are also additional employment impacts by each of the 7 districts within West Sussex;

- As well as employment impacts, we have also undertaken a preliminary assessment of employment-related financial impacts that can be used to demonstrate how the scheme can contribute revenue streams to Government (in the form of personal income taxation from new employment and reductions in welfare payments in the form of reduced Jobseekers' Allowance payments); and

- Other financial impacts such as increases in disposable income in the area and the extent to which these support additional employment opportunities have also been estimated on a preliminary basis.

5.9.4 The estimates are based on the predicted increases in turnover obtained from the results of the Business Survey. As discussed in more detail in the next two chapters, companies were asked to estimate the change in turnover following construction of the bypass. The responses were given in a series of bands, including potential reductions in turnover as well as situations whereby 'no change' was predicted.

5.9.5 Using increases in turnover as a direct proxy for increases in economic activity (as measured by GVA) and employment, a series of additional impacts were identified.

5.9.6 The uplift factors based on the surveyed increases in forecast turnover are based on the following process:

- **Step 1**: for each county in the study area, the numbers of firms responding to the 'increase in turnover' question are totalled by 1) turnover increase band and 2) by size of company;

- **Step 2**: for each county, the total number of new employment opportunities generated by increased turnover are calculated. This is based on the forecast increase in turnover and current size of company;

- **Step 3**: The total number of employees currently employed at the businesses responding to the survey is also calculated; and

- **Step 4**: by calculating the ratio of new employees relative to current employees within each firm, a series of uplift percentages are derived – these are then used to 1) estimate additional GVA and 2) estimate additional employment opportunities.

5.9.7 The uplift factors thus represent the *additional* GVA and employment impacts that will accrue over and above 'baseline' economic activity.

5.9.8 The uplift factors are applied to total GVA within the 'West Sussex' NUTS 3 area as well as to the NOMIS-based employment totals in each district within West Sussex. As discussed previously, these are very much preliminary results that provide an indication of potential impacts. Given the relatively small sample size, we have not, for example, factored up the businesses surveyed to represent the total number of companies in the area.

5.9.9 For this Stage 1 work, we have taken the uplift factors described above and applied these directly to total GVA and employment data. As part of the Stage 2 work, we will revisit this approach and will assess different means of applying results from a survey sample to all companies in the area.

5.9.10 The preliminary annual benefits are summarised below:

- **GVA Impact**: an additional £493m would be added to total West Sussex GVA of £15.257m (based on 2009 GVA figures – this is the most recent year for which data is available);

- **Employment Impacts**: an additional annualised total of 12,600 jobs would be added throughout the 7 districts in West Sussex. This is based on current (Jul11–Jun12) employment data from NOMIS and is distributed as follows:

  - **Arun**: 2,103
  - **Chichester**: 1,674
  - **Horsham**: 2,158
  - **Worthing**: 1,654
  - **Adur**: 1,066
  - **Crawley**: 1,851
  - **Mid Sussex**: 2,165

  - **West Sussex Total**: 12,600

- **Personal Income Tax Receipts**: across all 7 districts in West Sussex, an annualised total of £82m would accrue to Government in the form of personal income tax receipts from new employment;

- **Reductions in Jobseekers' Allowance**: across all 7 districts, Government would gain approximately £38m from reductions in Jobseekers' Allowance payments to those who would find employment following opening of the bypass and the resultant boost to economic activity in the area;

- **Increase in Disposable Income**: the increases in employment will support additional disposable income being spent in the county. The preliminary estimate of this is £108m throughout all 7 districts;

- **Additional Employment Supported by Disposable Income**: based on the estimate of increased disposable income spent in the county, this would support another 4,000 direct jobs. Although we have only used 'proxy' employment multipliers for this preliminary analysis, the increase in disposable income would also support approximately 1,300 'indirect' jobs and 650 'induced' jobs. (Direct jobs refer to new employment opportunities generated directly within companies benefitting from construction of the bypass. Indirect jobs refer to those jobs generated in 'supply' industries, i.e. those not directly generated by the bypass but supported by the activities of those companies benefitting from new, direct employment. Induced jobs refer to employment opportunities generated by the expenditure of those directly employed as a result of building the bypass); and

- **Further Taxation / Jobseekers' Allowance Benefits**: the additional employment stemming from increases in disposable income spent in the area will generate further income taxation revenue streams as well as savings from Jobseekers' Allowance payment reductions. Income taxation receipts would increase by approximately £39m per annum whilst Jobseekers' Allowance reductions would total £18m.

5.9.11 All of the above are based on preliminary assumptions and calculations. We have not undertaken analysis of potential tourism impacts here although indicative estimates of

this impact are derived from the results of the business survey and are described in Chapter 7.

5.9.12 In addition, the potential benefits associated with land use development (such as increases in land values and the resulting 'tax take' from these) have not been estimated as part of this Stage 1 work. We envisage holding detailed discussions with land developers and land agents as part of any potential Stage 2 work.

5.9.13 This preliminary analysis has focussed on the impacts within West Sussex and the 7 districts that form the county. In reality, the impacts may be distributed differently within each of the districts with those districts in close proximity to the bypass and the A27 corridor (Arun, Chichester and Horsham, for example) receiving a greater degree of impact.

5.9.14 The impacts may not be restricted to districts within West Sussex as areas within Hampshire, East Sussex and Surrey may also be affected by the bypass. Again, these can be addressed more specifically as part of the Stage 2 work.

5.10 Evidence from Other Similar Schemes

5.10.1 Evidence from similar road corridors has also been reviewed and analysed. The objective here has been to identify those schemes that are similar to the A27 Arundel Bypass and to review the extent to which these improvements boosted job creation and other economic impacts in the region.

The A55 Corridor in North Wales

5.10.2 The A55 in North Wales is a major trunk route that was fully dualled during the 1990s and early 2000s. Also known as the North Wales Expressway, the road is 87 miles in length and provides a strategic link between Chester and Holyhead on the island of Anglesey. As with the A27, most of the route closely follows the coast.

5.10.3 Historically and strategically, the A55 provides a major east-west link between Cheshire (as well as the major conurbations of north west England) and the various towns and developments along the North Wales coast. Similar to the A27 in Sussex, the A55 is strategically important for both businesses and tourism throughout North Wales.

5.10.4 Also similar to the A27 corridor was the historical incidence of traffic congestion on the A55 prior to its full dualling, particularly in the Colwyn Bay, Colwyn and Llandudno areas. The congestion was such that its reduction and removal were seen as pivotal to achieving economic growth and regeneration objectives.

5.10.5 Traffic 'bottlenecks' on the original A55 corridor were especially pronounced during the busy summer holiday period as holidaymakers heading from England to the various coastal resorts experienced significant delays. Traffic had to pass, for example, through town centres on roads that were unsuitable for such high traffic volumes. These characteristics are similar to those observed today on the A27 at Arundel where delays and congestion are commonplace during busy periods.

5.10.6 Since completion of the full dual carriageway scheme, the A55 corridor has witnessed significant development as several business parks have been either developed or are in the process of being actively planned and built.

5.10.7 One of the major business parks developed is that at St Asaph, situated close to the busy coastal towns of Rhyl, Prestatyn, Abergele, Colwyn Bay and Llandudno. The

business park is adjacent to the A55 and covers approximately 44.5 hectares (110 acres). As well as the St Asaph business park, there are also further developments that are scheduled adjacent to the site. These include the New Vision Business Park whereby 'Phase One' will comprise 8,000 square feet of high quality office space.

5.10.8 Further west along the North Wales coast (near Abergele) is another example of a major business park that has been developed adjacent to the A55. The North Wales Business Park covers 37 acres and has planning permission for 32,000 square metres of offices.

5.10.9 What is apparent from analysis of all these business parks in the coastal region is the extent to which they are marketed on the basis of the excellent transport links available through the A55 corridor. The business parks themselves are modern, recent developments that have been planned and built in the period following the completion of the A55 dualling programme.

5.10.10 Had the dualling works not been undertaken and had the A55 remained as a single carriageway with regular bottlenecks and congestion occurring, it is very difficult to envisage how these business parks would have been developed to the extent that they have.

5.10.11 What is important to note is that it is not just the actual improvements in journey times and journey reliability that have been so beneficial to the area, but it is also the perception of significantly improved transport links that has been one of the key selling points for development, inward investment and the continuation of the tourism sector as one of the main economic activities in North Wales.

5.10.12 The evidence supporting this is extensive and can be seen in the marketing literature for various business parks as well as in the plans for the continued success of the tourism sector in the region.

CHAPTER 6

SURVEY METHODOLOGY

6 SURVEY METHODOLOGY

6.1 Introduction

6.1.1 To inform the wider economic impact analysis, the views of businesses which use the A27 at Arundel were sought through an online survey and stakeholder workshop.

6.1.2 The business survey aimed to provide data and evidence on businesses' current use of the route, and how their future plans for growth (including increased turnover and job creation) may change if the route was upgraded.

6.1.3 The survey and workshop provided up to date information about the role of the route in the study area's economy. This helped to ensure that the preliminary economic impact assessment was robust and related to the actual perceptions of businesses which would be affected by the scheme.

6.1.4 The survey asked respondents to consider the impact this may have on their business if a dual carriageway was constructed between the west of Arundel and the A284 at Crossbush. The purpose of the survey was to ensure a clear, simple proposal was set out for respondents to consider, whilst the results of the survey could be used to ensure that a robust assessment of economic impact would be made.

6.2 Survey Design

6.2.1 The survey was developed in line with DfT guidance from WebTAG Unit 3.5.12 (Questionnaires for Business Interviews for the Appraisal of Regeneration Impacts, April 2011). Questions and options for answers were developed in line with this guidance and tailored to the specific study objectives and circumstances.

6.2.2 The draft survey went through a series of internal reviews and was also reviewed by the client group (Arun District Council, West Sussex County Council and Horsham District Council). The online version of the survey was trialled before it was launched, including testing the question routing.

6.2.3 The survey was developed and hosted using software from "Survey Monkey". This allows the survey to be developed online and distributed via a link.

6.3 Survey Questions

6.3.1 The survey was divided into a number of sections. These were:

- Section 1: Business overview;
- Section 2: Employees, turnover and sector issues;
- Section 3: A27 Arundel bypass specific questions;
- Section 4: Location;
- Section 5: Movement of goods, staff commuting and business travel;
- Section 6: Tourism (for businesses in the tourism sector only); and
- Section 7: Final comments.

6.3.2 In total the survey contained 35 questions. Following a number of revisions this number was thought to represent a good balance between collecting the necessary information

and not making the survey so long that respondents did not complete it. The survey is given in Appendix A.

6.3.3 The most critical questions were selected to be mandatory. These covered issues such as: the number of employees at the company; the importance of the route to the business; experiences of disruption and impact of the bypass on their business (including turnover).

6.3.4 As well as a section on route specific issues, a series of route specific questions were also included within most of the sections. By spreading these throughout the survey it was more likely that they would be completed by respondents. Having them near the end of the survey would have risked respondents not filling them in if they did not complete all of the survey questions.

6.3.5 The survey contained a mix of different types of question, including open and closed questions, yes no answers, multiple choice (one choice), multiple choice (tick all that apply) and free text boxes. This helped ensure that answers could be analysed quantitatively and also that any additional qualitative details to support the answers could be captured.

6.3.6 Respondents were given the option of adding their contact details at the end of the survey, so that they could be contacted for any further information if required.

6.4 Survey Channels and Sampling

6.4.1 The survey was hosted on a number of websites and e:mailed directly to members of stakeholder organisations. The website was promoted to stakeholders the workshop event. Full details are given later in this section.

6.4.2 These electronic methods of data collection were selected as they offer a number of advantages over paper-based survey distribution. These include reduced survey distribution costs and a reduced need for manual data entry of written responses. The response rate should help increase the response rate by reducing the need for respondents to spend time and money posting paper responses.

6.4.3 Respondents were routed through the survey depending on their answers to certain questions (i.e. Question 26 asked if their business was in the tourism sector. If the answer was no, the following six questions related to tourism were omitted).

6.4.4 The order of the options for answering certain questions was changed automatically on the online survey, to help remove bias (i.e. when considering the impact on their turnover if the scheme was implemented; half of respondents were presented with the answers in ascending order - from decrease of over 10% to an increase of over 10% - and half were presented with the answers in descending order).

6.4.5 The main survey distribution took place via email from business representative organisations. Given the increasing uptake of email by business, it was not considered that the focus on electronic distribution channels would lead to bias in the responses.

6.4.6 Business representative organisations were contacted and generally agreed to send information about the survey to their members, either via regular newsletters or as a specific email. This approach allowed more direct contact with businesses to be made, which helped achieve a high number of responses. As organisations emailed their members on our behalf there were not issues with data privacy in passing on contact

details. Short and long versions of introductory text about the survey were prepared and issued to ensure consistency and clarity about the survey.

6.4.7 The organisations who emailed their members and the numbers of members within each organisation are summarised in Table 11 below. There may be some duplication with firms being a member of more than one organisation.

Organisation	Number of members contacted
Arun Business Partnership	3,500
Bognor Regis Limited	23
Brighton and Hove City Council	2,400
Chichester District Council	TBC
Coastal West Sussex Area Partnership	200
Coast to Capital Local Enterprise Partnership	TBC
Gatwick Diamond Area Partnership	7,500
Horsham District Council	1,500
South Downs National Park	3 (business groups)
West Sussex Growers Association	70

Table 11: Details of survey distribution via email

6.4.8 A number of stakeholders agreed to host details of the survey and provided a link to it on their websites. This helped to capture responses from businesses which may not be part of a business representative organisation and from those who were emailed the survey but had not filled it in when first prompted.

6.4.9 Details of survey were hosted on the websites of Arun District Council, West Sussex County Council, Horsham District Council and Crawley Borough Council. The survey was also promoted by the Coastal West Sussex Area Partnership through Linked In and by Arun District Council on Twitter.

6.5 Stakeholder Workshop

6.5.1 To support the survey data, a stakeholder workshop was also held to discuss their views on the economic impacts of the A27 Arundel Bypass in more detail.

6.5.2 The workshop involved a brief presentation on the study and discussion of key issues. These included: impact on employment; impact on development and land values; impact on tourism; wider economic benefits; socio-economic impacts; impact on distribution and regional and sub-regional issues.

6.5.3 A list of attendees at the workshop, and a summary of the main points discussed is given in Appendix B.

CHAPTER 7

SURVEY RESULTS

7 SURVEY RESULTS

7.1 Headline Findings

7.1.1 The survey was open between Friday 7th September 2012 and Sunday 7th October 2012. 330 responses were received. Given that the survey was open for a period of 20 working days, this is a good level of response and is equivalent to receiving an average of just under 17 completed responses per day.

7.1.2 The key survey findings are:

- 30% of firms said the A27 at Arundel was very important for their business, followed by 43% who said it was important;
- Journey time reliability was identified as a major problem by 60% of respondents, and a moderate problem by 35% of respondents. Journey times were less of a problem, although 51% still reported that they were a major problem, and 43% said they were a moderate problem. Only 5% of respondents said they did not have a problem with either journey time reliability or absolute journey times;
- 68% of business reported major disruption to business travel, followed by 63% who reported major disruption to both customer travel and staff travel;
- 42% of businesses expected no change in turnover as a result of the bypass, followed by 35% who expected an increase of 0-10%. 3.6% of businesses (9 firms) expected the bypass to reduce their turnover;
- Based on analysis of the results, a predicted increase in turnover of £41.02m per annum was identified, increasing the total for businesses surveyed from £1.20bn to £1.24bn per annum. This includes a total increase of £46.11m, offset by a reduction of £5.09m;
- 38 responses were received from businesses in the tourism sector. 33% of tourism businesses estimated that 75% of their visitors use the A27 at Arundel;
- The 38 businesses in the tourism sector were asked to predict the impact of the Arundel Bypass on their visitor numbers. Most businesses (45%) expected their visitor numbers to increase by up to 10%. 27% predicted an increase of over 10%. 15% of business predicted a reduction in visitor numbers;
- Based on analysis of the results, overall, there would be a net positive impact on tourism spend within the businesses completing the survey. With the bypass, tourism spend (within these businesses) would increase by £338,547 per annum to £7.60m. This includes an increase in spend of £446,987, offset by a reduction in spend with some businesses totalling £108,441; and
- 48% of respondents reported travelling through Storrington on a regular basis to avoid congestion on the A27. 3% of people travelled through Storrington on a daily basis and 23% travelled through several times a week. Most people (43%) travelled through it 2 or 3 times a month. 81% of respondents said that the A27 Arundel Bypass would make them less likely to drive through Storrington.

7.2 Overview of Responses

7.2.1 Responses were received from locations around the study area. Whilst the majority (75%) were from West Sussex, replies were also received from Brighton, Surrey, Portsmouth, Southampton, Kent and East Sussex.

Location	No of firms	Percentage of firms
Surrey	4	1.2%
Brighton	63	19%
Portsmouth & Southampton	4	1.2%
Unknown	6	1.8%
Kent	3	0.9%
East Sussex	3	0.9%
West Sussex	247	75%

Table 12: Location of firms responding to the survey

7.2.2 Responses were received from all sectors specified apart from retailers. The most responses (13%) were from businesses in the professional, scientific and technical sector, followed by manufacturing (10%).

7.3 Employees, Turnover and Sector Issues

7.3.1 Most firms responding were small and medium sized enterprises, representing the nature of businesses in the study area. 69% had 10 employees or fewer; 12% had 11-24 employees and 8% had 25 to 49 employees. 5% of firms responding had over 100 employees.

7.3.2 The turnover of firms which responded to the survey is shown in Table 13 below.

Turnover	No of firms	Percentage of firms
Under £125k	103	32.9%
£125 - £250k	38	12.1%
£250 - £500k	32	10.2%
£500k - £1m	35	11.2%
£1m - £5m	51	16.3%
£5m - £25m	24	7.7%
£25m - £500m	5	1.6%
Over £500m	1	0.3%
Decline to answer	24	7.7%

Table 13: Turnover and size of firms responding to business survey

7.4 A27 Arundel Bypass-Specific Issues

7.4.1 No respondents said the A27 at Arundel was essential for their businesses. However, 30% of firms said it was very important, followed by 43% who said it was important. 7% said it was not important for them. This is shown in Figure 10.

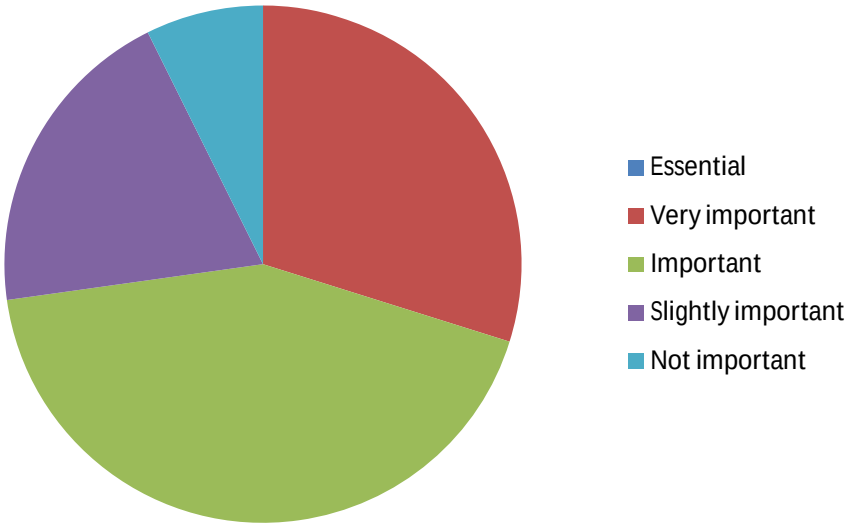


Figure 10: Importance of A27 at Arundel to businesses responding to survey

7.4.2 Comments on the importance of the route generally related to its use for work-related trips, customer access, access to suppliers and for staff travel to work. Selected comments include:

"We have an office in Brighton and an office in Chichester. I live in Arundel and regularly travel between the 2 offices as do other staff. Approximately 80% of our business is focused around the A27 between Brighton and Chichester. It is a key travel route for us therefore and it is woefully inadequate. Aside from our personal needs as a business, as commercial property advisers we know from experience in dealing with businesses that the A27 in its current form - with bottlenecks at Chichester and Worthing as well as Arundel, is a major deterrent to external businesses moving into the area and often sees established businesses in the area moving out as they grow - to locations where infrastructure is better." (Services company, 11-24 employees, Chichester).

"As we have a particular niche – [removed for anonymity] - we depend on our customers travelling to us from across a wide area. We are repeatedly telling them to use the A272 rather than the A27, as they are likely to be delayed." (Retail firm, under 10 employees, Surrey)

7.4.3 Issues reported with journey times and journey time reliability are shown in Figure 11. Journey time reliability was identified as a major problem for 60% of respondents, and a moderate problem for 35% of respondents. Journey times were less of a problem, although 51% still reported they were a major problem, and 43% said they were a moderate problem. Only 5% of respondents said they did not have a problem with either journey time reliability or absolute journey times.

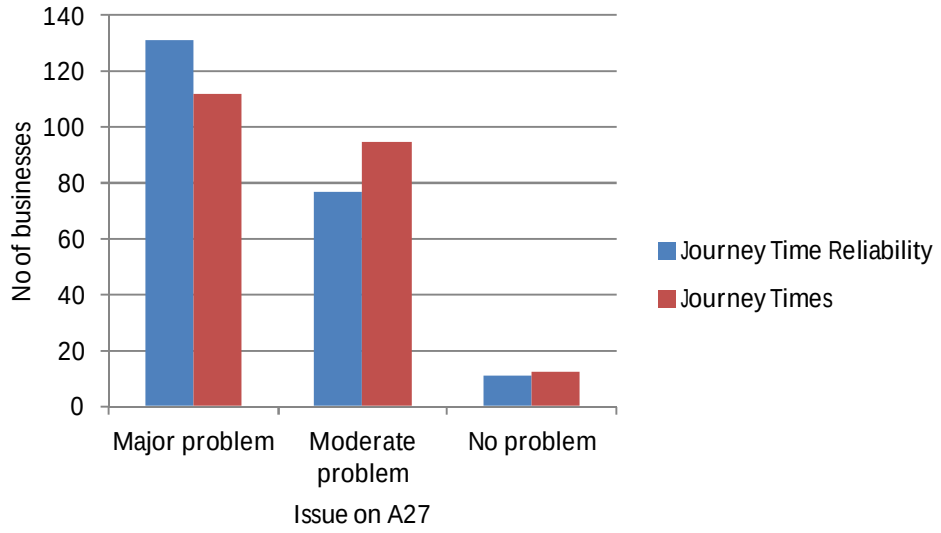


Figure 11: Survey results showing problems with journey time and journey time reliability

7.4.4 The level of disruption reported for different types of trip is shown in Figure 12. 68% of businesses reported major disruption to business travel, followed by 63% who reported major disruption to both customer travel and staff travel. Deliveries generally experienced least disruption. This could be partly a result of the issue being dealt with by the supply chain rather than the business completing the survey, and existing measures to make deliveries at off-peak times (i.e. overnight).

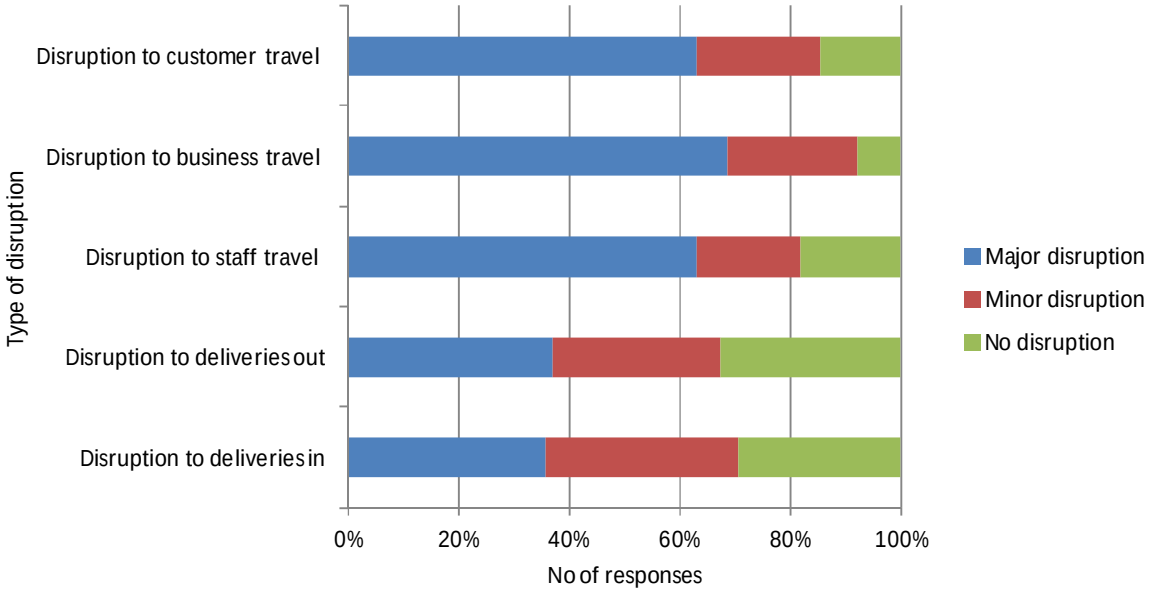


Figure 12: Level of disruption reported by survey respondents to different types of travel

7.4.5 Comments made about disruption on the route included:

"Regular delays and uncertain journey times add inefficiency and cost to business and ultimately to the client." (Professional firm, 11-24 employees, Brighton)

It takes only a very minor incident for the whole road to come to a standstill and cause delays of in excess of 1 hour to journeys, both local and further afield." (Finance and insurance firm, 1 to 10 employees, Crawley)

Considerable working time is lost when staff are delayed in traffic congestion which seriously impacts upon the business' viability and profitability." (Chartered surveyors, 1 to 10 employees, Horsham)

7.5 Impact of Scheme on Business Performance and Turnover

7.5.1 Respondents were asked how much they anticipated their turnover would change if the bypass was built. 251 responses to this question were received. As shown in Figure 13, 42% expected no change, followed by 35% who expected an increase of 0-10%. 3.6% of businesses (9 firms) expected the bypass to reduce their turnover.

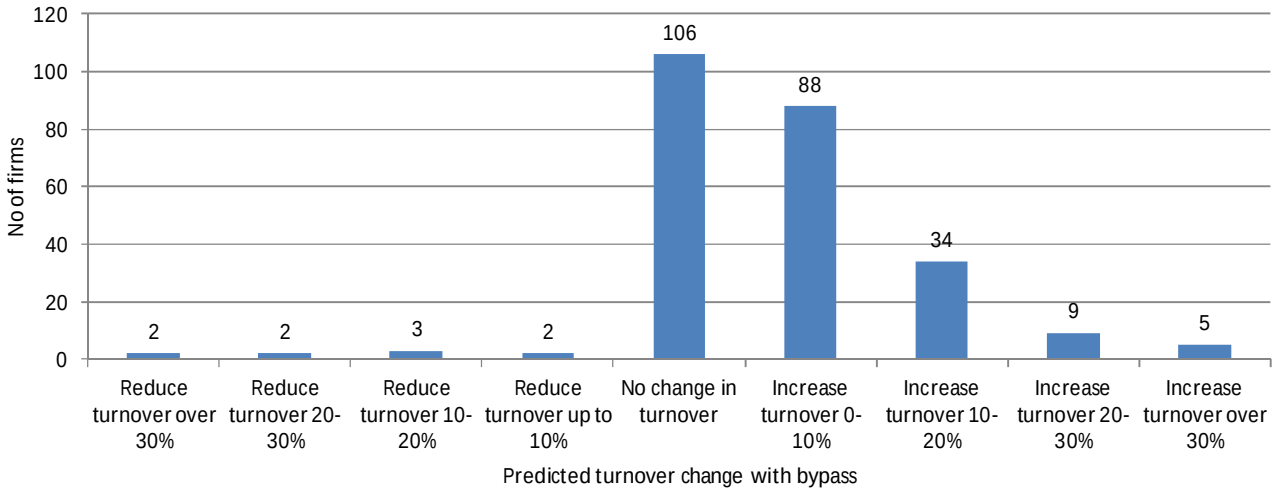


Figure 13: Predicted impact of bypass on business turnover

7.5.2 Figure 14 shows how these changes in turnover were reported according to the current turnover of the firms. The most firms reporting a negative impact on turnover were those with a current turnover of £125k to £250k and £1 to £5m. All firms with turnover over £35m reported the scheme would have a strong positive impact for them.

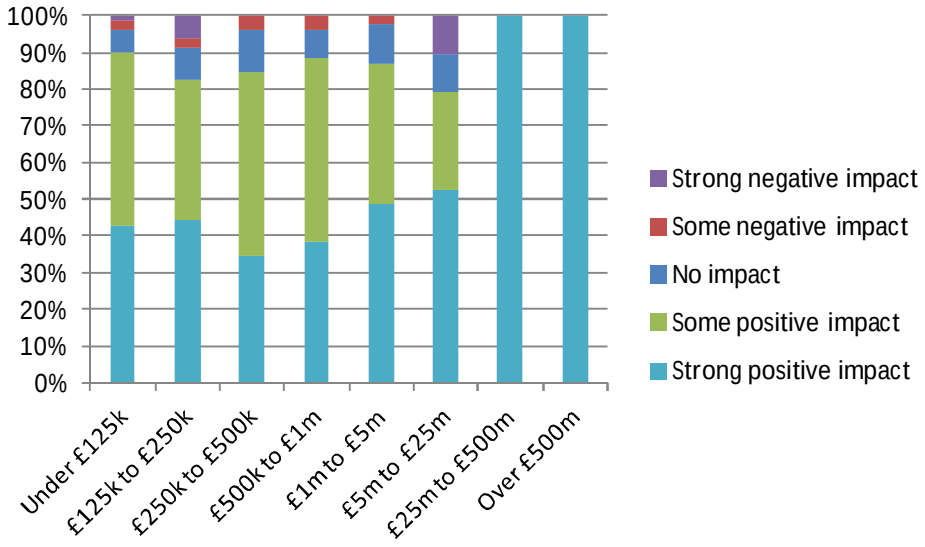


Figure 14: Predicted impact of bypass on business turnover in relation to current turnover

7.5.3 Comments made about the positive impact of the bypass generally focussed on less delays and better reliability, leading to increased business productivity. Benefits for customers in spending less time travelling were also quoted. One firm mentioned the scheme would result in them using the more suitable lorry route along the A27 and A24, rather than diverting through Storrington.

7.5.4 Three of the four comments from respondents who identified negative impacts as a result of the bypass related to a reduction in passing trade and the other related to the adverse environmental impact of the scheme.

7.6 Analysis of Impact of Bypass on Turnover

7.6.1 Using the mid-points for the quoted turnover bands, the total turnover per annum of the businesses responding to the survey was calculated as £1.20bn.

7.6.2 The Arundel Bypass was predicted to have a net positive impact on the turnover of businesses responding to the survey.

7.6.3 With the bypass, a predicted increase in turnover of £41.02m per annum was identified, increasing the total for businesses surveyed to £1.24bn per annum. This includes a total increase of £46.11m, offset by a reduction of £5.09m.

7.7 Impact of Scheme on Investment and Other Issues

7.7.1 67% of respondents felt that the scheme would encourage investment in the study area. 10% said it would not help encourage investment, and the rest were not sure. 72% of respondents felt that the scheme would make their location more attractive for business.

7.8 Impact on the Tourism Sector

7.8.1 All survey respondents, whether they were in the tourism sector or not were asked about the potential impact of the bypass on tourism to the area.

7.8.2 As shown in Figure 15, 39% of respondents (91) felt tourism would increase by up to 10%, and a further 39% (90) felt it would increase by more than 10%. Only 5% of respondents (12) felt the bypass would lead to a reduction in tourism to the area.

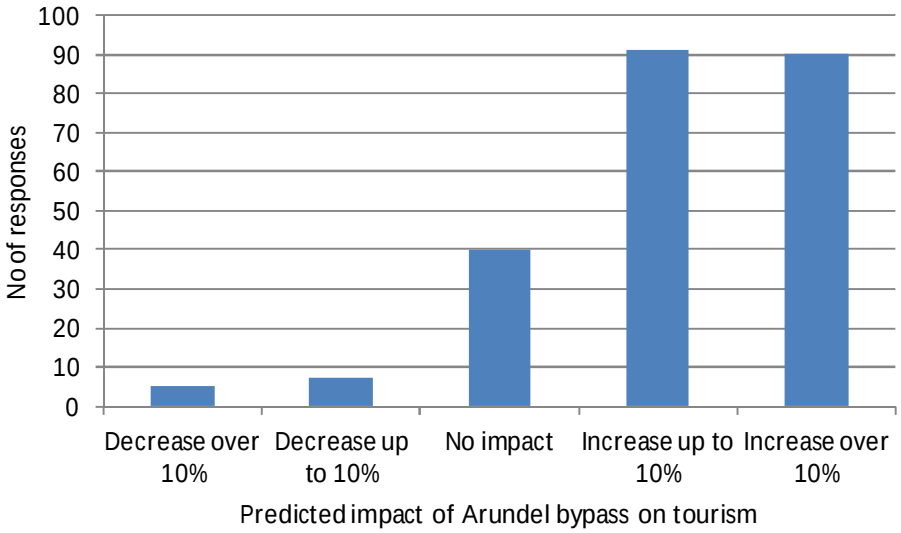


Figure 15: Predicted impact of Arundel bypass on tourism to the study area

7.8.3 Some of the comments received relating to the responses about the impact on tourism included:

"Congestion is a major disincentive to tourism. If the A27 is improved this would improve the prospects for tourism from Portsmouth to Brighton."

"Many people (including "local tourists") do not visit Arundel (and therefore other areas around there) because of the traffic queues at the Crossbush junction."

"Arundel would be much less pleasant so people wouldn't go there as much. It is peaceful at present, and a bypass would make it noisy."

7.8.4 38 responses were received from businesses in the tourism sector. These received a range of visitor members each year, from under 50 to over 10,000 as shown in Figure 16. Large businesses receiving over 10,000 visitors a year included Arundel Castle and Goodwood.

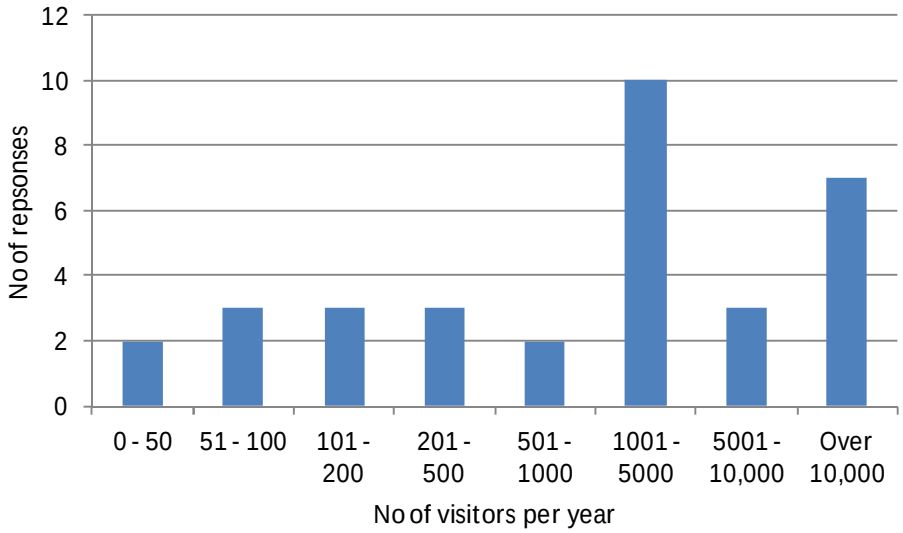


Figure 16: Visitors each year to tourism businesses responding to survey

7.8.5 Average spend per visitor was typically under £100, with the categories under £25, £25-£50 and £51-100 receiving ten responses each. One business reported typical spend per visitor of £101-£200 and two reported spend of over £200.

7.8.6 Tourism businesses were asked to estimate what percentage of their visitors use the A27 at Arundel. Most (33%) said over 75% of their visitors used this route as shown in Figure 17.

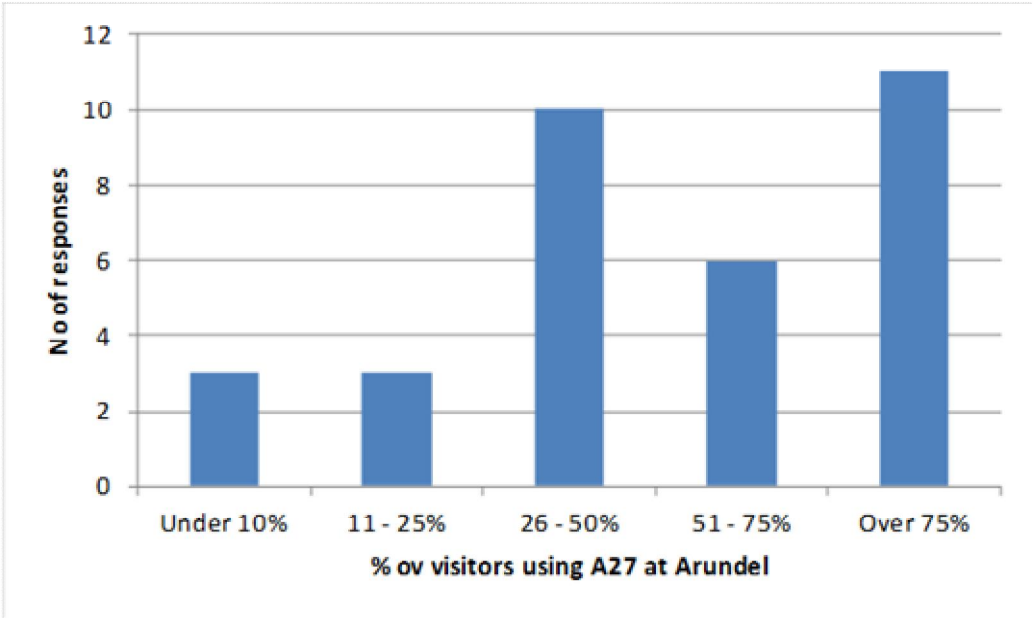


Figure 17: Visitors to tourism businesses using the A27 at Arundel

7.8.7 The tourism businesses were asked to predict the impact of the Arundel Bypass on their visitor numbers and to comment on this. As shown in Figure 18, most businesses (45%)

expected their visitor numbers to increase by up to 10%. 27% predicted an increase of over 10%. 15% of business predicted a reduction in visitor numbers.

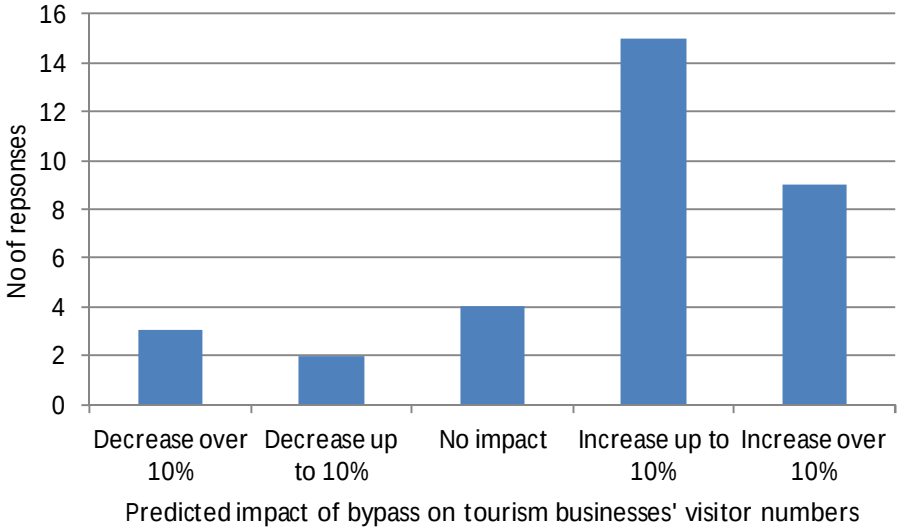


Figure 18: Tourism businesses' predicted impact of A27 bypass on their visitor numbers

7.8.8 Tourism businesses were asked to comment on their predictions about the impact of the bypass on their visitor numbers. Comments received included:

"speed and efficiency, less traumas and arriving relaxed and ready to holiday and not tainted by a poor travelling experience will make more visitors come." (predicted increase over 10%)

"So many visitors do not come to Arundel as the bottle necks are notorious." (predicted increase over 10%)

"To get to us you have to use the A27, there is no alternative. By bypassing Arundel passing trade will be affected." (Predicted 10% decrease)

"Visitors comment on the beauty and peacefulness of the surrounding area, the current A27 has little visual or noise affect on Arundel or the surrounding countryside. A 4 lane by-pass on bridge supports crossing the Arun less than a mile from the Castle views would have a major impact on the fundamental reason why people visit the area." (Predicted over 10% decrease)

7.9 Analysis of Impact on the Tourism Sector

7.9.1 Using the mid-points of the average visitor numbers and average spend per visit, the business responding to the survey accounted for approximately £7.3m of tourism spend per annum.

7.9.2 For each business, the adjustment to their income from tourism was calculated based on the anticipated change in visitor numbers they predicted.

7.9.3 Based on the survey responses, overall, there would be a net positive impact on tourism spend with the businesses completing the survey. With the bypass tourism spend with

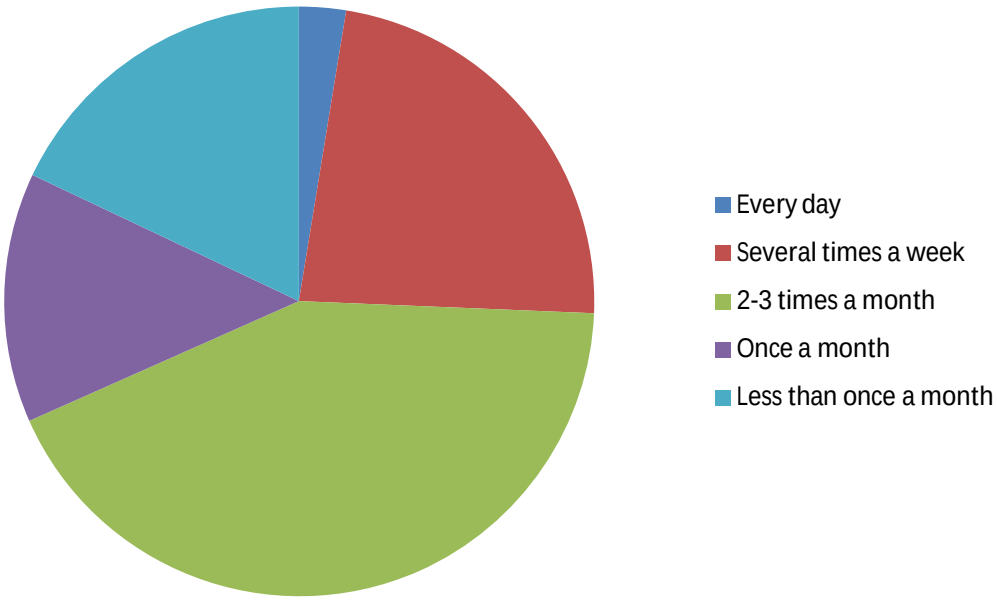
the businesses completing the survey would increase by approximately £339,000 per annum to £7.6m. This includes an increase in spend of approximately £447,000, offset by a reduction in spend with some businesses totalling approximately £108,000.

7.10 Impact on Storrington

7.10.1 33% of respondents were aware of the air quality management area in Storrington.

7.10.2 48% of respondents reported travelling through Storrington on a regular basis to avoid congestion on the A27. The frequency of these trips is shown in Figure 19. 3% of people travelled through Storrington on a daily basis and 23% travelled through several times a week. Most people (43%) travelled through it 2 or 3 times a month.

Figure 19: Frequency of survey respondents travelling through Storrington to avoid congestion on the A27 at Arundel



7.10.3 81% of respondents said that the A27 Arundel Bypass would make them less likely to drive through Storrington.

7.10.4 Of those who said they would not stop travelling through Storrington, most comments related to traffic issues at Worthing. Comments included:

"The main reason for driving through Storrington is to avoid congestion at Worthing as well as Arundel."

"Worthing would still be a bottleneck so Storrington would still be an alternative route during peak hours."

"It's a more pleasant drive and the emissions would be similar."

7.10.5 Respondents were asked an open question about what would stop rat running through Storrington. Of 87 responses, 28 people noted that nothing would stop them travelling through Storrington and nine suggested improvements at Worthing (i.e. a Worthing

bypass). Other comments include traffic calming or restrictions to through traffic in Strorington, or the introduction of a toll in Storrington.

7.11 Final Comments

7.11.1 Respondents were given the opportunity to provide final comments relating to issues along the corridor as a whole and wider economic issues associated with the Arundel Bypass.

7.11.2 Many respondents noted that traffic issues at Worthing and Chichester also need to be addressed.

7.11.3 A number of comments were made about avoiding further delays in delivering the Arundel Bypass.

7.11.4 Examples of typical comments were:

"I think a bypass is long overdue, but that for maximum positive effect to the economy it should be part of a larger project to sort out other congestion hotspots between Brighton and Chichester too, otherwise it is only solving part of the problem."

"Arundel and Worthing are equally important to the transport infrastructure otherwise you simply move the problem to the next bottleneck. The South Coast needs a through east/west link without hindrance so through traffic can get to its destination and allow local business to thrive."

"All three need resolving. A bypass at Arundel is the easier of the three to achieve and fund. It would be a good start."

"Please do it as soon as possible!."

7.12 Summary

7.12.1 Of the 330 responses to the survey, a range of sectors, business sizes and locations were covered. Most firms responding were small and medium sized enterprises, representing the nature of businesses in the study area.

7.12.2 No respondents said the A27 at Arundel was essential for their businesses. However, 30% of firms said it was very important, followed by 43% who said it was important. 7% said it was not important for them. Comments on the importance of the route generally related to its use for work related trips, customer access, access to suppliers and for staff travel to work.

7.12.3 Journey time reliability was identified as a major problem for 60% of respondents, and a moderate problem for 35% of respondents. Journey times were less of a problem, although 51% still reported they were a major problem, and 43% said they were a moderate problem. Only 5% of respondents said they did not have a problem with either journey time reliability or absolute journey times.

7.12.4 68% of business reported major disruption to business travel, followed by 63% who reported major disruption to both customer travel and staff travel. Deliveries generally experienced least disruption.

7.12.5 Respondents were asked how much they anticipated their turnover would change if the bypass was built. 42% expected no change, followed by 35% who expected an increase of 0-10%. 3.6% of businesses (9 firms) expected the bypass to reduce their turnover.

7.12.6 Three of the four comments from respondents who identified negative impacts as a result of the bypass related to a reduction in passing trade and the other related to the adverse environmental impact of the scheme.

7.12.7 Based on analysis of the results, a predicted increase in turnover of £41m per annum was identified, increasing the total for businesses surveyed from £1.20bn to £1.24bn per annum. This includes a total increase of £46.11m, offset by a reduction of £5.09m.

7.12.8 39% of respondents (91 firms) felt tourism would increase by up to 10%, and a further 39% (90 firms) felt it would increase by more than 10%. Only 5% of respondents (12 firms) felt the bypass would lead to a reduction in tourism to the area.

7.12.9 38 responses were received from businesses in the tourism sector. These received a range of visitor members each year, from under 50 to over 10,000. Average spend per visitor was typically under £100. 33% of tourism businesses estimated that 75% of their visitors use the A27 at Arundel.

7.12.10 The tourism businesses were asked to predict the impact of the Arundel Bypass on their visitor numbers. Most businesses (45%) expected their visitor numbers to increase by up to 10%. 27% predicted an increase of over 10%. 15% of business predicted a reduction in visitor numbers.

7.12.11 Based on analysis of the results, overall, there would be a net positive impact on tourism spend within the businesses completing the survey. With the bypass built, tourism spend would increase by £339,000 per annum to £7.60m from £7.27bn. This includes an increase in spend of £447,000, offset by a reduction in spend with some businesses totalling £108,000.

7.12.12 48% of respondents reported travelling through Storrington on a regular basis to avoid congestion on the A27. 3% of people travelled through Storrington on a daily basis and 23% travelled through several times a week. Most people (43%) travelled through it 2 or 3 times a month. 81% of respondents said that the A27 Arundel Bypass would make them less likely to drive through Storrington.

7.12.13 Given the potential economic impacts that have been identified at this preliminary stage, there would appear to be scope to analyse these further as part of a comprehensive assessment of the economic impacts of the Arundel Bypass.

CHAPTER 8

CONCLUSIONS AND NEXT STEPS

8 CONCLUSIONS AND NEXT STEPS

8.1 Conclusions

8.1.1 This preliminary analysis of the wider economic impacts of the Arundel Bypass has indicated that there are positive impacts in terms of job creation, increased economic output and tourism growth.

8.1.2 Based on the extensive Business Survey undertaken in the area and initial analysis, the preliminary results indicated the following impacts. As we stress elsewhere, however, we must emphasise that these are very much indicative results and will be revised / updated as part of the more detailed 'Stage 2' work going forwards:

Economic activity-related impacts:

- An additional £493m would be added to total West Sussex GVA of £15.3bn;

Employment-related impacts:

- Employment Impact: an additional annualised total of 12,600 jobs would be added throughout the seven districts in West Sussex;
- Personal Income Tax Receipts: across all seven districts, an annualised total of £82m would accrue to Government in the form of personal income tax receipts from new employment;
- Reductions in Jobseekers' Allowance: across all seven districts, Government would gain approximately £38m from reductions in Jobseekers' Allowance payments;
- Increase in Disposable Income: the increases in employment will support additional disposable income being spent in the county. The preliminary estimate of this is £108m throughout all seven districts;

Tourism-related impacts:

- Tourism Spend: based on analysis of the survey results, there would be a net overall positive impact on tourism spend (based on the businesses completing the survey). With the bypass constructed, tourism spend would increase by £338,547 per annum to £7.6m. This includes an increase in spend of £447,000, offset by a reduction in spend – as identified by the responding businesses - totalling approximately £108,000;

Land use and development-related impacts:

- Attracting investment: the bypass will remove the current bottleneck on the A27 and will significantly improve the 'attractiveness' of the corridor in terms of attracting investment and inducing land development (through distribution centres and business parks etc);
- Increase in land value: the impacts of these developments will include increases in land values (and land sale values) as planning permission is given for specific developments
- Additional impacts: additional impacts such as employment gains at these new development sites will also occur;

Other impacts:

- Additional Employment Supported by Disposable Income: based on the estimate of increased disposable income spent in the county, this would support another 4,000 direct jobs. The increase in disposable income would also support approximately 1,300 'indirect' jobs and 650 'induced' jobs; and
- Further Taxation / Jobseekers' Allowance Benefits: the additional employment stemming from increases in disposable income spent in the area will generate further income taxation revenue streams as well as savings from Jobseekers' Allowance payment reductions. Income taxation receipts would increase by approximately £39m per annum whilst Jobseekers' Allowance reductions would total £18m.

8.1.3 These preliminary estimated benefits total £721.4m. It must be pointed out that this preliminary estimate represents an annual total and will need to be adjusted accordingly before being incorporated in a standard Benefit Cost Ratio (BCR)-type calculation. What this preliminary estimate does indicate, however, is that the potential wider economic benefits of the scheme are considerable and will generate BCR ratios significantly higher than those calculated as part of previous transport economics appraisals.

8.1.4 As stated above, these results are indicative and preliminary at this stage. More detailed analysis will be undertaken as part of the Stage 2 work, including taking account of wider network constraints.

8.1.5 The survey results shown in Chapter 7 together with the workshop discussions indicated a good level of support for the Arundel Bypass amongst those contacted. In addition, clear benefits were identified. If the scheme is taken further forward a wider public consultation to identify and mitigate any potential acceptability issues should be undertaken.

8.1.6 Based on the initial assessment of the wider economic impacts of the scheme, there would be benefit in proceeding with Stage 2 to carry out a more detailed assessment of the scale of these benefits. This is discussed further in Recommendation 1 below.

8.1.7 Using the findings outlined in this report, it is possible to identify some high level general lessons which can be applied to other proposed schemes in the A27 or major schemes in West Sussex. These are:

- Given recent changes in Government priorities for major transport schemes, including an increased focus on promoting sustainable economic growth, there may be the opportunity re-evaluate and re-prioritise previously suggested schemes;
- Schemes which can help resolve transport issues facing businesses are likely to have demonstrable wider economic benefits in terms of demonstrably positive employment impacts. Assessment of the scale of these can form an important part of the scheme's business case;
- It is important to consider the impact of schemes on a corridor basis. Relieving a series of bottlenecks is likely to create greater economic benefits than the sum of the benefits from each individual scheme. If possible, schemes should be 'packaged together' to enable these larger benefits to be achieved. Alternatively, each individual scheme assessment should take into account constraints elsewhere on the network. For example, in the case of the Arundel Bypass, future work should consider the existing constraints at Chichester and Worthing and

- Affordability of schemes remains important and should be considered in all proposals, with local funding sources included where possible.

8.2 Next Steps – Phase 2

8.2.1 ***Recommendation 1: Progress with Stage 2 of the Project.*** Based on the conclusions from Stage 1 of the project, we recommend proceeding with Stage 2, to further assess and quantify the economic impacts of the Arundel Bypass. Given that several other transport schemes are 'competing' for scarce Government resources at the present time, it is important that the Stage 2 progresses as soon as is practicably possible. There are several advantages in progressing with Stage 2 now as significant amounts of preliminary work have already been undertaken and thus it will be a relatively quick exercise to move on to more detailed analysis.

8.2.2 We would also point to the example of the A30 Temple to Higher Carblake road widening scheme in Cornwall whereby the Chancellor's Autumn Statement allocated a large amount of funding to this scheme. This allocation was made largely on the back of appraisal work undertaken and the extent to which economic and 'wider' benefits were demonstrated. Parsons Brinckerhoff was extensively involved with this work and it clearly shows the potential to obtain Government support (and funding) for a scheme once its beneficial impact has been demonstrated.

8.2.3 Crucial public and stakeholder support for a scheme will also be generated when 'wider economic impact' appraisals are undertaken as these involve considerable involvement and participation from businesses and the local community generally (through business surveys, tourism surveys and workshops / open meetings). For our work on the A303 widening scheme in Somerset and Wiltshire, we saw first-hand how public involvement and support for a scheme can rapidly develop once various stakeholder meetings, consultations and media coverage takes place. This puts a scheme firmly 'in the public eye' and becomes an effective lobbying tool when the promoters of a scheme seek to demonstrate the benefits of a particular scheme.

8.2.4 Even at this preliminary stage, the work undertaken so far has identified a 'wider economic case' for the Arundel Bypass which can be used to raise the scheme's profile and gather local support for it. To gain funding for the proposal, however, a full business case needs to be developed. Further work on the economic assessment as well as rebasing of project costs and benefits to updated prices will be required for this. This is noted in Recommendation 3 and 4 below.

8.2.5 When additional funding is released by central Government for major schemes, there is often a limited window of time in which to prepare funding applications. In order to maximise the chances of the Arundel Bypass securing the necessary funding, it is recommended that the scheme be further developed proactively, rather than waiting until funding becomes available.

Stage 2 proposal overview

8.2.6 Stage 2 will involve the development of an economic model. The model will use data from the economic baseline, survey results and the segmentation of impacts to quantify the wider economic impacts of the bypass. This is shown in Figure 20.

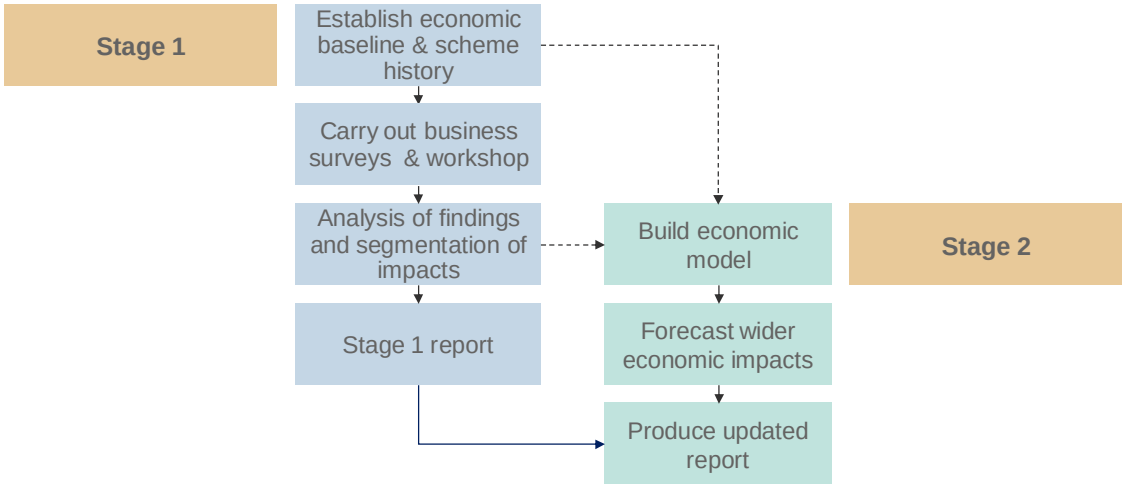


Figure 20: Stage 1 and Stage 2 of the Project

8.2.7 The model outputs will include:

- Changes in GVA;
- Employment generation;
- Other employment-related impacts;
- Tourism impacts; and
- Land development impacts.

8.2.8 The model will focus on these wider economic impacts and will not consider the traditional aspects of transport appraisal such as value of time savings, journey time reliability issues and safety benefits. These would need to be reviewed as part of a wider update of the SoCoMMS study (see recommendations below).

8.3 Next Steps – Additional Recommendations

8.3.1 In addition to recommending proceeding to Stage 2 of this project, there are a series of additional recommendations as set out below.

8.3.2 Recommendations 3 and 4 relate to the development of a full business case for the Arundel Bypass. In order to secure funding from Government for the bypass, further details will be required beyond those currently included in Stage 2 of the project.

8.3.3 ***Recommendation 2: To ensure Stage 2 offers maximum benefit and alignment with the latest Government priorities, discussions on the best approach should be held with DfT before proceeding*.** To initiate discussions, PB will prepare a draft "Range of Options" letter, for agreement with West Sussex, Arun and Horsham Chief Executives and issue to DfT prior to a meeting. PB can provide specialist staff with experience of economic appraisal and working with the DfT to support these discussions if required.

8.3.4 ***Recommendation 3: In order to develop a scheme business case, a route proposal incorporating estimated current costs should be prepared.*** This cost information is required in order to complete the re-appraisal of the scheme and estimate its full benefit:cost ratio (BCR). It is recommended that the scheme business case is developed proactively, to ensure any additional Government funding becoming available can be accessed within the necessary time period.

8.3.5 ***Recommendation 4: To develop a business case for the scheme, a full re-appraisal of the scheme impact and benefits should be completed.*** The most recent appraisal of the Arundel Bypass was completed in 2002. Since this time traffic flows, emissions levels and accident statistics will have changed and so a re-appraisal is required. This should be completed in line with the latest DfT WebTAG guidance. Traffic Economic Efficiency (TEE) impacts are not currently included within the scope of Stage 2. It is recommended that the scheme business case is developed proactively, to ensure any additional Government funding becoming available can be accessed within the necessary time period.

8.3.6 ***Recommendation 5: Work to address traffic and air quality issues at Storrington should continue, particularly to develop short term measures and to consider the potential for wider solutions which could complement the Arundel Bypass.*** The survey results suggest the Arundel Bypass alone will not be sufficient to address the identified problems at Storrington. Also, as the bypass would most likely be delivered in the medium term it would be beneficial to explore other, more immediate solutions to the issues at Storrington.

8.3.7 ***Recommendation 6: Dialogue should be maintained with businesses and local communities as well as the SDNP and other organisations with a keen interest in the proposal, so that they are aware of the benefits and costs of the bypass and any relevant issues can be addressed earlier rather than later in the development of the business case.*** It is recognised that the bypass proposal will generate some opposition and potentially some misinformation. In this context it is important that the debate is focussed on clear and transparent evidence. A co-ordinated approach to maintaining this dialogue should be agreed between West Sussex County Council, Arun District Council and Horsham District Council and should be related to other proposed transport schemes in the area.

APPENDIX A – BUSINESS SURVEY

<Survey to be inserted into PDF version of report>

APPENDIX B – WORKSHOP NOTES 24 SEPTEMBER 2012

Meeting title: A27 Arundel Bypass Wider Economic Impact Study – Stakeholder Workshop

Date: 24 September 2012

Venue: Arundel Town Hall

Present:

Colin McKenna (CM)	Parsons Brinckerhoff
Eleanor Short (ES)	Parsons Brinckerhoff
Amanda Townsend (AT)	Parsons Brinckerhoff
Caroline Wood (CW)	Coastal West Sussex Area Partnership
David Myers (DM)	Bognor Regis Limited
Karl Roberts (KR)	Arun District Council
Tim Richings (TR)	South Downs National Park (SDNP)
Chris Heaps (CH)	Arun and Chichester FSB Branch
Emma Parreby (EP)	Horsham District Council
Lorinda Monahaghan (LM)	Deputy Mayor Arundel Town Council
Nathan Spilstead (NS)	Mid Sussex District Council
Collette Blackett (CB)	Adur District Council
David Marsh (DMa)	West Sussex County Council
Peter Phillips (PP)	Highways Agency
John Hall (JH)	West Sussex Growers
Guy Blackmore (GB)	Chichester District Council

Apologies:

Fintan Geraghty (FG)	Parsons Brinckerhoff
Chris Raper	Institute of Directors
Ron Crank	Coast to Capital Local enterprise Partnership (LEP)
Rosemary French	Gatwick Diamond Area Partnership
Geoff Raw	Brighton & Hove Council
Sean Woodward	Partnership for Urban South Hampshire
Miriam Nichols	Arun Business Partnership
Trevor Constable	Worthing and District FSB
Suzy Bastable	Worthing District Council
Lisa Sorensen	Crawley Borough Council
Julie Harrison	Chichester Chamber of Commerce
Rhys Williams	Road Haulage Association

1. Welcome, Introductions and Presentation

CM and ES welcomed the attendees and thanked them for coming. ES gave a presentation providing an overview of the project.

2. Workshop discussion

The key themes emerging from the discussion were:

- Attracting business investment (including business perception);
- Impact on development and land values;
- Infrastructure and the areas economy;
- Tourism impacts;
- Reliability and resilience;
- Corridor and sub-regional network issues;
- Socio-economic issues including job creation and retention;
- Other economic impacts and
- Additional contacts

2.1 Attracting business investment (including business perception)

KR: Arun DC has just finished consultation on their Draft Local Plan. There are issues around poor business perception of the area, which puts them off investing (i.e. at Littlehampton etc). Level crossing issues need to be resolved and the congestion around Crossbush. There is a negative perception that people don't want to invest in Littlehampton, which has been factored in to land allocations.

DM agrees that businesses do have issues with finding investment. Many large businesses in the area have American owners, who do not see incentives to invest in the South East of the UK. As such, the local representatives need to work hard to justify maintaining their presence and growing. To encourage businesses to invest there needs to be investment in infrastructure.

JH: The Coastal West Sussex area is competing with other areas in Europe, not just the next door towns. Many businesses are national and international and will consider other alternative locations around the UK (e.g. the M6 and M4) and consider where their customers are.

GB: The A27 is high priority for businesses coming in. The area tends not to attract large businesses, but this isn't necessarily a problem in itself. Rolls Royce already use the A27 in quiet hours and have found a way around the busiest times on the roads. People usually find their way around the problem. People who work in Chichester commute from all over the region.

DM: Wyley is a large company which has locations and Bognor Regis and Chichester. Bognor Regis is their main distribution centre. Some companies in the area have grown as they have liked the location and managed to find space to expand. If the infrastructure for distribution around the area was better then Bognor Regis may grow quite quickly. Businesses will look at a wide range of issues when considering where to invest (including availability of local skilled labour). Infrastructure is only one factor in the decision making, although it is important.

CH agrees, businesses look at the whole picture, including the availability of a skilled workforce, as well as infrastructure.

KR: The perception of the A27 coast road could be putting off distribution companies from locating in

the region. It is difficult to quantify. KR has had discussions with businesses about why they don't have a presence in the coastal strip, many of whom have said that part of the reason is infrastructure.
KR: There are some kinds of business (e.g. Amazon) which are not represented in the region. It may be worth considering which types these are and why. RR commented that it may also be worth considering "time cluster evidence" about when key businesses arrived in the region compared to when historic A27 improvements were delivered (e.g. Rolls Royce and the Westhampnett bypass).
Action: **FG** to consider
Post meeting note. October 2012: *Business location issues have been taken into account in Chapter 5.*

2.2 Impact on development and land values

CH: Restriction of transport network does impact on people's decisions to locate in the area.
Action: **CH** to send evidence across to ES.

JH: As well as access issues, there is a monopoly of Land Ownership in the area which creates problems.
Action: **JH** to send evidence across to ES.
Post meeting note. October 2012: *Information not provided.*

GB: It is important to have good links onto and off of the A27. The A27 can currently divide land values and there is a difference north and south of the current road.

CB: to help understand the economic impact of the bypass, it may be worth considering those developments which didn't happen (including businesses which did not come to the area) because of accessibility issues.

CB: The study could look at Planning Application refusals to see if they were on transport grounds (i.e. objections from HA).

CB: Coastal Authorities are progressing housing and employment projects. Financial contributions from development can be used to assist with junction improvements elsewhere.

2.3 Infrastructure and the area's economy

LM: Better infrastructure is necessary for the people and businesses of Arundel to survive in Arundel. This does not necessarily just apply to the bypass, but also better infrastructure in general. It is hard to survive in business currently, and Arundel is dependent on cars and buses coming in. Businesses in the area are *"desperate for this bypass".*

LM: Arundel is dependant on people from a huge demographic area, but they currently haven't got the infrastructure to make it easy to travel. The bypass will make it more attractive.

JH: West Sussex Growers employ 4,500 people and output £500m of food and plant production each year which is transported on the A27. HGVs need to be kept on main roads for as much of their journey as possible (but as little overall time as possible for efficiency). Glasshouses are located in the South of England because of good weather and light conditions. However, the region is at a disadvantage of having the sea to south so distribution possibilities are reduced by 180 degrees. To increase the infrastructure to maximise distribution to the remaining 180 degrees to the north, has to be an advantage.

2.4 Tourism impacts

KR: This is an important area for tourism. Tourists seek to avoid traffic, and might avoid Arundel as a result. Local knowledge is quite important as many tourists are day trippers from the local area. Local people's choice about what to do with their limited free time might take into account traffic concerns, and this has an impact on Arundel businesses.

TR: Building better infrastructure near the National Park will meansthat people and tourists can get better access to the National Park.

GB: Local people would deliberately avoid some places in the summer months because of the traffic. GB stated that most of tourism in Chichester is predominantly day tourism, and people tend to come and go rather than stay overnight.

CM: People heading to the coast at West Wittering in the summer can cause traffic jams back to the A27.

GB: Businesses try and work around busy traffic days, as they tend to know when these are going to be (i.e. during events at Goodwood etc). PP agreed, stating that the first and last nice weekends of the summer are always the busiest. This can lead to knock on problems elsewhere (e.g. A3 at Hindhead).

DM: Butlins encourages their visitors out into the town at Bognor Regis and around Arun. They have recently made a £50m investment which has changed the demographic of their visitors. Butlins is an important employer and brings in a lot of tourism to the area.

KR noted that the National Park status has been created since other Arundel Bypass studies have been done. Arundel is a gateway place for the National Park.

TR: There are approximately 39m visitor movements to the National Park each year, mainly from local visitors for the day. They want to increase numbers, but also give tourists opportunity to stay longer and to maximise sustainable modes to access to the park. Arundel station would be easier to integrate into Arundel and the National Park if the bypass was created. Traffic is very high at the moment from the train station, so it isn't very pleasant for cyclists and pedestrians travelling from the station to town.

LM: Traffic issues put people off coming to the area, because people are busy in their lives and down-time is precious. Having children stuck in cars in traffic is not good for families, and could make people think twice about where they go and how to get there. Families should be encouraged as they generate a relatively high proportion of spend. The travel issues do affect how people think of Arundel.

KR agrees and added that traffic issues influence the thinking of locals and so local attractions are impacted.

DMa: There is a seasonal peak in traffic, demonstrating that tourism is a big part of the region.

CB noted that Adur and Worthing are having a tourism study done at the moment.

2.5 Reliability and resilience issues

CH: Small employers and one man bands often work from home, and can spend a lot of time travelling to and from jobs (e.g. builders, plumbers etc). The FSB would support investment in road infrastructure to improve access for these people. "*Anything that improves the transport and helps people to make a living for themselves has got to be good."*

CH: Journey time variability on the A27 is an issue. People cannot be sure what the traffic conditions are going to be like, so build extra times into their journeys which is a cost (loss of productivity).

LM: The bridge on A27 has had to be repaired a lot already. There would be large problems if it was managed and went out of service as there is not a lot of resilience in the network.

KR: The A27 is one of two crossings across the River Arun. If something happens to one of those crossings, there is a ripple of impacts that extend far and wide. There was a fatal accident 18 months ago, many people found alternative routes, but these can be a long way out of their way.

CM: The study could review data of incidents on A27 (from HA) and examine the economic impacts of hold up.
Action: ES to investigate this analysis
Post meeting note. October 2012: *Savings from safety improvements are part of the traditional appraisal used in SoCoMMS. These have not been included within the scope of this wider economic impact assessment. This should be reconsidered when developing the full business case for the scheme, using the updated traffic flow and accident statistic information.*

CH: Small businesses (and 'micro businesses') try to avoid travelling to clients etc, because of travel time and congestion. If they need to cross the A27 or go too far it can become a major job. Traders going 15-20 minutes can be impacted severely if there is congestion.
Action: CH to provide journey reliability information to ES.
Post meeting note. October 2012: *Information not provided.*

CW: Travel to work times depend on where you live and where you choose to work. CM stated that the DaSTS study showed clear divide on either side of the River Arun for travel to work.

2.6 Corridor and sub-regional network issues

CB: There is the issue of what happens further down the A27. CB asked what happens to Worthing and other key junctions at Chichester? Would the scheme help overall or move problems? *CM confirmed that this will be considered.*

CW: Are we looking to do prioritisation of other schemes along the coast, or just focussing on the Arundel Bypass? *ES said the survey will capture some of this information and could build into the scope of Phase 2*

CW - Some of the businesses, medium sized employers, are thinking about local transport network too, multiple rail crossings etc.

PP: The HA are taking a strategic look at the A27 and consider whether improvements to one bit then push traffic along to another section. Recommended that we need to look at individual aspects of the A27.

JH supports PP's view, welcomes the Arundel bypass, but also agrees we need to look at the wider issue of knock-on effect on and need for improvements at Chichester and Worthing.

CW stated that prioritisation and understanding the economic benefits were important.

CB noted that North and South routes to and from the area could be improved (to Gatwick and London etc). *CM said that the Arundel bypass would help the links to Gatwick and London on the A23 and improve the perception of connectedness.*

GB asked that if the Arundel bypass happens, what would happen at Worthing?

PP: With the current economic situation, a Worthing bypass is not likely in the short or medium term as the costs would be high. Some Worthing improvements could happen locally, easing the situation, but not solving it. PP noted that improvements at Worthing are likely to be online, and considered over the longer term. If it becomes easier for people to commute, they will commute further.

CM stated that the Olympics was a good example of people making journeys in different ways and reducing their need to travel. This approach (travel demand management) could be used to reduce some of the problems on the A27.

KR: People don't have much choice which routes to use, as the A27 is the main East-West route in the area. There are also North-South links, but there aren't many options and people are funnelled into the same points. Resolving these issues would help the whole network.

CH: Supports that a link North-South would relieve congestion.

KR: There are currently impacts on Storrington's local 'feel' with people "rat running" around parts of the A27. There are also problems at Petworth & Midhurst, due to large volumes of traffic and HGV movements along A272 where there are pinch points.

2.7 Socio-economic issues, including job creation and retention

LM: Deprivation in the area is growing and the number of family support groups have had to be increased.
Action: LM will send on information on socio-economics and deprivation.
Post meeting note. October 2012: *Information not provided.*

JH: Infrastructure affecting business impacts on where people can work at all levels. In some parts of Bognor Regis and Littlehampton where there is deprivation, there is a need for more jobs. Although tourism generally provides low paid jobs, these would still be welcome.

CW: Attracting businesses to locate south of the A27 could create all types of jobs.

CW: Job centre plus are focussed on the coastal district. But infrastructure is needed to attract companies to create the jobs.

KR can provide socio economic information on wards. Providing more job opportunities can help deprived households. Some businesses have signed up to an Arun Charter, where big businesses and local businesses alike make use of local labour and let contracts locally.

CM asked about if youth unemployment was a problem that the bypass may not help address, as many young people don't have access to a car. PP thought that as the bypass would relive traffic from local roads, it would improve conditions for walking and cycling.

2.8 Other Economic Impacts

CH asked how bypass effects would be considered. The bypass could take trade away from local businesses in Arundel, although it could also be considered a barrier to development. *ES explained these will be considered, hence the term economic impacts stud, rather than benefits study. The survey results will be used to understand this better. CM noted 90% of traffic is passing through, rather than local traffic, which is relatively high.*

KR discussed a recent draft Leisure Strategy which considers improvements to the street scene in Arundel.
***Action:* KR** to send consultation evidence.

3. Additional Contacts

Suggested additional organisations to contact given were:

- Arundel castle
- RSPB Arundel wetlands
- Goodwood estates
- Butlins
- Traders Associations in Worthing and Bognor Regis
- Gatwick Diamond (has been sent already)
- Visit Chichester, Visit Worthing etc
- Sussex by the Sea

***Action: ES** to follow up*
***Post meeting note. October 2012:** Arundel castle and Goodwood completed the survey. Follow up calls were made with the RSPB and Butlins.*

4. Final comments

Participants were asked to providing a final closing comment about their views of the economic impact of the Arundel bypass. These are set out below.

JH: *"Its the economy, stupid!"* Without focussing on the economy you can't get the other things right, and without the infrastructure the economy can't operate. *"Without the right infrastructure, trying to make the other stuff happen is virtually impossible".* Good infrastructure is more critical in this area as it is next to the sea, the sea, so the region has lost half of it's radius before it has started. The area needs to think about what it can we do to gain an advantage and to not be dis-advantaged.

EP: If congestion is reduced then cycling may increase. Horsham would like to make sure there are not any knock on effects in Horsham District.

PP: Any evidence coming forward as a support of bypass would be very useful. At the moment the Highways Agency's approach to scheme appraisal is quite restricted in what it can consider. This wider study could provide a wider and better economic perspective for the Government to look at. Looking at how important the A27 is and how far away the parallel links are will be important. The route *"must be fairly unique in how far away next strategic parallel route is."*

DMa: Numbers on gross value added in a believable way and explanation that is credible and well explained would be very useful.

CB: Businesses in Adur and Worting would support the bypass if seen as a package of measures including strategic junction improvements. We should also consider links to Europe, for ports and tourism. Enhancing the A27 will help promote tourism from overseas.

NS: The perception of the scheme is important. There are lots of intangible benefits which may be hard to put a value on. There could be ripple effect of spending money in this region.

LM: The scheme is not just about infrastructure in Arundel, but also for the wider community. This is

especially the case for Bognor Regis, which has a lot of people living there and high level of deprivation. The economy will be driven by better infrastructure. There needs to be more sustainability of jobs, and people need to be able to afford to live in the area. They are looking at the broader picture, not just Arundel – it is important for the areas to support each other.

CH: The survey going out to as many people as possible will be helpful in gauging opinions about the scheme.

TR: Work done in the past on the Arundel bypass was before the National Park existed. The "second purpose" of the SDNP is to ensure that attractions within the park are enhanced. Arundel is well placed to be a gateway to the National Park. The SDNP want to increase the number of visitors (currently 39m) and improve the experience they have. The results from visitor surveys will be coming soon (November 2012) and a Management Plan for the Park is being released in Spring 2013. Agrees about continental ports issue – tourists could be coming from Europe too.

KR: It is important to resolve bottlenecks for the wider economy. As the sea covers 180 degrees from the area, it can only really face North, which makes it unique (combined with other issues liek ahigh number of level crossings at railways etc). This impacts business perceptions of the area too. These unique challenges need to be overcome to attract businesses which only have 180 degrees of potential area to operate in. It is also important to attract businesses in the mean time, before these issues are resolved!

DM: Today's event was very useful. The scheme is an important part of the jigsaw for a sustainable economy on the south coast. It is important to sustain businesses which are hear already, rather than just thinking about expanding. Not trying to just expand but also to sustain existing business.

CW: A suite of infrastructure improvements have been delivered. There are other pieces of jigsaw too which need to be understood. There needs to be financial commitment and political support before a scheme can be taken forward. Large and small scale investment is important too.

GB: Clearly the bypass is a "missing link". 4 lanes of traffic into 2 doesn't go. This limits regional development economically and the flow of people travelling through the region. The route acts as a dis-incentive to investment in its present state. 85% of businesses are small (employ 10 or less people) along the A27 corridor. The large ones which there are, are all located close to the A27.