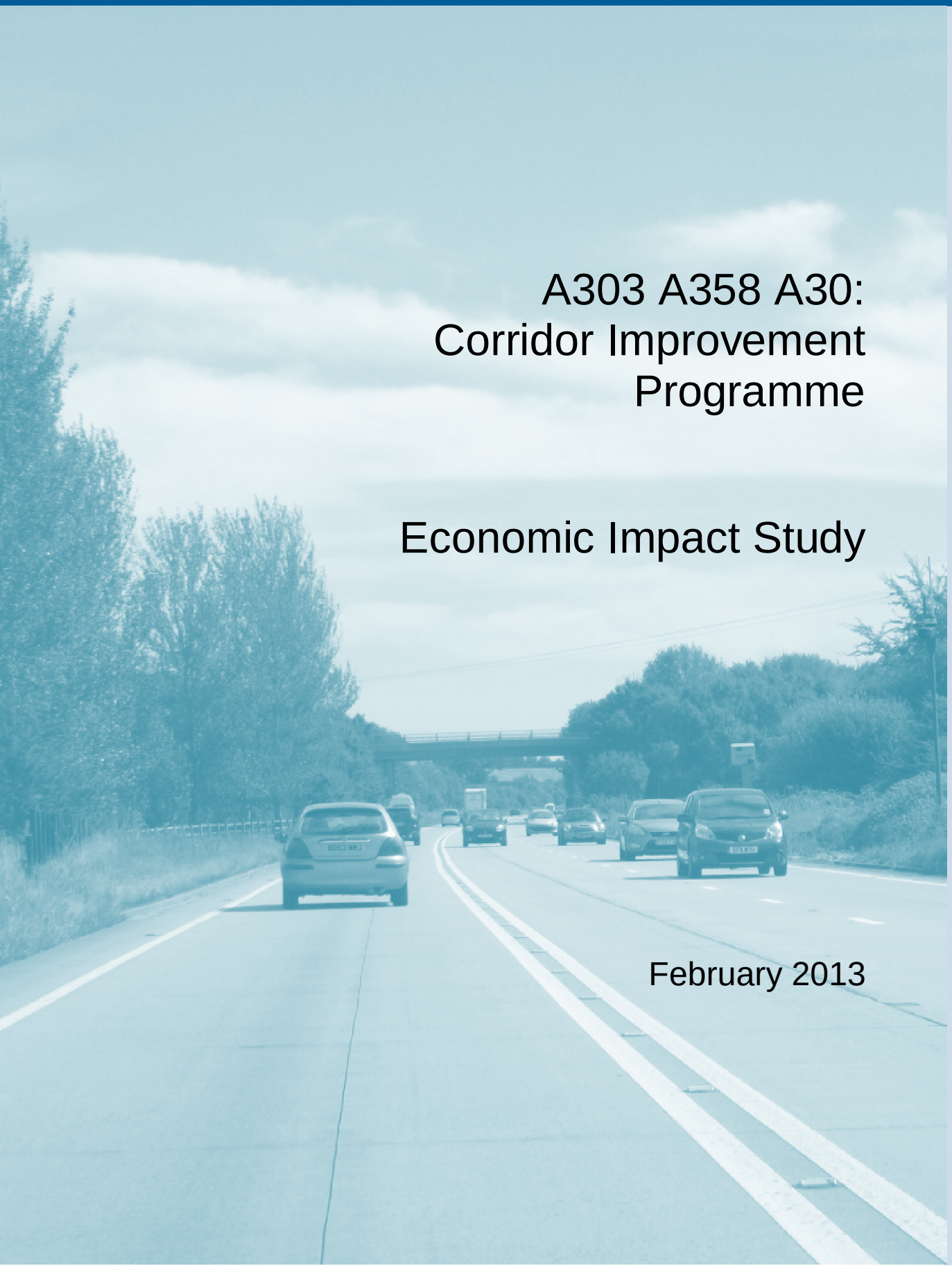

A303 A358 A30: Corridor Improvement Programme

Economic Impact Study

February 2013

PARSONS BRINCKERHOFF

SOMERSET County Council

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EXECUTIVE SUMMARY

Introduction

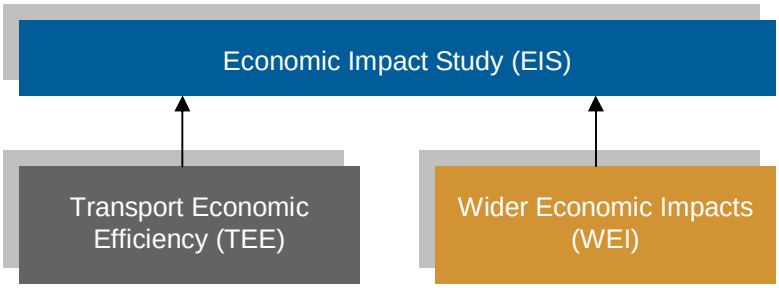
Parsons Brinckerhoff (PB) was commissioned by Somerset County Council (SCC) in May 2012 to undertake an appraisal of the economic impacts of dualling the full length of the A303 / A30 between Amesbury and Honiton, as well as the A358 between Ilminster and Taunton. An 'end to end' dual carriageway has been considered as the physical improvement to the existing route corridor to enable a clear and simple proposal of potential improvements to be assessed at this initial stage of study.

The economic benefits of transport infrastructure schemes are many and varied. This study both quantifies in monetary terms the predicted fiscal outcomes of implementing an end to end dualling of the route corridor, over a 60 year horizon, and describes the qualitative actions of businesses and individuals that lead to the predicted fiscal outcomes.

Transport infrastructure opens up markets and attracts new businesses, it also creates wider access to employment and most critically for the South West region, allows existing businesses to realise their commercial potential to grow and expand without being constrained by the peripherality from domestic and overseas markets.

By both looking at the effect on the real economy in terms of new jobs and increases in local GDP, as well as the transport economic metrics familiar to the Department of Transport (DfT), the study highlights that the scheme would have a significant and prolonged positive impact on the real economy. These may have been considered as marginally positive transport economic metrics if they had been considered in isolation.

This report describes the Economic Impact Study (EIS) that comprised the two packages of work shown below:



The EIS focused on the analysis and quantification of impacts such as journey times, regional Gross Value Added (GVA), employment and tourism-related impacts.

Methodology

The TEE and WEI are two distinct elements of the EIS and therefore the outputs must be considered independently. The TEE element of the EIS presents monetised benefits estimated from changes in travel time for both personal travel and freight. The WEI fiscal benefits are derived from the impact of transport upon agglomeration, and the underlying relationship of impacts of agglomeration upon productivity.

Transport Economic Efficiency

The TEE is the key comparator between all transport schemes used by the DfT. The approach used in this study follows DfT web-based Transport Assessment guidance (WebTAG) considering '*The Transport Economic Efficiency Sub-Objective'* and utilised the COBA (Cost Benefit Analysis) software. This approach was adopted as it is considered to be sufficiently robust for assessing the scheme impacts over a typical year – a period where traffic volume changes substantially – without being overly cumbersome in terms of data collection and processing.

Scheme Benefits and Costs

The scheme has beneficial impacts in terms of reducing journey times and the number of road traffic accidents as well as improving reliability. In monetary terms, the benefits are estimated to be in the order of £1.89bn (2002 prices) over 60 years. At this initial stage, the transport benefits associated with traffic reassigning to an upgraded route to take advantage of shorter journey times and any associated congestion relief on alternative routes have not been considered. Detailed traffic modelling to address these issues will form part of further work.

The scheme costs are calculated to include constructing the infrastructure, acquiring land and maintaining the infrastructure. The cost of the scheme, discounted to 2002 prices for the purposes of the COBA, is estimated to be £0.82bn including maintenance costs. There is potential for cost efficiencies to be generated to reduce the scheme cost subject to further work and investigation.

Value for Money

Overall the scheme has a benefit to cost ratio of 2.31 which represents good value for money. This value would be expected to increase when further details of wider traffic impacts are taken into consideration and greater scrutiny of the scheme costs is completed.

This assessment assumes that the scheme is fully funded by Government bodies. Contributions from private sector sources would have a significant positive impact on the BCR.

Summary of Transport Economic Efficiency

A summary of the key economic impacts is provided in the table below.

Impact	2022 Opening
Benefits to personal travel	£0.79bn
Benefits for business travel	£0.97bn
Reduction in accident costs	£0.16bn
Reduction in CO2 emissions	-£0.03bn
TOTAL BENEFITS	£1.89bn
Investment and Maintenance Costs	£0.82bn
BENEFIT TO COST RATIO	2.31

Wider Economic Impacts

The adopted approach followed the DfT appraisal guidance and focussed on surveying businesses in the South West region that would be affected by the scheme and customers of those businesses. The results are reported in a manner consistent with the Treasury's Green Book requirements for determining the economic impacts of additional business activity and employment.

The WEI assessment focuses on Gross Value Added (GVA) by the scheme to the economy of the South West. GVA measures the total contribution to the economy of each individual producer, industry or sector to the area in question, in this case the South West. GVA is a recognised measure of economic activity at a regional level, and as such it provides a useful and widely understood, as well as consistent, measure of how the scheme will benefit the overall economy of the South West. The business survey was used to substantiate the impact that the scheme would have on regional GVA and local employment when compared to a baseline scenario without the scheme in place.

For both economic assessments, values of benefits have been calculated for three possible opening years; 2017, 2022 and 2027. All values cited are based on those accruing over a 60 year appraisal period and are discounted according to DfT guidance back to 2002 values.

To aid the general robustness of the WEI assessment and to ensure that overestimation of impacts does not occur, a series of 'conservative' assumptions have been adopted throughout the assessment. Taking the GVA impacts described below, for example, additional impacts such as multiplier affects have not been included, whilst the focus has been on evaluating the impact of existing firms expanding rather than also including the impact of new businesses locating to the region due to the road improvement works.

In addition, both the GVA and employment-related impacts have been 'scaled' accordingly to reflect the relative distance of key districts and counties from the principal A303/A358/A30 corridor.

GVA Impacts

Given that increases in turnover are closely linked to increases in economic activity, the estimated increases in turnover (from proposed 'end to end' dualling) taken from the business survey for each county were used as a proxy for increases in GVA. In proportionate terms, the increase in turnover is 4.5%. This is based on results from businesses in Somerset for the following reasons: 1) businesses from this county provided the most responses and therefore were the most robust, and 2) the impact derived from Somerset was the lowest out of all 5 counties surveyed, thus ensuring additional 'conservatism' within the overall forecasting assumptions.

The 4.5% uplift is subsequently adjusted further to take account of the relative distance between the A303/A358/A30 corridor and those counties / districts that will be affected by the scheme. A series of 'scaling factors' are applied to the 4.5% uplift and these are based on journey time data.

Going forward, the annual increases in GVA are based on analysis of historical economic growth data going back to January 1990. Taking into account the impact of both the 'long boom' between 1992/3 and 2008 as well as the recent economic slowdown, the forecasts of annual GVA growth are based on these long-term historical trends.

The predicted increase in GVA, based on 2022 opening is £41.6bn over 60 years, as a result of potential 'end to end' dualling.

Employment-Related Impacts

A number of employment-related economic impacts were calculated. Firstly, 'headline employment' was estimated as a direct impact of increased turnover, and it has been shown that the scheme would generate approximately 20,600 jobs.

In financial terms, the employment impacts are also expressed in terms of taxation gains to Central Government, and 'welfare payment' savings when those who are currently unemployed find work.

The taxation gain calculated ranged from £2.5bn (2017 opening) to £2.1bn (2027 opening). Welfare payment savings calculated ranged from £1.4bn (2017 opening) to £1.2bn (2027 opening).

Further expenditure 'multiplier' impacts will also occur due to the increases in real disposable income of those who are now employed as a result of the scheme.

These multiplier impacts ranged from £3.7bn (2017 opening) to £3.1bn (2027 opening).

Tourism-Related Impacts

Tourism-related impacts were calculated according to 1) total tourism-related expenditure in each county, 2) the number of employment opportunities these support and 3) the related financial impacts of employment in the sector. Detailed current tourism data (including expenditure data) was obtained from the South West Tourism Alliance. This data covers visitor numbers and visitor expenditure at county and district levels.

Based on the results of both the Business and Tourism surveys, the proportionate increase in visitor numbers was used to calculate the increase in visitors to the regeneration area and in tourism-related employment, and the resulting financial impacts of this.

Total tourism benefits calculated ranged from £13.1bn (2017 opening) to £10.8bn (2027 opening).

Land Use and Land Value Gain

To establish the extent to which dualling of the roads can have a positive impact on land development, land value gain and new employment opportunities, discussions were held with several land development agencies about how likely additional land development would be once the scheme was completed. Their advice was sought on how much land values would increase as a result of the significantly improved transport infrastructure. Where possible, observations and evidence from other road widening and enhancement projects were also utilised (e.g. the A55 corridor in North Wales and the M5 corridor in Somerset and Devon).

The outcome of this analysis was to derive a series of land value gain parameters as well as data covering the likely scale of new development sites that would be attributable to the infrastructure improvements. Other economic impacts from these developments will include new employment opportunities as well as the financial benefits that will accrue from these new opportunities.

The increase in profit to developers as a result of land value increases was calculated as £60.7m (2017 opening) to £43.0m (2027 opening). The associated corporation tax gain to Government was calculated as £14.6m (2017 opening) to £10.3m (2027 opening).

Summary of Wider Economic Impacts

A summary of the key economic impacts is provided in the table below (shown as 2002 values).

Impact	2017 Opening	2022 Opening	2027 Opening
GVA	£43.3bn	£41.6bn	£40.0bn
Employment – taxation gains	£2.5bn	£2.3bn	£2.1bn
Employment – welfare payment savings	£1.4bn	£1.3bn	£1.2bn
Employment – disposable income multiplier impacts	£3.7bn	£3.4bn	£3.1bn
Tourism (combined impacts)	£13.1bn	£11.9bn	£10.8bn
Land Use – land value increase	£60.7m	£51.1m	£43.0m
Land Use – Government tax gain	£14.6m	£12.3m	£10.3m

Relationship between TEE and WEI

The COBA forecasts used to derive the TEE metrics are linked to the DfT forecasts (for trunk roads in the South West) and are independent of anything that could be "locally" derived and therefore do not directly reflect traffic growth that would be generated by the predicted increases in jobs and GVA in the WEI.

It is probable that there would be additional traffic alongside the forecasts for increased GVA, but not to a level that is likely to cause congestion, and therefore diminish the predicted traffic benefits. In reality the exclusion of such traffic probably means the TEE benefits are more conservative than would be the case if predicted wider economic benefits are realised.

Delivery

The different types of economic impact identified in the EIS will influence decisions regarding the various funding sources and project delivery mechanisms. There will be several beneficiaries of the scheme from an economic impact perspective. These include:

Drivers on the route: will benefit from reduced travel times and improved reliability;

Society: will benefit from fewer accidents, and the associated distress and loss of productivity involved;

Central Government: will benefit from the taxation revenue streams accruing from the additional employment generated. In addition, by taking people out of unemployment, benefits and other allowance payments from Government will be reduced;

Regional / Local Government: with regional economic output likely to rise following scheme implementation, there may be specific impacts accruing to the regional and local areas. These will include the impacts of increased spending in the region, both from the real disposable income of new employees and from those who are employed in 'support' industries that will also benefit from the overall economic impacts;

Local / regional industry sectors: taking the tourism sector as an example and based on the responses to the surveys, the scheme will induce additional visits to the region. These will result in increased

expenditure in the region, which will support additional employment and the associated financial benefits of this; and

Financial benefits from land development and land value gain: when the scheme is implemented, the 'attractiveness' of the corridor in terms of land development will be greatly enhanced. This will benefit developers and also central Government through increases in corporation tax. Revenues will also accrue from specific land value gain taxes such as the new Community Infrastructure Levy (CIL).

The quantification of the various economic impacts has been undertaken so that the stream of impacts are given according to each category and by area. This enables the different impacts to be quantified and thus taken into account when the 'delivery' and 'financing' options are being put forward.

Conclusions

Based on the extensive surveys conducted in the region and analysis of economic data, this assessment of transport and wider economic impacts has demonstrated that there will be significant benefits associated with dualling the full length of the A303 / A30 between Amesbury and Honiton and the A358 between Ilminster and Taunton.

Based on the latest DfT guidance, the analysis has shown that the scheme will bring a wide range of economic benefits to the region and importantly, will help boost employment during a time of continued economic uncertainty. These benefits will accrue from the improvements in connectivity, reliability and resilience that the scheme will bring.

Going forward and based on these findings, the next steps will be to develop appropriate funding and delivery mechanisms to ensure that the full dualling scheme is implemented. Following the outcome of consultation, the calculations can then be refined according to the scale of the selected scheme.

CHAPTER 1

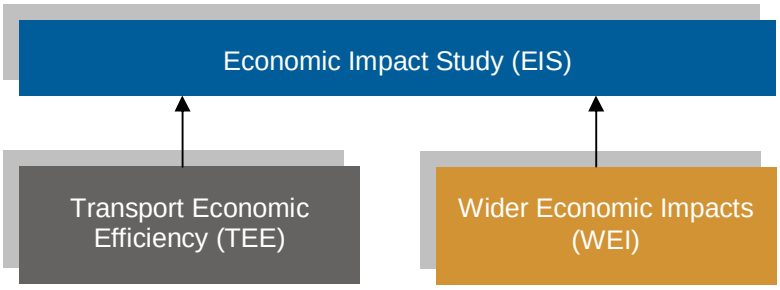
INTRODUCTION

1 INTRODUCTION

1.1 General

1.1.1 Parsons Brinckerhoff (PB) was commissioned by Somerset County Council (SCC) to undertake an appraisal of the economic benefits of dualling the full length of the A303 between Amesbury and Honiton as well as the A358 between Ilminster and Taunton. The study area is shown on Figure 1 and the improvement sections are shown on Figure 2.

1.1.2 The Economic Impact Study (EIS) was comprised of the two packages of work depicted below:



1.1.3 The Wider Economic Impacts (WEI) focuses on the analysis and quantification of impacts such as regional Gross Value Added (GVA), employment and tourism-related impacts. By contrast, the Transport Economic Efficiency (TEE) section of the EIS focused on cost benefit appraisal and impacts such as monetised journey time savings and accident reductions. The TEE and WEI are two distinct elements of the EIS and therefore the outputs have been considered independently.

1.1.4 One of the key economic impacts considered in this EIS is the impact of the scheme on Gross Value Added (GVA) for the South West. GVA measures the total contribution to the economy of each individual producer, industry or sector to the area in question, in this case the South West.

1.1.5 Essentially, GVA is the grand total of all revenues, from final sales and (net) subsidies, which are incomes into businesses. These incomes are then used to cover expenses (wages & salaries, dividends), savings (profits, depreciation), and (indirect) taxes. As the total aggregates of taxes on products and subsidies on products are only available at whole UK economy level, GVA is used for measuring gross regional domestic product and other measures of the output of entities smaller than a whole economy (for this study, these 'entities' are the individual counties affected by the route).

1.1.6 GVA is a recognised measure of economic activity at a regional level, and as such it provides a useful, widely understood and consistent measure of how the scheme will benefit the overall economy of the South West.

1.2 Study Objectives

Overarching Objective

1.2.1 The overarching objective of the EIS was to assess the economic benefits (both the transport economic benefits and the wider economic benefits) that would be achieved if the A303 / A30 and the A358 were to be dualled between Amesbury and Honiton

and Ilminster and Taunton, respectively. For the purposes of this study it has been necessary to assume the scheme would be a full dual carriageway. This may not necessarily turn out to be the actual case but it was necessary to make this assumption for the purposes of obtaining primary data used to inform the study.

Objective of the TEE Study

1.2.2 Estimating the transport economic efficiency impacts is a fundamental element of the scheme business case as it demonstrates to the Department for Transport the benefits to society of the infrastructure investment.

1.2.3 The objective of this part of the study is to capture the impacts on travel times and vehicle mileage and translate these into monetised costs and benefits.

1.2.4 The benefits to users are then compared to the capital costs incurred by society such that a benefit to cost ratio can be determined which effectively represents society's return on its investment.

Objective of the WEI Study

1.2.5 The principal objective of the WEI study is to identify and, where possible, quantify the 'wider economic benefits' of improving the A303, A358 and A30. The aim is to indicate where additional benefits will accrue following completion of the dualling works and to illustrate these by means of a stream of 'revenue benefits' generated over the duration of the appraisal period.

1.2.6 This work differs from more 'traditional' economic appraisal work as its focus is not just traffic related changes, but the role of transport as an agent of economic activity.

1.2.7 In more recent years, the DfT has put forward and published additional guidance whereby the economic impacts of transport schemes have been extended to cover items such as employment-related impacts. The guidance on these impacts and how to incorporate them in appraisal work is being updated on a regular basis.

1.2.8 Of the approaches contained within the DfT guidelines, it is the 'regeneration area' approach that is most applicable. This is because it focuses on the employment generation impact of transport schemes and utilises the findings of extensive surveys that are conducted on businesses and other relevant organisations.

1.2.9 A key feature of the recent DfT guidance is the scope it gives for additional analysis to be undertaken in support of the overall objectives of the appraisal. In the context of the A303/A358/A30 EIS, this is important and it has enabled us to incorporate impacts beyond the headline employment impacts discussed in the DfT WEI guidance.

1.3 Overarching Approach

1.3.1 The overarching approach has involved applying Government guidelines and general economic principles to quantify the economic benefits likely to be accrued from dualling the A303 / A30 and A358 from Amesbury to Honiton and from Ilminster to Taunton, respectively.

TEE Approach

1.3.2 The TEE approach essentially requires a computer-based representation of different infrastructure scenarios into which anticipated traffic volumes are fed.

1.3.3 The traffic volume, in combination with the infrastructure determines journey times on the specific infrastructure. By comparing the resultant journey times and applying a value of time, it is possible to estimate the travel time benefits.

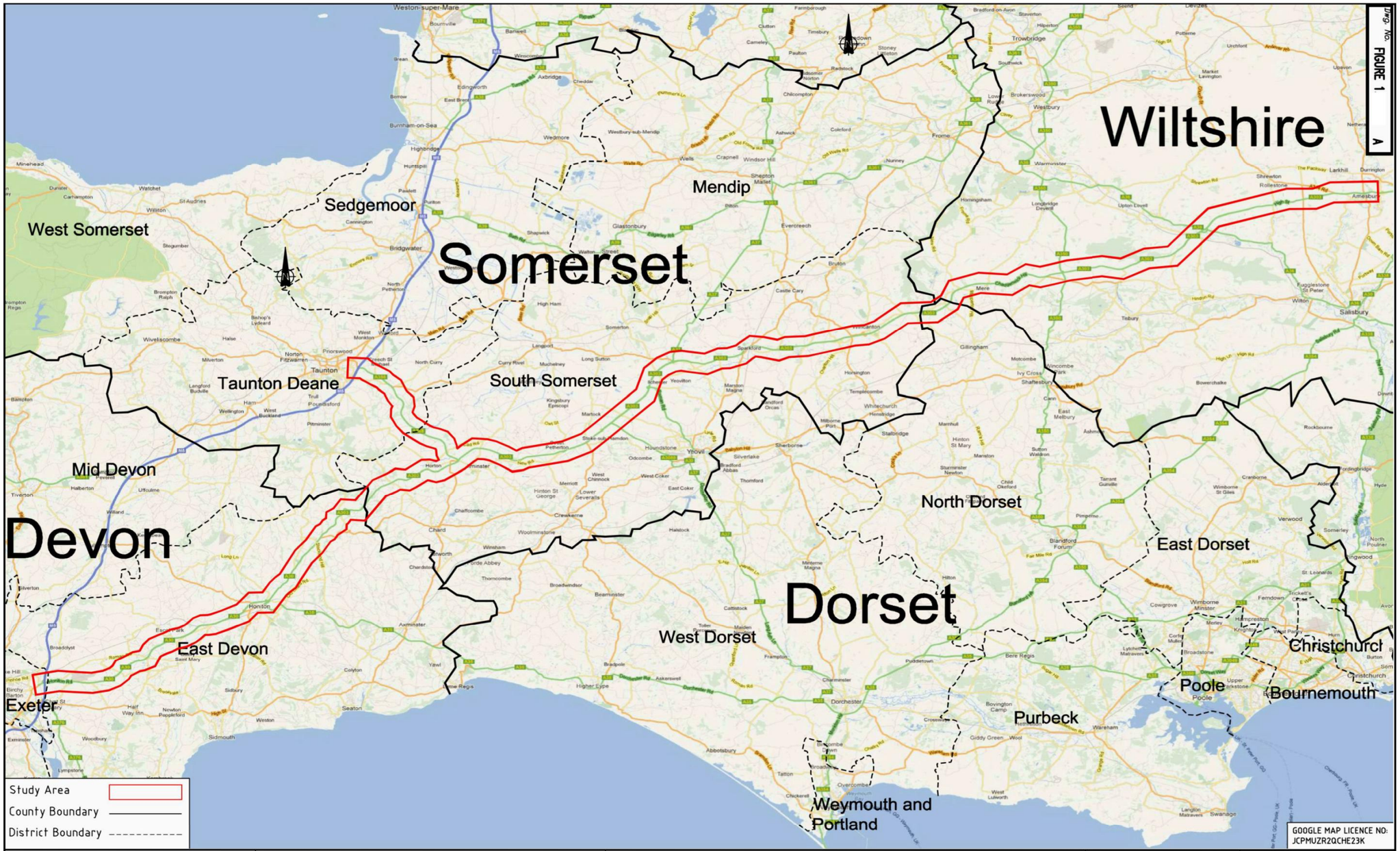
1.3.4 The traffic volume, when combined with route length and travel speed, provides estimates for the vehicle operating costs.

1.3.5 The estimation of road safety impacts is based on the carriageway standard and total vehicle kilometres on the route.

1.3.6 An estimate is made of the monetised benefits for each year of the scheme life – assumed to be 60 years. This value is discounted back to a common appraisal year and summed.

1.3.7 The scheme costs are estimated by the quantity surveyors based on engineering drawings, and discounted to the common appraisal year. The ratio of the sum of benefits to the sum of costs is used as the primary measure of the return on investment.

Figure 1: Study Area



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Taunton

SOMERSET County Council

Project Title
A303 A358 A30: Corridor Improvement Programme

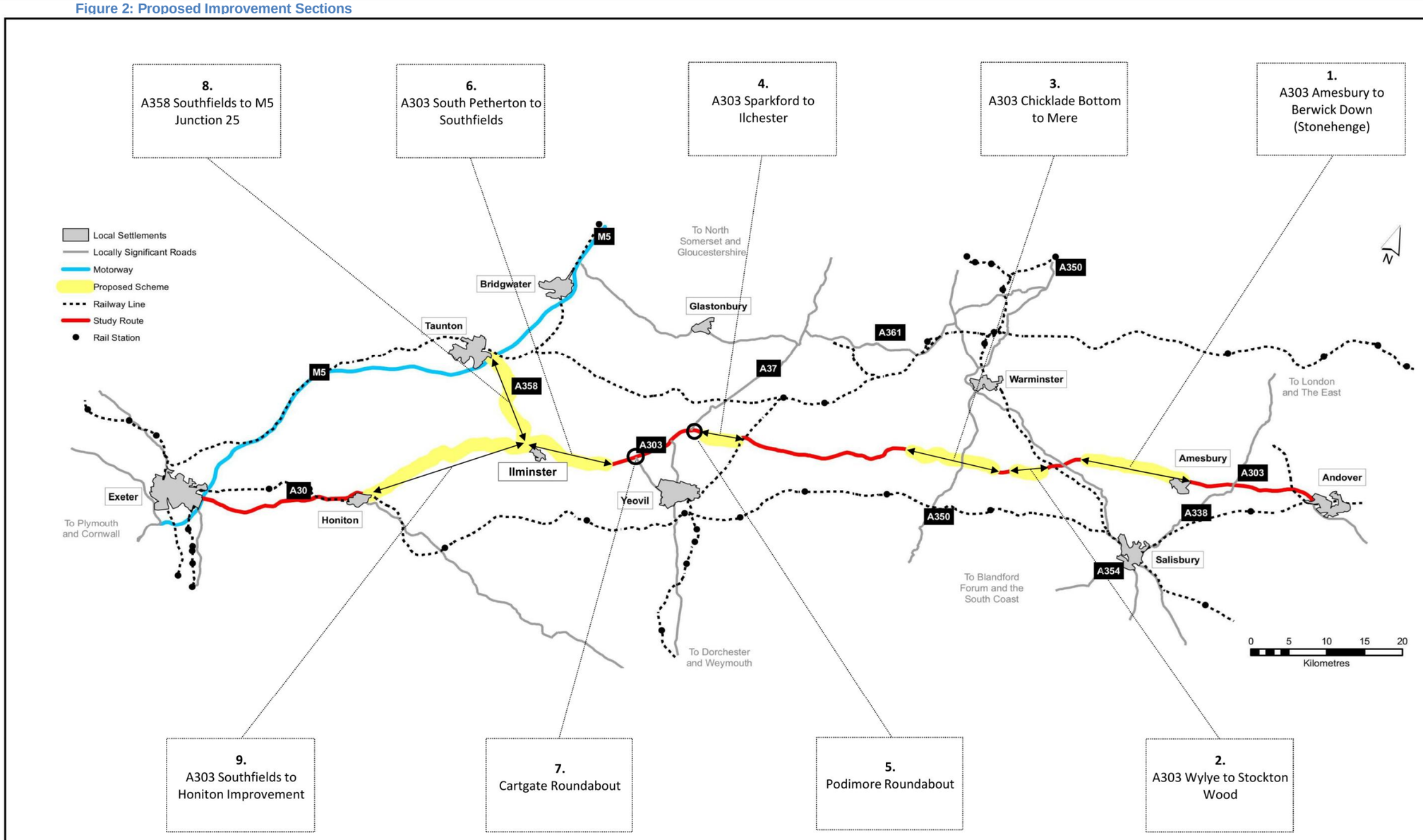
Economic Impact Study

FigureTitle
Study Area

DATE ***February 2013***	PRODUCED BY ***ASNW***
SCALE ***NTS***	CHECKED ***AS***
PROJECT NUMBER ***285333CP-HLT/4/7***	APPROVED ***DC***

Figure 1

Figure 2: Proposed Improvement Sections



PARSONS BRINCKERHOFF **Parsons Brinckerhoff Ltd** Riverside Chambers, Castle Street, Taunton, Somerset, TA1 4AP, Tel: (01823) 281190	*Client* ***Somerset County Council*** *County Hall* *Taunton* SOMERSET County Council	*Project Title* ***A303 A358 A30: Corridor Improvement Programme*** ***Economic Impact Study*** *FigureTitle* ***Proposed Improvement Sections***	*DATE* ***February 2013*** *SCALE* ***NTS*** *PROJECT NUMBER* ***285333CP-HLT/4/7***	*PRODUCED BY* ***ASNW*** *CHECKED* ***AS*** *APPROVED* ***DC***
			Figure 2	

WEI Approach

1.3.8 The overall approach involved two main phases of work, which linked closely together. Phase 1 involved the collection of baseline data and new data through surveys and meetings, and Phase 2 involved the development of an economic model to analyse this data and forecast the wider economic impacts of the scheme.

1.3.9 The key stages in the WEI approach, which are shown in Figure 3, were:

i Define the existing position or 'baseline' with respect to the economic performance and characteristics of the regeneration area. We define this area as the principal counties impacted by dualling the A303, A358 and A30 – these include Somerset, Wiltshire, Devon, Dorset and Cornwall;

ii Develop appropriate surveys to elicit 1) the views of stakeholder organisations likely to be affected by the scheme(s) and 2) obtain suitable data and metrics that are used in the process to quantify the various impacts;

iii Hold face-to-face meetings and workshops with various stakeholders in the region to obtain their views and first-hand experience of key issues;

iv Collect and collate all the data and information from the survey questionnaires, discussions and workshops; and

v Develop an appropriate forecast of impacts and financial values.

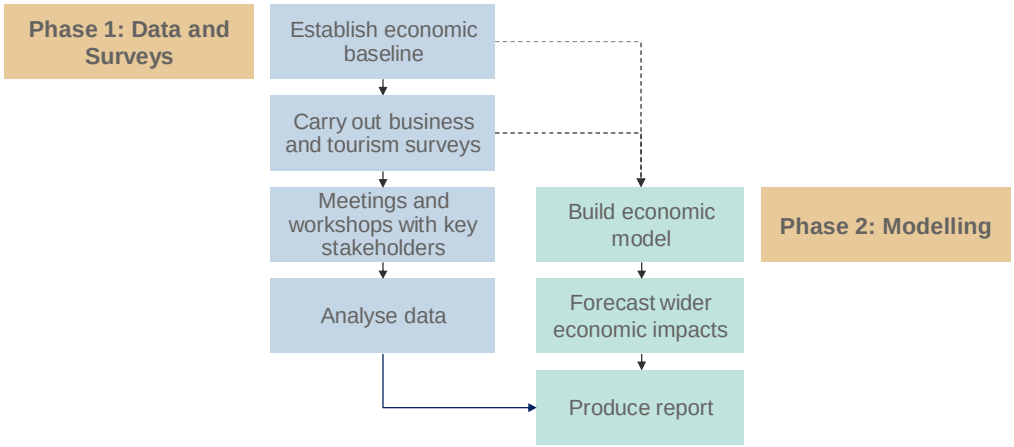


Figure 3: Approach to Wider Economic Impact Study

1.4 Structure of the Report

1.4.1 This report firstly presents the findings of the TEE assessment. The following chapters focus on the WEI assessment and start with the overall methodology and approach before turning to separate chapters on the business and tourism surveys. The results of the wider economic impact analysis are provided in the subsequent chapter. The report therefore is set out as follows:

- Chapter Two – A description of the approach used to assess the TEE benefits as well as the presentation of outputs;
- Chapter Three - A description of the approach to assessing and quantifying the wider economic benefits, including descriptions of how the results of the surveys were utilised in the analysis;

- Chapter Four – A description of the current or 'baseline' economic situation in the region;
- Chapter Five - A description of the Business Survey that was undertaken together with a summary of the key findings of the survey;
- Chapter Six - A description of the Tourism Survey that was also undertaken (face to face and online) and a summary of the key findings of the survey;
- Chapter Seven - the results of the wider economic impact analysis; and
- Chapter Eight – the overall summary and conclusions as well as indicating additional next steps.

CHAPTER 2

TRANSPORT ECONOMIC EFFICIENCY

2 TRANSPORT ECONOMIC EFFICIENCY

2.1 Introduction

2.1.1 In considering the WEI (see chapter 3) it was felt that a simple concept of 'improvement' would be required to determine impact without having a detailed engineering solution worked up and available for consultation. The TEE assessment has been undertaken allowing for consideration of the known environmental constraints across the Blackdown Hills AONB, and has reflected this accordingly.

2.2 General Approach

2.2.1 The TEE of a dual carriageway between Amesbury and Taunton coupled with climbing lanes in the Blackdown Hills has been assessed at an outline level of detail. Transport benefits relate to journey time changes, accident savings and vehicle operating cost changes.

2.2.2 At this initial stage, the transport benefits associated with traffic reassigning to an upgraded route to take advantage of shorter journey times and any associated congestion relief on alternative routes have not been considered in the current assessment of transport benefits as the detailed traffic modelling to address these issues will form part of further work.

2.2.3 The approach to estimating the traffic impacts adopted for this study was to utilise the COBA software. This approach was adopted as it is considered to be sufficiently robust for assessing the scheme impacts over a typical year – a period where traffic volume changes substantially – without being overly cumbersome in terms of data collection and processing.

2.2.4 The key data that COBA relies upon is as follows:

- A simple representative network consisting of links and nodes for the base, Do Minimum and Do Something Scenarios;
- Base year traffic volumes divided into "common" hours;
- Traffic growth projections throughout the period from the base year to the end of the scheme life;
- Traffic volumes on "new links" and revised traffic volumes for bypassed links on a common basis to the base year volumes;
- Accident data from a representative period;
- Scheme costs and spending profile.

2.2.5 The COBA output file reports the following information:

- Link speed, travel time and proportion of Heavy Goods Vehicles (HGVs) by "common" hour with and without the scheme;
- Junction delay and overcapacity reports with and without the scheme;
- Value of time saved due to the scheme being implemented;
- Value of vehicle operating costs saved due to the scheme being implemented;
- Number, severity and value of accidents saved due to the scheme being implemented;

- Discounted scheme cost; and
- Ratio of monetised benefits to costs (BCR).

2.2.6 The following sections of the report discuss each of these requirements and outputs in turn.

2.3 COBA Inputs

COBA Networks

2.3.1 The base year and Do Minimum networks are identical and contain 64 links. Of these:

- 38 represent the route between Amesbury and M5 Junction 29;
- 4 represent the M5 between Junction 25 and Junction 29;
- 4 represent the A358; and
- 18 represent entry / exit points to the network including stub ends from junctions on the A303.

2.3.2 Each link is coded with a link class (single / dual carriageway), length, width, gradient and bendiness, density of minor junctions and maximum speed. These factors affect the capacity and in turn the journey time achieved on the link.

2.3.3 The Do Minimum also has 44 nodes which include:

- 12 major junctions, and
- 32 locations where the carriageway standard changes.

2.3.4 Each of the roundabout junctions has been coded to represent the inscribed circle diameter, entry width of each arm, entry angle of each arm and any over-riding delay characteristics. COBA uses this information to perform a simplified junction capacity assessment and provides junction delays as outputs.

2.3.5 The Do Something network modifies and adds several links as follows:

- 8 new links are added to represent grade separated sections;
- 2 links have been modified to represent overtaking lanes through the Blackdown Hills; and
- 16 links have been modified to represent widening from single carriageway to dual carriageway.

Traffic Volumes and Common Hours

2.3.6 Traffic volumes were gathered on the A303, A358, M5 and A30 from the TRADS (TRAffic Data Service) database held by the Highways Agency, along with data from automatic traffic counters and manual classified counts held by the Local Highway Authorities. These flows were reported in the Baseline Report (A303 Infrastructure Study – Phase 2, August 2012).

2.3.7 COBA uses common hours – known as flow groups – to represent hours where the volume is approximately the same, along with the proportions of trip purpose and vehicle category.

2.3.8 Analysis was undertaken to consider the volume and composition of traffic changes within the A303 corridor over a typical year. By arranging each weekday hour of the year and each weekend hour of the year in numerical order and manipulating the various scaling parameters, the following flow group values have been adopted.

	Flow Group	Period	Hours	Default Multiplier	Adjusted Multiplier
Weekday	1	Weekday Overnight	3,132	0.2398	0.333
	2	Weekday Day time	2,088	1.4656	1.446
	3	Weekday Shoulder Peak	522	2.0528	2.012
	4	Weekday Peak Hour	522	2.6433	2.496
Weekend	6	Weekend Overnight	1,248	0.4685	0.252
	7	Weekend Low Flow	832	1.1714	1.293
	8	Weekend Busy	272	1.9035	2.074
	9	Weekend Peak	144	2.6053	2.707
	TOTAL		**8,760**		

Table 1: Flow Group Values

2.3.9 The "Adjusted Multiplier" represents a scaling parameter to adjust an "average hour" within the year to the flow of the Flow Group Hour. For example, Average Annual Daily Traffic (AADT) for a link is 20,000, the total annual traffic is 730,000 vehicles. This provides an average hourly flow of 833.33 vehicles. An average Flow Group 1 hour is 0.333 of 833.33 or 278 vehicles. An average Flow Group 9 hour is 2.707 times greater than 833.33 or 2,255 vehicles.

2.3.10 The Adjusted Multipliers are shown graphically in Figure 4 and Figure 5 below. Essentially, the pattern shown demonstrates the A303 corridor is busier overnight than the "average" UK road during the week, but quieter during the peak hours each weekday.

2.3.11 At the weekend, the overnight hours are quieter than the average relationship would expect, but all other hours – particularly the peaks – are substantially busier than would be expected.

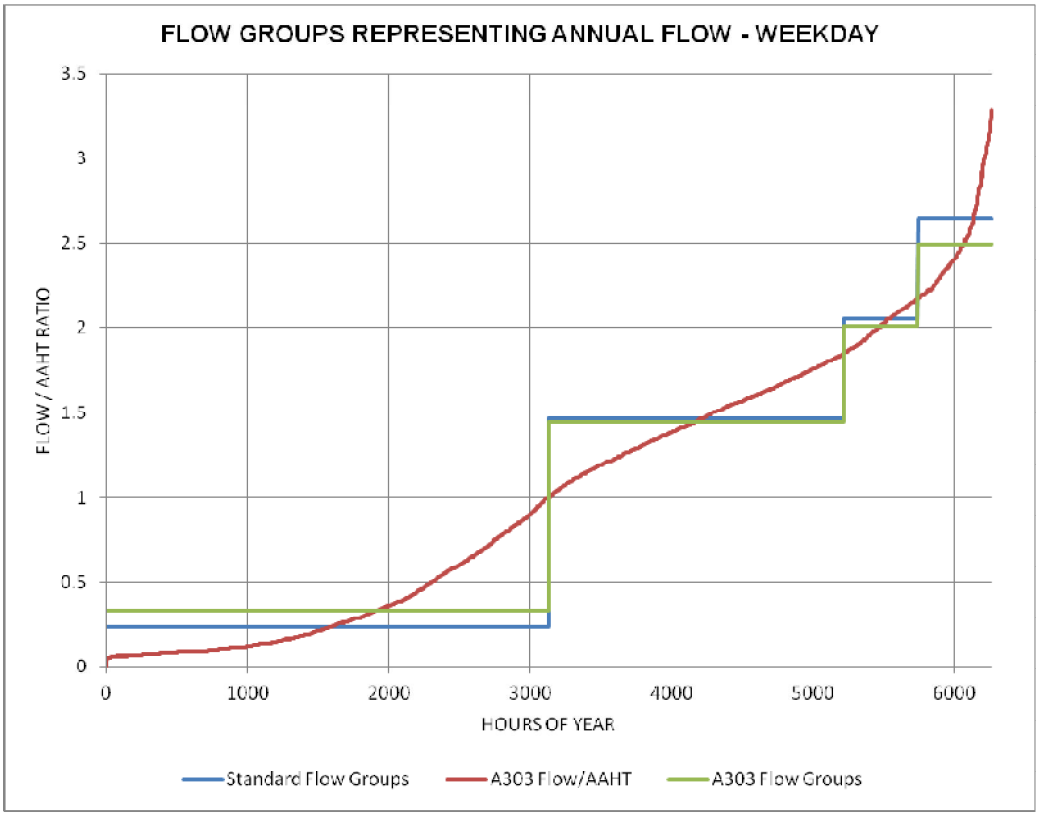


Figure 4: Weekday Flow Groups

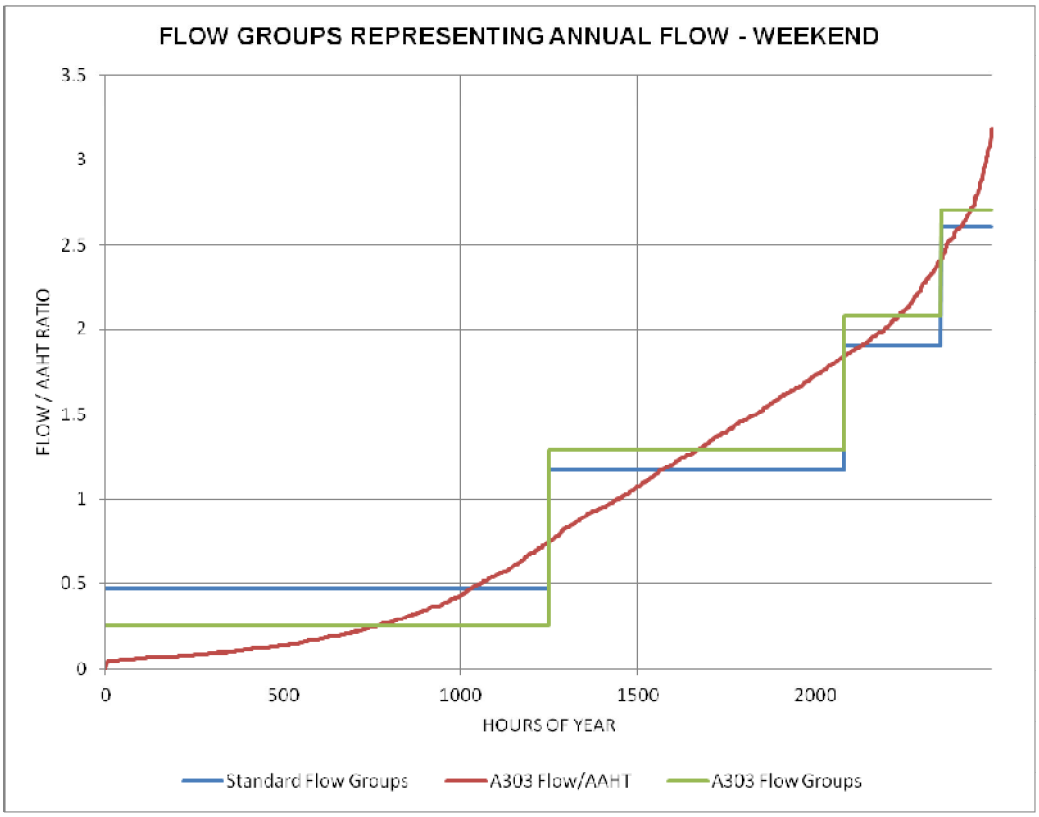


Figure 5: Weekend Flow Groups

Traffic Growth

2.3.12 The traffic growth has been taken from "Road Traffic Forecasts 2009 (RTF2009)" (DfT 2009) [http://www.dft.gov.uk/publications/road-transport-forecast-dft-ntm-results-2009/].

2.3.13 These forecasts use 2003 as a starting point and estimate growth in traffic – expressed as vehicle kilometres – by road class and vehicle type. Using vehicle kilometres is appropriate as it captures two drivers of growth, ownership of vehicles and increases in distance travelled. The second factor is often overlooked when simply considering trip end growth.

2.3.14 The growth factors applied within this study were derived from the RTF2009 Annex which splits the national forecasts reported in the main document into regional projections and further divides these by road class and vehicle type. Therefore, the actual growth rates adopted are "South West; Trunk Road" forecasts.

2.3.15 Table 2 below is a modified extract from the DfT report referred to in paragraph 2.2.12. The base year (2003) information is recorded in billion vehicle kilometres for cars, light goods vehicles and heavy vehicles. Growth to horizon years is expressed in percentage increases from the base billion vehicle kilometre figure. Heavy vehicle growth is presented by rigid, articulated and public service vehicles. Based on the vehicle proportions in COBA it is possible to disaggregate the base year total heavy vehicle kilometres by each sub-type of heavy vehicle, which allows the application of the appropriate growth rate for forecast years.

Region	Year	Data	Road Type				
			M'way	Trunk	Principal	Minor	All Roads
South West	2003	Sum of CARS (BvK)	6.1	5.3	12.5	13.6	37.5
		Sum of LGV (BvK)	0.8	0.7	1.7	2.2	5.5
		Rigid (BvK)	0.40	0.20	0.32	0.24	1.15
		Artic (BvK)	0.57	0.28	0.45	0.34	1.65
		PSV (BvK)	0.04	0.02	0.03	0.02	0.10
		Sum of Large Vehicles (BvK)	1.0	0.5	0.8	0.6	2.9
		Sum of TOTAL BvK	7.8	6.6	15.0	16.5	45.9
	2015	Sum of CARS	2%	5%	5%	6%	5%
		Sum of LGV	30%	31%	31%	31%	31%
		Sum of Rigid	23%	16%	12%	14%	16%

Region	Year	Data	Road Type				
			M'way	Trunk	Principal	Minor	All Roads
		Sum of Artic	-10%	-5%	-3%	-7%	-8%
		Sum of PSV	-5%	-5%	-5%	-5%	-5%
		Large Vehicles	3%	3%	3%	1%	3%
		Sum of TOTAL	5%	8%	8%	10%	8%
	2025	Sum of CARS	26%	28%	22%	23%	24%
		Sum of LGV	63%	64%	63%	64%	63%
		Sum of Rigid	30%	23%	19%	21%	22%
		Sum of Artic	-3%	4%	6%	-1%	0%
		Sum of PSV	-5%	-5%	-5%	-5%	-5%
		Large Vehicles	10%	11%	11%	8%	7%
		Sum of TOTAL	27%	31%	26%	28%	28%
	2035	Sum of CARS	44%	46%	36%	38%	39%
		Sum of LGV	105%	104%	103%	105%	104%
		Sum of Rigid	36%	29%	24%	26%	28%
		Sum of Artic	7%	11%	12%	6%	9%
		Sum of PSV	-5%	-5%	-5%	-5%	-5%
		Large Vehicles	18%	18%	16%	14%	6%
		Sum of TOTAL	47%	50%	42%	46%	46%

Table 2: Traffic Growth

(Note: Highlighted rows are calculated.)

2.3.16 The growth rates applied in COBA are expressed in annual incremental growth between a start and end year. The rates for year on year growth applied within this study are shown in Table 3 below.

Vehicle Class	2011 to 2015	2016 to 2025	2026 to 2035
Car	0.41	2.00	1.32
Light Goods	2.28	2.27	2.21
OGV 1 (Rigid)	1.24	0.59	0.48
OGV 2 (Arctic)	-0.43	0.91	0.65
Passenger Service Vehicle	-0.43	0.00	0.00

Table 3: COBA Growth Rates

2.3.17 For this study, it has been assumed that the Opening Year of the Scheme is 2022 with a Design Year of 2038. The published forecast growth rates terminate at 2035, but within this study, it has been assumed that traffic will continue to grow at the 2026 to 2035 rate until the Design Year.

Traffic Volumes

2.3.18 Base year traffic volumes were obtained from the Highways Agency Traffic Information System (HATRIS) and local highway authority counters where available. Information about the range of traffic volume along the route was reported in the Baseline Report.

2.3.19 For COBA, each link and turn is coded with an AADT volume such that COBA can apply the appropriate growth rate for each assessment year. For the Do Minimum this value simply represents what was observed in the traffic count data.

2.3.20 The traffic volumes for dual carriageway sections of the scheme are assumed to be consistent with those for the single carriageway sections. At this point in the scheme assessment issues such as induced traffic have not been addressed.

2.3.21 The grade separated sections in the Do Something are generated by a method of calculating traffic that will and will not use the scheme. An example is shown in Figure 6 below:

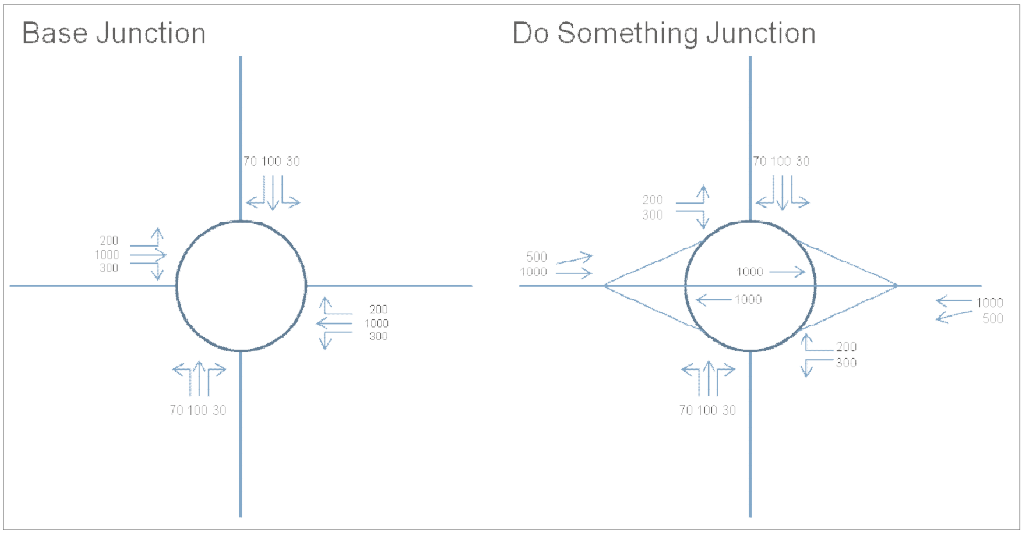


Figure 6: Diversion Traffic

Accident Data

2.3.22 Information about the number of accidents has been obtained from the local highway authorities and coded into the base year data of the COBA network. The data is included for links and at junctions and covers the period 2007 to 2011 inclusive.

Scheme Costs

2.3.23 The scheme costs were collected by PB from several sources and brought to a common year. These cost estimates have then been processed into the correct format for COBA. The outcome of this process is shown in several steps below.

Initial Cost Estimates

2.3.24 Each component scheme cost is reported at Appendix D for the year in which the estimate was made and then corrected to a common cost period which is the second quarter of 2011.

2.3.25 The basic cost elements, including VAT and Optimism bias, are shown in Table 4 below as both published and rebased values.

	Published	Rebased to Q2 2011
Construction	£639,810	£809,016
Land	£51,420	£64,546
VAT	£96,433	£127,030
Optimism Bias	£172,300	£212,198
TOTAL	**£959,963**	**£1,212,790**

Table 4: Scheme Base Costs

(Source: various published scheme costs (see Appendix D)
Units are £000

2.3.26 The assumed spend profile for the whole scheme (Amesbury to M5 J25) is:

Year	Construction	Land
2014	0%	0%
2015	0%	25%
2016	0%	25%
2017	0%	25%
2018	20%	25%
2019	20%	0%
2020	20%	0%
2021	20%	0%
2022	20%	0%
2023	0%	0%
	100%	**100%**

Table 5: Scheme Spend Profile

2.3.27 As the cost estimate was made in Q2 2011, construction inflation – to recognise the relative increase of construction compared to underlying inflation – has to be applied to each cost element, increasing it to the correct cost for that year. The impact of compound inflation from 2011 to 2023 is shown in Table 6 below.

Year	Compound	Construction	Land	TOTAL
2014	111.77%	£ -	£-	£ -
2015	114.23%	£ -	£-	£ -
2016	116.74%	£ -	£18,838	£18,838
2017	119.31%	£ -	£19,252	£19,252
2018	121.93%	£ -	£19,676	£19,676
2019	125.59%	£ 288,416	£20,266	£308,682
2020	129.36%	£ 297,069	£-	£297,069
2021	133.24%	£ 305,981	£-	£305,981
2022	137.24%	£ 315,160	£-	£315,160
2023	141.35%	£ 324,615	£-	£324,615
TOTAL		**£1,531,240**	**£78,031**	**£1,609,271**

Table 6: Scheme Costs - Construction Inflation

(Note: Units are £000)

2.3.28 It is considered likely that there would be some savings applied to all the various elements of the works, aside from the land, which would ultimately produce a scheme cost as shown in Table 7. These savings are likely to arise as a result of economies of scale and contractual arrangements. There is potential for further cost efficiencies to be generated to reduce the scheme cost subject to further work and investigation.

Year	Construction	Land	TOTAL
2013	£-	£-	£ -
2014	£-	£-	£-
2015	£-	£-	£-
2016	£ -	£18,838	£ 18,838
2017	£ -	£19,252	£ 19,252
2018	£ -	£19,676	£ 19,676
2019	£ 259,650	£20,266	£279,916
2020	£ 267,440	£-	£267,440
2021	£ 275,463	£-	£275,463
2022	£ 283,727	£-	£283,727
2023	£ 292,238	£-	£292,238
COBA TOTALS	**£1,378,517**	**£ 78,031**	**£1,465,549**

Table 7: COBA Input Scheme Costs

(Note: Units are £000)

2.4 COBA Outputs

Travel Time and Speeds

For the purposes of comparing the scheme impact the network has been divided into five sections. The travel time and average speed from the 2023 COBA model is shown in Table 8 below.

Flow Group	Do Minimum		Do Something	
	Time (mins)	Speed (kph)	Time (mins)	Speed (kph)
Weekend Overnight	94.8	97.3	90.7	101.7
Weekday Shoulder	109.1	84.6	92.9	99.3
Weekday Peak	119.0	77.5	93.8	98.4
Weekend Overnight	92.5	99.7	88.9	103.8
Weekend Busy	108.8	84.8	92.0	100.2
Weekend Peak	126.1	73.2	95.3	96.9

Table 8: Journey Times and Speeds A303 / A358

(Note: Data from 2023 COBA files. Network route length 153.8 km)

2.4.1 The results in Table 8 illustrate that the Do Something provides benefits in terms of reduced travel times in all periods reported. The smallest reduction in journey time is during the weekend overnight period, which is most lightly trafficked.

2.4.2 The largest difference is during the weekend peak periods with journey time reductions of more than 30 minutes and an average speed increase of more than 20 kilometres per hour.

Junction Delays

2.4.3 There are several junctions that will be bypassed when the scheme is implemented. These junctions will experience substantial changes in their operational characteristics including substantial decreases in traffic volume and the amount of delay experienced at peak times.

2.4.4 Summary statistics of the bypassed junctions are provided in Table 9 below.

Do Minimum			
Junction	**2010**	**2023**	**2038**
A358 Southfields	69.57	249.54	541.24
Hayes End	21.60	26.82	36.96
A3088 Cartgate	54.37	218.73	564.57
A37 Podimore	112.99	203.12	466.69
A359	27.59	53.25	200.89
A360	24.06	42.47	197.10
A345 Countess	95.31	362.38	520.78
Do Something			
Junction	**2010**	**2023**	**2038**
A358 Southfields	36.56	130.12	298.58
Hayes End	8.49	10.55	14.49
A3088 Cartgate	33.45	151.75	303.78
A37 Podimore	78.95	144.80	334.21
A359	10.03	16.73	51.83
A360	6.33	9.25	24.50
A345 Countess	18.91	41.21	115.49

Table 9: Junction Delays – Weekend Peak Period

(Note: Units are pcu hours per hour)

2.4.5 The data shows the total amount of delay within a single hour at each of the junctions assessed. This sum total is shared across all the vehicles using the junction, with different amounts of delay impacting on the various movements, and as such needs to be treated with caution.

2.4.6 However, it does demonstrate the impact of removing the main A303 through movements on each junction.

Value of Time Savings

2.4.7 The above results have shown that there are reduced travel times due to the scheme for traffic on the route and at the affected junctions. These reductions in journey times have a monetised benefit which COBA calculates for each year within the 60 year appraisal period.

2.4.8 Value of time benefits are accumulated by each person in each vehicle. COBA uses 2002 as its base year for monetised values[1] and adjusts these by inflation and other factors over the appraisal period. As the scheme is scheduled to open in 2023, the appraisal period terminates in 2082. Table 10 shows the journey time benefits by flow group.

[1] WebTAG Unit 3.5.6D July 2012 does include values for economic appraisals which have yet to be fully implemented in COBA.

Time Period	Do Minimum	Do Something	Benefit
Weekday Overnight	1,315,002	1,270,552	44,450
Weekday Interpeak	3,377,099	3,123,433	253,666
Weekday Shoulder	3,291,956	2,813,456	478,500
Weekday Peak	2,231,907	1,762,222	469,685
Weekend Overnight	304,572	294,644	9,928
Weekend Quiet	1,198,570	1,129,311	69,259
Weekend Shoulder	729,085	623,564	105,521
Weekend Peak	625,729	491,324	134,405
TOTAL	**13,073,920**	**11,508,505**	**1,565,415**

Table 10: Journey Time Benefits – 60 years

(Note: Units are £000)

2.4.9 The main benefits are in the peak periods on weekdays. This is not a surprising result, as there are more weekday peak and shoulder peak hours in each year and therefore over the appraisal period.

2.4.10 However, when considering the contribution that each period makes to the benefits, the weekend peak periods are over-represented in the benefits. There are 144 extremely busy hours in the Weekend Peak periods – 1.6% of the year – but these hours account for 8.5% of the scheme benefit.

Value of vehicle operating cost savings

2.4.11 The introduction of the scheme in COBA also changes the average speed on each link for each vehicle type. These in turn impact upon the fuel used vehicle operating costs and other costs associated with operating vehicles. The scheme impact on operating costs is shown in Table 11.

Time Period	Do Minimum	Do Something	Benefit
Weekday Overnight	391,490	398,053	-6,564
Weekday Interpeak	841,141	855,286	-14,145
Weekday Shoulder	758,015	765,206	-7,191
Weekday Peak	450,860	452,780	-1,922
Weekend Overnight	86,507	88,009	-1,502
Weekend Quiet	332,453	338,814	-6,359
Weekend Shoulder	172,837	174,703	-1,868
Weekend Peak	124,022	124,407	-383
TOTAL	**3,157,322**	**3,197,256**	**-39,934**

Table 11: Vehicle Operating Cost Benefits – 60 years

(Note: Units are £000)

2.4.12 As Table 11 reveals, there is actually a vehicle operating cost disbenefit from the scheme, which is a function of most vehicle speeds increasing to less fuel efficient levels.

Accident benefits

2.4.13 Accident calculations are based on the observed rates being applied to the Do Minimum scheme and adjusted by the expected rates of decrease or increase. Do Something elements of the scheme have default accident rates applied, such that a new dual carriageway section will tend towards the annual average, whereas an existing section will retain its observed values. The summary of accidents and casualties is shown in Table 12.

	Severity	Do Minimum	Do Something	Difference
Accidents		20,031.3	18,224.7	1,806.6
Casualties	Fatal	547.6	396.6	151.0
	Serious	3,191.9	2,584.1	607.8
	Slight	28,323	26,440.1	1,882.9
Costs		901,988	740,129	161,859

Table 12: Accidents, Casualties and Benefits – 60 years

(Note: Units are £000 for costs and absolute values for accidents.)

2.4.14 Table 12 shows that the scheme has a significant positive impact on the number of accidents which is consistent with the network having a greater length of dual carriageway and fewer junctions.

Other traffic related benefits

2.4.15 There are two further benefits to consider. Firstly, the impacts of delays during construction of the scheme, and secondly the operating costs associated with public transport.

Greenhouse Gases

2.4.16 COBA provides an indication of the costs associated with the carbon emitted from use of the scheme in comparison to the costs associated with the Do Minimum. Due to the increase in fuel consumption the emissions benefit is **-£29,730,000** over the 60 year appraisal period.

Scheme Costs

2.4.17 In addition to the construction and land costs there are preparation and supervision costs. At the scheme is at Stage 1 in the Highways Agency Project Control Framework, COBA assumes 12% of the total construction and land cost as the preparation cost and 5% for supervision.

2.4.18 The scheme construction, preparation and supervision costs are adjusted by COBA to remove the impact of general inflation between the appraisal cost base year and the estimate year. The Retail Price Index in Quarter 2, 2011 was 238 and the average for 2002 was 176.2. Therefore, all construction and land costs are factored by 0.7403.

2.4.19 The actual values that COBA then applies the discount rate to are shown in Table 13 below.

Cost Element	Input	Deflated
Construction	£1,378,517	£1,020,565
Land	£78,031	£57,769
Preparation	£174,667	£131,533
Supervision	£72,792	£ 53,890
TOTAL	**£1,704,007**	**£1,263,757**

Table 13: Input Scheme Costs

(Note: Units are £000)

2.4.20 These costs are then allocated to a year in which they are spent and then discounted to the common price base year of 2002. The output of this process is a spending profile which sums to the total investment cost. Table 14 provides this information.

Year	Construction	Land	Preparation	Supervision	TOTAL
2013	£ -	£-	£ 14,772	£-	£ 14,772
2014	£ -	£-	£ 14,272	£-	£ 14,272
2015	£ -	£-	£ 13,790	£-	£ 13,790
2016	£ -	£ 8,616	£ 13,324	£-	£ 21,939
2017	£ -	£ 8,507	£ 12,873	£-	£ 21,380
2018	£ -	£ 8,401	£ 12,438	£-	£ 20,838
2019	£ 107,110	£ 8,360	£-	£ 6,009	£121,479
2020	£ 106,593	£-	£-	£ 5,805	£112,398
2021	£ 106,078	£-	£-	£ 5,609	£111,687
2022	£ 105,566	£-	£-	£ 5,419	£110,985
2023	£ 105,056	£-	£-	£ 5,236	£110,292
TOTAL	**£ 530,402**	**£33,884**	**£81,468**	**£28,078**	**£673,833**

Table 14: Scheme Out-turn Spend Profile

(Note: Units are £000 in 2002 prices, discounted to 2002.)

2.4.21 In addition to the costs associated with the scheme construction there are maintenance costs to be considered. COBA has default values of costs per kilometre of single carriageway and dual carriageway which have been applied within the model runs. More substantial maintenance has not been included at present.

2.4.22 The impact of maintenance is an increase in spending due to the additional dual carriageway within the network. Ultimately, a figure (discounted to 2002) of **£2,902,000** additional spending with the scheme compared to without has been calculated by COBA.

2.4.23 The total investment costs are therefore **£867,349,000** in 2002 prices discounted to 2002.

Market Price Corrections

2.4.24 The figures reported above are referred to as "resource costs" which means they do not include tax. For items such as fuel, this can be a considerable proportion of the "market price" – the price paid at point of purchase.

2.4.25 To address this omission, the final figures for the appraisal include an uplift of 20.9% to reflect general tax for items such as time, construction, land and maintenance costs. Fuel costs have a resource to market factor of approximately 3.5 – i.e. the resource cost is approximately 22% of the market price with tax representing the remainder. Accident costs do not have any adjustment to market prices.

Transport Economic Efficiency

2.4.26 The standard TEE table includes travel time and vehicle operating cost benefits.

Impact		TOTAL	Cars / LGVs	OGVs	PSVs
CONSUMER USER BENEFITS					
Travel time	1	897,285	882,714	-	14,571
Vehicle operating costs	2	-109,606	-109,606	-	-
Travel time and vehicle operating costs:					
During construction	3	-144	-	-	-
During maintenance	4	0	-	-	-
NET CONSUMER USER BENEFITS		787,535	773,108	-	14,571
BUSINESS USERS					
User Benefits					
Travel Time	5	1,043,577	610,434	427,555	5,588
Vehicle Operating costs	6	-73,507	-14,949	-58,558	-
TRAVEL TIME AND VEHICLE OPERATING COSTS					
During construction	7	-167	-	-	-
During maintenance	8	0	-	-	-
Subtotal		**969,903**	**595,485**	**368,997**	**5,588**
Private Sector Provider Impacts					
Operating Costs	9	-310	-	-	-310
OTHER BUSINESS IMPACTS					
Developer and other contributions		0			
NET BUSINESS IMPACT		969,593	595,485	368,997	5,278
TOTAL					
Present Value of Transport Economic Efficiency					
Benefits		1,757,128			

Table 15: TEE Table

(Note: Units are £000 discounted to 2002 prices
Travel time delays during construction have been identified as requiring further assessment but are included in the results so the costs are accounted for.
Private sector operating costs are impacts on the costs of operating PSVs.)

2.4.27 The figures reported previously in Table 10 are represented in rows 1 and 5 and adjusted by the 20.9% market price correction (as identified in paragraph 2.3.27 previously). The Table 11 results are represented in rows 2 and 6 and adjusted for tax to provide a much greater benefit than the resource cost would imply.

Public Accounts

2.4.28 The impact on public accounts is shown in Table 16 below. For the purposes of this study, it has been assumed that all funding will be provided by the public sector. However, the impact of contributions from the private sector will be explored during the next phase of the study.

Central Government Funding: Transport	
Operating costs	£3,443
Investment Costs	£814,644
Developer and Other Contributions	£0
NET IMPACT	£818,087
Central Government Funding: Non-Transport	
Indirect Tax Revenues	£-135,144
TOTALS	
Broad Transport Budget	£818,087
Wider Public Finances	£-135,144

Table 16: Public Accounts – assuming 100% Central Government Funding

(Note: Units are £000 discounted to 2002 prices)

2.4.29 The operating costs are those reported in paragraph 2.4.22 factored to market prices and the scheme costs are taken from Table 14 and adjusted to market prices.

2.4.30 The indirect tax value is the fuel tax revenue generated by the additional fuel consumed. Until April 2011 this figure was treated as a mechanism to offset the total scheme costs. However, it was deemed that although the tax revenue would arise from the scheme being implemented it was not reasonable to use it as an "income."

Analysis of Monetised Costs and Benefits

2.4.31 The final step in the process of considering the benefits and costs is to bring these together into the Analysis of Monetised Costs and Benefits table – or the AMCB. This is produced in Table 17 below.

Analysis of Monetised Costs and Benefits		
Noise	-	*See supplementary reports*
Local Air Quality	-	*See supplementary reports*
Greenhouse Gases	-£29,730	*Paragraph 3.7.1*
Journey Ambience	-	*Not assessed*
Accidents	£166,858	*Table 12*
Consumer Users	£787,535	*Table 15*
Business Users and Providers	£969,593	*Table 15*
Reliability	Moderate beneficial	*Not quantified*
Option Values	-	*Not assessed*
Present Value of Benefits (see notes) (PVB)	£1,889,256	-
Public Accounts	£818,087	Table 14
Present Value of Costs (see notes)(PVC)	£818,087	-
OVERALL IMPACTS	-	-
Net Present Value(NPV)	£1,071,169	*NPV=PVB-PVC*
Benefit to Cost Ratio (BCR)	2.31	*BCR=PVB/PVC*

Table 17: AMCB Table

(Note: This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.)

Units are £000 discounted to 2002 prices

2.5 Reliability

Importance

2.5.1 The reliability of the route has been identified as a key component of the justification to seek a scheme. The baseline report demonstrated that throughout the year, journey times between Amesbury and M5 Junction 29 experienced by users vary by about 45 minutes – from 90 minutes to 135 minutes.

2.5.2 The DfT recognises that although these differences in journey times are important, it is the variability which most users are adverse to and not necessarily the average journey time itself. For example, if a summer Saturday journey time between

Amesbury and Honiton always took 135 minutes then drivers could adapt their trip to accommodate that duration.

2.5.3 Where users of a route become frustrated is that the summer Saturday could take anywhere between 100 minutes and 170 minutes. It is a reduction in the variability that is a benefit – not simply the reduction in the average journey time.

2.5.4 Focussing on the single carriageway section of the A303 between the A344 and A360 the scale of the variation across the year can be easily isolated from the HATRIS data.

Westbound							
7:00 - 21:00	Minimum	Best 5%	Lower Q	Median	Upper Q	Worst 5%	Maximum
January	1.71	1.78	1.86	1.91	2.00	2.38	8.66
February	1.70	1.78	1.84	1.89	1.95	2.24	5.78
March	1.60	1.77	1.83	1.87	1.91	2.03	9.86
April	1.69	1.76	1.82	1.87	1.96	4.13	7.78
May	1.71	1.75	1.82	1.90	2.05	4.71	9.14
June	1.72	1.78	1.87	1.94	2.28	5.07	7.45
July	1.68	1.78	1.89	1.96	2.26	5.98	7.84
August	1.81	2.04	2.30	3.18	5.82	9.83	18.45
September	2.02	2.13	2.25	2.32	2.46	9.71	13.00
October	1.93	2.11	2.22	2.27	2.35	6.63	10.50
November	1.80	2.11	2.20	2.27	2.33	2.79	10.50
December	1.86	2.08	2.22	2.28	2.36	3.96	10.28
Average	1.77	1.91	2.01	2.14	2.48	4.95	9.94

Table 18: Journey Time Variability

(Note: Route section is 1.82 miles or 2.91 km in length.)
Units are minutes

2.5.5 As Table 18 shows, the inter-quartile range – the difference between the best 25% and worst 25% of journeys – is 0.14 minutes (8 seconds) from October to April. This means that a driver can be confident that the journey time will be 120 seconds ±4 seconds for 7 months of the year.

2.5.6 For the key summer months of July and August, the average journey time increases to 2.56 minutes but more importantly the difference between the best and worst 25% of journeys increases to 1.94 minutes.

2.5.7 Compounded over the whole route the inter-quartile range in autumn, winter and spring is 5 minutes whereas the August variation is 18 minutes.

Methodology

2.5.8 WebTAG Unit 3.5.7 recommends one of three methodologies can be applied to demonstrate the potential a highway scheme has to improve reliability. The first approach is only appropriate in urban areas and the second methodology is

appropriate for motorways and dual carriageways when additional lane capacity is being considered.

2.5.9 The third methodology, the stress based approach, acts as a proxy for measuring improvements in reliability by measuring the change in the ratio of AADT to the Congestion Reference Flow (CRF). The CRF is calculated using the formula below:

CRF = CAPACITY * NL * Wf * 100/PkF * 100/PkD * AADT/AAWT
Where:
Capacity = capacity of per lane;
NL = number of lanes
Wf = width factor
PkF = peak hour flow as a proportion of daily flow;
PkD = tidality
AADT = average annual daily traffic;
AAWT = average annual weekday traffic.
Source: TA46/97

2.5.10 The ratio of AADT to CRF is calculated and then factored by the volume of traffic which receives the change to produce a dimensionless value. The values are then grouped into the following categories:

- Values in excess of 3,000,000 will be assessed as Large Beneficial (for positive) or Adverse (for negative) and are characterised by large traffic flows receiving a large impact;
- Values between 1,000,000 and 2,999,999 will be assessed as Moderate Beneficial (for positive) or Adverse (for negative) and are characterised by moderate flow receiving a large impact or large flows with a relatively small change in stress;
- Values less than 1,000,000 will be assessed as Neutral and are characterised by moderate changes to moderate to low volumes of traffic.

2.5.11 This measure is limited, in that it does not take account of junction delay. Furthermore, it is only appropriate for single to dual carriageway changes as it would not show any change based on the other assumptions used for forecasts.

Results

2.5.12 For the assessment, two sections of single carriageway have been identified which the proposals will convert to dual carriageway:

- the A303 section between the A344 and A360; and
- the A358 section between the A303 and A378.

2.5.13 The calculations for CRF and stress are shown for each of these sections in Table 19 below.

	Link	PkH %	Capacity	NL	Wf	PkF	PkD	AADT	AAWT	CRF	Stress
DM	A344 - A360	5.51	1,297	1	0.998	10.075	60	25,299	26,173	20,711	122%
	A303 - A378	5.51	1,297	1	1.460	10.075	60	38,387	39,714	30,289	127%
DS	A344 - A360	5.51	1,990	2	1.000	10.075	60	25,299	26,173	63,637	40%
	A303 - A378	5.51	1,990	2	1.000	10.075	60	38,387	39,714	63,637	60%

Table 19: CRF and Stress

(Units: Capacity, AADT, AAWT = Vehicles;
Wf = correction factor for capacity to reflect the width of the carriageway.)

2.5.14 The calculation of the stress value for this assessment is shown in Table 20 below.

	A344 - A360	A303 - A378
Do Minimum Stress	122%	125%
Do Something Stress	75%	75%
Difference in Stress	47%	50%
Do Something AADT	25299	38387
Overall impact	1,192,908	1,919,352
Assessment	Moderate Beneficial	Moderate Beneficial

Table 20: Stress Impact

(Note: Maximum stress = 125%
Minimum stress = 75%)

2.5.15 The impact on reliability of changing the route from single carriageway to dual carriageway is **Moderate Beneficial**.

2.5.16 The outcome of moderate beneficial is primarily because the flows are relatively moderate, when taken as an annual average. However, the benefit would be greater when the flows are larger, such as during the holiday periods. Do Minimum stress is capped at 125% but Do Something stress is unlikely to be greater than the result shown. Therefore, with the greater traffic volume the beneficial impact of the scheme would be greater.

2.6 Conclusion

Scheme Impacts

2.6.1 The scheme has beneficial impacts in terms of reducing journey times for traffic and the number of accidents.

2.6.2 The scheme modelling shows that summer peak period journey times with the scheme would be about 5 minutes greater than weekday overnight journey times in 2023. The Do Minimum has a difference of approximately 30 minutes between the two modelled periods.

Value for Money

2.6.3 The TEE benefits calculated at this initial stage show the scheme provides value for money with a benefit to cost ratio (BCR) of 2.31. This value would be expected to increase when further details of wider traffic impacts are taken into consideration and greater scrutiny of the scheme costs is completed. Further, as this assessment assumes that the scheme is fully funded by government bodies and any contributions from private sector sources will have a significant positive impact on the BCR for government investment.

CHAPTER 3

WIDER ECONOMIC IMPACTS – METHODOLOGY AND APPROACH

3 WIDER ECONOMIC IMPACTS – METHODOLOGY AND APPROACH

3.1 Introduction

3.1.1 This chapter sets out the approach to evaluating and quantifying the WEI of the dualling scheme(s). A key theme discussed below 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 certain beneficiaries (such as Government, local businesses or tourism organisations).

3.1.2 By contrast, other economic impacts such as headline employment generation and GVA impacts can be quantified but not necessarily as a 'cashflow' that can be directly attributable to a particular beneficiary. These items are, however, reported in our analysis as they are robust indicators of economic impact.

3.1.3 It is also necessary to distinguish those impacts that are more likely to be realised within the A303, A358 and A30 corridor and those that will be realised in more distant locations, such as in those counties not directly linked to the A303/A358/A30.

3.1.4 The overall approach has been to take 'baseline' measures of economic performance in the region and then assess how these will change once the works have been completed. Where possible, all impacts have been quantified in monetary terms.

3.1.5 The approach taken, showing the inputs, model and outputs is shown in Figure 7. This includes the parallel work on transport economics which has been undertaken in line with traditional appraisal guidelines.

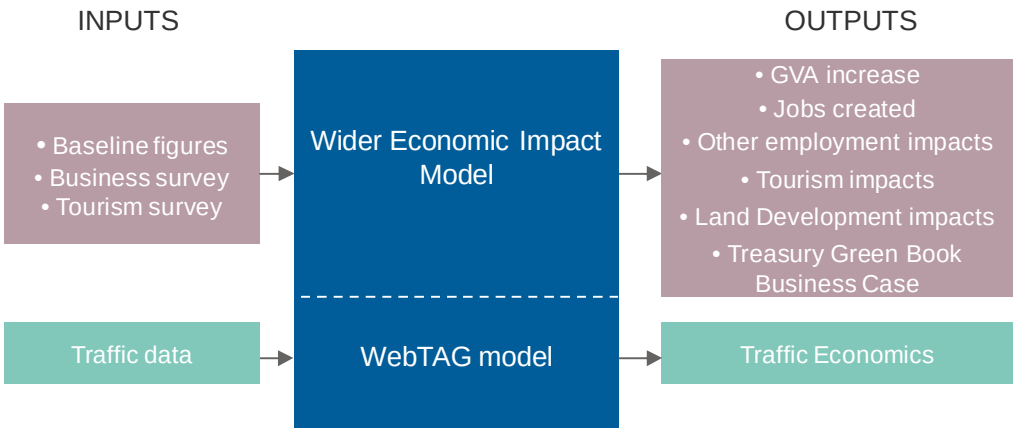


Figure 7: Approach to Wider Economic Impact Calculation

3.2 Types of Impacts

3.2.1 The different types of impacts analysed are as follows:

- *Economic output-related:* e.g. GVA by region;
- *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.

3.2.2 The impacts are disaggregated by geographical area where appropriate. The areas include the five main counties affected by the dualling programme (Somerset, Wiltshire, Dorset, Devon and Cornwall) as well as districts and other defined areas within the counties.

3.3 Background to Methodology Used

3.3.1 As discussed in the introductory chapter, we based our analysis on DfT guidance as contained with the WebTAG appraisal guidelines. We then augmented these by looking at the various ways in which the dualling scheme can result in positive cashflows during the appraisal period.

3.3.2 As well as independent research conducted on various measures of economic performance, the analysis was enhanced by the Business and Tourism surveys in the region (see Chapters 4 and 5). These surveys enabled us to obtain data on how businesses and visitors to the region would adjust the scale of their activities if the dualling schemes go ahead.

3.3.3 The results from the surveys also formed inputs to the calculation of wider economic impacts as several of the questions required the respondents to quantify the estimated impacts the dualled road(s) will have on their business activities and holidays. This is discussed in more detail below.

3.3.4 In terms of the approach adopted, DfT WebTAG Unit 2.8 covers "Wider Impacts and Regeneration" and was issued as recently as August 2012. The unit provides guidance on wider economic impacts, especially those concerning regeneration impacts and how these are to be considered in an economic appraisal. Other guidance from WebTAG covers specific elements of regeneration impacts and this guidance has also been followed.

3.3.5 Two key elements of the 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.

3.3.6 The DfT guidelines have been followed and adapted when developing the surveys and also when setting out the scope of the appraisal so that it suits the objectives of the study.

3.4 Modelling of Impacts

3.4.1 A model was developed to quantify the wider economic impacts of the A303/A358/A30 dualling scheme. It is based on the following approach and structure:

- The model is sub-divided into separate worksheets for 'Inputs', 'Calculations' and 'Outputs';
- The 'Inputs' worksheets contain all input assumptions, including assumptions covering the appraisal period and discount rates;
- The 'Inputs' worksheets also contain 'baseline' economic data such as the most up-to-date GVA data, employment data, tourism data and other statistics covering taxation, welfare payments and land values;
- In addition, selected results from the Business and Tourism surveys are incorporated within the 'Inputs' worksheets – these results provide key metrics that are used directly in the economic forecasting process;
- The 'Outputs' sheets show a 'baseline' economic impact across all categories as they would occur in the current year, 2012. The model then uses a series of background growth assumptions to factor these up to appropriate values that would be realised from scheme opening year onwards. The background growth assumptions used are discussed later in the chapter;
- The 'Output' worksheets also incorporate the discounting process that is common across DfT appraisals. This features:
  - A 60 year appraisal period (from the scheme opening date);
  - A discount rate of 3.5% applied to the first 30 years (from the current year, 2012);
  - A discount rate of 3% applied for the subsequent 30 years (from 2041);
  - All financial values discounted back to 2002, in line with standard appraisal practice.
- The final 'Output' worksheet reports the financial totals discounted back to values (taking account of the three proposed scheme opening dates).

3.4.2 The three opening dates that have been evaluated are 2017, 2022 and 2027.

3.4.3 These appraisal assumptions ensure that the WEI appraisal has the same evaluation basis as the separate 'transport cost benefit' appraisal.

3.5 Wider Economic Impacts – Calculation Approach

3.5.1 The approach used for calculating each type of impact is described below.

GVA Impacts

3.5.2 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.

3.5.3 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.

3.5.4 The data is available at the overall 'South West' 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.

3.5.5 For the analysis of wider economic impacts, it is the additional GVA over and above 'baseline' GVA that has been estimated. Baseline GVA refers to the GVA that will be generated if the dualling scheme does not go ahead.

3.5.6 The method for calculating additional GVA is based on the following process:

- 'Baseline' GVA data is that taken from the ONS database for each "NUTS 3" area – the most recent year for which comprehensive data by area is available is 2009;
- Given the absence of more recent data and to build in a degree of conservatism into the forecasts (as well as to allow for the impact of the recent economic downturn), the GVA values for 2009 have not been adjusted and the values reported for 'Base Year' 2012 are the same as those for 2009;
- The uplifts to GVA (see 3.5.8 and 3.5.9 below for a description of how these are calculated) are applied to the 'Base Year' GVA in each "NUTS 3" area;
- Going forward throughout the 60-year appraisal period, the additional GVA impacts are then increased based on the background growth assumptions; and
- Growth assumptions cover the period between 2012 and the three proposed scheme opening years as well as the longer term growth assumptions post-scheme opening.

3.5.7 The forecast uplift in GVA, in addition to predicted background growth, is based on the results of the Business Survey. In the survey, responding companies gave clear indications as to how much their turnover will increase in proportionate terms if the roads are fully dualled. The responses were provided in a series of quantified 'bands'.

3.5.8 Given that increases in turnover are closely linked to increases in economic activity, the estimated proportionate increases in turnover in each county were used as a proxy for increases in GVA. Going forward, the annual increases in GVA are based on analysis of historical GDP growth. Taking into account the impact of the economic slowdown, these forecasts are based on long-term historical trends.

3.5.9 Of the 467 businesses that responded to the 'increase in turnover' question, 230 (or 49%) were located in Somerset. Based on these responses, the estimated uplift in turnover was 4.5%. Estimates of uplifts were higher in other counties, but as the number of responses from other counties was lower (and to ensure that sufficient conservatism was built into the calculations) the uplift of 4.5% was applied to all 7 "NUTS 3" areas subject to the further adjustments described below.

3.5.10 The additional adjustments made to the GVA impact calculations take account of differing levels of impact across the South West. Of the 7 "NUTS 3" areas listed

below, for example, the full impact will only occur within those areas directly in the corridor (e.g. 'Wiltshire CC' and 'Somerset'). For the remaining areas, the impacts derived from the Business Survey are 'scaled' based on the following process:

- A series of scaling factors were derived from journey times between the core A303/A358/A30 corridor and other areas in the South West;
- Journey time data were analysed on the A303 corridor and for onward connections to the other NUTS 3-based areas in Devon, Dorset and Cornwall; and
- Using this data, the scaling factors were derived so that these reflect the proportionate increase in journey times for those trips involving onward travel from the corridor.

3.5.11 As a demonstration of this process and taking 'Cornwall and Isles of Scilly' as an example, the additional journey time to reach Truro (selected as the 'mid-point' within the county) is two hours. Given that it typically takes 90 minutes to drive the A303 corridor from Amesbury to Honiton, this additional journey times translates to a scaling factor of 42%. - applying this to the 4.5% uplift discussed above gives a revised uplift of 1.9% for Cornwall.

3.5.12 The factor of 42% is, in effect, a 'penalty' that is used to reduce the 4.5% uplift and is calculated by adding the additional journey time of 124 minutes to the 90 minute 'corridor' journey time. This is equivalent to a total journey time representing 237% of what it was previously. Dividing 100% by 237% gives the 42% scaling factor.

3.5.13 The output from this process is a series of increased GVA forecasts for each of the following "NUTS 3"-based areas in the region (note these are the areas within NUTS 3 classifications that are most applicable to the A303/A358/A30 analysis). The 'scaling factors' applied to the 4.5% uplift discussed above are also shown below for each NUTS 3 area:

- Wiltshire CC: 71%;
- Dorset CC: 58%;
- Somerset: 100%;
- Cornwall and Isles of Scilly: 42%;
- Plymouth: 55%;
- Torbay: 64%; and
- Devon CC: 64%.

3.5.14 Since the estimates of additional GVA cover an evaluation period of 60 years, the annual growth assumptions are based on analysis of historical economic growth data. This has been used as the basis for producing forecast annual GVA growth rates that are then applied to the additional GVA values in the 'Base Year', 2012.

3.5.15 Based on analysis of historical GDP data back to 1990 (regional GVA data was not collected and collated as far back as this year), long-term trend growth between Quarter 1 (Q1) 1990 and Quarter 2 (Q2) 2012 was 2.02% per annum. On the basis that this period covers both the "long boom" between 1992/93 and 2008 as well as the downturn from autumn 2008 onwards, this long-term trend has been used to increase the additional GVA each year.

3.5.16 There are several different types of impacts associated with the generation of additional GVA. These, together with the terminology used, are discussed below:

- "Additionality": this refers to the additional benefits associated with the scheme and has been described above in terms of the additional GVA generated over time;
- "Reference Case": this refers to the forecast of GVA over time that would take place if the scheme was not implemented;
- "Baseline": this refers to the starting position (in GVA terms) at the beginning of the appraisal period;
- "Deadweight": this refers to the quantification of GVA under the Reference Case;
- "Leakage": refers to the extent to which the additional benefits are accrued by those outside the target or 'regeneration' area;
- "Displacement": this refers to the proportion of scheme benefits accounted for by reductions in benefits elsewhere in the target area; and
- "Multiplier" effects: these refer to the additional economic activity generated by the spending of new employee incomes and local supplier purchases.

3.5.17 For the purposes of this analysis, we have focussed on the 'additionality' impacts associated with additional GVA as this is the primary indicator of how overall economic activity in the area will be increased due to the dualling scheme going ahead.

3.5.18 'Displacement' impacts are difficult to quantify to a necessary level of accuracy as there is no direct method of assessing how new employment generated in one firm (or sector) in the area displaces employment in other firms or sectors.

3.5.19 This impact is more likely to occur in a situation where there are constraints in the existing labour market and companies seeking to hire new employees will effectively have to attract people already employed in nearby firms.

3.5.20 Although the labour market in the South West has not been as badly hit as other regions in the UK, there does remain a sizeable and relatively skilled pool of available labour from which companies can source their employment requirements.

3.5.21 In addition, as has been shown, there is a diverse range of smaller, 'niche' companies within the South West, especially those in Somerset where smaller 'hi-tech' companies have expanded in recent years. These companies are likely to recruit new staff on a case-by-case basis and are unlikely to need to 'poach' staff from other firms as they expand further.

3.5.22 'Multiplier' effects have been used in the calculation of employment-related impacts. As described in more detail below, multipliers are used to calculate both 'indirect' and 'induced' employment impacts. The former refers to employment generated in 'supply' companies whilst the latter refers to new employment opportunities generated by the spending of increased disposable income in the region.

3.5.23 In addition to the above, it is important to emphasise that the additional GVA impacts described above refer to those across the whole of the South West region (as defined by the seven NUTS 3 areas described in 3.5.9).

Conservatism of GVA Impact Assumptions

3.5.24 To enhance the robustness of the GVA forecasts and to ensure that the potential impacts are not overestimated, several assumptions have been built into the estimates that counterbalance issues such as the relatively small survey sample size and elements of 'survey bias' that may exist (such as those firms who may be in favour of the scheme being those who predominantly responded to the survey).

3.5.25 These assumptions cover the following:

- The proportionate increase in turnover derived from the surveys is the lowest across all 5 counties (e.g. the 4.5% uplift, based on Somerset survey results);
- The most recent GVA data is from 2009 – given the uncertainty surrounding the economic situation, no real growth has been applied to GVA between 2009 and 'Base Year' 2012;
- There are no additional 'multiplier' impacts built into the additional GVA estimates (these would typically cover the GVA impact from increase in activity within supply companies and induced activity etc.); and
- The focus has been on the expansion of existing firms within the region – in reality, inward investment by new firms to the region would also boost economic activity and hence GVA.

Employment-Related Impacts

3.5.26 There are 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 specified 'regeneration area(s)'.

3.5.27 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 both the county and district levels. The data covers those in employment and those currently classified as unemployed (within the pool of those classified as 'economically active'). For the purposes of calculating the employment impacts, data at the more disaggregated district level was used.

3.5.28 Based on the survey results and the extent to which respondents stated how the turnover of their businesses would increase, we derived 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.

3.5.29 By adopting proportionate increases in turnover / employment based on the survey sample (467 businesses responded to the questions relating to increases in turnover), this has enabled us to quantify the typical impact of these increases across all the business sectors in the respective counties.

3.5.30 Similar to the GVA impacts described above, the percentage uplift adopted is the 4.5% identified from the businesses responding from Somerset. This is then adjusted further for each district according to the additional journey time between the main

A303/A358/A30 corridor and the mid-point of each district. The method adopted is the same as that used for the additional GVA impacts described above.

3.5.31 A summary of the 'scaling factors' adopted for each district in / adjacent to the 'corridor' (used to adjust the 4.5% impact) is given below:

- Salisbury: 50%;
- South Somerset: 100%;
- Taunton Deane: 100%;
- East Devon: 100%;
- West Wiltshire: 83%;
- Exeter: 78%;
- Mendip: 75%;
- North Dorset: 74%;
- West Dorset: 72%;
- Mid-Devon: 72%; and
- Sedgemoor: 68%.

3.5.32 In financial terms, the employment impacts are also expressed in terms of taxation gains to central Government, as well as 'welfare payment' savings when those who are currently unemployed then successfully find employment.

3.5.33 For taxation-related impacts, data was obtained from the NOMIS labour market database as well as personal taxation information from HMRC. For welfare payment-related impacts, data on Jobseekers' Allowances (JSA) was obtained directly from the JSA online database.

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

3.5.35 Additional economic benefits stemming from the increase in disposable incomes of new employees is discussed in a separate sub-section below.

Tourism-Related Impacts

3.5.36 For tourism-related impacts, these are given according to 1) total tourism-related expenditure in each county, 2) the number of employment opportunities these support and 3) the related financial impacts of employment in the sector (such as taxation impacts).

3.5.37 Detailed current tourism data (including expenditure data) was obtained from the South West Tourism Alliance. This data covers visitor numbers and visitor expenditure

by county and district level. The most recently available data when this EIS was undertaken was for 2010.

3.5.38 The results of the Online Tourism survey indicated the proportionate increase in visitor numbers that visitors themselves anticipate once the dualling works is complete. Similar to the approach adopted for GVA and employment-related impacts, the proportionate increase in visitor numbers was used to calculate the increase in visitors across the different counties.

3.5.39 Based on the increases in visitor numbers, subsequent increases in visitor spending in each county was calculated as well as the increases in employment that this expenditure will support.

3.5.40 Additional financial benefits include the taxation gains and welfare payment reductions accruing from generated employment in the tourism sector.

Land Use and Land Value Gain

3.5.41 To establish the extent to which dualling of the roads can have a positive impact on land development, land value gain and new employment opportunities, several discussions were conducted with land development agencies in the vicinity of the A303/A358/A30 corridor.

3.5.42 It is important to establish the range of impacts that could occur when the full dualling works are completed. These are summarised below and reflect the discussions held with various land agents:

- The existence of a full dual carriageway 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;
- The 'beneficiaries' of these financial impacts will be the 1) the private developers themselves 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 on the sites themselves will also accrue.

3.5.43 Although the passes through relatively rural, unpopulated areas (compared to, say, the M5 corridor that passes through or close to major urban areas), there is significant scope for new development to be attracted to the corridor and wider region on the basis of the significantly improved road corridor(s). For example, improvements on the A358 at Henlade could reasonably facilitate economic growth in Taunton. Other economic development programmes both within the A303/A358/A30 corridor and the wider area including the Exeter and East Devon Growth Point are also likely to benefit from the significantly improved road corridor(s).

3.5.44 As discussed later in this chapter, evidence from comparable 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 high quality transport links provided.

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

3.5.46 As potential sources of funding for the A303/A358/A30 improvements, the agents stated that each type of development has different characteristics. These are summarised below:

- 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' of the Town and Country Planning Act 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.

3.5.47 As examples of the potential for development in the A303/A358/A30 corridor, there are two business parks that are already built and are currently being marketed to prospective companies. These are:

- Minster Business Park – situated in Ilminster, Somerset (near the junction of the A303 and A358). This is a four acre business park that will comprise 54,000 square feet of B1, B2 & B8 employment floor space in a range of unit sizes; and
- Solstice Park - located adjacent to the A303 at Amesbury, Wiltshire. Solstice Park is a £250 million development on a 160 acre (65 hectare) site intended to become one of the largest mixed-use business parks in central southern England.

3.5.48 Salisbury District Council has designated Amesbury as its centre for employment growth and therefore Solstice Park will become the new commercial centre of South Wiltshire offering a wide range of property solutions for local, national and international organisations.

3.5.49 Several companies have already located to Solstice Park, including a specialist German optical equipment manufacturer, Robert Wiseman Dairies and Greggs.

3.5.50 Given the current economic climate, the continuing development of these business parks (and the attendant economic benefits this development will bring) will be greatly enhanced if the A303, A358 and A30 were fully dualled. 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.

3.5.51 As well as these business parks, other major developments are planned in the area and these will also benefit from improvements to the A303 and A358. In the case of the A358, for example, the proposed development at Monkton Heathfield near Taunton is scheduled to comprise up to 25 hectares of employment land.

3.5.52 Typical land uses at the site will be research and development (B1 b), light industrial (B1 c), general industrial (B2) and warehouse storage / distribution (B8). Depending on the split between these different land uses, potential employment is likely to total approximately 3,000 jobs and will take 10 years to achieve based on current predictions.

3.5.53 Although it is not possible to attribute the extent to which dualling the A358 will affect the scale and timing of this development, it is highly likely that the improvement of this strategically important link will boost the development potential of the new site, as well as any new employment sites east of the M5.

3.5.54 This is especially relevant in the context of the A358 as it serves long-distance traffic (including long-distance HGV traffic) on the key artery linking the major south coast ports, including Southampton, with points north of Somerset such as Bristol and the Avonmouth ports (as well as points further north, i.e. Gloucester).

3.5.55 The discussions with various agents and land development specialists also covered the typical observed 'land value gain' that would be achieved if significantly improved trunk road links are put in place.

3.5.56 The findings from this are as follows:

- There is no definitive value for land value gain as the characteristics of each particular development are different and it is difficult to attribute an increase in land value to specific infrastructure improvements;
- Despite this, there is evidence that land values increase when there is significantly improved access – this is based on evidence from land agents and developers indicating how, in their experience, land values increase in the area; and
- There is a wide range of potential land value gains with some uplifts likely to be very low.

3.5.57 Based on the above, the typical land value gain is in the order of £100,000 per acre. This is based, for example, on evidence in the Amesbury (Wiltshire) area, especially covering land developments at Solstice Park. The margin made on land sales in the Taunton area could also typically reach £100,000 per acre although there are several caveats to this, not least being the range of values that could apply in different circumstances.

3.5.58 This figure has been used as the basis for the WEI calculations. Other assumptions cover the following:

- The number and size of new developments that will be built in the corridor (a range of assumptions can be deployed here given the uncertainty surrounding future development);
- The timing and phasing of these developments; and
- Specification of typical numbers of employees per acre of new development (based on an assumed distribution of B1, B2 and B8 land uses).

3.5.59 These assumptions are incorporated within the calculations of wider economic impacts.

3.5.60 The 'wider economic impacts' derived from the above process are currently based on the financial gains from enhanced land values due to the road infrastructure

improvements. These impacts are based on 1) the profits made by local developers as the land is sold at a higher value and 2) the gains in Corporation Tax made by central Government on the basis of the higher profitability of land developers and agents.

3.5.61 Although not directly attributed in this analysis given the Government's current review of 'land taxation' funding mechanisms, processes such as 'Section 106' and CIL will be the typical means by which Government realises funds through land value increases. Other mechanisms that may be developed in the future include 'Tax Increment Funding' (TIF).

3.5.62 At this stage, the employment impacts of the new sites have not been included in the analysis as there is uncertainty as to how many of the new jobs can be directly attributed to the dualled roads and how many of the jobs will have been generated as a result of other factors.

Impacts from Increases in Disposable Income

3.5.63 Further economic impacts will also occur due to the increases in real disposable income of those who gain employment as a result of the roads being dualled.

3.5.64 In the WEI modelling, the calculation process is as follows:

- Real disposable income data was obtained from the Government's 'Neighbourhood Statistics' online database;
- To calculate the proportion of disposable income that is spent in the region, data was obtained from ONS showing what proportion of income in the South West is spent on various activities – this was then adjusted to reflect the proportion of income that would be spent (and thus retained) directly in the region;
- For the number of employment opportunities that the increases in real disposable income will support, data was obtained from NOMIS covering gross incomes in each respective county; and
- As well as 'direct' employment, 'indirect' and 'induced' employment multiplier data was obtained from the research work undertaken by the South West Tourism Alliance.

3.5.65 The outputs from this process comprise three distinct revenue streams / benefits:

- 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.

3.6 Transport Related Benefits (Non-Quantified)

3.6.1 Although the economic impacts have been quantified where possible, there are some impacts related to the transport system that are not directly quantifiable. These are discussed here.

3.6.2 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 dualling scheme(s). These are discussed below.

Improved Connectivity

3.6.3 By dualling the A303, A358 and A30 throughout, connectivity to / from the region will be greatly enhanced and 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.

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

- 'Actual' transport benefits – these refer to the connectivity enhancements associated with actual reductions in journey times between specified points on the dualled road(s); and
- 'Perceived' transport benefits – as well as the directly measurable journey time savings and other transport benefits, the perceptions of improved connectivity will greatly support economic development in the region as both existing and new businesses will view the region as being far more accessible when a fully dualled road is provided.

3.6.5 The perception of a more accessible region made possible through better transport links is an important factor when assessing wider economic impacts. In the case of both the A303 and the A358 and A30, 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, however, there is strong evidence that improved connectivity will boost economic activity.

Improved Reliability

3.6.6 Given that various 'bottlenecks' exist on the A303, A358 and A30, journeys on the roads are subject to variable levels of reliability. This applies to both journey times as well as the general 'journey experience' of drivers.

3.6.7 Based on the traffic analysis undertaken on the road, 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.

3.6.8 By dualling the roads throughout, there will be a step-change in reliability as drivers will be able to plan their journeys with confidence as the availability of two lanes in each direction will greatly reduce the build-up of congestion and delays that are common on single carriageway roads.

3.6.9 In addition to the above, varying types of vehicles currently use the A303/A358/A30. These include vehicles ranging from slow-moving farming and agricultural vehicles through to much faster small commercial vehicles and cars.

3.6.10 On the sections of road where there is only single carriageway, the differential speeds between these vehicles frequently reduce overall reliability by imposing unforeseen delays and congestion.

3.6.11 By dualling the roads, the subsequent improved reliability will be another factor adding to the perceived benefits of the scheme. Also, by improving journey time reliability, the generation of the benefits associated with the scheme are far more likely to be

achieved as the overall perceived quality of the roads as major transportation links to / from the region will be enhanced.

Improved Resilience

3.6.12 Once the dualling programme is complete, the road(s) will be far more 'resilient' during the following:

- Times of inclement weather;
- Occasions when unforeseen road works are required (the additional lanes 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, such as on the M5 corridor.

3.6.13 The availability of two carriageways in each direction will thus improve overall resilience to unforeseen events and will therefore add to the 'perceived' benefits of the scheme.

3.6.14 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 dualling programme.

3.6.15 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.

3.6.16 Resilience issues were discussed with key stakeholders at the project workshops. Some of the key points raised are summarised below.

- Dualling the A358 will not help provide alternative routes to Devon and Cornwall in the event that there is a problem on the M5, and as such improvement to the A303/A30 Ilminster to Exeter should also be considered;
- Currently if the M5 is closed, mobile small business are badly affected (e.g. florists, hairdressers and builders). If they are not on time for appointments they can lose those appointments and future work from the same customers. This makes it "trebly frustrating";
- There are a limited number of routes to Devon and Cornwall. "There is no point having the South Devon Link Road if you can't get to it because the M5 or A303 is shut";
- "Businesses seem to be unwilling to invest further west than Swindon due to the lack of a second route into the South West"; and
- Brittany Ferries has seen a reduction in business activity from Plymouth in recent years, put down to poor accessibility of the port compared with other ports. This is despite faster journey times to Spain from Plymouth compared with Portsmouth.

3.7 Evidence from Other Projects / Other Corridors

3.7.1 Evidence from similar road corridors has also been reviewed and analysed. The objective here has been to identify those schemes that are broadly similar to the A303/A358/A30 dualling schemes and to review the extent to which these improvements boosted job creation and other economic impacts in the region.

3.7.2 Similarly, there is evidence that the M5 corridor in the region has benefited from inward investment for business parks & associated land uses. Based on discussions with property consultants & developers in the area, for example, evidence of how other schemes and corridors have experienced economic growth has been identified.

The A55 Corridor in North Wales

3.7.3 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.

3.7.4 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. Bearing certain similarities to the A303 in the South West, the A55 is strategically important for both businesses and tourism throughout North Wales.

3.7.5 The importance of tourism to the North Wales economy is evident in the "Tourism Strategy for North Wales 2010 – 2015" which identifies that the sector brings in £1.8 billion of income to the region each year and supports over 37,000 jobs in the region. The Tourism Strategy also states that one of the distinctive strengths of the region is the relative ease of access to the North Wales coast facilitated by the A55 corridor. As the Strategy notes, this is one of the key messages to promote when marketing the region to the tourism sector.

3.7.6 Also similar to the A303/A358/A30 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.

3.7.7 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 display similarities to those observed today on the A303/A358/A30 where delays and congestion are commonplace during the busy holiday period.

3.7.8 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.

3.7.9 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). Widely regarded as the premier business park in North Wales, the site provides in excess of 800,000 square feet of high-tech office and business space. Major occupiers include:

- The Welsh Assembly Government;
- NHS Trust;
- North Wales Police;

- The RNLI;
- North Wales Fire Services and
- Pilkington Glass.

3.7.10 As well as the main 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. The overall New Vision Business Park will cover 4 hectares (10 acres) and will extend to approximately 120,000 square feet of high quality business space.

3.7.11 Similarly, Carlton Court within the St Asaph site is the next phase of speculative office development at the Business Park and comprises 51,000 square feet of 'B1' office development.

3.7.12 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.

3.7.13 North Wales Business Park is recognised as offering a high quality environment for businesses wishing to relocate and expand into modern high specification offices and has already attracted nationally recognised companies as well as providing growth opportunities to companies already based in North Wales.

3.7.14 Current companies at the site include:

- Worldspan International Plc;
- National Farmers Union Insurance;
- PSS;
- British Red Cross;
- Intellection UK;
- ROMER Labs UK Ltd;
- Southern Care Group;
- Spire Health Care;
- Merrall-Ross International Ltd; and
- Gwrych Medical Centre.

3.7.15 What is apparent from analysis of these business parks in the coastal region is the extent to which they are marketed on the basis of the excellent transport links facilitated by the fully dualled A55. 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.

3.7.16 Had the dualling works not been undertaken and 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.

3.7.17 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.

3.7.18 Although the A55 corridor does not have a nearby alternative access corridor such as the M5 in the South West, there are nevertheless certain similarities between the A55 and the A303/A358/A30. The evidence from the A55 strongly suggests that a local economy that is heavily dependent on tourism, inward investment and above all, the need for good connectivity with neighbouring regions, will benefit from the presence of a fully dualled trunk road.

3.7.19 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.

M5 Corridor in Somerset and Devon

3.7.20 The M5 is one of the South West region's principal transport corridors and similar to the A55 corridor in North Wales, has witnessed extensive development adjacent to the corridor in recent years. The advantages in terms of connectivity, journey reliability and journey resilience are clear from the number of business parks that have been developed or are in the process of being developed adjacent to the motorway.

3.7.21 These include the Blackbrook Business Park near Taunton. Situated directly off Junction 25 of the M5 (and 2 miles from Taunton town centre), the business park is widely acknowledged as the prime business park in the area and is home to a variety of corporate businesses and public sector organisations. These include companies and organisations as diverse as Clarke Willmott (legal), Somerset Waste Partnership, NatWest and the Strategic Health Authority. At the present time, there are 18 such major organisations at the business park.

3.7.22 Blackbrook comprises a wide range of accommodation from individual office suites of 5,000 square feet to bespoke buildings of up to 35,000 square feet. Buildings are offered with a choice of freehold ownership or occupational leases. In addition to these facilities, there are several other facilities, including various leisure and retail outlets.

3.7.23 The proximity of the M5 has been a major factor in the site's development and there is no doubt that the business park would not have developed to the same extent had the motorway not been located nearby.

3.7.24 Although the M5 passes through what can be termed more of an 'urbanised' area compared to the A303/A358/A30 (the latter passes through largely rural areas), there is nevertheless considerable scope for a fully dualled A303 (and A358) to attract inward investment in the form of new business parks and associated land development. Based on discussions with land development agencies in the area, these business parks are likely to be totally new developments in the area and will therefore not displace similar investments elsewhere.

3.7.25 Other examples in the M5 corridor include Exeter Business Park and proposals for a Science Park located just off Junction 29 of the M5.

CHAPTER 4

ECONOMIC BASELINE

4 ECONOMIC BASELINE

4.1 Introduction

4.1.1 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 chapter includes 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 previous reports which have been produced about the corridor. NOMIS provides official and up to date labour market statistics from the ONS.

4.1.2 This chapter focuses on selected aspects of the economic baseline. Following a review of the policy context, it covers each of the areas which are addressed in the wider economic impacts model: economic output; employment; tourism; land use and development and other economic characteristics.

4.1.3 The A303 corridor is defined as a Functional Economic Market Area (FEMA) within the South West England Regional Economic Strategy (RES) 2006-2015. This is shown in Figure 8.

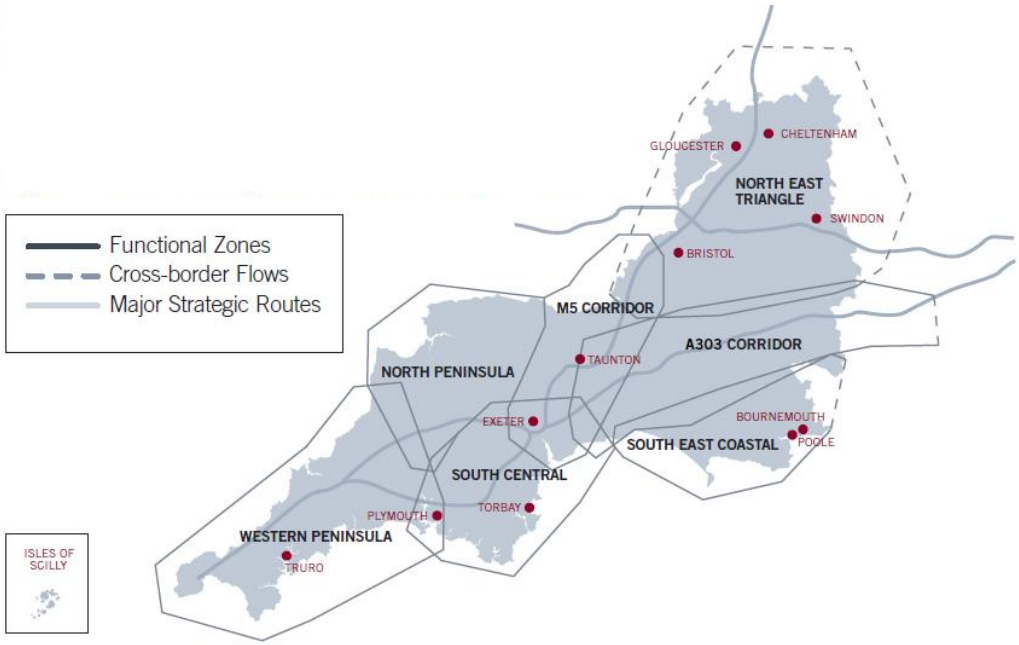


Figure 8: South West Functional Economic Areas (South West RES)

4.1.4 The A303 corridor FEMA is not a particularly distinct or economically coherent zone in its own right, with its defining feature being the A303 and activity in key market towns along the route. Employment in the knowledge economy is higher in the east of the zone than in the west. Some priority sectors in the zone include advanced engineering, food and drink, biotechnology and environmental technology. Advanced manufacturing, primary industries and traditional manufacturing also stand out as key sectors in the zone. The A303 corridor zone represents 7% of regional GVA, employee jobs and population. The two strategic settlements of Yeovil and Salisbury account for 26% of residents yet 39% of jobs in the zone.

4.1.5 The study area covers a number of different counties, and as such there is not one single set of data which can be used. The data in the sections which follow covers the counties of Somerset, Wiltshire, Devon, Dorset and Cornwall, as these are all relevant to the corridor. Although the A303/A358/A30 does not pass through Cornwall, and only passes through a small part of Dorset, it is important for travel to and from these counties.

4.1.6 The remainder of this chapter provides the economic context for the South West region, which is much wider than the immediate study area. In the economic modelling, a distinction is made between areas in close proximity to the corridor or which are heavily dependent on it and will therefore receive large benefits from the scheme, and those which are further away and will realise a lower level of quantifiable benefit.

4.2 Economic and Policy Context

4.2.1 The Economics Story (South West RDA, 2011) notes that overall, the South West Economy performs as well, or better, than most parts of the UK, but lags behind the 'leaders'. In some ways, it is like the greater South East, but in others it is more in line with more peripheral UK areas. This document also notes that parts of the South West economy are good at creating jobs, but the workforce is less productive than it could be.

4.2.2 Over the past 5 years, there has been relatively strong economic growth in the South West, accompanied by population growth. The South West population has increased from 5.09m people in 2005 to 5.27m in 2010. This is an increase of almost 183,000 people over the 5 years (an average of approximately 36,500 per year).

4.2.3 National Statistics data identifies that population density has increased every year between 2005 and 2010, except 2009. This density has increased from 213 people per square kilometre up to 221 people per square kilometre. Since 2008 and the subsequent recession, data indicates that the South West economy did not suffer as sharp a decline as the rest of the UK economy, identifying that the South West as a whole had a slightly higher resilience to the economic recession.

4.2.4 More recent economic data as compiled by the South West Observatory (SWO) in their publication "The Changing State of the South West 2012" shows that there are considerable differences in economic activity and performance by area within the region.

4.2.5 As an example, GVA per head data (for 2009, the latest year in which data is available from the ONS) indicates considerable variations across the region. Bristol and Swindon (both in the 'M4 corridor') have relatively high GVA per head totals compared to those in other parts of the region. In addition, both Bristol and Swindon have GVA per head totals (£25,000 and £27,000 respectively) significantly above the national average.

4.2.6 By contrast, GVA per head is significantly lower in the counties and areas served by the A303 with Wiltshire (£17,000), Dorset (£15,000), Somerset (£16,000) and Devon (£16,000) all demonstrating totals lower than the national average (approximately £19,000).

Regional Economic Strategy and Evidence Base

4.2.7 The South West RES 2006 – 2015 provides a shared vision for the development of the region's economy as well as sustainable development. Although the regional governance arrangements across the UK that were in place at the time of the RES have now been replaced by Local Enterprise Partnerships (LEPs), this remains the most current economic strategy document.

4.2.8 To achieve the vision, it is identified as a priority that "the region ensures better connections with markets and ideas within the region and beyond".

4.2.9 One of the eleven headline economic priorities is to improve transport networks and to create an 'effective' and 'confident' region. Journey times from parts of the region to major markets are identified as representing a *"significant brake on productivity".* In addition, congestion remains a problem in urban centres.

4.2.10 Connectivity, particularly the reliability and resilience of access to major markets such as London and the South East, is recognised as an essential component of supporting a successful economy. This is said to be particularly important in the South West which faces challenges because of its geographical context and peripheral nature.

4.2.11 The RES notes that *"our cities and towns cannot realise their economic potential and accommodate the projected population growth without better transport networks."* The RES identified the importance of managing demand alongside increasing capacity. Improving the region's transport network is one of the priorities for improving strategic communications infrastructure to support business need. Lobbying for improvements to the strategic A30/A303 corridor and A358 link is listed as a potential measure to deliver this, along with other schemes such as improvements to the Waterloo to Exeter rail line. Wider measures are also highlighted including improving broadband access and developing a regional image campaign.

Eddington Transport Study

4.2.12 The Eddington Transport Study (2006) looked at transport across the UK and concluded that *"a comprehensive and high-performing transport system is an important enabler of sustained economic prosperity."*

4.2.13 The report identifies the importance of the existing transport network, as well as current constraints. It also identified that the UK network supports 61 billion journeys a year. It notes travel demand is growing rapidly and is concentrated on certain parts of the network at certain times of day. The key findings and recommendations of the report identify that the Government should prioritise improvement on parts of the network that are critical in supporting economic growth, and there are clear signs that these networks are not performing. In line with survey results summarised later in this report, the A303 is considered to be a critical part of the network in the South West.

4.2.14 Other relevant recommendations from the Eddington Study are:

- Transport policy should prioritise congested and growing urban areas, key inter-urban corridors and key international gateways to focus on the most economically significant parts of the network. These should be the focus because they are heavily used, of growing economic importance and showing signs of congestion and unreliability; and

- Policies should prioritise strategic economic priorities by considering the range of modal options available that provide robust environmental and social cost benefits.

4.3 Economic Output – Gross Value Added and Economic Composition

Gross Value Added – Totals and Growth

4.3.1 GVA is the grand total of all revenues, from final sales and (net) subsidies, which are incomes into businesses. These incomes are then used to cover expenses (wages & salaries, dividends), savings (profits, depreciation), and (indirect) taxes. As the total aggregates of taxes on products and subsidies on products are only available at whole UK economy level, GVA is used for measuring gross regional domestic product and other measures of the output of entities smaller than a whole economy (for this study, these 'entities' are the individual counties affected by the route).

4.3.2 GVA trends for the South West since 1989 have been in line with wider UK patterns (see Figure 9), showing a gradual increase, with a decrease since 2008 as a result of the economic recession (Regional Indicators, BIS, 2011).

4.3.3 Total GVA for the South West in 2010 was £98.46m, an increase of 3.5% since 2009. This represents 7.7% of the UK total. GVA per head in the South West in 2010 was £18,669, an increase of 2.7% since 2009. This is 91.2% of the UK average, showing the region performs below average. Cornwall and the Isles of Scilly have the second lowest GVA per head of the UK sub-regions (£13,129 per head, 2009) (Regional Indicators, BIS, 2011).

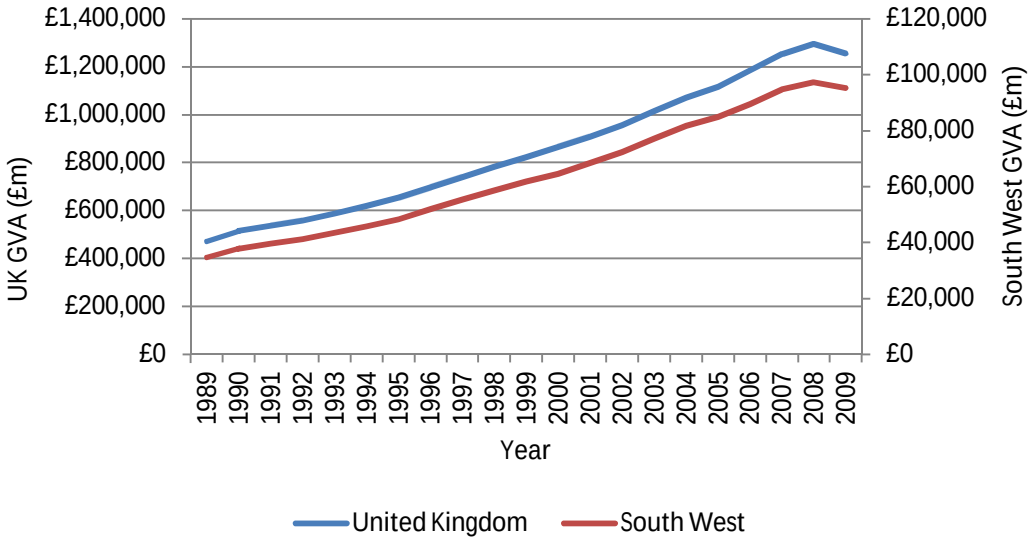


Figure 9: GVA growth in the South West and UK, 1989 to 2009 (Source: Regional Indicators, BIS, 2011)

GVA Per Head

4.3.4 Total GVA and GVA per head for 2009 for each of the areas in the South West are shown in the table below. GVA per head is highest in the cities of Swindon, Bristol, Bournemouth, Poole and Bath. The GVA per hour worked is 92.2% of the UK average (Regional GVA, ONS, 2011).

4.3.5 The key areas for the A303/A358/A30 are Wiltshire, Somerset and Devon. It should be noted that those areas which are reliant on the A303/A358/A30 as a link to London and the South East (i.e. Dorset, Somerset, Cornwall, Devon, Torbay and Plymouth), and which are more rural than other areas, all have GVA per head below the regional and UK average as shown in Table 21: GVA in the South West (2009) (Regional GVA, ONS, 2011). Rows in plain text are "NUTS2" level results and those in *italics* are more detailed, "NUTS3" level results.

Area	TOTAL GVA (£m, 2009)	TOTAL GVA (%, 2009)	GVA per head (£, 2009)
Gloucestershire, Wiltshire, Bath & Bristol	£49,081	51.6%	£21,099
City of Bristol	*£10,921*	*11.5%*	*£25,216*
Bath, North East & North Somerset	*£13,240*	*13,9%*	*£20,399*
Gloucestershire	*£11,452*	*12%*	*£19,438*
Swindon	*£5,490*	*5.8%*	*£27,616*
Wiltshire CC	*£7,978*	*8.4%*	*£17,492*
Dorset and Somerset	£21,004	22.1%	£17,026
Bournemouth and Poole	*£6,473*	*6.8%*	*£21,142*
Dorset CC	*£6,163*	*6.5%*	*£15,252*
Somerset	*£8,369*	*8.8%*	*£15,988*
Cornwall & Isles of Scilly	£7,001	7.4%	£13,129
Cornwall & Isles of Scilly	*£7,001*	*7.4%*	*£13,129*
Devon	£18,036	19%	£15,848
Plymouth	*£4,148*	*4.4%*	*£16,197*
Torbay	*£1,712*	*1.8%*	*£12,777*
Devon CC	*£12,167*	*12.8%*	*£16,279*
South West	**£95,123**	**100%**	**£18,184**
UK	**£1,256,932**	**7.7%**	**£20,341**

Table 21: GVA in the South West (2009) (Regional GVA, ONS, 2011)

GVA by Business Sectors

4.3.6 Table 22 below shows GVA by sector across the whole of the South West. The dominant sectors are production, distribution and public administration. There are low levels of GVA arising from agriculture, other services and information and communication.

Sector	GVA (£m, 2009)	GVA (%, 2009)
Agriculture, forestry and fishing	£1,169	1.2%
Production	£15,007	15.8%
Construction	£6,934	7.3%
Distribution, transport, accommodation & food	£18,104	19%
Information and communication	£4,338	4.6%
Financial and insurance activities	£7,665	8.1%
Real estate activities	£8,129	8.5%
Business services	£9,226	9.7%
Public administration, education and health	£18,231	19.2%
Other services and household activities	£3,346	3.5%
TOTAL	**£95,124**	**100%**

Table 22: GVA in the South West by sector (2009) (Source: Regional GVA, ONS, 2011)

4.3.7 In 2009, the South West had a slightly higher proportion of workplace GVA from high and medium technology industries (1.3%, compared to a UK average of 1.2%). A slightly higher percentage of the workforce is employed in these industries (3.5% compared to 3.2% in the UK). Expenditure on Research and Development is 2.1% of total workplace spend (Regional GVA, ONS, 2011).

4.3.8 Table 23 below shows the number of businesses in each sector. The largest number of companies are in construction (F) and professional, scientific and technical services (M), followed by relatively large numbers of companies in the wholesale, retail and motor vehicle repair (G), administrative and support services (N) and human health and social work (Q).

Sector	TOTAL no of businesses
A: Agriculture, forestry and fishing	12,915
B, D, E: Mining, quarrying, electricity, gas, sewerage etc	1,490
C: Manufacturing	33,965
F: Construction	145,245
G: Wholesale, retail and motor vehicle repair	68,280
H: Transport and storage	29,405
I: Accommodation and food services	19,375
J: Information and communication	60,650
K: Financial and insurance	14,135
L: Real estate	14,135
M: Professional, scientific and technical	113,980
N: Administrative and support services	63,350
P: Education	40,435
Q: Human health and social work	63,420
R: Arts, entertainment and recreation	26,775
S: Other service activities	37,750
TOTAL	**745,305**

Table 23: Number of businesses in South West by sector (Source: Business population estimates for UK and Regions, BIS, 2011)

Business Performance and Investment

4.3.9 The economy of the South West is showing mixed signs of economic recovery. 42% of businesses in the South West report their volume of activity or output to be higher in April 2012 than April 2011. However, 32% report it has stayed the same, and 22% report a decline in activity or output (English Business Survey, 2012).

4.3.10 34% of businesses in the South West made new capital investment between February and April 2012. This is slightly higher than the national score of 30%. 29% planned to make new capital investment between May and July 2012, compared to the national score of 27% (English Business Survey, 2012).

4.4 Employment Characteristics

Employment and Economic Activity

4.4.1 The Labour Force Survey (2012) shows that of the 3.27m people aged 16-64 in the South West, 78.3% are economically active (73.5% are employed), 6.1% are unemployed and 21.7% are economically inactive. The economic activity and employment rates have remained relatively stable over the last two years, with a small recent reduction in unemployment (from 6.8% in Dec-Feb 2012 to 6.1% in Mar-May 2012). This is a slightly better performance than the UK average, which shows an economic activity rate of 77% and an unemployment rate of 8.3%.

4.4.2 Of people employed in the South West, 83% are in the private sector, compared to 17% in the public sector. This is similar to the UK-wide split of 81% private sector, 19% public sector (Private Sector Employment Survey, BIS, Q1 2012).

4.4.3 The Private Sector Employment Survey (BIS, 2012) shows employment trends between 2008 ands Q1 2012. Over the recessionary period of 2008-9, the South West economy lost 85,000 jobs, taking overall employment down to 2005 levels. Unemployment has increased by 63,000 from 673,000 in Q1 2008 to 736,000 in Q1 2012.

4.4.4 Public sector employment has been declining from a peak of 555,000 jobs at the end of 2009. Since then employment has fallen to 491,000 in Q1 2012. Private sector employment over the same period has declined from a peak of 2.05m jobs in Q2 2008 to a low of 1.93m in Q3 2009. This has since increased and fluctuated at around 2m jobs. These trends, along with corresponding figures for unemployment and economic inactivity are shown in Figure 10 (Private Sector Employment Survey, BIS, Q1 2012).

4.4.5 The South West has experienced the largest absolute and relative declines in pubic sector employment of any region (excluding London). The majority of jobs lost in 2010-2011 were in Local Authorities, with over half of these in Devon, Plymouth and Torbay (6,000) (Private Sector Employment Survey, BIS, Q1 2012).

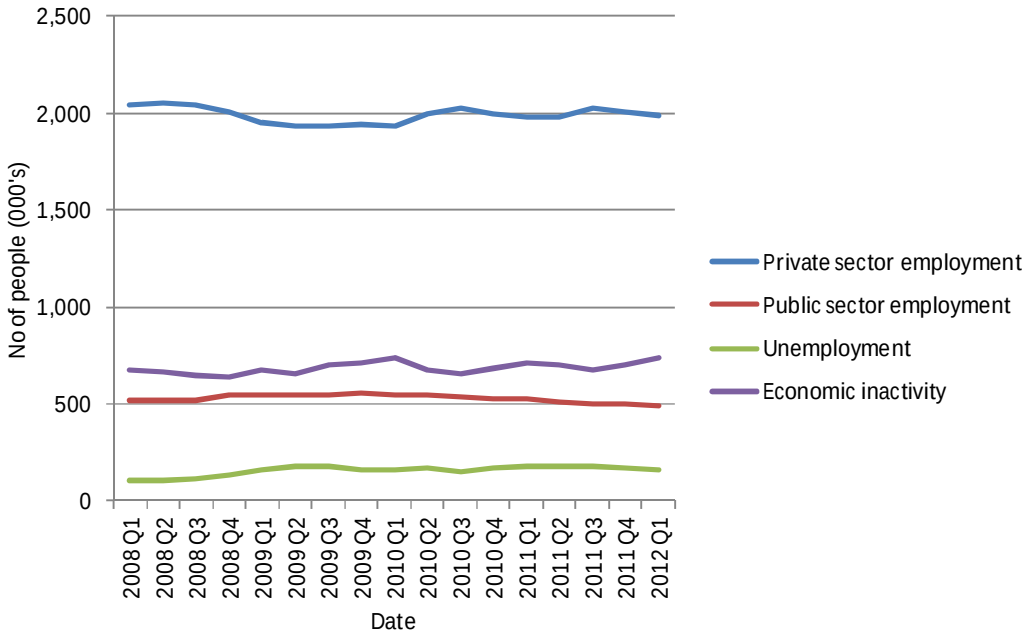


Figure 10: Public and private sector employment, unemployment and economic inactivity in the South West 2008 – 2012 (Source: Private Sector Employment Survey, BIS, 2012)

Salary and Disposable Income

4.4.6 Figure 11 shows the average salary earned by County across the South West and trends over time. In 2011 the average salary in the South West was £29,000, lower than the UK average of £32,827. For all the counties in the study area wages are below the South West average, ranging from a low of £25,126 in Cornwall to £28,850 in Wiltshire (NOMIS, 2012).

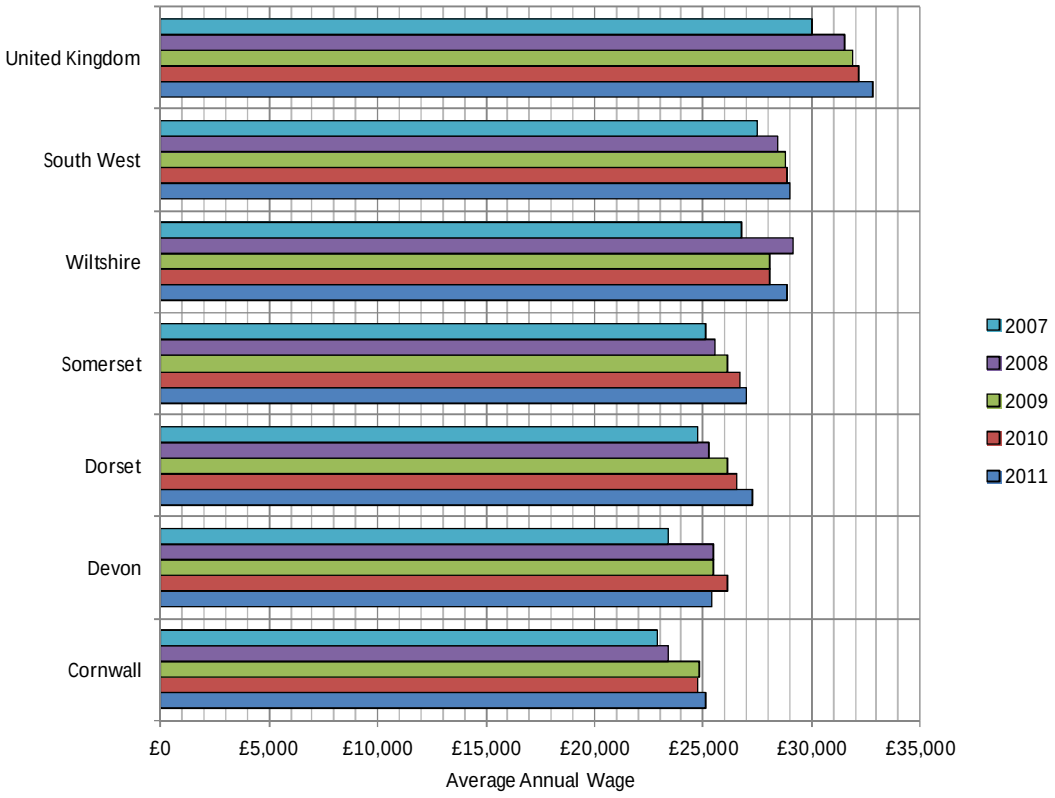


Figure 11: Average annual wages in South West by County (Source: NOMIS, 2012)

4.4.7 Average household disposable income in the South West in 2009 was £15,140 per person, only slightly below the UK average of £15,350 (BIS Regional Indicators, 2011).

Skill Levels

4.4.8 Skills levels in the South West are generally better than the UK average (see Table 24). The South West has fewer people with no qualifications than the UK average and has higher levels of people at each skill level than the UK average.

Level	UK average	South West
No qualifications	9%	5.4%
NFQ Level 2 and above	77.2%	80.4%
NFQ Level 3 and above	58.2%	60.1%
NFQ Level 4 and above	37.2%	37.6%

Table 24: Level of qualifications in South West for population aged 19-64 compared to UK average (Source: Regional Indicators, BIS, 2011)

4.4.9 53.1% of 19 year olds are educated to Level 3 or higher, compared to 47.1% across the UK in 2010. 3% of the population are claiming Job Seekers Allowance, compared to 4.5% in the UK as a whole (BIS, regional indicators, March 2011). Of these 9.2% have been claiming over 12 months or more, below the UK average of 14.6%.

Employment by Business Size and Sector

4.4.10 The ONS 2011 bulletin identifies that there were 1.5m full-time employees, 808,000 part-time employees and 195,000 self employed workers in the South West Region in 2010.

4.4.11 Table 25 below shows the percentage of businesses, people employed and turnover by size of business. Businesses in the South West are largely Small and Medium Sized Enterprises (SMEs), with 73.7% having no employees and a further 25.6% having fewer than 50.

	TOTAL	No employees	1-49	50-259	Over 250
No of businesses	427,125	73.7%	25.6%	0.6%	0.1%
Employment	1,770,000	19.9%	38%	12.9%	29.1%
Turnover (£m)	£164,876m	9.4%	34.6%	13.8%	42.3%

Table 25: Percentage of businesses, employment and turnover by size of businesses in South West (Source: Business Population Estimates for the UK and Regions, BIS, 2011)

4.4.12 Figure 12 below shows more detail on the size of different businesses in the South West and their numbers, percentages of employees, and percentage of turnover. Businesses with no employees are those which are sole proprietors, partnerships with only a self-employed owner-manager and companies with only an employee director.

4.4.13 There are over 565,000 businesses with no employees, and only 500 with 250-499 employees and 505 with over 500 employees. However, most people (1.18m) are employed in companies with over 500 employees. The second largest percentage of employees however is in those businesses with no employees (613,000 people). The large businesses with over 500 employees contribute to the largest turnover in the South West, with a relatively consistent distribution amongst businesses of other sizes.

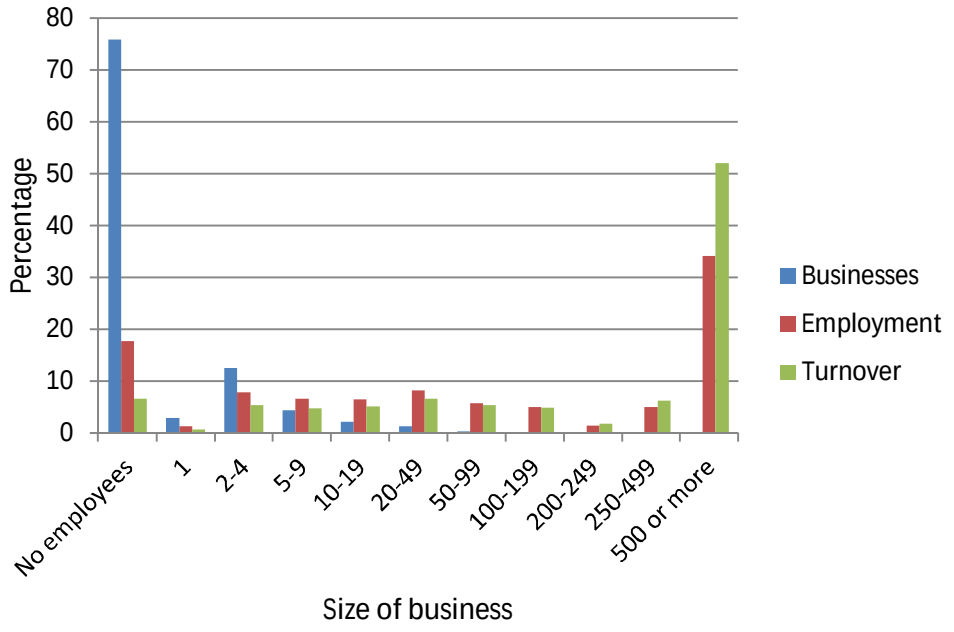


Figure 12: Number and size of businesses in South West by employees and turnover (Source: Business Population Estimates for the UK and Regions, BIS, 2011)

4.4.14 The South West's existing employment breakdown by sector is shown in Table 26, along with the number of businesses by business size for different sectors. The largest number of businesses are those in the construction sector, and this is also the sector which employs the largest number of people. The majority of these are in small businesses with 1-9 employees. The largest firms with over 100 employees cover the arts, education and recreation (R), manufacturing (C) and wholesale, retail and vehicle repair (G) sectors.

Sector	TOTAL no of businesses	TOTAL employees	Number of employees			
			1 to 9	10 to 49	49 to 99	Over 100
A: Agriculture, forestry and fishing	12,915	7,565	4,845	430	40	35
B, D, E: Mining, Quarrying, Electricity, Gas, Sewerage	1,490	905	370	155	25	35
C: Manufacturing	33,965	22,065	8,265	2,780	440	415
F: Construction	145,245	121,225	21,405	2,330	190	95
G: Wholesale, retail and motor vehicle repair	68,280	36,320	26,335	4,760	450	415
H: Transport and storage	29,405	24,625	3,636	905	130	110
I: Accommodation and food services	19,375	4,765	10,815	1,465	195	185
J: Information and communication	60,650	47,990	10,815	1,465	195	185
K: Financial and insurance	14,135	11,020	2,545	410	65	95
L: Real estate	14,135	11,020	2,545	410	65	95
M: Professional, scientific and technical	113,980	88,100	22,720	2675	270	215
N: Administrative and support services	63,350	48,135	12,460	2,065	350	340
P: Education	40,435	37,450	2,370	495	65	55
Q: Human Health and Social Work	63,420	55,335	4,860	2,715	325	185
R: Arts, Entertainment and Recreation	26,775	23,135	2,950	545	85	602
S: Other service activities	37,750	28,195	8,505	975	40	35

Table 26: Business size in South West by sector (Source: Business Population Estimates for the UK and Regions, BIS, 2011)

Predicted Employment Growth

4.4.15 Projected growth in jobs and workforce across the study area are identified in Figure 13 and 14 below (TEMPRO 6.2). The graphs identify that both jobs and workforce figures are expected to increase generally year on year across the South West with the exception of Dorset. Wiltshire and Devon are forecast to experience high growth in both the number of jobs and the size of the workforce over the same time period.

4.4.16 Projections indicate that future jobs and workforce in Dorset will decline by approximately 4% by 2030. Although an explanation as to why the projected figures decrease is not provided within TEMPRO, the 'Workplace Strategy Autumn 2011 Update Draft' commissioned by the Dorset Local Authorities suggests that employment will continue to grow by up to 1.2% annually from 2011 to 2026. A 1.2% increase would give an increase of 9.6% by 2020 over 2012 figures.

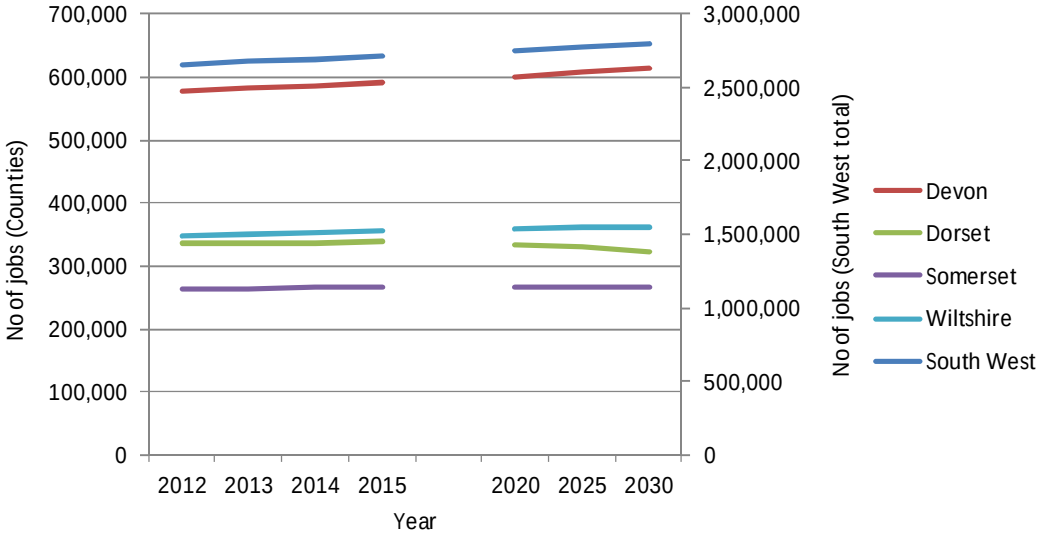


Figure 13: Projected Growth in the number of jobs compared to 2012 (Source: TEMPRO 6.2, 2012)

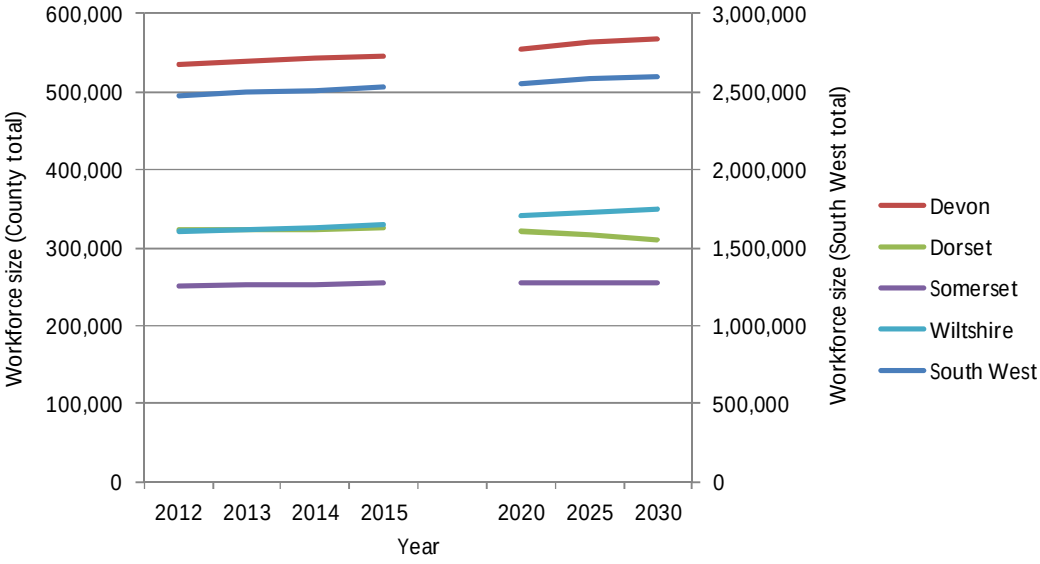


Figure 14: Projected Growth in the Work Force compared to 2012 (Source: TEMPRO 6.2, 2012)

4.5 Tourism in the South West

4.5.1 Tourism is an important sector for the region's economy. In 2008 there were over 118 million tourism trips to the South West (from UK and overseas visitors). TOTAL spend by staying visitors (from the UK and overseas visitors) was £4.6bn, combined with

£4.4bn from day trips and £397m from people visiting friends, relatives and second homes. This gives a total for all tourism spend in 2008 of £9.4bn (Value of Tourism, South West alliance, 2008). These trips for staying visitors and day trips are broken down as shown in Table 27.

	Overnight trips (millions)	Nights of stays (millions)	Spend (£ millions)	Day trips (millions)	Spend (£ millions)
South West Region	21.2	92	£4,622	96.8	£4,418
Cornwall	4.5	23.1	£1,202	9.9	£452
Devon	5.3	22.9	£1,118	19.9	£918
Somerset	3.5	15.1	£739	14.6	£656
Former Avon	3.1	10.1	£597	15.9	£787
Gloucestershire	1.5	6.1	£284	11.6	£507
Somerset	2.5	97	£409	13.9	£623
Wiltshire	1.6	5.0	£264	11.0	£474

Table 27: Summary of tourism spend and trip numbers in the South West (Source: Value of Tourism, South West Alliance, 2008)

4.5.2 Although this tourism supports economic growth, it also puts pressure on the transport network, especially in holiday periods.

4.5.3 The South West Visitor Survey (2009) recorded 65% of trips as overnight stays and 35% as day visits. The average length of stay was 5.71 nights and 82% of visitors had previously stayed overnight in the South West.

4.5.4 Tourists from the UK spent £4.1bn in South West England in 2009, and stayed for 82 million nights (UK Tourism Survey, 2009). This was an increase from £3.6bn in 2008 and represents 19% of the expenditure of UK residents on UK tourism trips. A total of 21m trips were made to the region in 2009 from the UK (UK Tourism Survey, 2009).

4.5.5 For UK based visitors to the South West, 32% come from the South West itself. The next most common origins are the South East (20%), West Midlands (9%) and London (8%) (UK Tourism Survey, 2009). A large proportion of these, particularly those from the South East are likely to use the A303/A358/A30 to access their destinations.

4.5.6 In terms of visitors from overseas, the South West accommodated 7% of England's trips, 9% of nights and 6% of spend (International Passenger Survey, 2008).

4.5.7 Of the total £9.4bn spent in 2008, an estimated £1.67bn was spent on accommodation, £2.3bn on shopping, £2.8bn on food and drink, £980m on attractions and entertainment and £1.27bn on travel and transport (Value of Tourism, South West Tourism Alliance, 2008).

4.5.8 The average spend of a UK staying visitor across the South West is £182, ranging from £255 in Cornwall to £142 in Wiltshire. For overseas visitors the average is higher at £370. This is highest in Dorset at £434 and lowest in Somerset at £289 (Value of Tourism, South West Tourism Alliance, 2008).

4.5.9 The tourism sector in the South West is estimated to contribute to 198,457 full time equivalent jobs, including the direct employment of 193,336 people. 11% of people in the region are employed in the tourism sector (Value of Tourism, South West Tourism Alliance, 2008).

4.5.10 Compared to all UK tourism, trips to the South West in 2009 had a higher proportion of trips in April and also between June and September, highlighting its seasonality. Similarly, trips to the South West in January, February, March, November and December were below the UK average (UK Tourism Survey, 2009). The impact of the seasonality of the route on traffic flows is discussed further in Section 4.8.

4.5.11 The South West Visitor Survey (2009) identified Devon and Cornwall as the most popular locations for visitors to the South West. Around 68% of visitors arrived by car, van or motorcycle into the South West. The average number of hours spent in a car per day for each staying visitor was 1h 35 minutes, with a maximum of 6 hours (South West Visitor Survey, 2009).

4.5.12 The UK Tourism Survey (2009) found that compared to all UK tourism, trips to the South West had a higher proportion of car usage (83%) and a lower proportion of train and plane usage. The South West also has a higher percentage of trips involving self catering, camping or caravanning.

4.6 Land Use and Development - Deprivation and Regeneration Areas

4.6.1 In 2009 there was 116,700 hectares of developed land in the study area. There was 1,167ha of previously developed vacant land (1%), and 2,100ha of derelict land (1.8%) (Regional Indicators, BIS, 2011).

4.6.2 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.

4.6.3 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 (LSOAs), of which there are 3,226 in the South West.

4.6.4 The South West Observatory published a report on Deprivation in the South West, 2011). Of these 3,226 LSOAs, 121 (3.7%) are in the most deprived 10% of areas in England. Around a quarter of these (32) are in Bristol. There are a further 291 LSOAs (9%) which are in the most deprived 20% of areas in England. The highest level of these is in Bristol (61), Plymouth (41) and Cornwall (33). Gloucestershire, Somerset, Devon and Cornwall have 76 LSOAs amongst the 20% most deprived in England, which suggests pockets of relative deprivation in these areas (Deprivation in the South West, South West Observatory, 2011).

4.6.5 Figure 15 shows the spatial pattern of deprivation across the South West by IMD quintile. Although there are concentrations of very high deprivation in Bristol and Plymouth, this figure also shows the general level of relatively high deprivation across Devon and Cornwall.

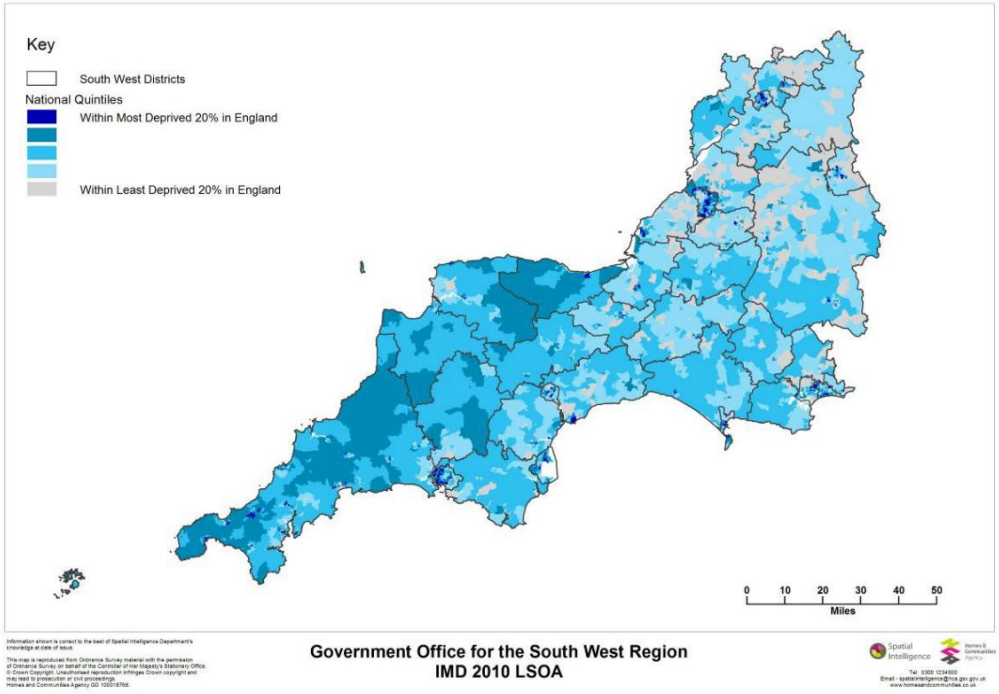


Figure 15: South West LSOAs by IMD quintile (Source: Deprivation in the South West, South West Observatory, 2011)

4.6.6 Torbay has the highest percentage of its population (14.1%) living in areas amongst the most deprived 10% in England, followed by Bristol (13.9%) and Plymouth (10.5%). Penzance has almost 50% of its population living in areas amongst the most deprived 20% in England (Deprivation in the South West, South West Observatory, 2011).

4.6.7 There are five LSOAs in the South West among the most deprived 1% in England and a further 11 among the second most deprived 1%. The five most deprived areas are:

- Bristol – Whitchurch Park;
- Plymouth – St Peter & the waterfront;
- Bournemouth – Boscombe West;
- North Somerset – Weston Super-Mare South 1; and
- North Somerset – Weston Super-Mare South 2.

4.6.8 Figure 16 below shows the settlements across the South West which have LSOAs in the most 20% deprived in the UK.

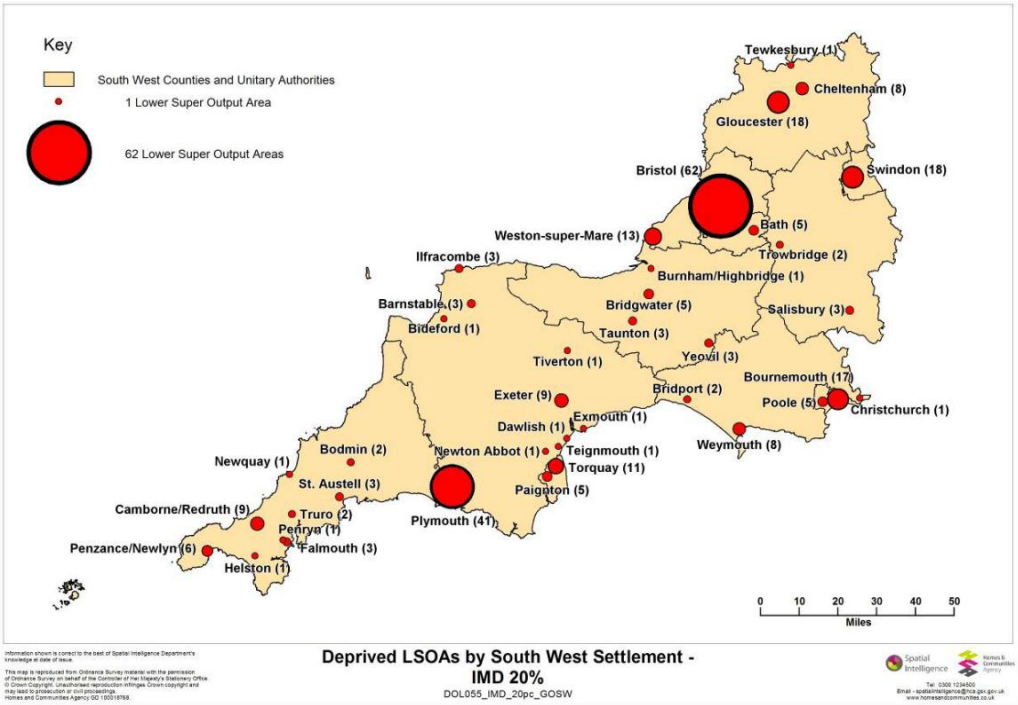


Figure 16: Deprived areas by South West settlement – IMD 20% (Source: Deprivation in the South West, South West Observatory, 2011)

4.6.9 The IMD can be broken down by the type of deprivation. Weymouth and Portland has the highest proportion of people experiencing deprivation relating to employment and health, while deprivation relating to barriers to housing, services and the living environment is highest in West Somerset and Cornwall (Deprivation in the South West, South West Observatory, 2011).

4.6.10 Levels of deprivation can be partly addressed by improved transport links. Transport links which are more reliable and more importantly, are perceived as being more reliable would help promote tourism. Improved transport links will therefore help promote economic growth and address deprivation issues (Deprivation in the South West, South West Observatory, 2011).

4.7 Other Economic Baseline Information

4.7.1 This section sets out a range of additional economic information which is useful to understanding the baseline economic performance of the South West.

Demographic Characteristics and Population Growth

4.7.2 The 2011 Census indicates that in 2010 the South West region had a population of approximately 5.3 million. Of these, most (749,900 people) live in Devon, followed by Cornwall (537,000). The least populated county in the study area is Dorset (404,800 people) (NOMIS, 2012).

4.7.3 The population growth since 2005 and 2012 totals are shown in Figure 17. Between 2005 and 2012 the population of the South West increased by 188,400 (3.7%) from 5.09m to 5.23m. Across the counties in the study area growth was lower than this in all cases, with a low of 1.2% in Dorset and a high of 3.4% in Wiltshire.

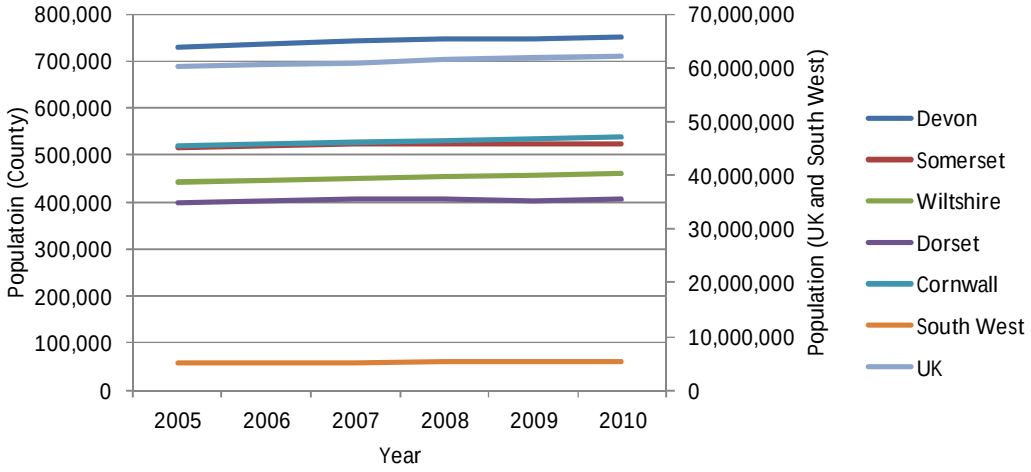


Figure 17: Population growth in study area, South West and UK 2005-2010 (Source: NOMIS, 2012)

4.7.4 The South West average for the percentage of the population aged 16-64 is 62.8%, and the UK average is 64.5%. All the counties within the study area have values lower than the South West average, with the lowest value being in Dorset (57.3%) showing it to have a relatively high percentage of young and or elderly people (NOMIS, 2012).

Business Perceptions of the South West

4.7.5 Research by Into Somerset (Research into the External and Internal Markets of Potential Business Investors in Somerset, July 2008) examined the characteristics and requirements of investors in Somerset.

4.7.6 56% of businesses surveyed stated ease of travelling around local areas was important or very important to their location decisions. 48% rated access to motorways and main roads as important and 46% rated accessibility and attractiveness for skilled staff as very important or important. Interviewees located in Somerset cited a lack of investment in road infrastructure (including the A358 and A303) as a weakness of the area in terms of its offer for businesses. Somerset was found to be perceived as an attractive place to live where there is an emphasis on quality of life as well as an attractive overall environment (Into Somerset, July 2008).

Business Formation Rates

4.7.7 Business formation rates have declined in the South West over the past six years (see Figure 18). This decline has been mostly associated with the service sector, with relatively stable start up rates in manufacturing and other sectors (BIS, Regional indicators, 2011).

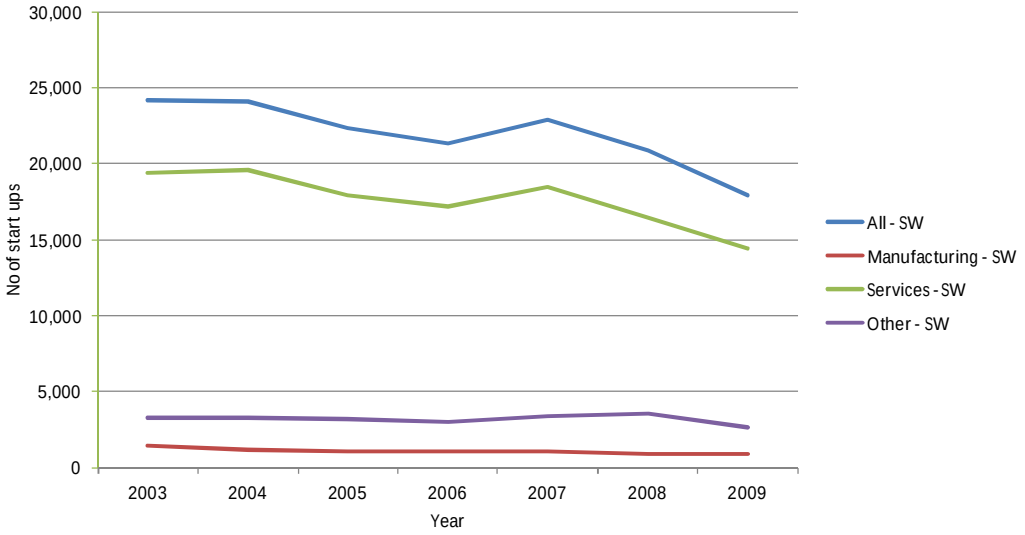


Figure 18: Business formation rate in South West 2003-2009 (Source: Regional Indicators, BIS, 2011)

4.7.8 The three year 'survival rate' for businesses in 2006 was 69%, higher than the UK average of 66%.

Economic Competitiveness

4.7.9 The UK Competitiveness Index 2010 (UK Competitiveness Index, Cardiff Metropolitan University, 2011) provides a composite measure of competitiveness, describing the extent to which firms in the South West 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).

4.7.10 In 2010 the South West index scored 91.8, lower than the UK index of 100, illustrating it is below average in terms of competitiveness. It is the sixth most competitive region of the UK, behind the South East, London, East of England, the North West and the East Midlands. This represents a fall from 2008 when it was the fifth most competitive location (and the North West was sixth).

4.7.11 The cities within the study area which are the most competitive are Bristol (8th in the UK); Exeter (12th in the UK) and Plymouth (36th in the UK). None of the top 25 most competitive localities in the UK are in the South West; they are all in London, the South East and East of England.

4.7.12 Three areas in the South West have reduced in competitiveness significantly since 2009. West Dorset's relative position has reduced by 40 places to 148, East Devon has reduced 33 places to 288 and Mendip reduced by 37 places to 202 (UK Competitiveness Index, Cardiff Metropolitan University, 2011).

Imports and Exports

4.7.13 According to data on international trade in goods from HM Customs & Excise, the South West has performed relatively poorly in terms of both the numbers of exporting firms and the value of international exports, relative to the overall size of the South West economy.

4.7.14 The value of exported goods as a percentage of GVA is low compared to the UK average (14.3% compared to 20.2%) (Source: Regional indicators, BIS, 2011).

4.7.15 In 2010, 3,892 companies in the region were involved in exporting goods. 46% of these goods are exported to the European Union, 17% to North America, 18% to Asia and 12% to the Middle East and Africa (Source: Regional indicators, BIS, 2011).

4.7.16 International trade is an area of competitive weakness for the South West. Of all of the UK's regions, the region has long had the lowest overall propensity to export goods. The goods which the region does export are highly concentrated by sector (machinery and transport equipment) and by destination (two thirds to the European Union) (Source: Regional Economic Performance Indicators, BIS, 2010).

Investment in Manufacturing

4.7.17 Investment by UK and foreign firms in manufacturing is shown in Figure 19. Over the last ten years investment by UK firms in manufacturing has declined across the South West, mirroring trends across the UK as a whole. Conversely, investment by foreign firms has remained comparatively stable, with some fluctuation in investment in the South West.

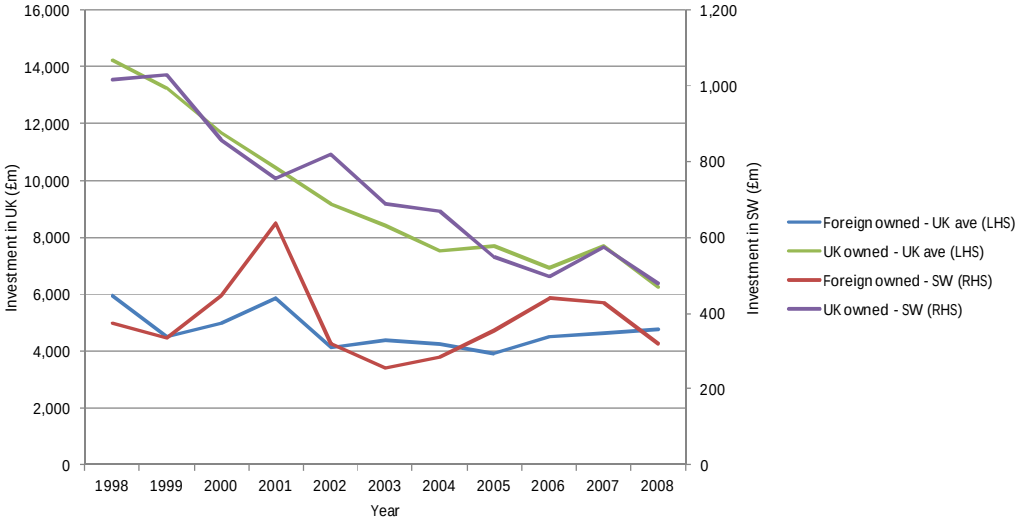


Figure 19: Investment in manufacturing in the South West and UK, 1998 – 2008 (Source: Regional Indicators, BIS, 2011)

4.7.18 Investment in the service sector has followed a different pattern, and has much lower levels of foreign investment. Across the UK as an average, service investment has increased from £48.4bn in 1998 to £54.6bn in 2008. However in the South West investment has remained relatively stable at around £3.7bn per year.

4.8 Transport and the South West Economy

Transport and the South West Economy – Overview

4.8.1 Peripherality is an issue affecting the South West economy. Research has shown that for every 100 minutes travel time from London, productivity reduces by 6%, and by 2-3% for other major conurbations (Meeting the Productivity Challenge, Universities of West of England and Bath, Boddy et al. 2005). The South West (particularly Cornwall and Devon) are relatively peripheral locations, and distance from key product markets

is a factor in the lower levels of productivity seen in these areas. By improving transport connections, and therefore access to product markets and labour, the economic output of these areas can be improved.

4.8.2 The South West Observatory (2011) published a report entitled "Transport in the South West – Does It Matter for the Performance of the Economy?" It notes that where capacity or reliability deficiencies exist, an economic cost of missed opportunities might follow, including increased costs, reduced economic competitiveness and reduced productivity.

4.8.3 In general, transport affects the performance of the economy through two channels: product markets and labour.

4.8.4 The transport services industry is estimated to account for £3.5m of GVA in the South East in 2008 (South West Regional Accounts, 2011). The sector employed 85,594 FTE workers, 4% of those in the region. The highest share of these is in North Somerset (7%) and Swindon (6%) (South West Regional Accounts, 2011).

4.8.5 The South West Observatory (2011) quotes the average household expenditure on transport in the South West between 2008 and 2010 as 14% of total expenditure. Nationally this is second only to the South East as a percentage of total expenditure. This represents an increase of 13% from the expenditure figure in 2001.

Historic Traffic Volumes

4.8.6 Figure 20 shows changes in traffic levels at Stonehenge from 1998 to 2012. The oscillations in the traffic volumes each year indicate a high level of seasonality in the traffic flows, which is discussed further in the next section.

4.8.7 Traffic volumes gradually increased in the period from 1998 to 2007. After 2007, traffic volumes subsequently experienced a gradual decline in line with national traffic trends during the economic slowdown. The decline in traffic volumes should be acknowledged as it will mean congestion issues experienced today are likely to be less severe than those in previous years, although there is potential for them to worsen again if traffic volumes increase.

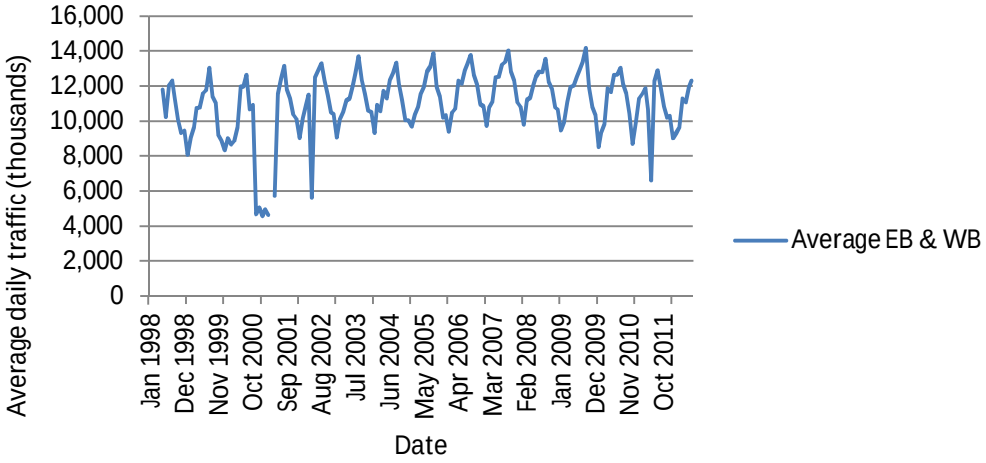


Figure 20: Average daily traffic volumes on A303 at Stonehenge 1998 to 2012 (Source: HA, TRADS, 2012)

Seasonality of Traffic Flows

4.8.8 Tourist traffic impacts heavily on traffic flows to and from the South West. TRADS data has been extracted from the Highways Agency website which identifies the fluctuation in flows along the study area during peak seasonal periods. Data was extracted at three points along the route:

- A30 Honiton Bypass;
- A303 between A358 and A356; and
- A303 East of Longbarrow Roundabout.

4.8.9 Year on year at the three data points in the study area, traffic flow increased by an average of 10.5% of the May flow during August. A seasonal increase in traffic flow of an average of 8,322 vehicles over the route can be identified.

4.8.10 In line with DMRB Vol.13, a seasonality index above 1.10 means the road can be considered 'seasonal', meaning it will have a large fluctuation in traffic flow between neutral and seasonal months. Table 28 shows that in 2011, the A30 Honiton Bypass in both directions and the eastbound section of the A303 between the A358 and A356 are seasonal areas of the carriageway as they all have a seasonality index of 1.10 or above. In line with guidance the A303 westbound between the A356 and A358 and in both directions east of the Longbarrow Roundabout are considered non seasonal (but only marginally).

	WB, A30, Honiton Bypass	EB, A30, Honiton Bypass	EB, A303, between A358 and A356	WB, A303, between A356 and A358	EB, A303, East of Longbarrow Roundabout	WB, A303, East of Longbarrow Roundabout
2011	1.32	1.32	1.40	0.95	1.08	1.05
2010	1.33	1.37	1.36	1.22	1.34	1.23
2009	1.29	1.30	1.21	1.21	1.21	1.16

Table 28: Seasonality index of ATC sites 2009 to 2011 (Source: TRADS, HA, 2012)

Travel to Work

4.8.11 The 2001 Census Travel to Work data for the South West region identifies that the majority of work-related travel is contained within the region, totalling 2.18m travel to work trips. Details of these trips are shown in Table 29. Of the people who travel outside of the South West for work, the majority travel to the adjacent South East region. Further data would be required to understand whether these trips are short distance across the administrative boundary or longer distance trips. Some trips are made to further destinations including London, the Midlands and Wales. These are likely to involve the use of strategic routes such as the A30/A303/A358 although further detailed original destination modelling and traffic analysis would be required to explore this further.

To	Area of Workplace							
From	North East	North West	East & West Midlands	East	London	South East	South West	Wales
South West	406	2,266	13,412	4,006	16,243	51,022	2,180,182	6,295
	0.0%	0.1%	0.6%	0.2%	0.7%	2.2%	95.9%	0.3%

Table 29: Travel to work information from the South West (Source: Census, 2001)

Ports and Shipping

4.8.12 There are five main ports in the South West of England: Bristol, Falmouth, Plymouth, Poole and Weymouth. In general, port freight traffic in the South West is lower than the English average.

4.8.13 Table **30** shows that, according to DfT, Bristol, Poole and Plymouth are considered the three major freight ports in the South West region. Of these Bristol is by far the busiest; in 2011 Bristol processed over double the number of units (435,000 units) of either Poole (133,000 units) or Plymouth (166,000 units).

4.8.14 DfT statistics do not cover Weymouth or Falmouth as DfT defines a major port as handling over 1 million tonnes of freight a year. It should be noted however that there are plans and commitments to expand the existing facilities at Falmouth docks which will include some increase in commercial shipping.

Thousand units								
Ports	Port Group	2005	2006	2007	2008	2009	2010	2011
Bristol	Bristol Channel	681	649	688	631	420	476	435
Plymouth	West Country	208	189	198	201	173	170	166
Poole	West Country	188	202	220	239	212	126	133

Table 30: Total freight traffic for major South West freight ports (Source: DfT Statistics – Ports, 2011)

4.8.15 Table **30** shows that the peak traffic for Bristol was 688,000 units in 2007, 208,000 units for Plymouth in 2005 and 239,000 units for Poole in 2008. These figures were significantly lower in 2011. This suggests that either freight traffic has now routed through different ports or less is being imported / exported. It is likely a combination of these factors together with the use of alternative freight modes such as rail or air.

Road Freight

4.8.16 Figure 21 shows the destinations of road freight originating in the South West in 2010. This covers all freight moved by HGVs registered in the UK. In 2010, outside of internal freight trips, the South East and the West Midlands are the top destinations for freight traffic with 1,538 and 1,032 million tonnes kilometres respectively. Specific data for the A30/A303/A358 was not available.

Figure 21: Road freight destinations from the South West in 2010 (Source: DfT Statistics – Road Freight RFS0140, 2010)

CHAPTER 5

BUSINESS SURVEY

5 BUSINESS SURVEY

5.1 Introduction

5.1.1 To inform the WEI analysis, the views of businesses along the A303/A358/A30 corridor were sought through an online survey, workshops and face to face meetings.

5.1.2 The business survey aimed to provide data and evidence on businesses' current use of the corridor, and how their future plans for growth (including turnover and job creation) may change if the route was upgraded. Surveys were distributed to businesses across Somerset, Wiltshire, Dorset, Devon and Cornwall.

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

5.1.4 The survey asked respondents to consider the impact this may have on their business if the route was an "end to end" dual carriageway between Amesbury, Taunton and Exeter. The purpose of the survey was to ensure a clear, simple proposal of potential improvements was set out for respondents to consider, whilst the results of the survey could be used to ensure the broadest possible economic benefit to be calculated.

5.1.5 If required at a later stage, further survey and analysis work could be undertaken to factor down the benefit from end to end dualling and estimate the impact of smaller scale improvements. This would require a series of assumptions and some further information from the businesses surveyed.

5.1.6 Details of the specific tourism survey which was designed to complement the business survey are given in Chapter 6.

5.2 Business Survey Design

5.2.1 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.

5.2.2 The draft survey went through a series of internal reviews and comments were taken into account from key stakeholders (Somerset County Council, Devon County Council and Wiltshire Council). The online version of the survey was trialled before it was launched, including testing the question routing.

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

5.3 Survey Questions

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

- Section 1: Business overview;
- Section 2: Employees, turnover and sector issues;
- Section 3: A303/A358/A30 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.

5.3.2 In total the survey contained 34 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.

5.3.3 The most critical questions (18 in total) were categorised as 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 dualling on their business (including turnover).

5.3.4 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.

5.3.5 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.

5.3.6 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.

5.4 Survey Channels and Sampling

5.4.1 The survey was hosted on a number of websites and emailed directly to members of stakeholder organisations. The website was promoted to stakeholders at workshop events and information about the survey was provided in a series of press releases about the project.

5.4.2 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 ease of completing the questionnaire should help increase the response rate by reducing the need for respondents to spend time and money posting paper responses.

5.4.3 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).

5.4.4 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).

5.4.5 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. There may be some bias introduced because those businesses who chose to respond to the survey are likely to have strong views about it (either positive or negative). This was considered when developing the model.

5.4.6 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.

5.4.7 The organisations contacted and their respective membership numbers are summarised in Table 31 below. There may be some duplication with firms being a member of more than one organisation.

Organisation	Number of members contacted
Buy Wiltshire	2,000
Somerset Chamber of Commerce	1,125
Federation of Small Businesses – Somerset and Wiltshire	7,500
Devon and Cornwall Business Council	300
Federation of Small Businesses – Devon	7,400
South West CBI	300
Cornwall LEP	27
Exeter Chamber of Commerce	500
East Devon Business Forum	80
Road Haulage Association	4,489

Table 31: Details of survey distribution via email

5.4.8 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.

5.4.9 Details of these organisations and their websites are given in Table 32 below. The Somerset Chamber of Commerce also provided details of the survey on their Twitter account.

Organisation	Website address
Somerset County Council	http://www.somerset.gov.uk/irj/public/home http://www.somerset.gov.uk/A303project
Devon County Council	http://www.devon.gov.uk/A30A303study
Buy Wiltshire	http://www.buywiltshire.co.uk/
Dorset LEP	http://www.dorsetlep.co.uk/
BBC News	http://www.bbc.co.uk/news/uk-england-somerset-18726993
Somerset Chamber of Commerce	http://www.somerset-chamber.co.uk/index.php?opt=newsletter&action=show&id=117

Table 32: Details of survey hosting websites

5.4.10 WebTAG guidance states that the sampling process for selecting businesses will depend on the circumstances of the business and the study. Therefore in line with the guidance, local businesses dependent on transport and specifically the A303/A358/A30 route were targeted to ensure robust and effective data was collected.

5.4.11 The sampling approach was designed to represent a broad spectrum of business sizes and types across the study area. It was not intended to be a statistically representative sample of different sectors and business sizes in the area. Instead, the objective was to target those firms who use the A303/A358/A30 corridor for various purposes and who would potentially be affected by the scheme.

5.4.12 As there are many ways in which a firm's turnover will be affected by the scheme (including size, location, nature of its business, frequency and timing of trips made on the roads), the results have not been weighted within the model. The model uses the estimated changes in business turnover, broken down by size of firm, as part of the process to calculate the wider economic impacts benefits of the scheme. Details of the approach used in the model were given in Chapter 2.

5.4.13 The survey respondents were not given any incentive to complete the survey and were therefore largely self-selecting. There may therefore be a degree of 'bias' in the results as those companies that did respond are more likely to have strong views (either positive or negative) on the scheme.

5.5 Workshops

5.5.1 To support the survey data, a series of workshops were also held with key stakeholders, to discuss their views on the economic impacts of improving the A303/A358/A30 route in more detail.

5.5.2 The workshops involved a brief presentation of the baseline report 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.

5.5.3 The meetings held are summarised in Table 33 below.

Date	Location	Organisations represented
26th June 2012	County Hall, Exeter	Somerset County Council; Devon County Council; East Devon District Council; Highways Agency; Environment Agency; Torbay Council; Blackdown Hills AONB and Federation of Small Businesses
2nd July 2012	Council Offices, South Somerset District Council, Yeovil	Somerset County Council; South Somerset District Council; Somerset Chamber of Commerce; Devon County Council; Road Haulage Association; Dorset County Council and Wiltshire Council
12th July 2012	Clarke Wilmott Offices, Taunton	Somerset County Council; Clarke Wilmott, CBI Construction Council; CHI; Osborne Clarke; Bishop Flemming Accountants; Brittany Ferries; Alder King; Heart of the South West LEP
18th July 2012	NFU Offices, Exeter	South West Business Forum; South West Chamber of Commerce; NFU; Heart of the South West LEP; Federation of Small Businesses and South West Tourism Alliance

Table 33: Summary of workshops held

5.6 Workshop Findings

5.6.1 The main themes discussed at the workshops were: resilience of the road network; traffic engineering and transport planning; infrastructure and economic growth; business perceptions; infrastructure, land values and development; housing; sub-regional and regional issues; tourism and delivery.

5.6.2 A summary of the main points raised at the workshop and how these have been addressed is given in Appendix C.

5.7 Survey Results & Findings

Headline Findings

5.7.1 The key survey findings, expanded in this section are:

- The A303/A358/A30 is essential and very important for many businesses. Its uses include allowing visitors to access the South West, moving goods to market, bringing in raw materials and business travel. The route was most important to businesses in Somerset and Devon, and particularly those in the transportation sector;
- Journey time reliability on the route is a problem for many businesses, and disruption to business travel was identified as a particular issue, affecting 89% of businesses which responded;
- Creating an end to end dual carriageway would have a strong positive impact for 50% of businesses, and a positive impact for a further 39%;
- 4.5% of businesses reported a potential negative impact of an end to end dual carriageway. These were mainly those in the hotel, restaurant and tourism sectors, who cited reasons such as a reduction in passing trade;

- 62% of businesses reported the dualling would have a positive impact on their turnover, 36% said there would be no change and only 2% anticipated a reduction. Increases in turnover of over 20% were reported mainly by businesses in Devon, Somerset and Wiltshire
- 77% of respondents felt dualling would increase investment in the area;
- 77% of businesses said their site would be more viable as a business location if the route was an end to end dual carriageway;
- 83% of respondents said tourism to their area was likely to increase if the route was an end to end dual carriageway (46% said this increase would be over 10%).
- 86% of the tourism businesses said their visitor numbers would increase if the A303/A358/A30 was an end to end dual carriageway, including 40% who said this increase would be more than 10%; and
- Benefits of dualling cited were removal of delays and poor reliability associated with congestion, making areas more attractive to investors and tourists, and tourists being able to reach their destination in a more positive and relaxed state. On balance, the comments about the benefits of the scheme were more numerous and strongly opinionated than those about its disadvantages (which included environmental, noise and pollution issues).

Overview of Responses

5.7.2 Using the channels set out in Section 4.4, the survey was emailed directly to over 23,000 businesses. 627 responses were received between 22nd June 2012 and 20th July 2012. A further 58 responses were received to 31st August 2012, taking the total to 685.

5.7.3 As well as monitoring the number of responses, the survey responses were monitored to ensure there was a balance of responses from companies according to their size, sector and location. This balance was achieved – further details are given below.

5.7.4 The range of businesses responding to the survey, compared to the composition of the business community in the South West (by number of firms) is shown in the table below. The sectors used in the survey were based on WebTAG guidance and those used to calculate the percentage of firms in each sector in the South West are from GVA statistics, and are not directly comparable. As such, in some cases the exact percentage in the South West is unknown.

5.7.5 WebTAG (Unit 3.5.12) notes that sampling should focus on businesses which are dependent on transport. As such, some sectors (such as the transportation sector) are over-represented in the survey. It should also be noted that the percentage of businesses in the South West does not necessarily reflect the percentage which use the A303/A358/A30. Other sectors which are over-represented in the survey include agriculture, finance, hotels and restaurants, manufacturing, “other” services and real estate and renting. Sectors which are under-represented in the survey include construction (6.1% in survey compared to 19.5% in the South West), health and social work (2.6% in survey compared to 8.5% in the South West), and telecommunications (1.3% in survey compared to 8.1% in the South West).

5.7.6 Table 34 shows the large number of responses received from businesses in Somerset and Devon. This reflects the extent of the perceived impact of the road on these counties. Conversely, the relatively small number of responses from Cornwall and Dorset reflect the lower level of importance of the A303/A358/A30 to these areas.

County	Responses	Percentage
Cornwall	10	1.5%
Devon	188	27.5%
Dorset	33	5%
Somerset	327	48%
Wiltshire	67	10%
Other & unknown	60	8%
TOTAL	**685**	**100%**

Table 34: Survey responses by county

5.7.7 68% of respondents were from firms with fewer than 10 employees, reflecting the large percentage of small firms across the study area. 8% of responses were from large businesses with over 100 employees. A similar pattern was seen in the turnover of the firms responding. 33% had turnover under £125k per annum. 24% had turnover of over £1m, including 4% with turnover over £25m.

Employees, Turnover and Sector Issues

5.7.8 51% of firms said they expected turnover at their sites to increase in the next year, 40% expected it to stay the same and 9% expected a decline. Comments reflected a wide range of issues, ranging from macro-economic issues (UK-wide recession, Eurozone issues) and issues specific to individual sectors. Although a number of respondents cited road network issues as affecting their performance, this is likely to reflect the focus of the survey.

A303/A358/A30-Specific Issues

5.7.9 31% of businesses said the A303/A358/A30 was 'essential' for their businesses, 27% said it was 'very important' and 25% said it was 'important'. 5% of respondents said the road was 'not important' for their business. Reasons for this included the importance of the route for visitors, moving goods to market, bringing in raw materials and business travel. The high level of importance attached to the route amongst respondents reflects the fact that the introductory text about the survey specifically asked businesses to fill it in if the route was important to their operations.

5.7.10 There was some variation in the importance of the route according to where businesses are located, as illustrated below in Figure 22 and Table 35. Allowing for the small number of responses from Cornwall and Dorset, Somerset had the highest percentage of businesses who said the route was either 'essential' or 'very important' for them (41%), followed closely by Devon (40%).

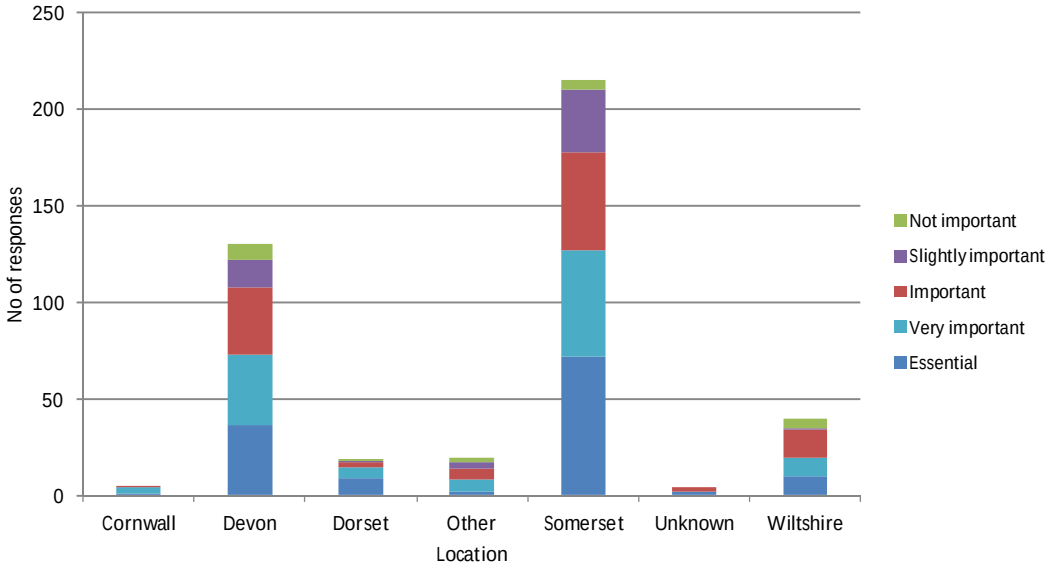


Figure 22: Importance of A303/A358/A30 to businesses by location

County	Not important	Slightly important	Important	Very important	Essential
Cornwall	0%	0%	20%	60%	20%
Devon	6%	11%	27%	28%	29%
Dorset	5%	5%	11%	32%	47%
Somerset	2%	15%	24%	26%	34%
Wiltshire	13%	3%	35%	25%	25%
Other	15%	15%	30%	30%	10%
Unknown	0%	0%	50%	0%	50%
TOTAL	**5%**	**12%**	**26%**	**27%**	**31%**

Table 35: Importance of A303/A358/A30 to businesses by location

5.7.11 The importance of the route by sector is shown in Figure 23 below. The businesses reporting the route to be essential or very important to their daily operation were in the transport, education and telecommunication sectors respectively. For transport, 41% said the route was essential, and a further 41% said it was important (based on 43 responses). For education, 33% said the route was essential, and 50% said it was important (based on 12 responses). There was a low level of importance attached to the route amongst firms in the research, health and social work, finance and retail sectors.

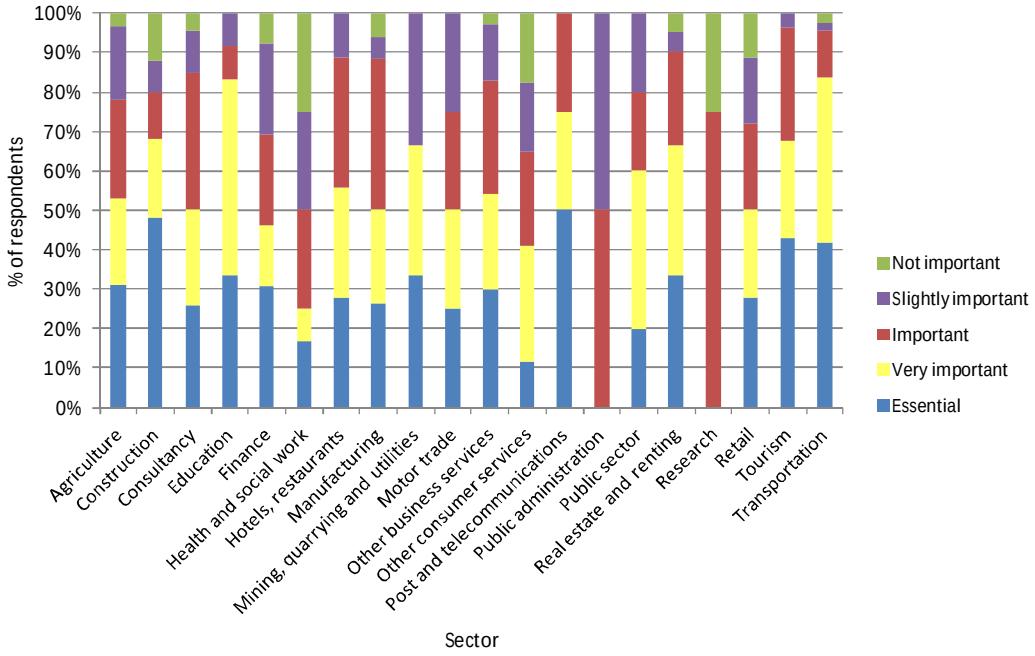


Figure 23: Importance of A303/A358/A30 to businesses by sector

5.7.12 Disruption to business travel was identified as a particular issue, affecting 89% of businesses which responded. 85% said disruption caused problems for customer travel. The full results are shown in Figure 24 below.

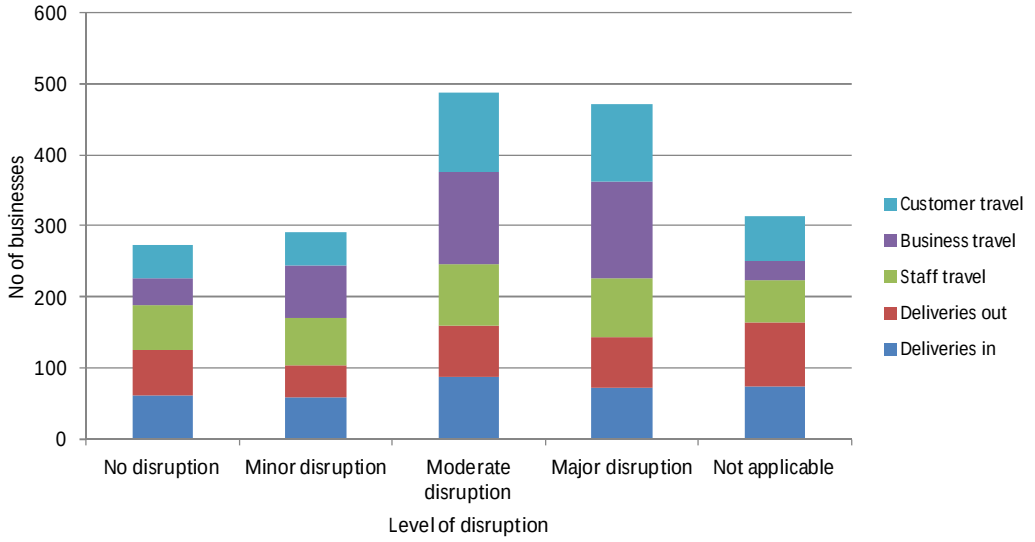


Figure 24: Disruption experienced on A303/A358/A30 by different types of travel

5.7.13 Journey time reliability was seen as more of a problem than absolute journey times. 45% cited reliability as a major problem, and 35% as a moderate problem. Only 8% of respondents said it was not a problem for them.

5.7.14 Businesses noted a range of techniques used to respond to congestion, including planning trips outside peak periods, and avoiding particular areas if possible. Many

noted they have specially re-arranged travel arrangements to leave before or after known congestion periods. Those who drive for work mentioned that they have missed or only just made dedicated delivery slots and have on occasions incurred penalties for late arrival. Holiday and weekend travel was identified as a particular issue, as well as a lack of suitable alternative routes for large articulated vehicles

Impact of Dualling on Business Performance and Turnover

5.7.15 Creating an end to end dual carriageway would have a strong positive impact for 50% of businesses, and a positive impact for a further 39%. 7.3% reported the dualling would have no impact on them, and 4.5% reported a potential negative impact.

5.7.16 A strong positive impact was expected on most business sectors. Comments about positive impacts largely focussed on more consistent journey times improving efficiency and productivity, and reducing wasted time and fuel costs. Some respondents noted that tourists would be more likely to come to the area and that their customer markets would expand.

5.7.17 The hotel, restaurant and tourism sectors identified the greatest negative impact as a result of an end to end dual carriageway (see Figure 25). Of those businesses which said dualling would have a negative impact on them cited issues such as a reduction in passing trade for hotels and local shops. Improved signage for local amenities was raised as a suggestion to help address this. Some concerns were raised over the short term impact whilst the improvement was constructed, including noise impacts.

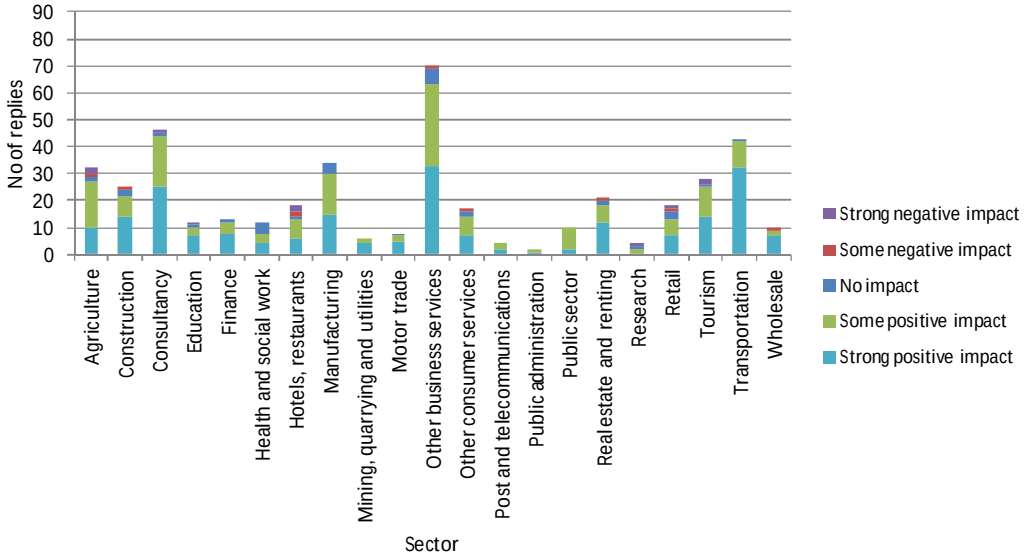


Figure 25: Impact of end to end dual carriageway by sector

5.7.18 The strongest positive impact was reported amongst businesses in Cornwall, Somerset and Dorset although only 5 responses were received from Cornwall for this question. The largest possible negative impact was identified by businesses in Wiltshire, followed by those in “other” areas beyond the main study area (see Figure 26 below).

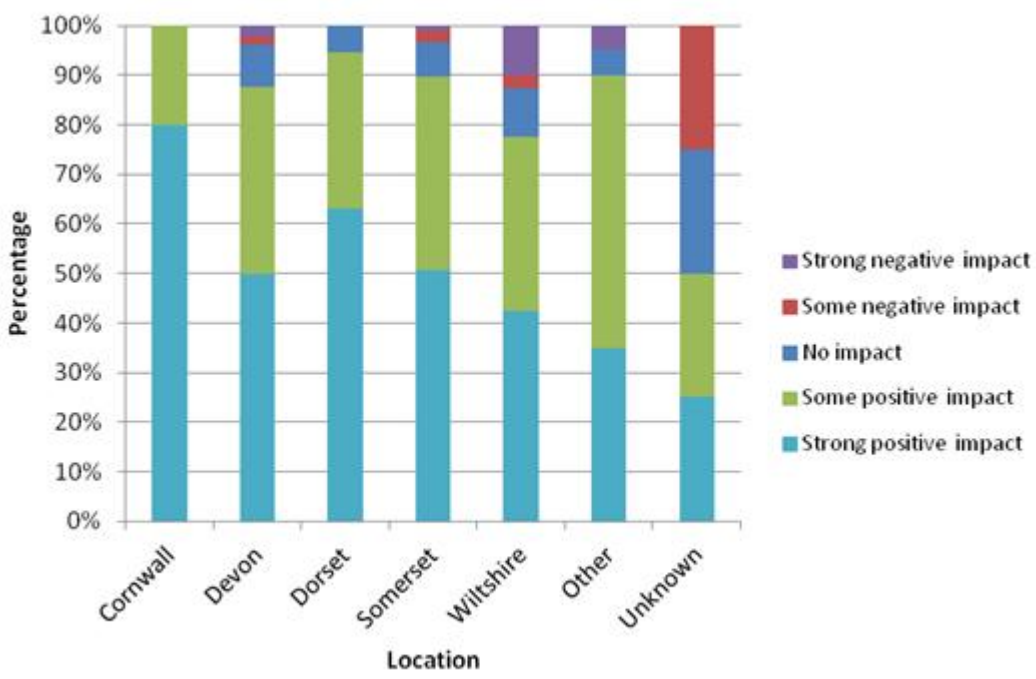


Figure 26: Impact of dualling by business location

5.7.19 More specifically, 62% who responded to this question reported the dualling would have a positive impact on their turnover, 36% said there would be no change and 2% anticipated a reduction. Further details are given in Table 36 below.

Change in turnover	Number of respondents	Percentage of respondents
Increase over 30%	13	2.8%
Increase 20-30%	17	3.6%
Increase 10-20%	69	14.8%
Increase up to 10%	192	41.1%
No change	167	35.8%
Reduce turnover	9	1.9%

Table 36: Predicted impact of end to end dual carriageway on turnover

5.7.20 There was no noticeable variation in the perceived change in turnover as a result of an end to end dual carriageway according to businesses' current turnover or number of employees.

5.7.21 A predicted increase in turnover of over 20% was reported mainly by businesses in Devon, Somerset and Wiltshire. Most businesses who anticipated a reduction in turnover were either also in Wiltshire or in other areas beyond the immediate study area (see Figure 27). It should be noted that the Cornwall figures are based on a small sample size, in this case 5 responses.

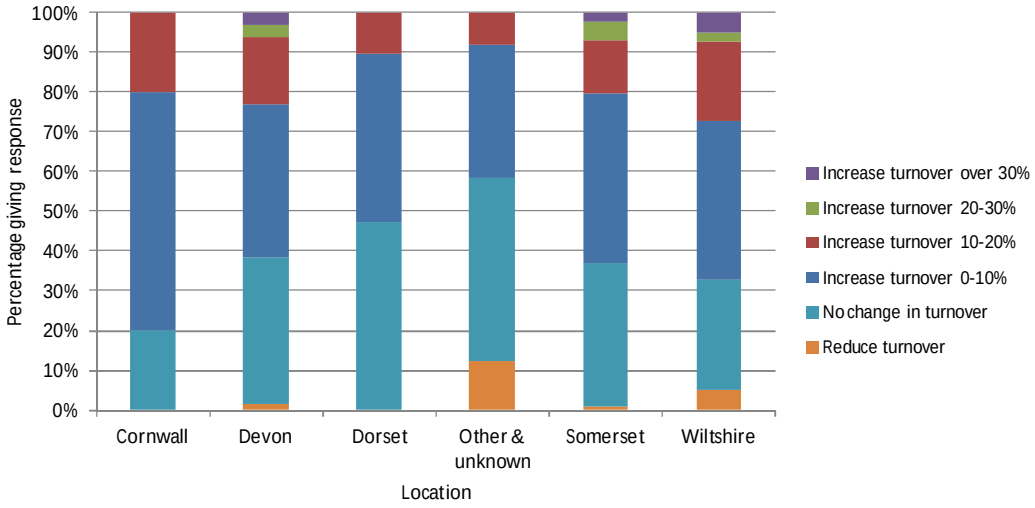


Figure 27: Predicted impact of dualling on turnover by business location

5.7.22 The anticipated change in turnover by business sector is shown in Figure 28. The sectors reporting the most potential reductions in turnover were agriculture, hotels, restaurants, retail and tourism.

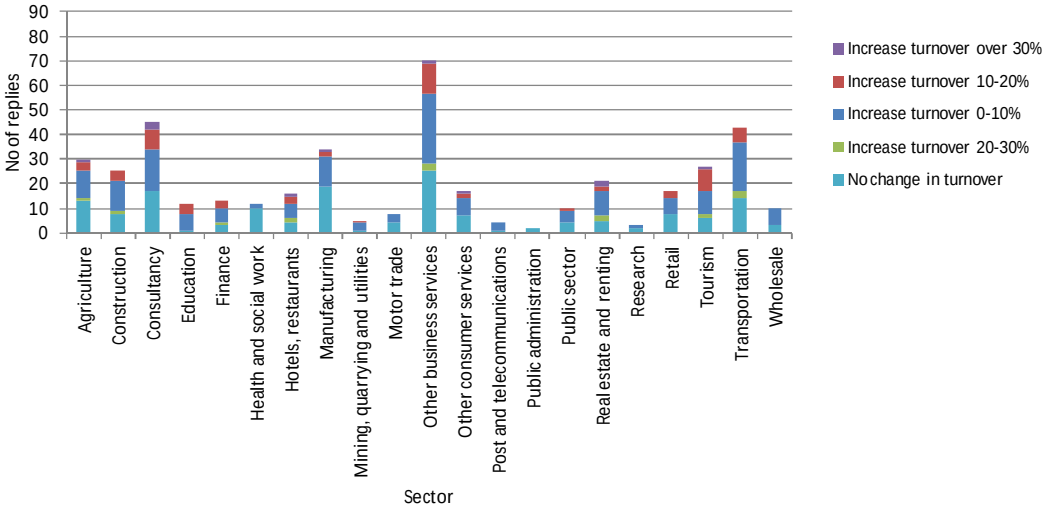


Figure 28: Predicted impact of dualling on turnover by business sector

Impact of Dualling on Investment and Other Issues

5.7.23 77% of respondents felt dualling would increase investment in the area, 3% said it would not and the remainder were unsure. Reasons that dualling would not increase investment include cited examples of other well connected locations which still have empty business properties. Some locations were noted to benefit more than others, due to their size and potential agglomeration affects.

5.7.24 Benefits cited included removal of delays and poor reliability associated with congestion, making areas more attractive to investors and tourists, and tourists being able to reach their destination in a more positive and relaxed state.

5.7.25 Many respondents noted that they could not think of any disbenefits created by an end to end dual carriageway. Some comments were noted about disruption during construction, noise, pollution, environmental issues, impact on heritage sites and a concern the improvement would simply generate more traffic. Concerns were also raised about bypass effects reducing passing trade. On balance, the comments about the benefits of the scheme were more numerous and strongly opinionated than those about its disadvantages.

5.7.26 77% of businesses said their site would be more viable as a business location if the route was an end to end dual carriageway. Reasons given included an increased level of investment in business parks due to better road connections and encouraging more tourists to the area who are currently put off travelling on summer weekends. Those who said it would not help were primarily concerned about bypass effects or said there were other issues which had more of an impact on the viability of their site.

Impact on the Tourism Sector

5.7.27 83% of respondents said tourism to their area was likely to increase if the route was an end to end dual carriageway (46% said this increase would be over 10%). A number commented that people are currently put off weekend trips because of (real or perceived) issues with the transport network. 2.8% predicted tourism would decrease, because of a reduction in passing trade.

5.7.28 91 businesses responded from the tourism sector. The amount of visitors they typically receive in a year is shown in Figure 29 below, and ranged from under 50 to over 10,000.

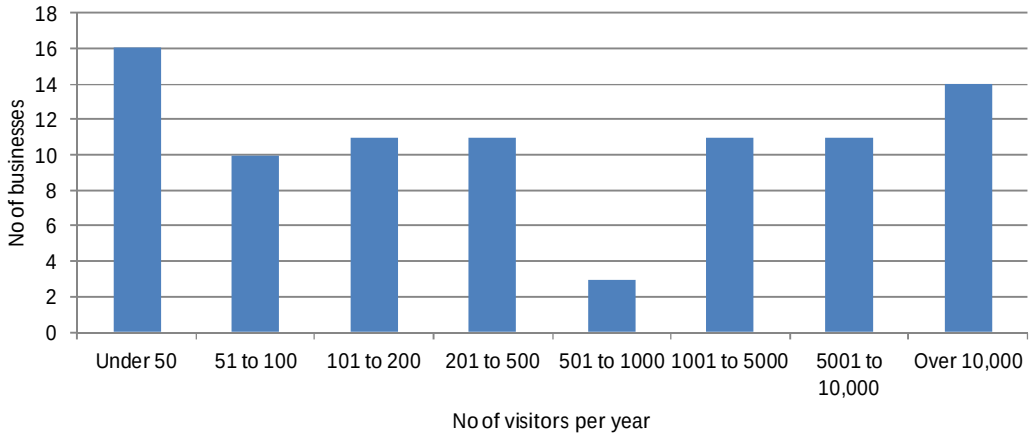


Figure 29: Number of visitors each year to tourism businesses surveyed in the South West

5.7.29 Typical spend per person with the individual businesses surveyed ranged from under £25 (22%) to over £200 (11%). The weighted average spend per person was £87 with each business. This compares to an average spend of £182 in total for UK overnight visitors and £370 for foreign visitors.

5.7.30 51% of businesses surveyed received visitors from across the UK (not including Southern England), with a further 26% receiving visitors from across Southern England. 12% (10 businesses) attracted international visitors. Over one third of tourism businesses surveyed (36%) said over 75% of their customers used the A303/A358/A30 to access their business.

5.7.31 86% of the tourism businesses surveyed said their visitor numbers would increase if the A303/A358/A30 was an end to end dual carriageway, including 40% who said this increase would be more than 10% (see Figure 30). One firm noted *"visitors from mainland Europe now comment on the long delays on the A303".* 3.4% predicted a decrease in tourism due to bypass effects.

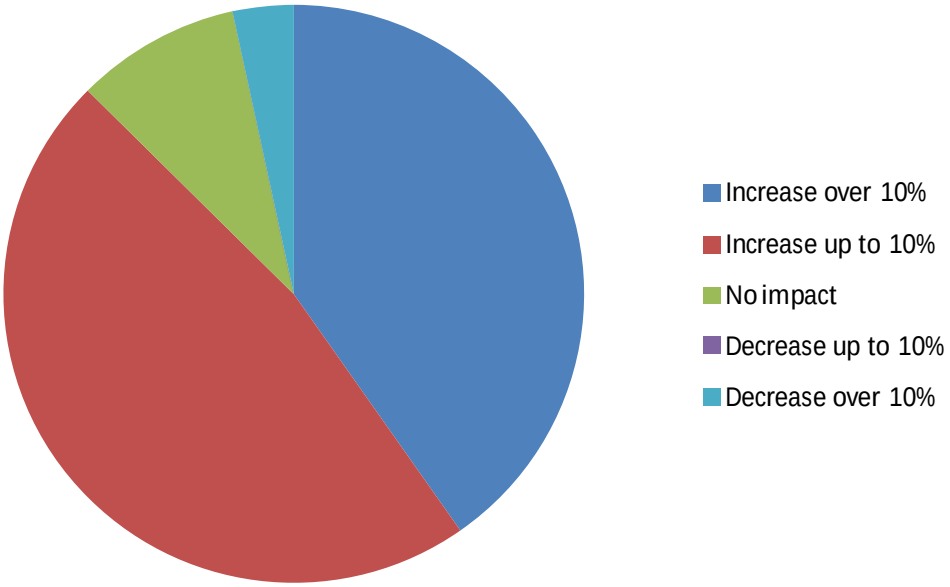


Figure 30: Predicted impact of dualling on turnover for tourism businesses surveyed

5.8 Business Survey – Final Comments & Conclusions

5.8.1 31% of businesses said the A303/A358/A30 was essential for their businesses, 28% said it was very important and 25% said it was important. 5% of respondents said the road was not important for their business. Reasons for its importance included the importance of the route for visitors, moving goods to market, bringing in raw materials and business travel. The route was most important to businesses in Somerset and Devon.

5.8.2 The most businesses who reported the route to be essential or very important were in the transportation sector, followed by education and telecommunications. There was a low level of importance attached to the route amongst firms in the research, health and social work, finance and retail sectors.

5.8.3 Journey time reliability was regarded as more of a problem than absolute journey times. 45% cited reliability as a major problem, and 35% as a moderate problem. Only 8% of respondents said it was not a problem for them. Disruption to business travel was identified as a particular issue, affecting 89% of businesses which responded. 85% said disruption caused problems for customer travel.

5.8.4 Creating an end to end dual carriageway would have a strong positive impact for 50% of businesses, and a positive impact for a further 39%. 7.3% reported the dualling would have no impact on them, and 4.5% reported a potential negative impact.

5.8.5 The hotel, restaurant and tourism sectors identified the most potential negative impact as a result of an end to end dual carriageway. Those businesses which said dualling would have a negative impact on them cited issues such as a reduction in passing trade for hotels and local shops.

5.8.6 More specifically, 62% who responded to this question reported the dualling would have a positive impact on their turnover, 36% said there would be no change and 2% anticipated a reduction. Increases in turnover of over 20% were reported mainly by businesses in Devon, Somerset and Wiltshire.

5.8.7 77% of respondents felt dualling would increase investment in the area, 3% said it would not and the rest were unsure. 77% of businesses said their site would be more viable as a business location if the route was an end to end dual carriageway.

5.8.8 83% of respondents said tourism to their area was likely to increase if the route was an end to end dual carriageway (46% said this increase would be over 10%). 86% of the tourism businesses said their visitor numbers would increase if the A303/A358/A30 was an end to end dual carriageway, including 40% who said this increase would be more than 10%.

5.8.9 Benefits of dualling cited included removal of delays and poor reliability associated with congestion, making areas more attractive to investors and tourists, and tourists being able to reach their destination in a more positive and relaxed state.

5.8.10 These headline survey findings have been incorporated into the modelling work. The details of this are discussed further in Chapter 5.

CHAPTER 6

TOURISM SURVEY

6 TOURISM SURVEY

6.1 Introduction

6.1.1 As discussed in Chapter 2, tourism plays an important role in the economy of the South West. To inform the economic modelling, the views of tourists who were using or had used the A303/A358/A30 corridor were sought through a number of channels, including an online survey and face to face surveys at Cartgate Roundabout Tourist Information Centre (TIC) near Yeovil.

6.1.2 The tourism survey aimed to provide data and evidence on how tourist visits would be affected if the A303/A358/A30 was an end to end dual carriageway. This included whether peoples' current experiences of the route affected their decision to use it for future trips, and whether they would make more trips if the route was dualled.

6.1.3 The survey provided up to date information about the role of the route for tourism in the South West. This helped to ensure that the economic impact assessment was robust and related to the actual perceptions of tourists who would be affected by the scheme.

6.1.4 The survey asked respondents to consider the impact if the route was an "end to end" dual carriageway between Amesbury, Taunton and Exeter. This was both to ensure a clear, simple proposal which respondents could consider, and to enable the maximum possible benefit to be calculated. If required, the benefit from end to end dualling can be factored down for smaller scale improvements more reliably than it could be factored up from a smaller improvement to end to end dualling.

6.2 Tourism Survey Design

6.2.1 The Tourism survey was developed to ask a series of questions about peoples' current trips made along the study corridor (for the face to face survey), their experience of the journey and how this would affect their future trips. The draft survey went through a series of internal reviews and was also reviewed by Somerset County Council. An online version of the survey was developed in parallel using similar questions to enable the results to be analysed alongside each other. Copies of the surveys are contained in Appendix B.

6.2.2 The online survey was developed using Somerset County Council's consultation survey tool. This survey was reviewed internally, and approved by the Council's consultation lead on this project and the county's communication team. Once approved the scheme was trialled at PB and SCC for one day before it went live to the public.

6.2.3 To encourage participation in both face to face and online surveys, two £25 High Street Vouchers, (for each survey), redeemable at many different shops, were offered as prizes.

6.3 Survey Questions

<u>Face to Face Survey</u>

6.3.1 The face to face survey was divided into five sections. These were:

- Section 1: Trip details;

- Section 2: Travel today;
- Section 3: Future trip plans;
- Section 4: Other trips in the last year; and
- Section 5: Closing comments and details.

6.3.2 The face to face survey contained 26 questions, although some were omitted if respondents had not experienced congestion on their journey or not made other trips on the route in the last year. It typically took around five minutes to complete with people.

Online Survey

6.3.3 The online version of the tourism survey was divided into sections:

- Section 1: Overnight leisure trips;
- Section 2: Day leisure trips;
- Section 3: A303/A358/A30 specific questions;
- Section 4: Future trip plans; and
- Section 5: Closing comments and details.

6.3.4 The online survey contained 38 questions, although some were omitted if respondents had not made day trips or overnight stays in the last year.

6.3.5 Within both face to face and online surveys, 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. The online survey would not save survey responses unless all mandatory questions were answered, ensuring all respondents gave a complete response.

6.3.6 The survey contained a mix of question type, including open and closed questions, multiple choice (one choice), multiple choice (tick all that apply) and 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.

6.4 Survey Channels and Sampling

6.4.1 The online survey was hosted on a number of websites and emailed directly to members of stakeholder organisations, tourism boards, and issued to tourism related businesses who were involved in the business surveys. The groups who were consulted passed the online survey link to their customers.

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;
- Reduced need for stakeholders to spend time and money posting paper responses (which would reduce response rates);
- Reduced need for manual data entry of written responses;

- The ability to easily route people 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 6 questions relating to tourism businesses were omitted) and
- The ease of respondents being able to undertake the survey in their own time, and under their own will.

6.4.3 The main survey distribution took place via email circulated on the 13th August 2012 and went live on the SCC website on the same day. The survey was open for a total of three weeks from 13th August to 31st August. Given the increasing uptake of email, it was not considered that the focus on electronic distribution channels would lead to bias in the responses. As well as being issued to tourism boards local to the study area, the survey was promoted on BBC News and Heart FM and could also be found via Google / internet search.

6.4.4 Tourism organisations were contacted and generally agreed to send information about the survey to their members, either via regular newsletters or to upload the survey link onto their website. 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.

6.4.5 The organisations contacted and their respective membership numbers are summarised in Table 37. There may be some duplication with firms being a member of more than one organisation.

Organisation	Number of members contacted
Visit Dorset	800 Tourism Businesses, uploaded on website, and mailed to 45,000 members on distribution
Heart of Devon	700 Tourism Businesses, uploaded on website and emailed to 45,000 members on the consumer distribution list
Dorset County Council	2000 employees
Visit Wiltshire	Emailed to 15,000 members on distribution list
Exeter City Council	200 employees
Parsons Brinckerhoff South East and South West	600 employees

Table 37: Details of survey distribution via email

6.4.6 Organisations which were contacted but did not reply included: Visit Somerset; Axminster Tourist Information; Budleigh Salterton Tourist Information; Exeter Tourist Information; Exmouth Tourist Information; Ottery St Mary Tourist Information; Honiton Tourist Information; Seaton Tourist Information; Tiverton Tourist Association; Visit Devon and Visit Hampshire.

6.4.7 A number of stakeholders agreed to host details of the survey and put a link to it on their websites. This helped to capture responses from tourists and leisure users who may not have been contacted via email.

Organisation	Website address
Visit Dorset	www.visit-dorset.com/
Heart of Devon	www.heartofdevon.com/
National Trust	www.nationaltrust.org.uk/
Visit Somerset	www.visitsomerset.co.uk/
Somerset County Council	www.somersetconsults.org.uk http://www.somerset.gov.uk/irj/public
Visit Wiltshire	http://www.visitwiltshire.co.uk/
New Forest official Visitor site	http://www.thenewforest.co.uk/
Visit Southampton	http://www.visit-southampton.co.uk

Table 38: Details of websites hosting the online tourism survey

6.4.8 The sampling approach adopted was designed to target a broad spectrum of tourists across the study area. As there was no detailed information available on the precise characteristics of tourists using the A303/A358/A30 corridor, we did not seek to obtain a representative sample for both the face to face and online surveys.

6.5 Survey Results and Findings – Face to Face

6.5.1 The face to face survey was completed at Cartgate Tourist Information Centre on the A303 near Yeovil on Friday 3rd August (4pm – 9pm) and Saturday 4th August (8.30am to 4pm). Over the two days, 153 responses were received.

6.5.2 Overall there was an even split of people travelling eastbound and westbound over the two survey days. Most people (34%) had travelled from the South East, followed by Cornwall (20%). The most popular destinations were the South East (21%), Cornwall (21%) and South Devon (18%).

6.5.3 The most common trip duration for overnight stays was 7 nights (39% of responses). 22% of trips were for less than 7 nights. 14% of people were staying for 14 nights.

6.5.4 Average spend per person is shown in Figure 31. The most common level of spend was under £100 per person (24%), followed by £301 to £400 (16% of respondents). This is broadly comparable to a figure of £182 for UK visitors and £370 for overseas visitors from the National Tourism Survey.

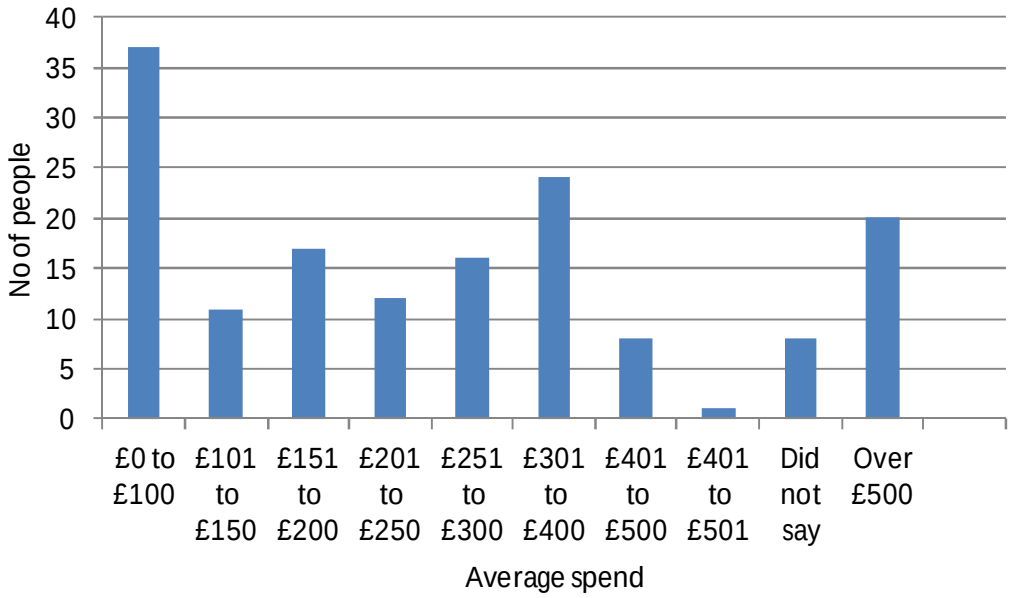


Figure 31: Average spend per person for respondents of face to face tourism survey

6.5.5 Only 37% of people said they considered the potential for delay when planning their trips, compared to 61% who did not. In total 69% of people did nothing about the potential for delay when making their trip, showing that some of those who considered it did not then take any action. The most common response was to leave early (14.3%). 3% of people diverted around known problem areas, and under 1% took measures including leaving late, allowing extra time and using travel advice websites.

6.5.6 People's overall views about the route are shown in Figure 32. The largest percentage (42%) said the route was 'good', followed by 31% who said it was 'very good', and 20% who said it was 'average'. Only 5.2% of people said it was 'poor' or 'very poor'.

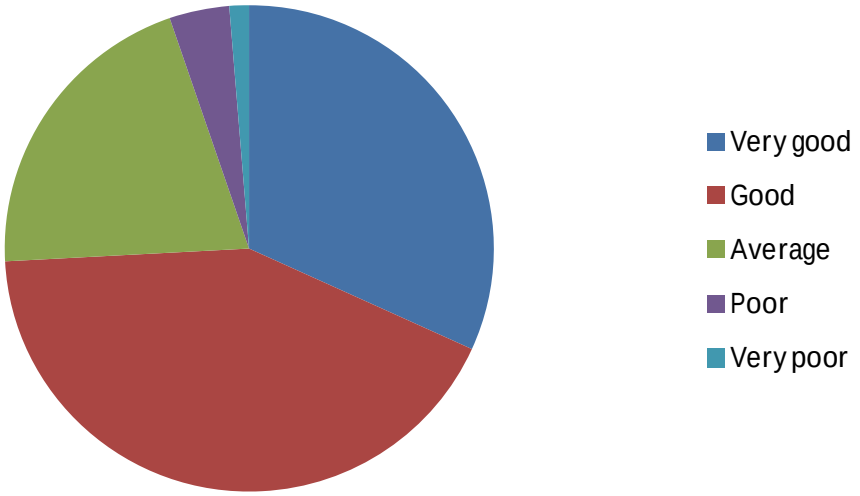


Figure 32: Overall experience of the A303/A358/A30 from face to face survey

6.5.7 Of the people questioned during the face to face survey, 34% experienced delay on their trip. The level of this delay is shown in Figure 33. Most people were only delayed a short period of time between 5 and 30 minutes. This is likely to have influenced their views on making return trips which are discussed below. Only 5 people made extra stops as a result of delay, and only 2 of these spent any money, which was less than £5.

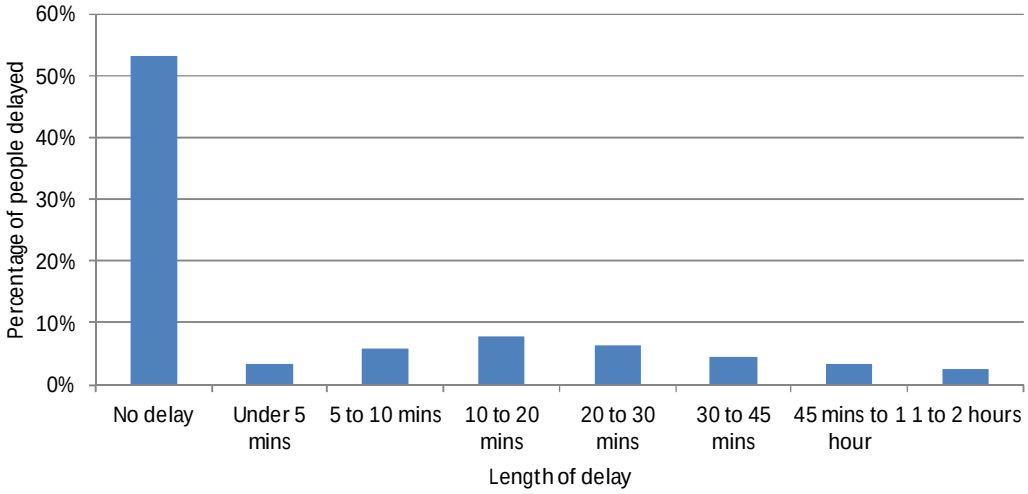


Figure 33: Length of delay experienced between Amesbury, Taunton and Exeter by face to face survey respondents

6.5.8 94% of respondents said that their trip experience would not affect their future trips using the route. Of those who said it would influence them, the most common response was that they would use a different route in future (although this only applied to 3% of people).

6.5.9 32% of people said that they would make extra trips involving overnight stays if the route was upgraded to an end to end dual carriageway, and 16% said they would make extra day trips. This is shown in Figure 34. Unfortunately, when asked to estimate the amount of extra nights they would stay or day trips they would make each year, most respondents were not able to provide an answer.

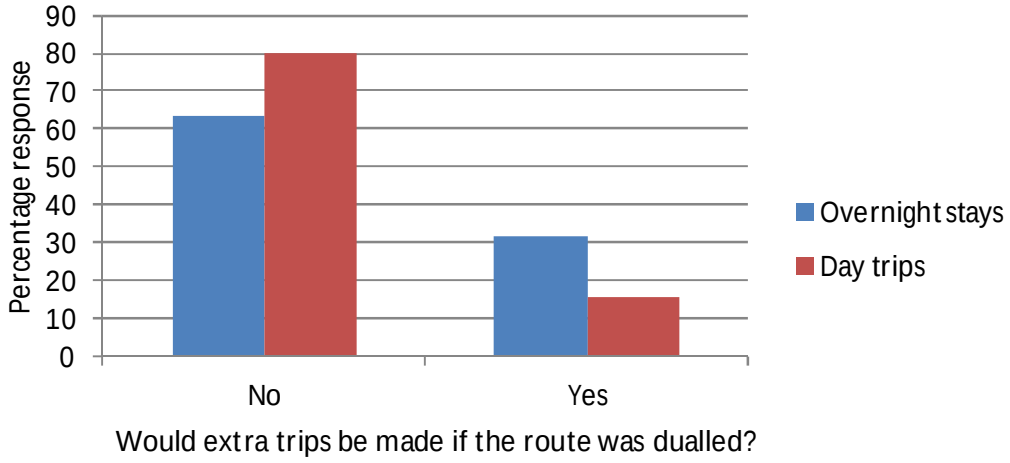


Figure 34: Face to face survey respondents who would make extra trips if the A303/A35/A30 was an end to end dual carriageway

6.6 Survey Results – Online Survey

6.6.1 The online survey opened on 13th August 2012 and closed on 31st August 2012, during which time 519 responses were received.

Trips Involving Overnight Stays

6.6.2 434 respondents had made trips using the route which involved an overnight stay in the last year. 29% had made over 6 such trips, followed by 19% who had made 2 trips.

6.6.3 The most common destination was Cornwall (29%), followed by the rest of the UK (not including the South East) (25%) and the South East (23%). As per the face to face survey, this suggests a split of responses from people in the South West who travel eastbound on the route for leisure trips and those based on the South East who travel to the South West for leisure.

6.6.4 Following known trends about tourism in the South West, most trips were made in the spring and summer months. August had the most trips (179), followed by July (159) and May (153). Fewest trips were made in November (60) and February (94).

6.6.5 44% of trips were weekends or long weekends, and 39% were a mix of these, week days and whole weeks. A small percentage of trips were week days only or whole weeks alone.

6.6.6 The number of nights stayed is shown in Figure 35. Most trips were one to three nights, with the most common being two nights (41%), 18% of trips were a week long, and a further 17% were between one and two weeks. Most commonly there were two people in the party (53%), followed by 4 people (13%) and 3 people (12%).

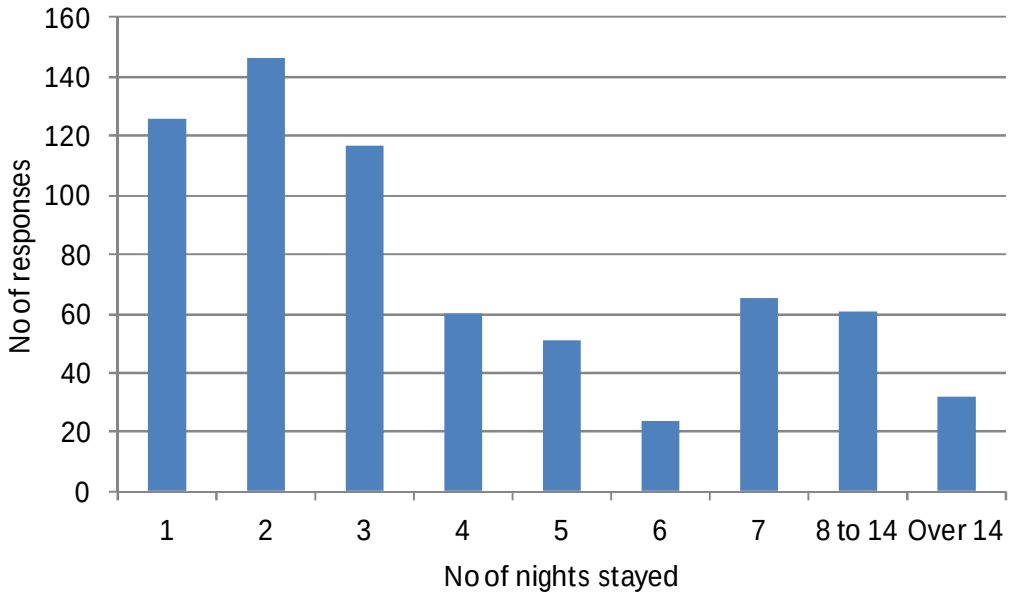


Figure 35: Number of nights stayed on trips to and from the South West by online survey respondents

6.6.7 The approximate average spend per person is shown in Figure 36. A weighted average of these results gives an average value of £227, compared to £182 for UK visitors and £370 for overseas visitors from the National Tourism Survey.

Figure 36: Average spend per person per trip by online survey respondents

Day Trips Using the A303/A358/A30

6.6.8 272 people had made leisure day trips using the route in the last year. 21% (45 people) had made over 12 day-trips. More typically, respondents had made one to four day trips (10-15% each) and five to six day trips (7-8% each).

6.6.9 The most common day-trip destinations were Southern Somerset (97 trips), the rest of the UK (95 trips), Dorset (84 trips), Wiltshire (79 trips), Exeter and East Devon (75 trips). The most popular starting point by a long margin was Southern Somerset (74 trips), followed by the rest of the UK (50 trips).

6.6.10 The majority of trips (56%) involved two people, followed by 18% involving four people.

6.6.11 A similar pattern in terms of which month the trip was made was observed for 'overnight stay' trips, with more being made in the spring and summer months. Most trips were made in May (143), followed by July (140) and August (134). The least popular months for trips were November (66) and January (76).

6.6.12 The most common average spend per person for day trips was £51 to £100 (32%). 24% of people spent £0 to £25 and a further 24% spent £26 to £50. 8% of respondents spent over £200 per person.

Overall Route Experience

6.6.13 Peoples' overall experience of using the route for trips to the South West is shown in Figure 37. The most common response is that the route is average (35%). 24% describe the route as good or very good, but were outweighed by 36% who said it is poor or very poor. The response for trips from the South West followed the same pattern.

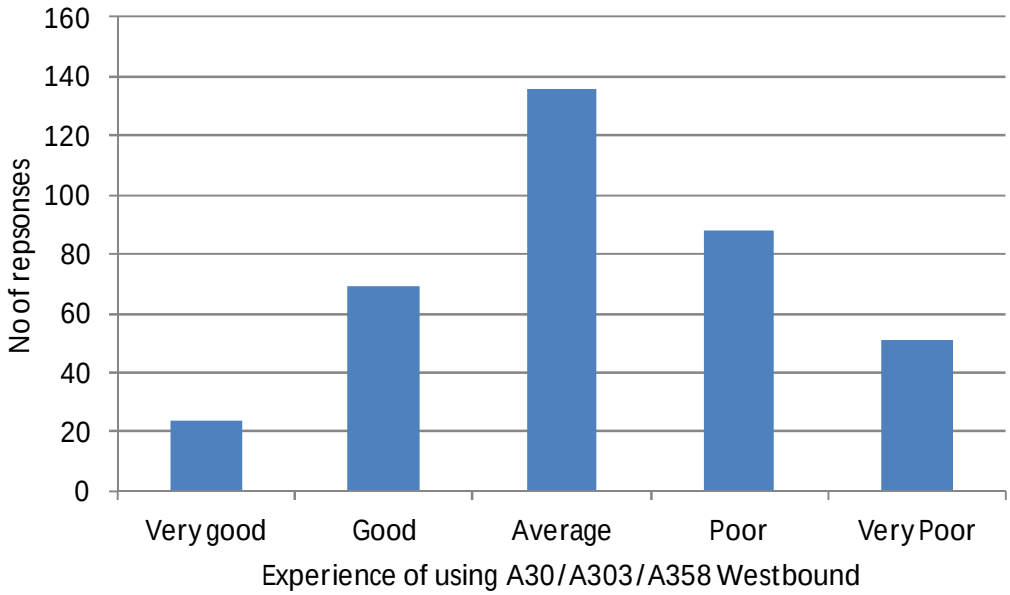


Figure 37: Experience of using the route for trips to the South West by online survey respondents

6.6.14 Reasons given for rating the route as poor or very poor included: delays experienced; heavy traffic; bottlenecks where two lanes merge into one and delays at roundabouts. Some comments were made about the safety of the route being poor. Those who said the route was good had generally not experienced any problems at the time they use it (e.g. weekdays and evenings).

6.6.15 Most people (45%) joined the route between 10:00 and 16:00. A similar amount of trips were made in the morning before this time (26% between 06:00 – 10:00) and in the afternoon and evening after this time (28% between 16:00 to 22:00).

6.6.16 In contrast to the face to face survey, 82% of respondents reported that they consider the potential for delays on the route when planning their trip. The most common response (56%) was to leave early to try and avoid traffic, followed by leaving late to try and avoid traffic (42%) and using traffic information websites (34%). 31% of people divert around known problem areas.

6.6.17 85% of respondents reported experiencing delay on the route. The length of this delay is shown in Figure 38, and typically ranges between 10 minutes and 1 hour.

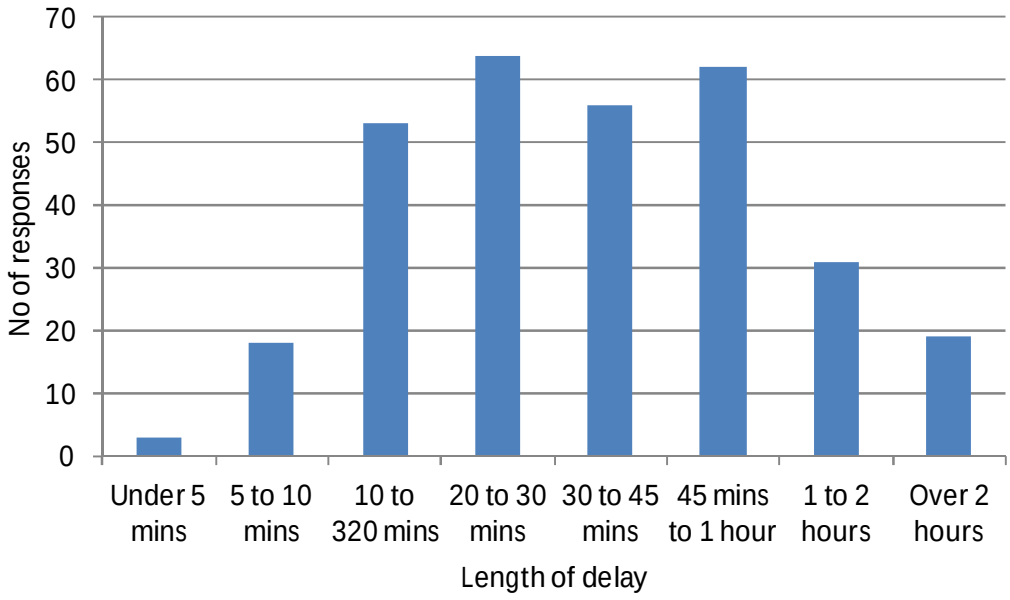


Figure 38: Length of delay experienced by online survey respondents

6.6.18 44% of people made extra stops as a result of being delayed along the route. There was some additional spend associated with these stops, typically around £10-£12 per person.

Future Trip Plans

6.6.19 60% of respondents said their experience of using the route would affect their decisions about whether and when to use it in future for other leisure trips. The most common responses were to use alternative routes (62%) and travel at a different time of day (45%). 19% of people said that they would not make a trip to the area again representing a loss of tourism income.

6.6.20 Some people were put off from using the route because of the current conditions on the road. A selection of comments is shown below:

- "If travelling to West London, would consider using M4 and M5 despite the longer distance";
- "I can sit in an airport and end up with a guaranteed sunshine holiday, but to sit in a traffic jam for hours forget it";
- "Would, and indeed do, travel less than I would like to see friends in Salisbury and Dorchester. Public transport isn't really an alternative as there is no decent rail route between Barnstaple, Exeter or Tiverton Parkway and Dorchester"; and
- "As I no longer work it is possible to plan travel at different times of the day. However as mentioned before, if visiting an attraction, one normally travels to arrive at opening time. Attractions are expensive so one has to make the most of them and not arrive too late!".

6.6.21 Of the 40% of people who said that their future trips would not be affected, there was a relatively even distribution of reasons. 47% preferred this route to alternatives, 34% had already adapted their journeys to avoid problems, and 34% stated there were not any viable alternatives available.

6.6.22 Peoples' likelihood of using the route to make overnight trips if it was an end to end dual carriageway is shown in Figure 39. 67% of people were more likely to use the route for trips involving overnight stays if it was an end to end dual carriageway, including 42% who were much more likely to do so. Only 4% of people reported they would use the route less if it was an end to end dual carriageway.

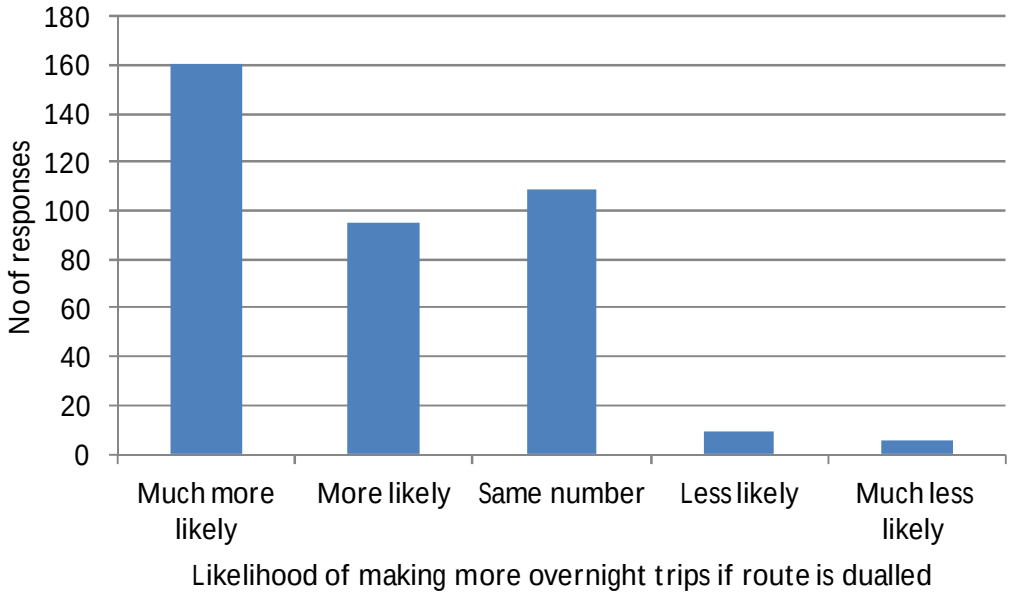


Figure 39: Likelihood of making trips involving overnight stays if the route was an end to end dual carriageway - by online survey respondents

6.6.23 Many people who said they would make the same number of trips noted that this would be easier if the route was an end to end dual carriageway, or stated that they

would remain on the main road rather than diverting on more minor roads to avoid known problem areas.

6.6.24 The responses for additional day trips which would be made if the route was an end to end dual carriageway followed a similar pattern. 67% of people were more likely to use the route for day trips if it was dualled, including 38% who were much more likely to do so. Only 3% of people reported they would use the route less if it was dualled.

6.6.25 When asked how many additional day trips would be made in a year, most people suggested two, three or four (17% each). 9% of people said they would make over 12 extra trips.

Additional Comments

6.6.26 A selection of additional comments provided at the end of the survey is shown below:

- "I think tourism numbers would remain the same but everyone's lives would be made much easier and trips much quickly and potentially less stressful";
- "The Southwest is an important part of the country both for business and leisure. Not to have 2 first class access routes, i.e. something in addition to the M5, is frustrating to say the least"; and
- "It is a lot quicker to get from Bromley to Paris than Bromley to Falmouth. If you only have a weekend to take, you have more time for holiday in France than in Cornwall. This is not a good advert for British tourism".

6.7 Tourism Survey Conclusions

6.7.1 The tourism survey provided useful information about peoples' previous trips and important information about how this would affect their future trip making using the A303/A358/A30.

6.7.2 The survey uncovered a range of ways in which people have already adapted to try and avoid congestion on the route (e.g. by leaving early). Many people experience delays along the route, find it a frustrating experience and feel there are a lack of viable alternatives for their journeys.

6.7.3 19% of people said that they would not make a trip to the area again because of their previous experiences, representing a potential loss of tourism income.

6.7.4 67% of people were more likely to use the route for trips involving overnight stays if it was an end to end dual carriageway, including 42% who were much more likely to do so. These trips result in around £200 of spend per person in the South West economy, so the creation of an end to end dual carriageway could help unlock this additional potential tourism spend. This has been factored into the economic modelling which is discussed in both Chapters 2 and 6.

CHAPTER 7

RESULTS OF WIDER ECONOMIC IMPACT ANALYSIS

7 RESULTS OF WIDER ECONOMIC IMPACT ANALYSIS

7.1 Headline Economic Impacts

7.1.1 This chapter contains the results of the WEI assessment.

7.1.2 Table 39 contains a summary of the principal economic benefits by category. The values are based on those accruing over the 60 year appraisal period and are discounted according to DfT guidance back to 2002 values.

7.1.3 The values given in Table 39 are the additional impacts that will accrue over and above the 'baseline' situation. In the case of GVA, for example, the three values reported in Table 39 represent the sum of the discounted *additional* GVA that is estimated to accrue over the 60-year appraisal period.

7.1.4 Three possible opening dates have been evaluated: 2017, 2022 and 2027.

	2017 Opening	2022 Opening	2027 Opening
Additional GVA Impact	£43.3bn	£41.6bn	£40.0bn
Employment (new jobs created)	21,400	21,400	21,400
Employment – taxation generation	£2.6bn	£2.4bn	£2.2bn
Employment – welfare payment savings	£1.4bn	£1.3bn	£1.2bn
Employment - disposable income spent in region	£3.9bn	£3.5bn	£3.3bn
'Multiplier' Employment - taxation receipts	£1.3bn	£1.2bn	£1.1bn
'Multiplier' Employment - welfare payment reductions	£0.75bn	£0.68bn	£0.62bn
Tourism - increase in spend	£9.5bn	£8.6bn	£7.8bn
Tourism employment impacts - taxation receipts	£2.3bn	£2.1bn	£1.9bn
Tourism employment impacts - welfare payment reductions	£1.3bn	£1.2bn	£1.1bn
Land Development - increase in land values	£60.7 million	£51.1 million	£43.0 million
Land Development - Corporation Tax gain to Government	£14.6 million	£12.3 million	£10.3 million
TOTALS (without GVA impact)	**£23.1bn**	**£21.2bn**	**£19.2bn**

Table 39: Summary of Wider Economic Benefits

7.2 Economic Impact by County

7.2.1 The economic impacts identified in Table 39 can be broken down by each of the counties and districts in the study area.

7.2.2 Table 40 below contains a summary of the additional GVA impacts by area. The opening year selected for presentational purposes is 2022.

	2022 Opening
GVA Impact (by each EU "NUTS 3" area)	
Wiltshire CC	£7.4bn
Dorset CC	£4.7bn
Somerset	£11.0bn
Cornwall and Isles of Scilly	£3.9bn
Plymouth	£3.0bn
Torbay	£1.4bn
Devon CC	£10.2bn
TOTAL	**£41.6bn**

Table 40: Summary of Additional GVA by NUTS 3 Areas

7.2.3 As well as the additional GVA impacts summarised in Table 40, the 'baseline' GVA that will occur without the A303/A358/A30 scheme being implemented can also be calculated and shown for comparative purposes. Taking 2022 as the opening year, for example, 'baseline' GVA for each of the NUTS 3 areas is shown in Table 41.

	2022 Opening
Baseline GVA (by each EU "NUTS 3" area)	
Wiltshire CC	£234.5bn
Dorset CC	£181.2bn
Somerset	£246.0bn
Cornwall and Isles of Scilly	£205.8bn
Plymouth	£122.2bn
Torbay	£50.3bn
Devon CC	£357.7bn
TOTAL	**£1,397.7bn**

Table 41: Summary of 'Baseline' GVA by NUTS 3 Areas

7.2.4 Table 42 overleaf contains a summary of the combined employment-related impacts by each district in the A303/A358/A30 corridor. These include the impacts of additional spending by new employees in each respective area.

	2022 Opening
Combined Employment Impact (by NOMIS districts)	
West Wiltshire	£0.8bn
Salisbury	£0.4bn
South Somerset	£1.1bn
Taunton Deane	£0.8bn
Mendip	£0.6bn
Sedgemoor	£0.5bn
North Dorset	£0.3bn
West Dorset	£0.5bn
East Devon	£0.8bn
Mid Devon	£0.4bn
Exeter	£0.7bn
TOTAL	**£6.9bn**

Table 42: Summary of Combined Employment Impacts

7.2.5 Table 43 below contains a summary (by each county) of the taxation and welfare payment reductions to Government attributable to the new employment supported by the spending of additional real disposable incomes in each county.

	2022 Opening
Combined Financial Benefits to Govt	
Wiltshire	£0.3bn
Somerset	£0.8bn
Dorset	£0.2bn
Devon	£0.3bn
TOTAL	**£1.8bn**

Table 43: Summary of Financial Benefits to Government of Increased Disposable Income

7.2.6 Table 44 contains the values of the combined tourism impacts by county. These cover the increases in tourist spending as well as the tourism employment-related impacts.

	2022 Opening
Combined Tourism Impacts	
Wiltshire	£1.9bn
Somerset	£2.2bn
Dorset	£2.6bn
Devon	£3.2bn
Cornwall	£1.6bn
TOTAL	**£11.6bn**

Table 44: Summary of Combined Tourism Impacts

7.3 Economic Impact by Beneficiary

7.3.1 The different types of economic impact identified in the EIS will influence the various funding and project delivery mechanisms. There will be several beneficiaries of the scheme from a wider economic impact perspective. These include:

- *Central Government:* will benefit from the taxation revenue streams accruing from the additional employment generated. In addition, by taking people out of unemployment, benefits and other allowance payments from Government will be reduced;

- *Regional / Local Government:* with regional economic output likely to rise following scheme implementation, there may be specific revenue streams accruing to Local Government in the form of increased local business rates and other similar income streams;
- *Local / regional industry sectors:* taking the tourism sector as an example and based on the responses to the surveys, the scheme will induce additional visits to the region. These will result in increased expenditure in the region which will support additional employment and the associated financial benefits of this; and
- *Financial benefits from land development and land value gain:* when the scheme is implemented, the 'attractiveness' of the corridor in terms of land development will be greatly enhanced. This will benefit developers and also central Government through increases in corporation tax.

7.3.2 The quantification of the various wider economic impacts has been undertaken so that these are given according to each category and by area. This enables the different impacts to be quantified and thus taken into account when the 'delivery' and 'financing' options are being put forward.

7.4 Themes Emerging

7.4.1 There are several themes and trends emerging from the analysis. These are as follows:

- The largest overall impact over the 60-year appraisal period is that on GVA and although this measure of economic activity is in the form of a financial total that cannot be captured as a 'revenue stream', it is nevertheless an important indicator of the overall impact on the region's economy over time;
- There are several direct financial benefits to central Government, including the revenue streams accruing from direct taxation on new employees and reductions in welfare payments – these revenue streams accrue from several different sources of employment generation;
- The local / regional economy will also benefit directly from the increases in disposable income of those that are employed as a result of the dualling programme – the increases in disposable income will benefit various businesses in the region and will also support additional employment. This 'multiplier' impact will thus enhance the overall impact of the dualling programme;
- Tourism is one of the principal economic activities throughout the South West and the improvements to the A303, A358 and A30 will have a positive, quantifiable impact on visitor numbers, visitor spending and the number of additional employment opportunities supported by increased spending;
- Land development will also have several impacts, including those additional revenue streams generated by land value gain and associated corporation tax gains to Central Government – although not quantified at this stage, land development will also generate long-term job opportunities in the A303/A358/A30 corridor and surrounding areas.

7.4.2 The analysis has also shown how the later the schemes are completed, the greater the impact of discounting on the overall financial impact (in Present Value terms) of the dualling programme.

7.4.3 Even without potential income sources such as National Insurance contributions from new employees, increases in Corporation Tax attributable to increased turnover / profitability of companies benefiting from the dualling programme as well as the

benefits associated with employment at new business parks, there is considerable evidence that the dualling programme will generate significant wider economic impacts.

7.4.4 As discussed in the following, concluding chapter, the next steps are to undertake more detailed analysis (if necessary) and to commence the development of appropriate mechanisms to achieve successful delivery of the schemes.

CHAPTER 8

SUMMARY, CONCLUSIONS AND NEXT STEPS

8 SUMMARY, CONCLUSIONS & NEXT STEPS

8.1 Overall Summary

8.1.1 The analysis of economic impacts has indicated that there are substantial benefits associated with dualling the A303/A30 between Amesbury and Honiton as well as the A358 linking the A303 with the M5.

8.1.2 The main components of economic impacts are:

- Increases in GVA throughout the region due to increased output and turnover of businesses;
- Employment-related impacts, including the generation of new employment opportunities and the financial benefits accruing to Government;
- Tourism-related impacts, including increases in visitor expenditure in the region as well as increases in employment supported by these increases in expenditure;
- Impacts associated with land development and increases in land values due to the provision of improved transport infrastructure; and
- Other benefits, including those associated with the impacts of increased disposable income.

8.1.3 The headline economic impacts of the dualling programme are as follows:

- Total number of new jobs generated: 20,600;
- Total impact on GVA (over 60 years, discounted, 2022 opening): £41.6 billion;
- Combined impact on employment-related taxation (2022 opening): £2.3 billion;
- Combined impact on employment-related reduction in welfare payments (Jobseekers' Allowance, 2022 opening): £1.3 billion;
- Total impact on visitor expenditure in the region (2022 opening): £8.6 billion;
- Total disposable income spent in region (2022 opening): £3.4 billion; and
- An initial benefit to cost ratio of 1.80 which would be likely to increase when considered in further detail.

8.1.4 The impacts related to items such as taxation and visitor expenditure are those that can be captured and distributed across various beneficiaries.

8.1.5 This report has examined the impacts of the full dualling scheme for the A303/A358/A30. Further work would be required to disaggregate these impacts to calculate the economics benefits of any reduced scale scheme.

8.2 Conclusions

8.2.1 Based on the extensive surveys conducted in the region and analysis of economic data, this assessment of economic impacts has demonstrated that there will be significant benefits associated with dualling the full length of the A303/A358/A30.

8.2.2 Based on the latest DfT guidance, the analysis has shown that the scheme will bring a wide range of economic benefits to the South West region and importantly, will help boost employment during a time of continued economic uncertainty.

8.2.3 These benefits will accrue from the improvements in connectivity, reliability and resilience that the scheme will bring.

8.3 Next Steps

8.3.1 Going forward and based on these findings, the next steps will be to work with the Highways Agency and the Department for Transport to develop appropriate funding and delivery mechanisms to ensure that the full dualling scheme is implemented.

8.3.2 Following the outcome of consultation, the calculations can be refined based on the scale of the selected scheme (i.e. from targeted improvements to full dualling of the A30).

APPENDIX A – BUSINESS SURVEY QUESTIONS

A30/A303/A358 Wider Economic Impacts Survey

Parsons Brinckerhoff, on behalf of Somerset County Council, is undertaking an options study for the A30/A303/A358, which includes estimating the wider economic impacts of improvements to the route corridor and then developing proposals for appropriate solutions.

This survey has been designed to gather information and views from local companies in the region to establish current operations and the extent these may change in the future if the route corridor is upgraded. If your business is located near the route corridor, or relies on it to connect you to suppliers and customers or if your staff commute on it, we would be interested in hearing from you.

The options study will be examining a number of possible improvements, at different scales. For the purposes of this survey, (to ensure that the maximum possible economic impact of an improvement can be calculated), respondents are asked to consider the impacts of constructing an “end to end” dual carriageway improvement along the A30/A303/A358 corridor between Amesbury, Taunton and Exeter. Please note this does not constitute a proposal, and the options part of the study has not yet started.

Earlier studies have often overlooked the local economy impacts which are often cited as the key driver of the need for the scheme. The impacts we are keen to understand include potential jobs impacts (including jobs safeguarded), effects on visitor spending, changes in business to business activity, which are all potential spin-off impacts of the scheme. By filling in this survey, you will be providing the information we need to understand how the A30/A303/A358 supports your business today and how its future will influence your choices about what investments you will make and how many people you will employ from the local economy.

The survey typically takes around ten minutes to complete and will be open until Friday 20th July.

All information provided will be confidential, remain anonymous and will be processed in accordance with the Data Protection Act. Responses will be used soley for the purposes of evaluating the economic impacts of improvements to the A30/A303/A358.

Section 1: Overview

This section begins the survey with some basic questions about your business.

If your company has more than one site which uses the A30/A303/A358 we are happy to recieve responses for each of these sites. Please fill in the survey honestly and accurately for the site at which you are located and encourage your counterparts in other locations to also complete the survey for their site.

1. Please enter your company name: (This will only be used if we need to contact you in future).

***2. Please enter your postcode (e.g. ABCD XYZ):**

*3. What sector is your company in?

- Agriculture
- Mining, quarrying and utilities
- Manufacturing
- Construction
- Motor trade
- Wholesale
- Retail
- Hotels, restaurants
- Tourism
- Transportation
- Post and telecommunications
- Finance
- Real estate and renting
- Public administration
- Education
- Health and social work
- Consultancy
- Research
- Public sector
- Other business services
- Other consumer services

Other (please specify)

Section 2: Employees, turnover and sector issues

This section of the survey looks at specific characteristics of the size and nature of your business

*4. How many people do you employ at this site?

- 1 to 10
- 11 to 24
- 25 to 49
- 50 to 99
- 100 to 250
- 250 or over

5. Please select the categories which your employees fall in to:

	Most staff	Some staff	Few staff	No staff
Professional and managerial:				
Other white collar:				
Skilled manual:				
Unskilled manual:				

6. What is your approximate annual turnover at this site? (This question is optional. Filling it in will help us better calculate the economic benefits of improving the A30/A303/A358 corridor).

- Under £125k
- £125k - £250k
- £250k - £500k
- £500k - £1m
- £1m - £5m
- £5m - £25m
- £25m - £500m
- Over £500m
- Decline to answer

7. Which of the following best represents how you think your turnover at this site will change over the next year?

- Increase over 10%
- Increase up to 10%
- Stay about the same
- Decrease up to 10%
- Decrease over 10%

Please comment on any barriers to expansion or reasons for anticipated decline:

Section 3: A30/A303/A358 specific questions

This section covers some specific questions about improving the A30/A303/A358 to an "end to end" dual carriageway (between Amesbury, Taunton and Exeter), and the impact that it would have on your business.

*8. How important is the A30/A303/A358 to your business?

- Not important
- Slightly important
- Important
- Very important
- Essential

Please explain why:

***9. At some times and in some locations the A30/A303/A358 between Exeter, Amesbury and Taunton suffers from congestion. Please indicate below if this causes any disruption to different aspects of your business:**

	No disruption	Minor disruption	Moderate disruption	Major disruption	Not applicable
Deliveries in	○	○	○	○	○
Deliveries out	○	○	○	○	○
Staff travel	○	○	○	○	○
Business travel	○	○	○	○	○
Customer travel	○	○	○	○	○

Please explain how you respond to or work around this disruption and identify any key congestion hotspots:

***10. If the A30/A303/A358 between Amesbury, Taunton and Exeter was converted to entirely dual carriageway, what scale of impact would this have on your business?**

- ○ Strong negative impact
- ○ Some negative impact
- ○ No impact
- ○ Some positive impact
- ○ Strong positive impact

Please comment on what this impact would be:

***11. On top of any existing plans for business growth in the medium term, realistically how much change in your businesses' turnover do you think would be created as a result of dualling of the A30/A303/A358 between Amesbury, Taunton and Exeter?**

- ○ Reduce turnover
- ○ No change in turnover
- ○ Increase turnover 0-10%
- ○ Increase turnover 10-20%
- ○ Increase turnover 20-30%
- ○ Increase turnover over 30%

Please explain the reasons for your answer:

***12. Do you think the dualling of the A30/A303/A358 between Amesbury, Taunton and Exeter would encourage investment in the area?**

- ○ No
- ○ Maybe
- ○ Yes

13. Please explain the reasons for your answer:

***14. What do you think the benefits of dualling the A30/A303/A358 to create an "end to end" dual carrageway would be?**

***15. What do you think the disadvantages of dualling the A30/A303/A358 to create an "end to end" dual carriageway would be?**

Section 4: Location

16. How important are the following aspects to your location?

	Essential	Very important	Important	Slightly important	Not important
Access to the road network	○	○	○	○	○
Acess to public transport	○	○	○	○	○

*17. Please rate how much of a problem (if any) the following are for your business:

	Major problem	Moderate problem	Minor problem	No problem
Journey times on the A30/A303/A358	○	○	○	○
Predictability / reliability of journey times on the A30/A303/A358	○	○	○	○

Please add more details if you wish:

*18. Would creating an "end to end" dual carriageway along the A30/A303/A358 between Amesbury, Taunton and Exeter make your site more viable / attractive as a business location?

- ○ Yes
- ○ No

Please comment if you wish:

Section 5: Movement of goods, staff commuting and business travel

This section covers the movement of goods, staff commuting and business travel for work.

Business travel includes trips to see suppliers, customers etc for which expenses are often claimed.

19. Approximately what percentage of your business costs are associated with moving goods TO and FROM your business?

- ○ 0 - 10%
- ○ 11 – 20%
- ○ 21 – 30%
- ○ 31 – 40%
- ○ 41 – 50%
- ○ Over 50%
- ○ Don't know

*20. Approximately what percentage of trips taking goods TO and FROM your business involve using the A30/A303/A358?

- ○ Under 10%
- ○ 11 - 25%
- ○ 26 - 50%
- ○ 51 - 75%
- ○ Over 75%

21. Please rate below how many of your staff travel to work using the following modes:

	Most people	Some people	Few people	Nobody	Don't know
Motor vehicle (passenger)	○	○	○	○	○
Motor vehicle (driving)	○	○	○	○	○

Other (please specify) or comment

*22. Of the staff who travel to and from work using a motor vehicle, approximately what percentage are likely to use the A30/A303/A358?

- ○ Under 10%
- ○ 11-20%
- ○ 21-40%
- ○ 41-60%
- ○ 61-80%
- ○ 81-100%
- ○ Dont know

23. How many business trips made each week in connection with your site use the A30/A303/A358? (Please include trips from your site as well as where your staff travel from home on business).

- ○ Under 10
- ○ 11-20
- ○ 21-50
- ○ 51-100
- ○ 101-200
- ○ 200-300
- ○ Over 300
- ○ Not applicable (do not make business trips)
- ○ Don't know

24. Please select which of the following sections of the A30/A303/A358 your company typically use for both moving goods to and from your site and business trips. (Please select all that apply).

	Moving goods to and from site	Business trips
A303 Amesbury to Berwick Down (Stonehenge)	☐	☐
A303 Wylye to Stockton Wood	☐	☐
A303 Chicklade Bottom to Mere	☐	☐
A303 Sparkford to Ilchester	☐	☐
A303 South Petherton to Southfields (Ilminster bypass)	☐	☐
A303 Southfields to Marsh	☐	☐
A358 Ilminster to Taunton	☐	☐
A30 Honiton to Exeter	☐	☐

Section 6: Tourism

This section is specifically related to tourism, and mainly focused on businesses in the tourism sector.

When referring to visitors please consider the total number of visitors, not the number of groups (e.g. 2 groups of 4 is 8 visitors).

25. How do you think tourism to YOUR AREA would be affected if the A30/A303/A358 was an "end to end" dual carriageway between Amesbury, Taunton and Exeter?

- Increase over 10%
- Increase up to 10%
- No impact
- Decrease up to 10%
- Decrease over 10%

Please comment if you wish:

***26. Is your business in the tourism sector?**

- Yes
- No

Section 6: Tourism

***27. Does your company supply goods or services to the tourism industry?**

- Yes
- No

Section 6: Tourism

28. How many visitors do you typically recieve in a year?

- 0 - 50
- 51 - 100
- 101 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
- 5001 - 10,000
- Over 10,000

29. What proportion of visitors do you typically recieve in the following periods?

	0-10%	11-20%	21-40%	41-60%	61-80%	81-100%
Summer Holidays (July / August)						
Autumn (September to mid-December)						
Christmas and New Year						
January up to Easter						
Easter fortnight						
Between Easter and the Summer Holidays						

30. What is the approximate average spend per visitor with your business? Note: If a family group of 4 spend £200, that is £50 per visitor. Please include all spend which generates turnover for your business (e.g. tickets, meals, souvineers, accomodation if available).

- Under £25
- £25 - £50
- £51 – £100
- £101 - £200
- Over £200

***31. Approximately what proportion of your visitors would travel to you using the A30/A303/A358 between Amesbury, Taunton and Exeter?**

- Under 10%
- 11 – 25%
- 26 – 50%
- 51 – 75%
- Over 75%

32. Where do you the majority of your visitors live?

- Within 10 miles
- Within 11 - 25 miles
- Within 26 - 50 miles
- Across the South of England
- UK-wide
- International

***33. How do you think the number of visitors to your business would be affected if the A303 was "end to end" dual carriageway between Amesbury, Taunton and Exeter?**

- Increase over 10%
- Increase up to 10%
- No impact
- Decrease up to 10%
- Decrease over 10%

Please comment if you wish

Final comments

This section provides the opportunity to make any final comments relating to the A303 dual carriageway study and the potential impacts of the scheme on your business which have not been catured so far.

34. Do you have any final comments (including on the current situation on the A30/A303/A358, benefits or drawbacks of "end to end" dual carriageway)?

35. Please provide your contact details below so we may contact you for follow up research:

Name:	
Position in company:	
Work telephone number:	
Work email addresss:	

Thank you for taking the time to complete this questionnaire. If you have any queries about this survey please contact Adam Walton on WaltonAd@pbworld.com

APPENDIX B – TOURISM SURVEY QUESTIONS

A30/A303/A358 Leisure and Tourism Survey

Section 1: Overnight leisure trips

This section of the survey covers leisure trips made in the last year which involved an overnight stay away from home.

1.1
Did you use the A30/A303/A358 for a leisure trip involving an overnight stay in the last year?

- Yes
- No

If option 1 (Yes) of this question was selected then jump to the next item in the questionnaire
If option 2 (No) of this question was selected then jump to Section 2: Leisure Day Trips

1.2
If yes, how many leisure trips involving overnight stays did you make using the A30/A303/A258 in the last year?

- 1
- 2
- 3
- 4
- 5
- 6
- Over 6

1.3
Where did you stay overnight on your trip(s)? (Please select all that apply)

- Cornwall
- North Devon
- South Devon
- Dorset
- Northern Somerset
- Southern Somerset
- Wiltshire
- Rest of UK
- Overseas

1.4
Where did you travel from? (If you made more than one trip, please select your most common starting point)

- Cornwall
- North Devon
- South Devon
- Dorset
- Northern Somerset
- Southern Somerset
- Wiltshire
- Rest of South East
- Rest of UK
- Overseas

Other (please specify)
Answer
(Max. 200 characters)

1.5
What months did you make your trips in? (Please select all that apply. If a trip covered more than one month please select the month most of the trip was in). Please select at least 1 option.

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Please provide further details if you wish

1.6
Which of the following categories did most of your overnight stays fall into:

- Weekends or long weekends
- Week days only
- Whole weeks
- Mixture of the above

1.7
How many nights did you stay on your trip(s)? (Please select all that apply if you made more than one trip)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8 to14
- Over 14

How many people were typically in your group?

- «Please select» 1/2/3/4/5/6/7/8/9/10/Over 10

1.8
Including all accommodation, food and drink, souvenirs, travel costs and leisure activities, what was the approximate average spend on your trip per person?

- Under £100
- £101 to £150
- £151 to £200
- £201 to £250
- £251 to £300

£301 to £400
£401 to £500
Over £500

Section 2: Leisure Day Trips

This section covers tourism trips made in the last year which have used the A30/A303/A358 and were day trips including travelling from home and back in one day, without staying overnight. These include trips to visitor attractions and to see friends and family.

2.1
Did you use the A30/A303/A358 for any leisure day trips in the last year? (Trips not involving overnight stays)
Yes
No

If option 1 (Yes) of this question was selected then jump to the next item in the questionnaire
If an answer was provided to this question then jump to Section 3: A30/A303/A358 specific questions

2.2
If yes, how many leisure day trips (not involving overnight stays) did you make using the A30/A303/A358 in the last year?
«Please select»1/2/3/4/5/6/7/8/9/10/11/12/Over 12

2.3
Where did you travel to on your day trip? (Please select all that apply)
Cornwall
North Devon
South Devon
Dorset
Northern Somerset
Southern Somerset
Wiltshire
Rest of UK

Please enter any additional comments if you wish

2.4
Where did you travel from for your day trip? (If you made more than one trip, please select your most common starting point)
Cornwall
North Devon
South Devon
Dorset
Northern Somerset
Southern Somerset
Wiltshire
Rest of UK

2.5
Which parts of the A30/A303/A358 did you use for your trip? (Please select all that apply)
Please select zero or more options.

Section 1: A303/A30 Southfields to Exeter
Section 2: A358 Taunton to Southfields
Section 3: A358 (Southfields) to A3088
Section 4: A3088 to A37
Section 5: A37 to A350
Section 6: A350 to A36
Section 7: A36 to Amesbury (Stonehenge)

How many people were typically in your group?
«Please select» 1/2/3/4/5/6/7/8/9/10/Over 10

2.6
What month(s) did you make your day trips in? (Please select all that apply)
January
February
March
April
May
June
July
August
September
October
November
December

2.7
Including all food and drink, souvenirs, travel costs and leisure activities, what was the approximate spend per person for the trip(s)?
£0 to £25
£26 to £50
£51 to £100
£101 to £150
£151 to £200
Over £200

Section 3: A30/A303/A358 specific questions

3.1
How would you describe your overall experience of using the A30/A303/A358 for leisure trips to the South West (westbound)?
«Please select» Very good/Good/Average/Poor/Very poor/Not applicable

3.2
How would you describe your overall experience of using the A30/A303/A358 for leisure trips from the South West (eastbound)?
«Please select» Very good/Good/Average/Poor/Very poor/Not applicable

3.3
Please explain your answer to the previous two questions about your experience of using the A30/A303/A358.

3.4
Approximately what time did you usually start your trip on the A30/A303/A358 travelling to the South West (westbound)? (Please select the time you joined the A30/A303/A358, not the time you started your trip).
«Please select» 06:00 to 08:00/08:00 to 10:00/10:00 to 16:00/16:00 to 19:00/19:00 to 22:00/22:00 to 06:00

3.5
Approximately what time did you usually start your trip on the A30/A303/A358 travelling from the South West (eastbound)? (Please select the time you joined the A30/A303/A358, not the time you started your trip).
«Please select» 06:00 to 08:00/08:00 to 10:00/10:00 to 16:00/16:00 to 19:00/19:00 to 22:00/22:00 to 06:00

3.6
Did you consider the potential for delays on the A30/A303/A358 when you planned your trip? (This includes if you left at a specific time to try and avoid delay).
Yes
No

If option 1 (Yes) of this question was selected then jump to the next item in the questionnaire
If an answer was provided to this question then jump to 3.8

3.7
If you considered the possibility of delay, what did you do about this? (Please select all that apply).
Nothing
Deliberately broke trip over two days
Diverted around known problem areas
Left early to try and avoid traffic
Arranged late check in
Left late to try and miss traffic
Used traffic information website

Other (please specify)

3.8
Did you ever experience any delay on the A30/A303/A358 when making trips to or from your destination?
Yes
No

If option 1 (Yes) of this question was selected then jump to the next item in the questionnaire
If option 2 (No) of this question was selected then jump to Section 4: Future trip plans using the A30/A303/A358

3.9
If yes, please specify approximately how long you were delayed for on the A30/A303/A358 between Amesbury, Taunton and Exeter?
«Please select» Under 5 mins/5 to 10 mins/10 to 20 mins/20 to 30 mins/30 to 45 Mins/45 mins to 1 hour/1 to 2 hours/Over 2 hours

Please comment on where these delays were and why you think they occurred (if known):

3.10
If you made any unplanned additional stops as a result of congestion on your journey, please select how much extra you spent that you would not have spent later anyway.

Did not make any extra stops
Stopped but did not spend any money
Under £5
£5 to £10
£10 to £20
£20 to £30
£30 to £40
£40 to £50
Over £50

Section 4: Future trip plans using the A30/A303/A358

This section considers your future plans for leisure trips using the A30/A303/A358.

4.1
Would your experience of using the A30/A303/A358 so far affect your decision about whether and when to use it in future for other leisure trips?

Yes
No

If option 1 (Yes) of this question was selected then jump to the next item in the questionnaire
If option 2 (No) of this question was selected then jump to 4.3

4.2
If yes, please explain how your experiences of the A30/A303/A358 so far would affect how and when you use it in future? (Please select all that apply).

Would plan trip at different time of year
Would travel at different time of day
Would not make a trip to the area again
Would use public transport instead
Would use alternative routes

Please note any other changes you would make or additional comments

Always jump to 4.4 (If the A30/A303/A358 was an end to end dual carriageway between Amesbury, Taunton and Exeter,...)

4.3
If your previous experiences of the A30/A303/A358 would not affect how or when you use it in future, please explain why:

Have already adapted to avoid problems (e.g. travelling at quiet times)
Have not experienced any problems
No alternative routes available
Prefer this route to alternatives

Please explain any other reasons or elaborate on your answer:

4.4
If the A30/A303/A358 was an end to end dual carriageway between Amesbury, Taunton and Exeter, would you be more or less likely to make trips involving overnight stays using the route?
Much more likely
More likely
Would make the same number
Less likely
Much less likely

Please enter any additional comments or explain your answer:

If an answer was provided to this question then jump to 4.6
If option 4 (Less likely) of this question was selected then jump to 4.6
If option 5 (Much less likely) of this question was selected then jump to 4.6

4.5
How many more nights away would you stay in a year if the route was an end to end dual carriageway?
«Please select» None/1/2/3/4/5/6/7/8/9/10/Over 10

Please explain your answer:

4.6
If the A30/A303/A358 was an end to end dual carriageway between Amesbury, Taunton and Exeter, would you be more or less likely to make day trips (not involving overnight stays) using the route?
Much more likely
More likely
Would make the same number
Less likely
Much less likely

Please enter any additional comments or explain your answer:

If option 3 (Would make the same number) of this question was selected then jump to Section 5: Closing Comments
If option 4 (Less likely) of this question was selected then jump to Section 5: Closing Comments
If option 5 (Much less likely) of this question was selected then jump to Section 5: Closing Comments

4.7
How many additional day trips are you likely to make in a year if the route was an end to end dual carriageway?
«Please select» None/1/2/3/4/5/6/7/8/9/10/11/12/Over 12

Please explain your answer:

Section 5: Closing Comments

Thank you for taking the time to complete this survey.

If you have any questions about this survey, please contact Adam Walton on WaltonAd@pbworld.com

If you are a business which uses the route, you may also be interested in completing our wider economic impacts survey. This can be accessed at www.surveymonkey.com/s/a303economics and is open until the end of August.

5.1
Do you have any additional comments regarding the impact of creating an end to end dual carriageway between Amesbury, Taunton and Exeter and its impact on tourism in the South West?

5.2
In order to be entered into the prize draw for one of two £25 High Street Vouchers, please provide your name and email address or phone number below. We will not pass your details to any third parties beyond the project team.

5.3
Please select whether you would be happy to be contacted about follow up work

- Yes
- No

PARSONS BRINCKERHOFF

A30/A303/A358 Tourism Survey

Parsons Brinckerhoff is undertaking an options study for the **A30/A303/A358,** which includes estimating the **economic impacts** of improvements to the route corridor.

This survey has been designed to gather information and views from people who are making **tourism related (leisure) trips** which use the route. If you are on a leisure trip today, we are interested in hearing from you. Two people will win **a £25 High Street Voucher**.

By filling in this survey, you will be providing the information we need to understand how the A30/A303/A358 supports tourism to the area immediately around it, and further afield in Devon, Cornwall and the South West.

Face to face, the survey typically takes about **five minutes** to complete.

Day of survey: **Time of survey:**

Section 1: Trips Details (Today)

1. Where have you travelled from today?

South West: Cornwall / North Devon / South Devon / Dorset / Northern Somerset / Southern Somerset / Wiltshire
Rest of UK & further: London / South East / East of England / Midlands / Wales / Other UK / Overseas

If overseas, where did you enter the UK? Heathrow / Gatwick / Stanstead / Dover / Eurotunnel / Eurostar / Other (please specify)……..

2. Where are you going to?

South West: Cornwall / North Devon / South Devon / Dorset / Northern Somerset / Southern Somerset / Wiltshire
Rest of UK & further: London / South East / East of England / Midlands / Wales / Other UK / Overseas

If overseas, where will you leave the UK? Heathrow / Gatwick / Stanstead / Dover / Eurotunnel / Eurostar / Other (please specify)……..

3. Are you travelling: Eastbound / Westbound

4. How many nights will you stay?

None / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / Over 14

5. How many people are there in your group?

1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / Over 10

6. Including all accommodation, food and drink, souvenirs, travel costs and leisure activities, how much do you think you will spend on your trip *per person?*

£0 to 100	£201 to £250	£401 to £500
£101 to £150	£251 to £300	Over £500
£151 to £200	£301 to £400	

Section 2: Travel Today

7. Which parts of the route have you used and will you be using for your trip today? *<Show map. Tick for have used it, put "W" or "P" for will / plan to use it>*

Section 1: A303/A30 Southfields to Exeter
Section 2: A358 Taunton to Southfields
Section 3: A358 (Southfields) to A3088
Section 4: A3088 to A37
Section 5: A37 to A350
Section 6: A350 to A36
Section 7: A36 to Amesbury (Stonehenge)

8. What time did you start your trip on the A30/A303/A358 today?

06:00 – 08:00 / 08:00 – 10:00 / 10:00 – 16:00 / 16:00 – 19:00 / 19:00 - 22:00 / 22:00 – 06:00

9. Did you consider the potential for delays on the A30/A303/A358 when you planned your trip?

Yes / No (Go to Q11)

10. If yes, what did you do about this?

Left early to try and avoid traffic
Left extra time to allow for traffic
Left late to try and miss traffic
Diverted around known problem areas
Deliberately broke trip over two days
Arranged late check in
Used travel advice website
Nothing
Other (please explain)

11. How would you describe your overall experience today of using the A30/A303/A358 for leisure trips?

Very good / Good / Average / Poor / Very poor

12. Please explain your answer to the question above:

13. Did you experience any delay on the A30/A303/A358 when making your trip today?

Yes / No (If no, go to Section 3)

14. If yes, please specify approximately how long you were delayed for on the A30/A303/A358 between Amesbury, Taunton and Exeter?

Under 5 mins
5 to10 mins
10 to 20 mins
20 to 30 mins
30 to 45 mins
45 mins to 1 hour
1 to 2 hours
Over 2 hours

15. Please comment on where these delays were and why you think they occurred (if known):

16. Did you make any unplanned additional stops as a result of delay on your journey? If yes, how much *extra* did you spend that you would not have spent later anyway?

Did not make extra stops
Stopped but did not spend any money

Under £5
£5 to £10
£10 to £20
£20 to 30
£30 to £40
£40 to £50
Over £50

Section 3: Future trip plans

17. Would your experience on the A30/A303/A358 today affect your future leisure trips using the route?

Yes / No (If no, go to Q19)

18. If yes, please explain how your experience would affect your future leisure trips

Would use alternative routes
Would not make a trip to the area again
Travel at different time of day
Travel at different time of year
Would use public transport
Would come more often
Other (please specify):……..

19. If the road was an “end to end” dual carriageway between Amesbury, Taunton and Exeter, would you be more likely to make trips using the route (overnight stays and day trips)?

For overnight stays: Yes / No
For day trips: Yes / No

20. If yes, how many?

Day trips:
Additional nights:

21. Please explain your answer to the last question.

Section 4: Other trips in the last year

22. In the last year, how many leisure day trips have you made along the A30/A303/A358? (Not including your trip today)

None / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / Over 10

23. Were these mainly: Week days (only) / Weekends (only) / Whole weeks

24. In the last year, how many leisure trips involving overnight stays have you made along the A30/A303/A358? (Not including your trip today)

None / 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / Over 10

25. How would you describe your experience of using the A30/A303/A358 for these trips?

Very good / Good / Average / Poor / Very poor / Not applicable

Closing comments and details:

Do you have any additional comments about the impact of an end to end dual carriageway on tourism or the economy?

Thank you for taking the time to complete this survey. To be entered into the prize draw for one of two £25 High Street Vouchers, please provide your contact details:

Name:

Email / phone number:

APPENDIX C – SUMMARY OF WORKSHOP DISCUSSIONS

As set out in section 3.5, a summary of the discussions at the two stakeholder workshops is given in the table below.

Comments/Issues	Response
Resilience of the Road Network	
Sue Wilkinson – Federation of Small Businesses For employment it is important to have more than one key road into Devon and Cornwall. Currently if the M5 is closed, mobile small business are badly affected and cannot travel easily around the area. Dualling the A358 will not help provide alternative routes to Devon and Cornwall in the event that there is a problem on the M5 improvement to the A303/A30 Ilminster to Exeter will be required. Network resilience needs to be improved.	The purpose of the study is to demonstrate to the DfT and Ministers the benefit of dualling the A303 from Amesbury to Honiton. A principle message that needs to be relayed is the issue of resilience. The M5 is the main access route into the South West which when closed or running at a reduced capacity due to an accident causes tremendous travel disruption.
Sue Wilkinson – Federation of Small Businesses The resilience of roads in the area is an issue for many mobile small businesses in the area; including mobile hairdressers, florists, builders etc. If they are not on time for appointments they can loose those appointments and future work from the same customers. “For small businesses it is trebly frustrating”.	The benefit to businesses in the South West of dualling the A303 will be included in the economic analysis. A monetary value of increased business productivity will be determined.
Dave Black – Devon County Council Resilience is more of a local issue, as end to end traffic makes up a small proportion of the total travel on the route. As such, smaller scale improvements would help solve some of the resilience problems, rather than needing an end to end dual carriageway.	Small scale improvements will have local benefits but they will not address the wider economic issues which are likely only to be realised with more major improvements that give end to end route resilience.
Sue Wilkinson – Federation of Small Businesses “There is no point having the South Devon Link Road if you can’t get to it because the M5 or A303 is shut.” The M5 was shut five times last year. Cornwall is affected too. The whole peninsula basically has just one route in.	The benefits associated with improved journey reliability will be included in the economic analysis.
Ian Parsons – Highways Agency Flows on the M5 are actually relatively low compared to other motorways. Perhaps the focus should be on improving the M5 so that it is more resilient itself. Managed Motorway schemes are being progressed for the Bristol Box.	This would not address the perception of resilience or the perception that the South West has poor road access from the South East and from the South Coast.
Sue Wilkinson – Federation of Small Businesses	The benefit to all businesses – small and large – will be included in the economic

"It would kill businesses in east Devon including Sidmouth. They rely on the A303. Not improving it would kill them."	analysis.
Tim Carol – Somerset County Councillor and South Somerset District Councillor Resilience to the SW was worse when SWARMMS was done in 2002. The HA proposed improvements to the M4/M5 and these have all been done, so there is not much else which can be done to improve journey times. It is important for resilience that there are two main arteries into the South West.	This is a key message that will be relayed to decision makers.
Steve Hindley – Chairman of CBI Construction Council Brittany Ferries has seen a reduction in business activity from Plymouth in recent years put down to poor accessibility of the port compared with other ports. This is despite faster journey times to Spain from Plymouth compared with Portsmouth. However, ferry services to Spain from Plymouth have reduced in recent years while the Spanish demand for services has increased.	Travel times between Plymouth and the main markets (London / South East) will not change much for freight vehicles with a dual carriageway (average speeds now are about 50 mph on the A303 section we are considering). Reliability, however, should improve and will be considered in the economic analysis.
Andrew Maynard – Alder King Businesses seem to be unwilling to invest further west than Swindon due to the lack of a second route into the South West. There is no resilience if the M5/M4 is closed.	A major improvement is likely to attract investment to the South West. The economic benefit of this will be determined.
Traffic Engineering and Transport Planning	
Martin Woods – South Somerset District Council Traffic was growing before the recession, and if it returns to growing then the peaks will become even worse. "The situation is getting perceptibly massively worse at certain junctions". The peak seems to be extending.	Current peaks at some junctions indicate that they have reached capacity. The junctions need to be considered in tandem with the sections to protect benefits that come with a higher standard of carriageway.
Nick Payne – Road Haulage Association There are 32m cars and 400,000 lorries on the roads. "Lorries don't contribute that much to congestion. They are long and people see them." "We are very keen for the road to be as efficient as possible". The RHA would like the right turn at Stonehenge stopped as that is where congestion starts, and would like to "dual the lot". "Congestion is a major problem, in and out, for lorries".	There are plans to stop up the A344 at Stonehenge. A dualling of the route is likely to reduce congestion thus increase efficiency for haulage companies.
Tim Carol – Somerset County Councillor and South Somerset District Councillor SWARMMS looks at the North South issues and came up with lots of answers. It is not just the parts of single carriageway which constrain the route but also the junctions on the dual carriageway (e.g. Cartgate at Yeovil). There needs to be grade separation at the roundabouts to maintain journey times. The HA looks at signalising rather than separation.	An assumption has been made that all junctions will be grade separated therefore not reducing capacity of the links.
Infrastructure and Economic Growth	

Neil Harrison – East Devon District Council "To grow and survive internationally they deserve the best infrastructure possible." There is a danger in thinking about the route just for tourism in the summer. Actually, "It is a necessity all year round for businesses."	The economic analysis will factor in year round benefits for all facets of the economy.
Sofie Francis – Devon County Council "Improving the A303 would benefit the Devon economy." The ability to get goods to market would improve and people would be able to get to work more easily. SF can send reports on the economic assessment of Devon (2010).	Monetary values will be attached to improvements in accessibility for employees and businesses.
Sofie Francis – Devon County Council The economic analysis will need to be refined based on the make up of the economy.	All economic aspects will be considered in the economic analysis. Sector analysis should give a refinement of where the benefits accrue.
Nigel Hutchings – South West Chamber of Commerce There are a few thousand Foreign Direct Investors (FDI's) in the South West. Lots of new FDI comes from companies that are located in the area already. "Improving infrastructure is vital to encourage that inward investment."	The economic benefits associated with FDI are potentially great. The economic analysis will capture these benefits.
Nick Payne – Road Haulage Association "Nobody can get into Wales and that's why nobody is investing in Wales. You need to demonstrate connectivity".	Connectivity is an essential part of any recipe for attracting investment and therefore helping to improve the economy.
Nick Payne – Road Haulage Association There is a fuel saving in using the A303 compared to the M4/M5 route. "No lorry is ever going to be where it doesn't have to be." Driving them is hard. If the M4 M5 route was cheaper then they would use that. The companies are "up against it financially in the current climate – they're not going to waste a load of fuel."	The efficiency benefit to haulage businesses will be taken into account in the economic analysis.
Martin Woods – South Somerset District Council Penetration of the route and the West by hauliers is an issue. On single carriageways HGVs are restricted to 40mph, but 56mph on dual carriageways, so they could travel a lot further per shift if the route was dualled. This would make using the route more cost effective and would increase the viability of locating further to the west.	This will be taken into account in the economic analysis.
Nick Payne – Road Haulage Association Some hauliers are currently running at 52mph as this is found to save them £500 a month on fuel (although this varies by the type of usage). There are environmental benefits too – "modern lorries pump out cleaner air than they suck in."	The efficiency benefit to haulage businesses will be taken into account in the economic analysis.
Martin Woods – South Somerset District Council	This will be considered in the economic analysis.

We need to be careful about not just moving jobs. We should look at firms growing or expanding from where they are which would help to increase GDP. They need the opportunity to grow to be provided by the transport network. National growth depends on lots of local growth. "The West does have lots of growth potential, but it needs to be realised by transport infrastructure"	
Rupert Cox – Somerset Chamber of Commerce Incremental improvements have been made in the past. "I don't think these have been fully exploited economically as there are still too many bottlenecks." We are not currently exploiting what has already been invested in. "It's not finished". The full benefits have not been realised because the whole route has not been upgraded.	Dualling the A303 end to end will help to realise the benefit of previously dualled sections. Dual carriageway sections are currently constrained by single carriageway sections. Single carriageway sections are effectively working like funnels/bottle necks.
Andrew Maynard – Alder King Toolstation was formed in 2003 by Mark Goddard-Watts four years after the Goddard-Watts family had sold Screwfix in 1999 to the Kingfisher plc group. Screwfix originated in Yeovil but due to better accessibility Toolstation decided to set up in Bridgwater. Had the A303 been dualled then Toolstation may have set up in Yeovil.	The economic benefits from businesses locating in the A303 corridor will be captured in the economic analysis. With a specific consideration of business retention and growth.
Steve Hindley – Chairman of CBI Construction Council It is difficult to sell employment land or employment premises at the moment due to the number of closures that occur on M5 around Taunton. Dualling of the A303 would help to address this issue.	The potential economic benefits associated with development will be considered in the economic analysis. Benefits may accrue from tax revenues and higher population densities.
Business Perception	
Sofie Francis – Devon County Council "Perception is critical for inward investment". People perceive that it is too far down to Devon and Cornwall. This could be made worse by the fact that there is one route in (the M5). "Improving the A303 would improve this perception".	This is a very valid point that will come across in the report. The potential increase in investment will be quantified.
Rupert Cox – Somerset Chamber of Commerce Had a meeting with a representative from a regeneration company in Kent, when asked if they travelled to the meeting along the A303 they replied "I don't do the back route." There is a perception that the area s a backwater due to the perception of the route.	Dualling the A303 end to end will help to change this perception. The economic benefits of dualling the A303 will be captured in the economic analysis.
Infrastructure, Land Values and Development	
Neil Harrison – East Devon District Council The Honiton Business Park (which has an eastern connection from Honiton to the	The economic benefits that accrue as a result of dualling the A303 end to end will be included in the economic analysis. The associated economic benefits will be considered as a result of new infrastructure and the consequential increase in land

M5) is due to expand. The Honiton to the M5 link opened just before the eclipse (2000) and has boosted EDDC to get land developed at the Heath Park Estate. EDDC bought this land from the MOD with low expectations about selling it, but once the dual carriageway was added their ability to sell it on increased hugely. Since 2005/6 the only parcels of land which they own are those which they use operationally. "That is what happens when you put in convincing infrastructure". The route at the moment acts as "a constraint to growth".	values, development and employment.
Martin Woods – South Somerset District Council The driver is whether development can happen, not the land value itself. Taunton, Yeovil and Somerset have high levels of growth projections. "They do require the pinch points that are occurring not to constrain it".	The message that infrastructure can be an enabler to development will be put across using real case examples.
Sue Wilkinson – Federation of Small Businesses Exeter airport is the only regional airport in the South West. "People need to have a way of getting in and out." Plymouth airport was used for businesses but has closed, and there is also a possibility that Newquay airport will close.	The study will distinguish between the transfer of jobs compared to the creation of new jobs. Cornwall produces a lot of food, but there is little food processing capacity in the SW (and lots in the North). There is the potential to process more food locally if the road network is resilient enough to enable efficient distribution. This shift could also lead to a reduction in food miles and free up sites in other locations (e.g. Birmingham) for expansion of other businesses.
Tim Carol – Somerset County Councillor and South Somerset District Councillor "Allocated employment land next to the A303 never fulfilled its potential". Wincanton and Ilminster both have employment land allocated. They assumed distribution companies would bring this forward but it has not happened. You could argue if you make a dual carriageway there will be a surge in interest in land take up.	The potential increase in land uptake as a result of improving the A303 will be considered in the economic analysis.
Rupert Cox – Somerset Chamber of Commerce Solstice Park area is busy because it is located where the dual carriageway ends. There are not many jobs there for the size of the site though.	As with other areas adjacent to the A303, a dualled route end to end is likely to promote new business and improve existing businesses. This will be considered in the economic analysis.
Andrew Maynard – Alder King There has been substantial development on the M5 corridor due to ease of access to employment and markets. Land values have increased along this corridor in relation to the demand for prime employment land. A similar story may materialise on the A303 corridor if the route were to be dualled end to end. Dualling the A303 may encourage local authorities to allocate development land along the A303 corridor. This may encourage developers currently banking land to start construction.	M5 development statistics will be reviewed and considered in the economic analysis. It is agreed that benefits similar to those seen in the M5 corridor could materialise in the A303 corridor with end to end dualling.

Stephen Walford – Somerset County Council The HA recognise the role of the road network in facilitating future economic growth. There are some locations on the route which would benefit from increased land values. The Government has not recognised the A303 as the second strategic route. The barriers will be around the cost to fund the necessary work. The HA lobby for developments to fund specific projects, but this is unrealistic for nationally significant (and costly) infrastructure. The A303 is not a regional road. Local development can contribute towards the cost of upgrading it, "but to think that development is going to fund this is just completely pie in the sky". Cartgate is currently unaffordable.	The wider infrastructure study will help to raise awareness to alternative funding streams and will promote schemes with wider economic benefits in addition to schemes that receive funding solely on transport economic benefits.
Housing	
Martin Woods – South Somerset District Council As well as a focus on employment, the Government are also interested in housing. We need to make sure the A303 builds on the opportunity to support the economy and also housing growth.	Improving the A303 is likely to facilitate the delivery of development. This will be considered in the economic analysis.
Paul Willis – Dorset County Council Housing is key in North Dorset. Shaftesbury is planning 600 homes. Gillingham could have unconstrained growth. They are looking at around 2000 homes. Previously the HA wanted to cap the amount of growth to minimise the impact on the A303, but they may be changing their view now. The A303 is constraining development in Dorset.	The HA are a partner in this study and are keen to promote economic development in the region providing their road network is not adversely affected. Increasing the capacity of the A303 will help to ensure this does not happen and therefore enable more housing developments to come forward.
Regional and Sub-regional Issues	
Nigel Hutchings – South West Chamber of Commerce The issue is not just about people coming in to the South West, but also people in Devon and Cornwall who need to get their goods to market, including out to the ports. The two way flow issues need to be looked at.	The wider economic benefits will be included in the economic analysis. This therefore will consider all benefits that are likely to accrue form dualling the A303 end to end.
Rupert Cox – Somerset Chamber of Commerce There is significance in identifying the importance of East-West movement to people travelling North-South, particularly to ports and airports. North South links are poor in some places. There are various anecdotal examples from people who know the area that rat running occurs through small villages to avoid problems on the A303. This causes noise and environmental issues for people who live in these areas. People then rejoin the route where they feel the problems will be gone, effectively making their own bypass. (These suppressed and diverted traffic issues won't be shown up in the traffic data by itself). Traffic issues were even observed on a Sunday at Sparkford around 4pm (It took 12 minutes to get onto the A303 from a side road) – local road issues caused by congestion on the A303 may need to be investigated	As well as the economic benefits being considered, environmental benefits will be assessed. .

further and taken into consideration.	
Nigel Hutchings – South West of Commerce North Devon is supportive of a scheme – there are lots of areas wanting to connect to the A303 to go east and to the M5. Access out of the North Devon peninsula is a key issue.	This will be considered in the economic analysis.
Nick Payne – Road Haulage Association NH & RC are right. It is important to get goods out form the West too. There are some huge hauliers in Cornwall and Devon who all suffer from the same problems. They get 7mpg from their vehicles and are bound by DfT regulations on how long they can travel without a break. "Time is money".	The efficiency benefits to hauliers and the economic multipliers of this will be considered in the economic analysis.
Steve Hindley – Chairman of CBI Construction Council The Government drive to get more business into Cornwall should help to achieve investment.	A review of all relevant policy will be undertaken and reported.
Tourism	
Sofie Francis – Devon County Council Outside of Exeter, Devon is a small firm economy with "not as high ambition as we would like." There is high dependence on tourism, but not a high productivity of those jobs which are in the tourism sector. Tourism accounts for a high level of spend in the economy. The tourism jobs tend to be lower paid and lower skilled jobs, although there are things that could be done to push them higher up the value chain. Unemployment in Devon does reduce in the summer. Stretching the season would be good for the economy.	Improved access to the South West achieved through improving the A303 end to end is likely to lengthen the tourism season especially for short weekend breaks. Evidence to support this is being sought through a tourism survey.
Sue Wilkinson – Federation of Small Businesses "If roads were more resilient to get people to the area in 2-2.5 hours then they would come". There is a high value offer in South Hams, and a lot of people come for long weekends.	This is an issue that will be carefully considered in the economic analysis. There are places along the A303 corridor that will become more accessible and are equally as attractive as South Hams. The benefits of this will be captured in the economic analysis.
Sue Wilkinson – Federation of Small Businesses People with second homes are an important consideration too, as each visit they make they contribute money to the local economy.	This will be considered in the economic analysis.
Rupert Cox – Somerset Chamber of Commerce We should not under-estimate the importance of weekend breaks to the economy. If people only travelled for week breaks the only peaks would be around half term. Currently the season runs from about April to October, and the tourism industry is trying to extend the shoulders. People who travel to the area are generally quite	Improving access to the South West is likely to cause an upsurge in the number of short breaks. Better journey reliability will encourage those that may have been previously deterred due to bad travel experiences to once again see the South West as a viable and accessible short break destination. The travel survey will help to provide evidence to support this hypothesis.

discerning – they want a quality experience. There is a "very valuable tourism market at the high end".	
Martin Woods – South Somerset District Council There has been a lot of work done on tourist perceptions. They found that on the A303 people get confused about where they are and only stop when they need a break. There should be detailed information available about local attractions. People often stop at Cartgate, so it would be possible to do a survey there if needed. The A303 has different catchments to the M5. "The A303 is vitally important for those short break holidays". People who have problems with traffic will probably divert next time, or go to other locations instead next time. The tourism market is immense, but fragile. "The visitor experience is very important", including visitor perception. Creating a dual carriageway could be problematic for increasing tourism as people will be more inclined to travel to the end of the route. People need to have a better understanding of what is available along the route itself through better signage.	The economic work being undertaken will include a survey of people travelling to the South West. The survey will be undertaken at the Cartgate services and will be pertinent to capturing the views and opinions of tourists in particular.
Paul Willis – Dorset County Council Dorset CC's economic development team think that Dorset misses out on some tourism due to people's poor perception of the A303. They suspect people avoid using the route and go along the south coast instead. This means they would not access North Dorset as readily as the south. If people get on the A303 they generally stay on it and don't deviate off. The A303 issue has been raised with the Dorset LEP.	The potential benefits to North Devon as a result of improving accessibility to the area will be captured in the economic analysis.
Andrew Maynard – Alder King Lives close to Ilminster and from personal experience would choose to make more local tourists trips on weekends and bank holidays should the A303 not be so congested.	This will be considered in the economic analysis.
Delivery	
Ian Parson – Highways Agency There have been a number of ministerial meetings about the scheme. These often begin by focussing on how the scheme can be funded locally. This is a key deliverability issue which needs to be taken into account.	Careful thought will be given to the funding of future schemes.
Dave Black – Devon County Council The environmental issues with the scheme are well versed, and will need to be looked at again. The Government Agencies need to be lined up and supportive of any proposal to minimise objections.	The Environment Agency and other organisations with particular interests in the Stonehenge area have been consulted and will continue to be consulted as the study progresses.
Dave Black – Devon County Council There is the potential for a bottleneck at Exeter M5 viaduct if A303/A30/A358 is	This issue is only relevant for traffic travelling beyond Exeter and should not be discounted. However Active Traffic Management between J29 and J31 may

improved as the volumes currently using that are at capacity.	potentially allow 4 lane capacity if necessary at peak times) and therefore will not be explored further than to state it.
Other Comments	
Nigel Hutchings – South West Chamber of Commerce There were discussions about Tesco's developing a distribution centre on the A303, but they think it was pulled. There is a co-op distribution centre in Andover.	This will be investigated further as the study progresses.
Rupert Cox – Somerset Chamber of Commerce We don't need a gold plated solution. If the HA will consider reducing the specifications required then that is fine, we should "be realistic about what is a deliverable option."	Schemes reflective of the current economic climate will be designed which may depart in some areas from HA standards but will not compromise road safety.

APPENDIX D – SCHEME COST ESTIMATES USED BY THE COBA MODELLING

APPENDIX D: A303 INFRASTRUCTURE IMPROVEMENTS COST SUMMARY

SCHEME	BASE DATE & ROADCON Index	MID POINT CONST.	CONST. COST	VAT	OPTIMISM BIAS/RISK	LAND	SCHEME BUDGET	REBASED CONST.	REBASED VAT	REBASED OP/ RISK	REBASED LAND	RE-BASED BUDGET Q2 2011 (169)	% SAVING	REVISED COST INC SAVINGS
A303 Amesbury to Berwick Down (Stonehenge) Published Scheme Stage 2 July 2006	Q2 2003 (122)	Q3 2020	289	39	28	9	365	400.34	54.02	38.79	12.47	505.61	5	480.33
Countess Roundabout Flyover	*Q2 2003 (122)*	*Q2 2019*	*18*	*0*	*1.8*	*0.5*	*20.3*	*24.93*	*0.00*	*2.49*	*0.69*	*28.12*	*5*	26.71
Stonehenge	*Q2 2003 (122)*	*Q4 2020*	*204*	*27*	*19.4*	*0.5*	*250.9*	*282.59*	*37.40*	*26.87*	*0.69*	*347.56*	*5*	330.18
Longbarrow Crossroad Grade Separation	*Q2 2003 (122)*	*Q2 2019*	*12*	*2*	*1.2*	*1*	*16.2*	*16.62*	*2.77*	*1.66*	*1.39*	*22.44*	*5*	21.32
Winterbourne Stoke Bypass	*Q2 2003 (122)*	*Q1 2020*	*55*	*10*	*5.6*	*7*	*77.6*	*76.19*	*13.85*	*7.76*	*9.70*	*107.50*	*5*	102.12
A303 Wylye to Stockton Wood Improvement (Purple Option)	Q3 2001 (117)	Q4 2019	15.4	3.6	3.1	2.45	24.55	12.97	5.20	4.48	3.54	35.46	15	30.14
A303 Chicklade Bottom to Mere Improvement	Q3 2001 (117)	Q1 2020	47.54	10.84	21.36	9.76	89.5	68.67	15.66	30.85	14.10	129.28	15	109.89
A303 Sparkford to Ilchester Improvement	Q3 2001 (117)	Q1 2020	19.51	5.22	3.9	1.12	29.75	28.18	7.54	5.63	1.62	42.97	15	36.53
Podimore Roundabout Grade Separation	Q3 2001 (117)	Q1 2020	10.23	2.74	2.05	0.02	15.04	14.78	3.96	2.96	0.03	21.72	10	19.55
Cartgate Roundabout Grade Separation	Q3 2001 (117)	Q3 2019	12.22	3.27	2.44	0	17.93	17.65	4.72	3.52	0.00	25.90	10	23.31
A303 South Petherton to Southfields (Ilminster Bypass) Improvement	Q2 2006 (150)	Q1 2020	31.63	3.58	14.39	4.86	54.46	35.64	4.03	16.21	5.48	61.36	20	49.09
On Line Improvements to Ilminster Bypass														0.00
A358 Southfields to M5 J25 Improvement	Q2 2006 (150)	Q1 2020	130.7	14.81	59.46	20.08	225.05	147.26	16.69	66.99	22.62	253.56	20	202.85
A303 Southfields to Marsh & A303 Marsh to Honiton Improvement														
On Line Minor Improvements A303 Southfields to Honiton	Q2 2011 (169)	Q2 2022	83.58	13.37	37.60	4.13	138.68	83.54	15.21	42.76	4.70	157.70	11	140.15
TOTALS			**639.810**	**96.433**	**172.300**	**51.420**	**959.963**	**809.016**	**127.030**	**212.198**	**64.546**	**1,212.790**		**1,091.83**

TOTALS above include Stonehenge individual sections not Overall Cost in first line
Base Date of Q2 2011 used as this is the last firm index available from BIS Roadcon Index