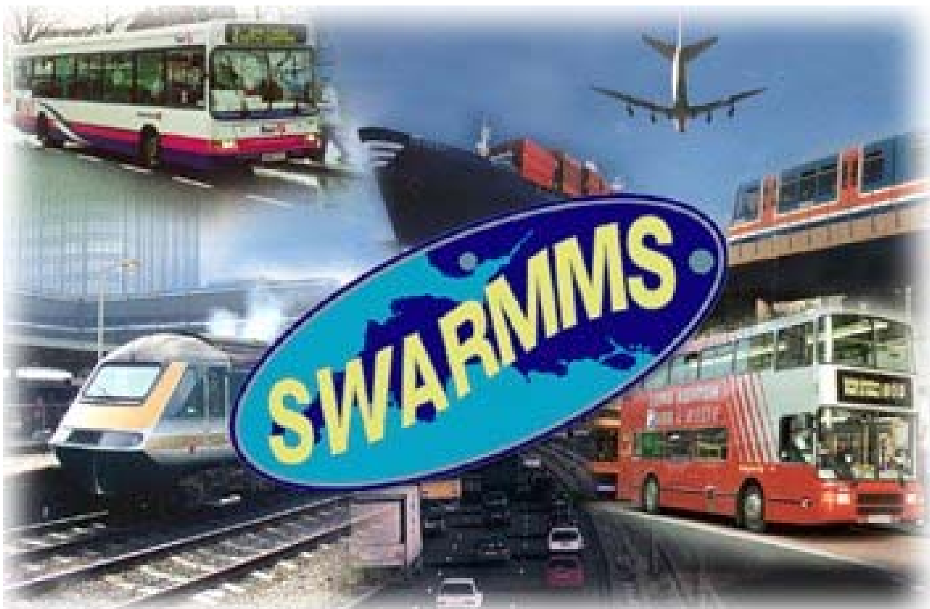
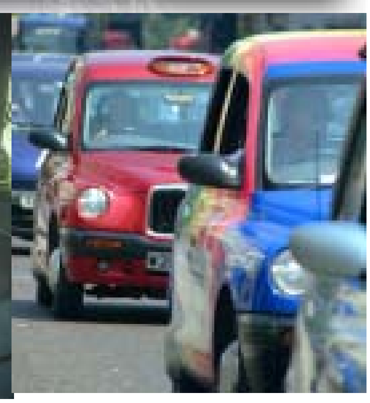
Government Office for the South West

SWARMMS

APPRAISAL OF THE WIDER ECONOMIC EFFECTS





A Final Report by

DTZ Pieda Consulting

CONTENTS

1. PURPOSE AND SCOPE OF THIS REPORT 1

2. THE APPRAISAL APPROACH 5

PROPERTY DEVELOPERS/ 12

INVESTORS 12

3. THE SWARMMS STRATEGY 15

4. PRINCIPAL RAIL AND ROAD SCHEMES AND THE IMPACT ON STRATEGIC ACCESSIBILITY 22

5. THE CONTRIBUTION TO THE ACHIEVEMENT OF REGIONAL ECONOMIC OBJECTIVES 33

6. ASSESSMENT OF THE STIMULUS TO ECONOMIC GROWTH 43

7. COMMENTARY ON SPECIFIC OPTIONS 53

8. SUMMARY OF CONCLUSIONS 56

APPENDICES

APPENDIX 1 – GOMMS THE WIDER ECONOMIC IMPACTS SUB-OBJECTIVE

APPENDIX 2 – A SUMMARY OF RESEARCH ON THE IMPACT OF TRANSPORT INFRASTRUCTURE IMPROVEMENTS ON ECONOMIC DEVELOPMENT

APPENDIX 3 – CONSULTATIONS WITH BUSINESS COMMUNITY IN THE SOUTH WEST

APPENDIX 4 – BASELINE ANALYSIS

by

DTZ Pieda Consulting

Greyfriars Gate
5 Greyfriars Road
Reading RG1 1NU

Tel: +44 (0)118 967 2020
Fax: +44 (0)118 950 3759 & 9584378
Web: http://www/dtzpiedaconsulting.co.uk
Also at Belfast, Birmingham, Bristol, Cardiff, Dublin,
Edinburgh, Horsham, Leeds, London & Manchester

Ref: 99/71791-5 May 2002

1. PURPOSE AND SCOPE OF THIS REPORT

BACKGROUND

1.1 The SWARMMS study was commissioned in 1999 to examine the transport problems of the main transport corridors between London and the South West of England and South Wales and to develop solutions. The SWARMMS Preferred Strategy has been developed by Halcrow, the lead consultants for the study. This strategy has been appraised in accordance with the Guidance on Multi-Modal Studies (GOMMS) published by the DTLR. This report covers one component of the appraisal, namely the economic effects of the strategy which are not captured by the appraisal of the strategy in terms of the economic efficiency and reliability of the transport network.

THE APPRAISAL PROCESS

1.2 The GOMMS manual indicates that multi-modal studies should be appraised in terms of the strategies' impacts in relation to five objectives:

- environment – to protect the built and natural environment
- safety – to improve safety
- economy – to support sustainable economic activity and get good value for money
- accessibility – to improve access to facilities for those without a car and to reduce severance
- integration – to ensure that all decisions are taken in the context of the Government's integrated transport policy.

The Economic Appraisal

1.3 The economic appraisal has three components.

- An assessment of the effects of the strategy on the economic efficiency of the transport system
- An assessment of the effects of the strategy on the reliability of the transport system

- An assessment of the wider economic impacts of the strategy

1.4 The first and second of these components of the economic appraisal have been undertaken by Halcrow. The appraisal entails generating monetary values for the benefits flowing from the proposed transport schemes contained within the Preferred Strategy, based on the transport modelling that forms a core component of the study. This appraisal captures the value to businesses, commuters and leisure travellers of more reliable journeys, shorter journey times etc. The first two components of the economic appraisal therefore capture the ***principal*** benefits of strategy to business and the economy.

Wider Economic Effects

1.5 However, it is recognised in GOMMS that the appraisal of the economic effects of Multi-Modal strategies will not necessarily be *fully* captured by the quantitative assessment of the value of efficiency and reliability improvements. The guidance contained in GOMMS on the appraisal of wider economic effects is limited (see Appendix 1). But DTZ's interpretation of the guidance is that the appraisal of the wider economic effects of options is intended to pick up on effects that will not be adequately captured by the first two components of the economic appraisal.

1.6 What might these wider economic effects be? First, it is clear from GOMMS that the primary aim of the assessment of wider economic effects is to consider the *distributional* effects of the strategy, by assessing the contribution the strategy will make to the achievement of regeneration objectives. The SACTRA report *'Transport and the Economy'* (DTLR 1999) highlights that changes in transport infrastructure will often produce winners and losers. Some areas will gain, others will lose. This is an important issue that will not be addressed by other elements of the economic appraisal.

1.7 This emphasis on the distributional effects of proposals is reflected in what GOMMS specifically identifies as the key components of the wider economic effects appraisal. GOMMS indicates that the wider economic effects appraisal should entail an assessment of:

- whether the proposals are significantly beneficial for designated regeneration areas (Assisted Areas, EU Objective 1 & 2, SRB etc.)
- whether there are significant developments within or adjacent to the regeneration areas which are likely to be dependent on the proposals being implemented.

1.8 In the context of the SWARMMS Strategy, it is more relevant to assess the Strategy in terms of the effects, positive or negative, on designated regeneration areas. This reflects the fact that the Strategy concentrates on improvements to major strategic route corridors, rather than more localised initiatives that might open up development land in particular locations. The study does comment however, on whether the Strategy will have any effect in terms of bringing forward physical development on major sites.

1.9 This report also considers broader issues concerning the contribution that the SWARMMS Strategy to the achievement of regional objectives. In particular the report considers the extent to which the implementation of the Strategy is important to the achievement of economic objectives for the region as a whole. Within the budget allocated for the work it has not been possible to address this issue in great depth, but it has been possible to reach some broad conclusions about the importance of the Strategy being implemented to the economy of the South West region. Other elements of the economic appraisal, not reported here, are also relevant to answering such questions since they capture the benefits and costs to businesses and individuals in the region.

1.10 It is relevant to note at this stage that there is no exact science that allows one to assess the scale of wider economic effects. SACTRA in answer to the question *'do transport improvements lead to increased economic activity?* concluded in its report *'Transport and the Economy'* (DTLR 1999):

> *'Thus we are provided with a strong theoretical expectation that all or part of a successfully achieved transport cost reduction may subsequently be converted into a range of different economic impacts. This in principle, provides for the possibility of improved economic performance. Empirical evidence of the scale and significance of such linkages is, however, weak and disputed. We conclude that the theoretical effects listed can exist in reality, but that none of them is guaranteed. Our studies underline the conclusion that generalisation about the effects of transport on the economy are subject to strong dependence on specific local circumstances and conditions.'*

1.11 The conclusion of the SACTRA report that '*the effects on transport on the economy are subject to strong dependence on specific local circumstances and conditions'* does point to the fact that there may be merit in undertaking specific local studies on particular components of the SWARMMS Strategy. This report is an appraisal of the overall Strategy, and is thus conducted at a high level. To fully understand the wider economic effects of the individual components of the Strategy would require, for example, detailed assessments of local property markets and business surveys. This would be required in particular to fully assess the wider economic effects of the Strategy on the Principal Urban Areas in the South West. Such work has been outside the scope of this study.

REPORT STRUCTURE

1.12 The rest of this report is structured as follows

- Section 2 identifies the key regeneration zones in the South West of England and South Wales and then describes the theoretical framework for the appraisal.
- Section 3 comments on the extent to which the different themes within the Strategy are likely to give rise to wider economic effects.
- Section 4 summarises the key schemes contained in the Strategy and the impact these have on strategic accessibility.
- Section 5 considers the contribution that the Strategy will make to achieving objectives for economic growth across the region as a whole, and in particular the implications for future economic growth if the Strategy were not implemented in full.
- Section 6 considers the extent the Strategy will contribute to stimulating additional economic growth, with a particular focus on regeneration areas in the region, where there is an identified need to foster economic growth.
- Section 7 comments on two specific elements of the Strategy where there has been a need to consider what they contribute to economic development.
- Section 7 summarises the findings of the appraisal.

2. THE APPRAISAL APPROACH

2.1 There is no simple and straight forward way to assess the wider economic benefits that will be associated with any transport improvement. This section:

- identifies the main regeneration zone in the South West and Wales which have been the focus for much of the appraisal work;
- identifies the different mechanisms by which transport investment may *in theory* impact the local economy;
- describes the process through which evidence has been marshalled to enable the appraisal.

REGENERATION AREAS

2.2 The appraisal of wider economic effects in this report focuses to a substantial degree on the extent to which the Preferred Strategy will benefit designated regeneration zones in the South West of England, and to a lesser extent in Wales. These are areas where government recognises there are under-utilised resources. Therefore a transfer of economic activity to these areas would lead to increased welfare *even if there is no net gain in economic activity at the national level*. This is precisely the sort of economic benefit that the other elements of the appraisal process would not pick up.

2.3 The key regeneration zones in the SWARMMS study area:

- EU designated Objective 1 and 2 areas in the South West. Figure 2.1 shows that these cover all of Cornwall (Objective 1) and north, south and west Devon, most of West Somerset, and central Bristol (Objective 2). The map also shows the Objective 1 and 2 areas in South and West Wales.
- UK Government designated Assisted Areas. Figure 2.2 shows that these cover all of Cornwall (Tier 1), Plymouth (Tier 2) and parts of Somerset, Devon and Weymouth. The map also shows Assisted Areas in South and West Wales.
- Figure 2.3 shows the Rural Priority Areas in the South West and areas with existing Single Regeneration Budget programmes. (The SRB is being phased out and funding in future for economic regeneration will be directed through the RDA's Single Pot).

FIGURE 2.1 - OBJECTIVE 1, 2, 2 & 5B TRANSITIONAL

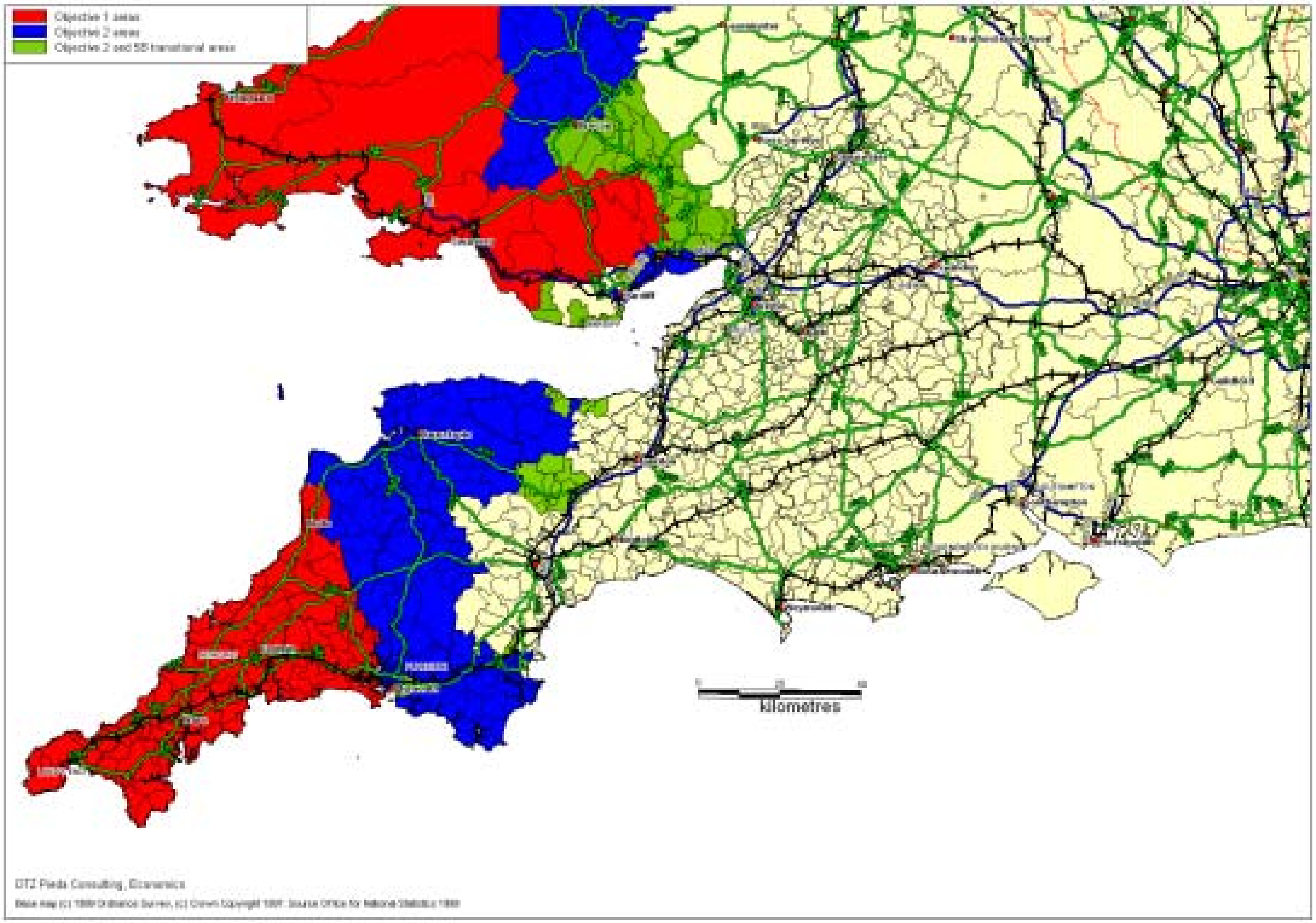


FIGURE 2.2 - ASSISTED AREAS

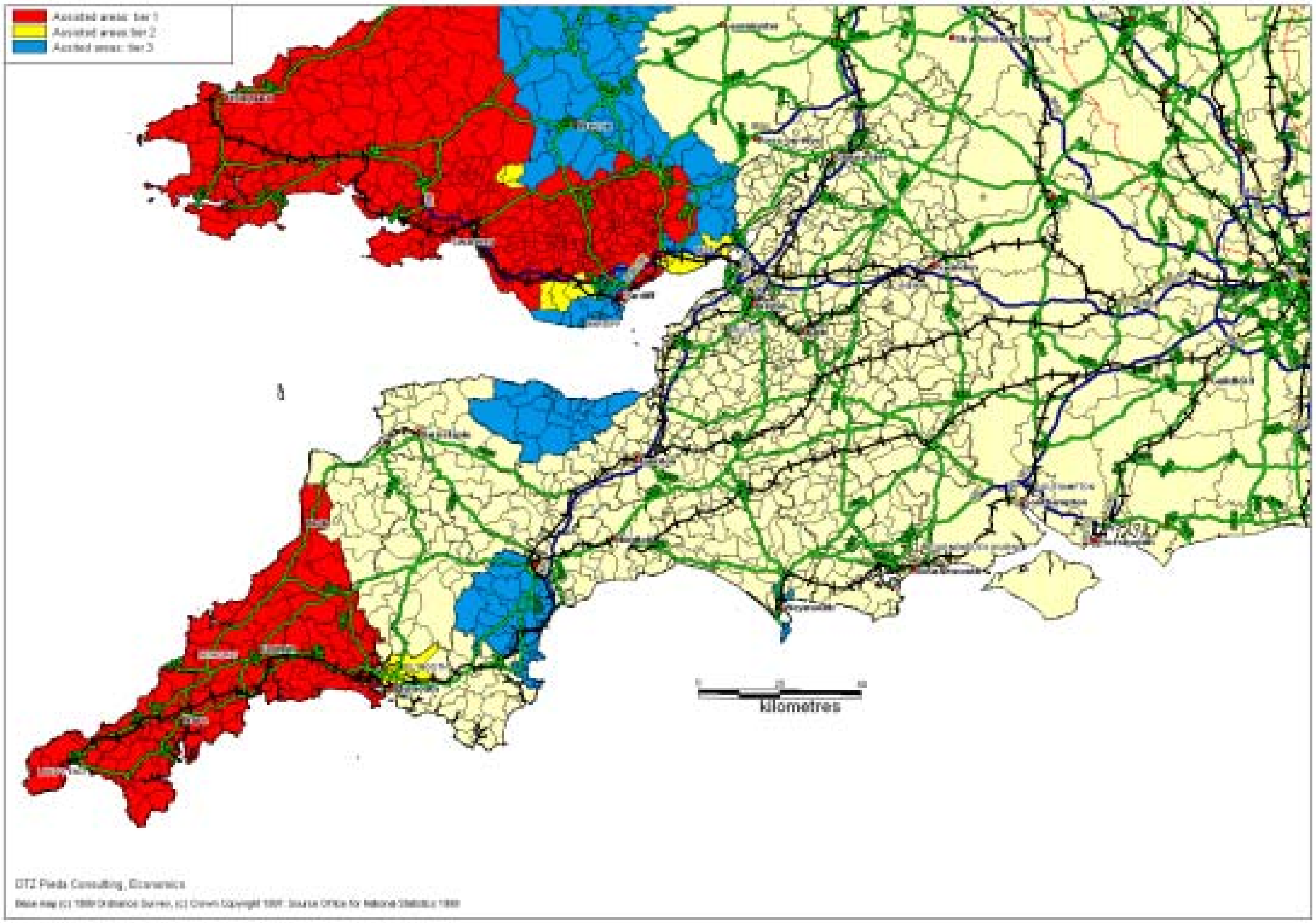


FIGURE 2.3 - RURAL PRIORITY AND SRB (ROUND 4, 5 & 6) AREAS

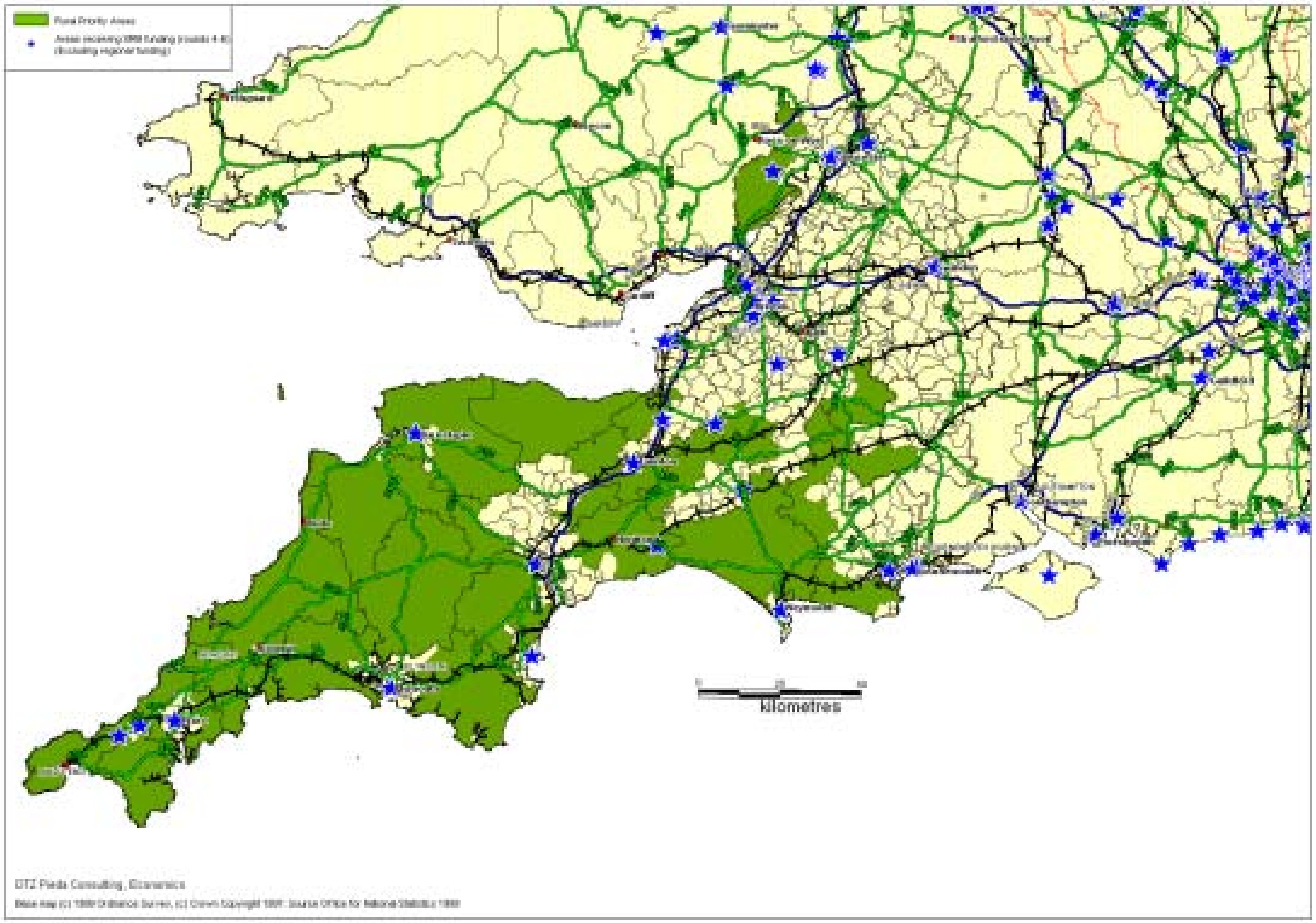
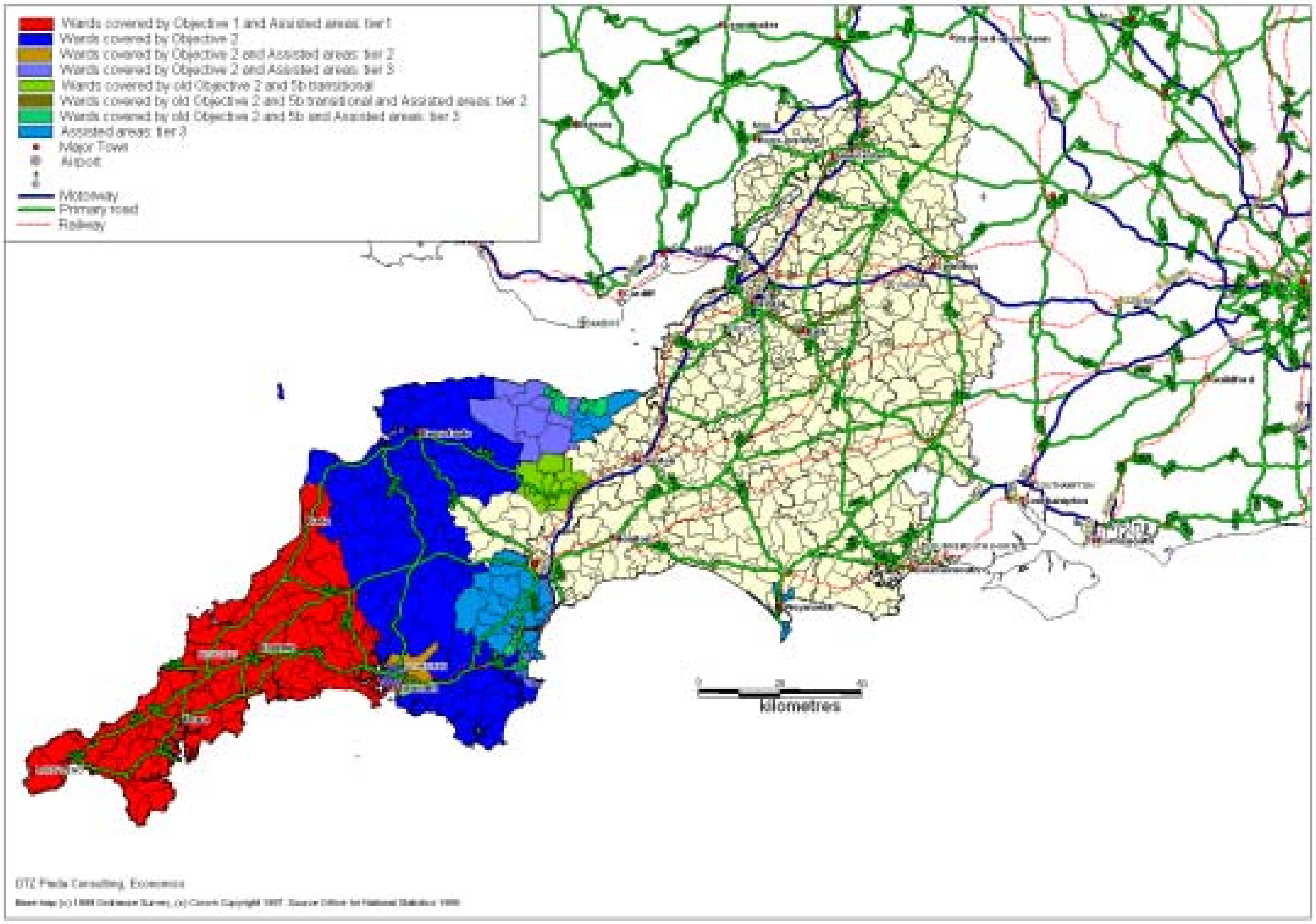


FIGURE 2.4 - ASSISTED AREAS AND OBJECTIVE 1, 2 & 5B AREAS –



2.4 Figure 2.4 brings together information on the EU Objective 1 and 2 areas and Assisted Areas. The Figure illustrates that the whole of Cornwall and the whole of Devon, with the exception of the Exeter Travel to Work area and East Devon, are recognised by national government as being in need of regeneration. The appraisal concentrates on the effects that the SWARMMS Strategy would have on the regeneration of this area, though comments are also made about the extent to which the SWARMMS Strategy might benefit Rural Priority and SRB areas in the study area.

2.5 It is also relevant to note that the London to Bristol corridor is the key corridor linking South and West Wales to London and the South East. The Valleys and West Wales are designated Objective 1 areas. The quality of road and rail links between the Valleys and West Wales are as important to the regeneration of these areas as they are to the regeneration of areas in the South West. Brief comments are made on the significance of the SWARMMS Strategy to the achievement of wider economic objectives for Objective 1 areas in Wales.

THE IMPACTS OF TRANSPORT INVESTMENT ON REGENERATION

2.6 The principal mechanisms by which investment in transport infrastructure or other transport management policies impact on business and hence the economy can be identified as being:

- The impact of changes in the cost – as measured in both actual cost and journey time – and ease of travel on business travellers;
- The impact of changes in the cost – as measured in both actual cost and journey time – and ease of travel on freight transport;
- The impact of the two effects above impact on:
  - the competitiveness of existing businesses in a particular area.
  - the attractiveness of a particular area as a business location.
- The impact of changes in the cost – as measured in both actual cost and journey time – and ease of travel on leisure travellers;
- The impact of the above changes on the tourism and leisure sector and in particular the competitiveness of areas as a tourism destination;
- The impact of changes in the cost – as measured in both actual cost and journey time – on people's travel to work journeys;
- The implications of the above for:

   - the effective labour pool upon which employers can draw;
   - hence the competitiveness of established businesses;
   - and the attraction of different areas as a business location;

- Changes in the relative attractiveness of different locations and specific sites – actual and as perceived by investors – will have potential impacts on the scale, timing or value of development at particular locations/sites.

2.7 The matrix presented in Figure 2.5 provides a broad framework for thinking about the economic impacts of the SWARMMS Strategy. The Strategy will have impact upon:

- business travellers;
- freight movements;
- tourists (long and short stay plus day visitors);
- workers.

2.8 Changes in the cost, convenience and comfort of these four groups will affect three types of economic actor:

- existing businesses in the region;
- inward investors and mobile businesses;
- property developers and investors.

FIGURE 2.5
IMPACT ASSESSMENT MATRIX

		PURPOSE OF TRAVEL			
		(BUSINESS TRAVELLERS) BUSINESS	(FREIGHT) GOODS	(VISITORS/ TOURISTS) LEISURE	(WORKERS) EMPLOYMENT
ECONOMIC ACTIVITY	EXISTING BUSINESSES				
	INWARD INVESTORS/MOBILE BUSINESS				
	PROPERTY DEVELOPERS/ INVESTORS				

THE ASSESSMENT PROCESS

2.9 In appraising the wider economic effects of the SWARMMS Strategy, information has been collected from a variety of sources to provide a basis on which to come to conclusions. The key sources of information used are set out below

2.10 **Changes in Accessibility Delivered by the SWARMMS Strategy:** A key building block in the assessment process is to understand what the SWARMMS Strategy delivers in terms of improvements in accessibility, since it is changes in accessibility that drive economic change. The concept of accessibility embraces journey times, the cost of travel, the ease of travel and the quality of the journey experience. Information on how journey times are likely to change between key locations in the study area, particularly in the identified regeneration zones, and other key destinations in the UK has been provided by Halcrow.

2.11 **Empirical Evidence of the Effect of Transport Infrastructure Investment on the Economy:** DTZ Pieda Consulting has kept abreast of research on the effects that transport investment can have on economic development over many years. This information has been used in the assessment of the wider economic effects of major transport investment proposals including the CTRL, the West Coast Mainline Improvements, Thameslink 2000, and the Access to Hastings proposals. A brief summary of this research is contained in Appendix 2. Reference has also been made to a variety of studies undertaken in the South West that have examined the economic impacts of proposed transport schemes in the South West. A list of relevant literature examined is contained in Appendix 3.

2.12 **Consultations:** DTZ has consulted with a range of business people and those involved in economic development in the region about the constraints that existing transport infrastructure imposes on business and more generally on economic development. We have received extensive representations and evidence from business groups and economic development agencies about the impact that transport issues has on their businesses and on economic development. A summary of these representations is presented in Appendix 4.

2.13 **Baseline:** Some limited work has been undertaken to establish baseline data on key economic trends. This includes the pattern of growth in the regeneration zones and the current employment structure; inward investment and business relocations; tourism trends. Data has been analysed for Cornwall and the Devon and Somerset Objective 2/Assisted Area zone (see above). A baseline report is contained in Appendix 5.

2.14 **The Appraisal Process:** Armed with the facts about changes in accessibility, the current and prospective economic conditions in the regeneration areas, and the evidence of the wider economic effects that transport investment has had elsewhere, a formal appraisal has been made of the component themes of the strategy and the schemes. This inevitably relies heavily on professional judgement, but a judgement informed by extensive experience in the process of regional economic development, and of undertaking such appraisals on similar schemes.

2.15 It should be acknowledged that it is difficult to quantify wider economic benefits. The approach used, and accepted elsewhere, is to assess in qualitative terms the likely level of enhancement – or diminution – in economic activity (job creation in firms, enhanced competitiveness, inward investment, visitors) based upon the scale of the accessibility improvement envisaged, and taking into account evidence from elsewhere.

3. THE SWARMMS STRATEGY

3.1 This section summarises the key features of the SWARMMS Strategy and comments on the extent to which different component items are likely to have wider economic effects. The section identifies the key elements of the Strategy that are likely to make a difference to strategic accessibility.

KEY THEMES OF THE STRATEGY

3.2 The Preferred Strategy contains 13 policy themes:

- Reducing the need to travel;
- Better integration for public transport;
- Promote use of public transport to/from main urban areas;
- Traffic restraint within main urban areas;
- New road and rail infrastructure;
- Provide more opportunities to travel by rail ;
- More opportunity for freight to use rail;
- Improve coach and express bus networks and facilities;
- Demand responsive public transport in rural areas;
- Smarter use of existing roads;
- Local road safety and other measures;
- Expand air and sea networks;
- Specific measures to assist tourism.

3.3 The types of intervention associated with each of these themes is described below. In the light of this an assessment is made of whether these types of action are likely to have significant impacts on the economic development of the South West and in particular the regeneration zones in the South West.

3.4 **Reducing the need to travel*:*** This theme seeks to reduce the need to travel by car through: encouraging use of Information and Communications Technologies (ICT); ensuring new development is in locations that are accessible on foot, by bike or by public transport; and a hearts and minds campaign to encourage use of more sustainable travel choices.

3.5 The economic benefits of this theme are twofold.

- First, reducing the need for travel has clear benefits in terms of reducing congestion on the region's transport networks, and hence reduces the cost associated with congestion and lack of reliability. This is of benefit to the economy of the region as a whole.

- Second, it is possible that businesses may not make sufficient use of technology such as video-conferencing and work place travel plans, and thereby incur higher costs than they need to. Encouraging wider adoption of these measures take up may therefore promote greater efficiency and enhance competitiveness.

3.6 Greater use of ICT in communications by business would in general be thought to favour more remote areas. The areas which are the most remote benefit most from any reduction in the need to travel. But the faster adoption of new technology and working practices may require investment in new technology by firms and would certainly require investment of management time. Larger and faster growing firms, which are more strongly represented in the more buoyant parts of the region, would find it easier to adapt. Generally this measure will contribute more to the achievement of broad economic objectives for the region as a whole than specifically helping promote the development of identified regeneration zones.

3.7 **Better integration of public transport.** Actions under this theme are designed to make it more practical to use public transport by making it easier to change between different transport modes. This will contribute to encouraging modal shift from road to rail, and make better use of existing road space which will have beneficial economic impacts on reducing congestion and enhancing reliability. These effects are covered by other elements of the economic appraisal. Generally the actions identified under this element of the SWARMMS Strategy would apply across the study area, so they do not change the relative accessibility of different sub-regions. It is therefore doubtful that this element would make a difference in terms of its impact on economic development of areas identified for regeneration. The effect of this theme is neutral in terms of its effects on achievement of regeneration objectives.

3.8 **Promote use of public transport to/from main urban areas:** The principal actions within this theme are the provision of additional 'suburban' rail services, the provision of new rail stations to encourage use of rail services, park and ride and bus priority schemes. This will contribute to encouraging modal shift from road to rail, and make better use of existing road space which will have beneficial economic impacts on reducing congestion and enhancing reliability. These effects are covered by other elements of the economic appraisal.

3.9 Actions under this heading can be expected to encourage the efficient operation of the labour market of significant urban areas, notably Bristol and to a lesser extent Swindon and Plymouth. The measures would thereby help to ensure that the growth of these urban centres is not constrained by rising congestion. The measures could also have an impact on the distribution of economic activity within particular sub-regions. Proposals could stimulate property development if there are particular locations within urban areas that gain significantly in terms of public transport accessibility. More detailed information would be needed on both the schemes in each area and local conditions to make a full assessment of impact.

3.10 The measures within this theme do not change the strategic accessibility of different parts of the region. They would not therefore have a significant impact on the competitive position of the Cornwall and Devon regeneration zones. It is important to note however that the Strategy acknowledges the risk that the measures identified could in principle make it more difficult to enhance long distance rail services. If this occurred it could damage the economic performance of regeneration zones in the far South West. A key part of the theme is ensuring adequate investment in rail infrastructure to avoid such conflicts.

3.11 **Traffic restraint within main urban areas:** Proposals under this theme include, for example, reducing long stay parking spaces in urban areas, adopting charging systems to influence driver behaviour and reallocating road space to public transport, walking and cycling. These measures are important to the efficient operation of the key urban areas, notably Bristol, where congestion threatens growth. The effects on reliability and journey times, and hence the contribution to the achievement of economic objectives for the Bristol area are captured in other parts of the economic appraisal.

3.12 These measures are important therefore to the achievement of regional economic objectives which see Bristol as a key motor of growth in the region. They are less significant in terms of the achievement of regeneration objectives, since the measures do not have major implications for strategic accessibility (except in so far as they remove local traffic from strategic routes). The measures could also have some micro-scale economic effects, in terms of benefiting or disadvantaging certain types of economic activity in particular urban locations, not captured in other parts of the economic assessment.

3.13 **New road and rail infrastructure:** Actions under this theme entail increasing the capacity of the rail network and relieving local bottlenecks and increasing the capacity of the road network at key locations in the main transport corridors. It is this element of the Strategy which will contribute much to improving journey time reliability and reducing journey times within the region. Combined with the next theme – providing more opportunities to travel by rail – it is this theme which has the greatest potential to affect the strategic accessibility of regeneration areas in the South West. The extent of the enhancements to strategic accessibility are discussed in further detail in Section 4.

3.14 **Provide more opportunities to travel by rail:** This element, linked to new rail infrastructure, envisages significant enhancements to strategic rail services involving reduced journey times, increased frequency, better local connections, enhanced reliability and journey ambience and a wider choice of route/destination. This would secure significant enhancement to long distance rail services to Devon and Cornwall. This element of the Strategy is potentially significant in terms of the achievement of regeneration objectives. It is not only the reality of reducing peripherality – but the effect on the perception that matters.

3.15 **More opportunity for freight to use rail:** This theme entails creation of new multi-modal freight terminals and creating the capacity on the rail system to accommodate growth. There is already an inter-modal terminal at Cabot Park at Avonmouth and another terminal is being developed at South Marston, Swindon. The SWARMMS Strategy identifies that the level of demand in the South West peninsula would not support the creation of more than one additional inter-modal terminal. The Strategy recommends the creation of a new terminal at Tavistock Yard, Plymouth.

3.16 Halcrow's report on Inter-Modal Freight indicates that there might be demand for two inter-modal trains per day from the South West peninsula to the south and west of Bristol. Each train load can be expected to carry 500 tonnes of freight on average, equivalent to 125,000 tonnes for a year round daily service. A terminal in Plymouth could be expected to capture outgoing traffic from manufacturers in Cornwall and Devon. The total volume of goods moved by road from Devon and Cornwall exceeds 3 million tonnes per annum. Thus the additional traffic captured represents about 4% of the existing volume of goods moved by road.

3.17 This provides a feel for the extent of economic benefit derived by existing businesses in Cornwall and Devon from the development of an inter-modal freight terminal since businesses will only use the service if it is more cost effective overall than road transport (taking account of the quality of service). Businesses are also likely to place a value on having an alternative to road based transport – particularly businesses which need to transport goods over long distances with high point to point volumes. The proposals would deliver some real, albeit quite modest, benefits to businesses in Devon and Cornwall.

3.18 The development of an inter-modal terminal in Plymouth is also likely to attract associated development, in terms of distribution businesses. This will be of benefit to Plymouth and the surrounding area in terms of job creation. Other benefits in terms of the contribution which the development of rail freight makes to reducing congestion are captured by other aspects of the economic appraisal.

3.19 **Improve coach and express bus networks and facilities:** The improvement of coach and express bus will be achieved through new and improved services; new interchange facilities; and priority measures on strategic routes. The wider economic impacts on regeneration zones of these measures are likely to be limited. There is likely to be some beneficial impact in that the visitor market is partly coach borne – but only a small proportion of visitors arrive in the South West by coach. The benefits of these measures will be largely reflected in the scope for reducing congestion through this measure, which are reflected in other elements of the economic appraisal.

3.20 **Demand responsive public transport in rural areas:** The key aspect of this theme is to provide certainty of being able to continue a journey by public transport outside of core operating hours. Key actions in the theme involve provision of public transport to link with rail and coach interchanges, provide links to areas which may not have conventional bus services and provide links at early or late off-peak times. These measures are unlikely to be significant in terms of economic development, though they may be more important in terms of addressing social exclusion in rural areas. This dimension of the strategy is considered under the appraisal of accessibility.

3.21 **Smarter Use of Existing Roads (Demand Management):** This element of the SWARMMS Strategy involves use of Intelligent Transport Systems to allow the strategic road network to operate more effectively. These measures affects the regeneration zones in the South West and Wales in so far as they improve journey times/reduce cost from/to those areas. Most of the economic benefits of these measures will be reflected in the other elements of the economic appraisal. But these measures will contribute to reducing journey times and hence costs for long distance traffic. They will therefore have a modest beneficial effect in terms of the impact on regeneration zones in the South West and South and West Wales.

3.22 **Local road safety and other measures:** This theme is intended to address specific problems of safety, environment, congestion, accessibility and integration. Interventions may involve traffic management, alterations to junctions, signage improvements etc. These minor measures are not likely to contribute significantly to economic development. The nature of the schemes proposed is that they are not likely to open up new sites for development.

3.23 **Expand air and sea networks:** Enhancing air services from airports serving the regeneration areas – Penzance, Newquay, Plymouth and Exeter – would have positive effects in reducing both the reality and perception of peripherality, and contribute to easier business travel and tourism development. Enhancement to services from other regional airports would also be of considerable benefit to the region. However the SWARMMS Strategy does not extend to consideration of required improvements to air services. This has been considered as part of the Regional Air Service Study.

3.24 The remit of the SWARMMS strategy has been to consider improving of surface access to key airports and ports. The key measure within this theme that will contribute positively to economic development in the South West generally, including the regeneration zones, is the proposed creation of rail access to Heathrow from the west. Heathrow is such a key node for both business and leisure travel that direct rail access from the west would represent a significant enhancement in the strategic accessibility of the South West region. It would enhance the ability to attract overseas visitors and inward investors, as well as benefiting existing businesses.

3.25 Other schemes within the Strategy deliver only modest enhancements to the surface accessibility of ports and airports in the region. These will deliver modest enhancements to the competitiveness of the ports and airports concerned but are unlikely to have major spin off benefits in terms of economic development. The possibility of developing a new strategic route from the M5 to Bristol International Airport is discussed within the Strategy. No firm proposal for such a scheme has been put forward, since the feasibility of such a route has not been established and there are related issues concerning the expansion of Weston-Super-Mare which still have to be resolved. The development of such a route would, however, have positive economic development effects, especially if combined with the development of additional air services through the airport. Such benefits have not been considered in detail since the scheme is not part of the SWARMMS strategy.

3.26 **Specific measures to assist tourism:** The aim of this theme is not to encourage the attraction of additional visitors to the South West, but rather to encourage those people who do visit the South West to travel by public transport, principally rail services. Other measures – particularly the enhancement to long distance rail schemes and improvements to the strategic road network – are more likely to have an impact on attracting visitors to the region and particularly the regeneration zones in Devon and Cornwall. The effect of these other measures on the tourism industry is discussed in more detail in Section 6.

3.27 The measures proposed under the theme include a large number of modest initiatives to make journeys by public transport easier for visitors; for example, improved ticketing, more left luggage facilities, better information systems etc. The measures that could potentially increase the number of visitors to the region, and especially to the prime tourist destinations in Devon and Cornwall, include the expansion of motor-rail services, car hire/public transport packages for visitors etc. These measures on there own will have only limited impact on increasing overall visitor numbers/length of stay, though the effect will be beneficial. It is the changes in strategic accessibility which offer much greater potential to enhance the tourist industry in the region in particular in the regeneration areas.

3.28 **Summary:** Table 3.1 below summarises the extent to which each of the themes can be expected to have wider economic effects in terms of fostering the regeneration of Cornwall and Devon. The key measures that have the potential to stimulate economic development are the investment in new road and rail infrastructure and associated improvements in rail services. The other themes are important in that they collectively form part of a strategy that will reduce congestion on the strategic road network serving the regeneration zones in the South West.

TABLE 3.1
SUMMARY OF WIDER ECONOMIC IMPACTS BY THEME

Reducing the need to travel	Positive, low
Better integration for public transport	Neutral
Promote use of public transport to/from main urban areas	Positive, low
Traffic restraint within main urban areas	Neutral
New road and rail infrastructure	Positive, medium
Provide more opportunities to travel by rail	Positive, medium
More opportunity for freight to use rail	Positive, low
Improve coach and express bus networks and facilities	Positive, low
Demand responsive public transport in rural areas	Neutral
Smarter use of existing roads	Positive, low
Local road safety and other measures	Neutral
Expand air and sea networks	Positive, low
Specific measures to assist tourism	Positive, medium

4. PRINCIPAL RAIL AND ROAD SCHEMES AND THE IMPACT ON STRATEGIC ACCESSIBILITY

RAIL SCHEMES

4.1 The SWARMMS Strategy proposes a major programme of investment in rail infrastructure to support a significant enhancement of rail services within the SWARMMS area. Full details of the proposed infrastructure works are contained in the Corridor Plans, but a brief summary is given here of the major schemes.

London-Bristol Transport Corridor
- Additional platform capacity at Paddington;
- 6 tracking Paddington-Heathrow;
- Remodelling of Reading, Swindon, Bath Bristol Temple Mead, Bristol Parkway, Newport and Cardiff stations to increase capacity;
- 4 tracking Didcot-Swindon;
- Construction of a number of grade separated junctions to increase capacity and increase operational flexibility;

London-Exeter Transport Corridor
- Reinstatement of double track between Exeter and Salisbury;
- Engineering works to increase average speeds on the Berks and Hants line;
- New stations at Devizes Parkway, Clyst Hayes, Porton, Wilton and Newton.

Bristol-Exeter Transport Corridor
- Modest improvements to increase rail capacity;
- Creation of a Worle Parkway station;

Exeter-Penzance Transport Corridor
- Reinstatement of double tracks on the GW mainline between Burgallow and Probus in Cornwall to increase capacity and improve reliability;
- Works to improve line speeds on the GW mainline.

4.2 This programme of works amounts to improvements on the Great Western Mainline (including the Berks and Hants line) of a similar magnitude to the West Coast Mainline and East Coast Mainline projects.

4.3 Table 4.1 shows that this strategy would produce significant journey time improvements between all stations to the west of Taunton and Paddington. The strategy would reduce journey times from Plymouth to London by 70 minutes, while towns in Cornwall would benefit from journey time reductions of around 50 minutes.[1] Torbay benefits from a reduction in average journey times to London of around half

[1] Destinations in Cornwall do not secure the same degree of journey time savings as Plymouth, because a high proportion of services from Cornwall have a stopping pattern that produces less significant journey time savings.

an hour. The scale of these journey time improvements potentially offer significant benefits to all areas west of Taunton.

TABLE 4.1 RAIL JOURNEY TIME SAVINGS ASSOCIATED WITH THE SWARMMS STRATEGY				
	Average in-train time from Paddington (mins)			
	Base	Do Minimum	SWARMMS	SWARMMS Saving v Do Min
Destination Station	2000	2016	2016	
Penzance	314	314	259	-55
Cambourne	294	294	244	-50
Truro	275	275	226	-49
Plymouth	214	214	145	-69
Torbay	198	198	165	-33
Exeter	155	155	130	-25
Taunton	132	132	112	-20
Weston-Super-Mare	128	128	120	-8
Bath	96	96	83	-13
Bristol Temple Meads	100	100	95	-5
Swindon	67	67	66	-1
Gloucester	117	117	114	-3
Reading	32	32	30	-2
Newport	111	111	110	-1
Cardiff	124	124	123	-1
Birmingham	122	122	121	-1

Rail Accessibility Tables: Journey Time Savings

Note: Table 4.1 has been constructed on the basis of average travel times across all services, although reflecting that most passengers will choose the fastest services. The journey time savings result from a combination of line speed increases and a greater choice of services having fewer intermediate stops.

4.4 In addition the strategy delivers significant improvements in service frequencies. Figure 4.1 shows the typical number of long distance rail services from key stations in the South West on routes to London. The key enhancements in service frequencies can be summarised as follows.

- The principal stations in Cornwall would have a once an hour fast service to London, a considerable enhancement on the current once every two hours service;

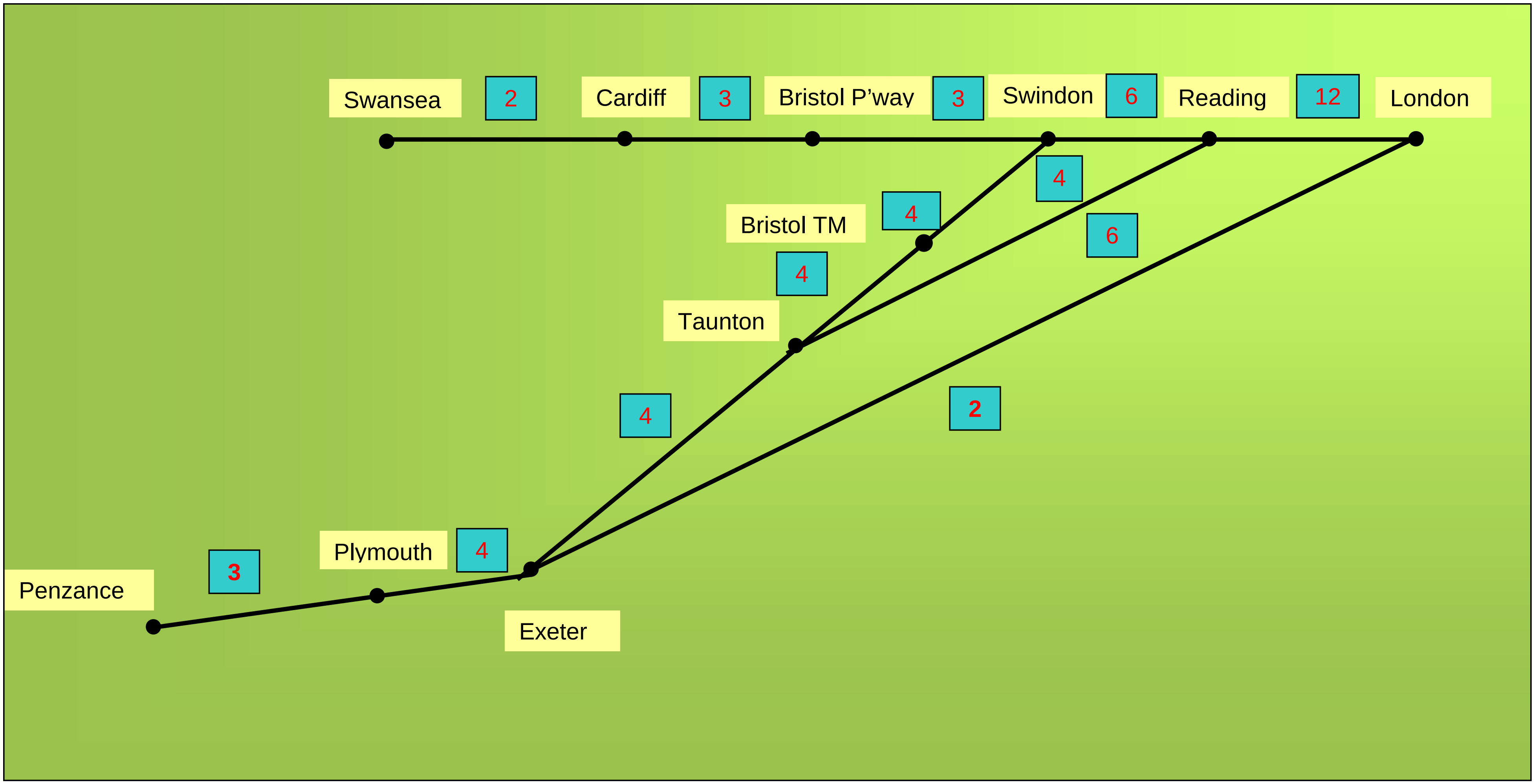
- Exeter would benefit from enhanced service frequencies, with roughly four trains an hour to London, compared to the current two trains per hour;
- Service frequencies from Taunton would increase from the current hourly service to four trains per hour;
- Bristol Temple Meads would have at least four trains per hour to London, in place of its current half hourly service;
- Bath, Newport and Cardiff would also benefit from more frequent services;
- There will be enhancements to services on the Penzance – Birmingham route via Bristol.

4.5 In addition to the increased frequency of service and reduced journey times on the key route to London Paddington, the introduction of many more services including semi-fast and regional services also increases the range of destinations available to rail travellers, and the number of options for journeys. Increased service frequency on the Exeter-London Waterloo service also represents a valuable enhancement to options for rail travel. The new semi-fast and regional services particularly benefit stations in Cornwall, Taunton and Bristol Temple Meads.

4.6 The investment programme should also enhance reliability – though the more intensive use of the rail network would also present challenges in ensuring reliability. In addition the strategy flags up the possible need for replacement of the existing High Speed Train fleet in 2011 and route electrification. Were these measures to be introduced they would deliver improvements in the quality of journeys.

4.7 Taken together the investment programme identified in the SWARMMS Strategy delivers significant enhancements to strategic accessibility of areas to the west of Taunton, including the regeneration areas of Cornwall and Devon.

FIGURE 4.1
INDICATIVE NUMBER OF LONG DISTANCE TRAINS PER HOUR ASSOCIATED WITH THE SWARMMS STRATEGY



ROAD SCHEMES

4.8 The SWARMMS Strategy also proposes a programme of targeted investment in road infrastructure, designed to make the existing strategic road network work more effectively and to deal with specific problem areas. This will be complemented by traffic management measures including variable speed limits, incident detection etc. Full details of the proposed infrastructure works are contained in Corridor Plans, but the brief summary below provides a feel for the scope and nature of schemes proposed in the Strategy.

London-Bristol Transport Corridor
- New merge/diverge facilities at Junctions 15 (Swindon East), 16 (Swindon West) and 19 (Bristol M32) of the M4;
- Additional weaving capacity at M4 Junctions 19-20 (M32 and M4/M5 interchange);
- Climbing lanes on M4 eastbound approaching Junction 18 (Bath);

London-Exeter Transport Corridor
- Schemes that, taken together, will result in the A303 being a dual carriageway between Ilminster in Somerset and the M3;
- Dualling of the A358 Ilminster-Taunton road and provision of a new junction 25a to the south of the existing Junction 25 on the M5 to provide a continuous dual 2 route from the M3 to the M5;
  Note: If it does not prove possible to construct a suitable junction between the A358 and M5, and develop the A358 as part of the strategic east-west route, the alternative would be to construct a new dual-carriageway in the A303/A30 corridor between Ilminster and Honiton.

Bristol-Exeter Transport Corridor
- Climbing lanes on the M5 at Junctions 17,18, 19, and 20 northbound and Junctions 19 and 20 southbound;
- Modifications to Junctions to improve traffic flow around Bristol, Weston-Super-Mare and Exeter;
- Possible new junctions at Taunton and Weston-Super-Mare.

Exeter-Penzance Transport Corridor
- Dualling of the A30 at Temple Improvement. This a continuous dual 2 route from Carland Cross (the junction for Truro) to the M5 at Exeter;
- Proposals for improvement of the A30 between Carland Cross (A30/A39 junction) and Chiverton Cross as a single carriageway road;
- A range of improvements to the A30 and A38 designed to overcome safety problems and improve traffic flow (including junction improvements).

4.9 This overall strategy for roads can be summarised as follows:

- A wide range of measures are to be taken to limit further growth in vehicle movements, both by reducing the need to travel and encouraging greater use of public transport;

- Nevertheless vehicle traffic is forecast to increase. The Strategy ensures that this growth can be accommodated without the need for significant new road building by making better use of existing transport infrastructure;

- Measures are targeted at those areas experiencing the greatest congestion in the strategic route corridors in the SWARMMS area. Figure 4.2 shows that these are particularly on the M4, on the A303/A30, and at Goss Moor in Cornwall.

4.10 The effect of the Strategy on journey times by road between key destinations in the SWARMMS area are shown in Table 4.2, which compares journey times in 2016 with the Strategy in place and current (2000) journey times. Table 4.3 compares journey times in 2016 with what they would be without the implementation of the SWARMMS Strategy.

4.11 Table 4.2 shows that the effect of the Strategy is to maintain the level of accessibility currently enjoyed by the South West peninsula, rather than to improve accessibility. This, however, is important since Table 4.3 shows that if the Strategy is not adopted then the strategic accessibility of the South West peninsula ***declines***. Put simply, without the implementation of the Preferred Strategy, growing congestion on the main strategic arteries connecting the South West to the rest of the country – the M5 and M4 – will make journey times longer and less reliable than they are now.

4.12 The programme of investment in roads also produces other benefits. The Strategy will deliver enhancements in journey reliability by the eliminating particular bottlenecks. This is an important dimension of strategic accessibility, since for many road users certainty about journey times is as important as the actual duration of the journey. The quantification of these benefits is dealt with by other elements of the economic appraisal.

4.13 The impact of the road investment programme on journey times implies that the economic significance of the Preferred Strategy is its contribution to ensuring that the South West economy can continue to grow without the transport system of the region imposing a constraint on that growth. This issue is examined in Section 5.

FIGURE 4.2 CONGESTION ON THE MOTORWAY AND THE TRUNK ROAD NETWORK IN 2000

***Source*: DTLR, Transport 10 Year Plan**

TABLE 4.2
ROAD JOURNEY TIMES CHANGES BETWEEN 2000 & 2016 WITH SWARMMS STRATEGY

(Figures in red indicate of journey time savings)

	P'zance	C'borne	Truro	Plym.	Torbay	Exeter	Taunton	WSM	Bath	Bristol	Swindon	Glouc.	Reading	London	Newport	Cardiff	B'ham
Penzance	**0**																
Camborne	1	**0**															
Truro	2	1	**0**														
Plymouth	9	8	10	**0**													
Torbay	0	-1	1	16	**0**												
Exeter	1	0	2	16	4	**0**											
Taunton	-1	-2	0	14	1	3	**0**										
WestonSM	2	1	3	17	4	5	4	**0**									
Bath	2	1	3	17	4	5	6	11	**0**								
Bristol	3	2	4	18	5	6	5	14	6	**0**							
Swindon	0	-1	1	15	2	3	2	11	4	3	**0**						
Gloucester	0	-1	2	15	3	4	3	11	9	3	7	**0**					
Reading	-2	-3	0	13	1	1	4	12	6	5	3	15	**0**				
London	-7	-8	-5	8	-4	-3	-4	4	-2	-3	-5	7	-4	**0**			
Newport	0	-1	1	15	2	3	2	11	3	3	1	1	3	-5	**0**		
Cardiff	0	-1	1	14	2	3	2	11	3	3	1	1	3	-5	1	**0**	
B'ham	1	0	3	16	4	5	4	12	8	5	5	8	11	13	3	3	**0**

Figures in black indicate journey time increases

TABLE 4.3
ROAD JOURNEY TIME SAVINGS IN 2016 WITH THE SWARMMS STRATEGY COMPARED TO THE DO MINIMUM

Estimates for Journey Time Savings accruing from implementing compared to the Do Minimum - 2016

	P'zance	C'borne	Truro	Plym.	Torbay	Exeter	Taunton	WSM	Bath	Bristol	Swindon	Glouc.	Reading	London	Newport	Cardiff	B'ham
Penzance	**0**																
Camborne	0	**0**															
Truro	0	0	**0**														
Plymouth	-2	-2	-2	**0**													
Torbay	-2	-2	-2	1	**0**												
Exeter	-1	-1	-1	3	1	**0**											
Taunton	-2	-2	-2	2	0	1	**0**										
WestonSM	-2	-2	-2	2	1	2	1	**0**									
Bath	-4	-4	-4	0	-2	-2	-1	2	**0**								
Bristol	0	0	0	3	2	3	2	3	1	**0**							
Swindon	-7	-7	-7	-3	-5	-4	-5	-3	1	-1	**0**						
Gloucester	-3	-3	-3	1	-1	0	-1	0	-2	2	-3	**0**					
Reading	-10	-10	-10	-6	-8	-8	-5	-4	0	-1	0	-1	**0**				
London	-19	-19	-19	-16	-17	-16	-17	-16	-12	-13	-13	-13	-12	**0**			
Newport	-4	-4	-4	0	-1	0	-2	0	-2	2	-3	0	-3	-16	**0**		
Cardiff	-4	-4	-4	0	-1	0	-2	0	-2	2	-3	0	-3	-16	0	**0**	
B'ham	-4	-4	-4	0	-2	-1	-2	-1	1	2	0	0	0	0	0	0	**0**

(Figures in red indicate magnitude of journey time savings)

AREA PLANS

4.14 The Preferred Strategy also contains two area based plans, one for Bristol, and one for Swindon. Both have a role in relieving congestion on the main strategic roads, the M4 and M5, and hence play an important role in maintaining the strategic accessibility of the region and the far South West and Wales. Brief comments are made below on the area plans.

Greater Bristol

4.15 The Greater Bristol plan contains a significant number of improvements to rail infrastructure to allow a significant increase in the number of rail services spanning the Greater Bristol area and the introduction of new services. These services would provide connections across the area and to the south west (Exeter), west (South Wales), north (Gloucester) and south east (Southampton and Portsmouth). Proposals for a Light Rail system are still subject to evaluation.

4.16 Other measures include strategic bus/coach priority measures; implementation of a park and ride strategy; and traffic control measures. The only highway scheme included in the strategy is possible works on an A370-A38 Road Link to improve access to Bristol Airport.

Swindon

4.17 The Swindon strategy includes the opening of new stations for suburban/inter-urban services, reinstatement of twin tracks on the Swindon-Kemble line and introduction of a regular hourly shuttle service from Swindon to Cheltenham. The strategy also envisages enhanced transport interchange facilities; implementation of a park and ride strategy; and traffic control measures. Highway schemes include plans for Junction 15 and 16 of the M4 and the possibility of a southern link road as part of the Southern Development area.

Assessment of Area Plans

4.18 As a general principle, local transport initiatives of the sort contained in the Greater Bristol and Swindon area plans will enhance the efficient functioning of local economies by reducing congestion. But they are unlikely to change greatly the competitiveness of different areas as a location for business since they do not impact on the strategic accessibility of the area. Only if congestion becomes so severe is there the possibility that economic activity may be diverted to other areas. This is perceived to be a real risk in Bristol.

4.19 In contrast local measures are much more likely to change the relative locational advantages of different parts of the locality being targeted. In particular it may change the relative merits of town centre locations versus out of town locations. It is a real possibility that a renaissance in rail use within for example Greater Bristol, could benefit the inner areas of Bristol, both in encouraging business location in inner areas, and countering the dispersal of economic activity.

4.20 This impact would be achieved both by making specific locations more accessible, by creating or reinforcing public transport nodes and opening up new high quality public transport routes. This could benefit the Objective 2 area in inner Bristol both by encouraging development in the area, and by making it easier for people in disadvantaged areas to access jobs. More detailed work would be required to assess whether these benefits would, in fact, be realised and the scale of such effects as Greater Bristol are further refined.

5. THE CONTRIBUTION TO THE ACHIEVEMENT OF REGIONAL ECONOMIC OBJECTIVES

5.1 This section considers the contribution that the Preferred Strategy will make to the achievement of regional economic objectives. It does so by first examining the economic performance of the South West in the recent past and commenting on the link between this growth and transport infrastructure investment. A summary is then provided of the economic development objectives set out for the region in key policy documents. Future projections of GDP and employment growth are examined. An assessment is then made of how important investment in transport infrastructure is likely to be to the achievement of regional economic development objectives, based on a review of key factors in business growth and location.

THE ECONOMIC PERFORMANCE OF THE REGION OVER THE PAST 20 YEARS

5.2 The economy of the South West has grown steadily over the past two decades, outstripping the national average in terms of both GDP and employment growth (see Figures 5.1 and 5.2). The region's share of national GDP has grown steadily since the 1970s. In 1998, the South West accounted for 7.8% of the nation's GDP compared to only 7.2% in 1977. The South West was one of only three regions to increase its share of national GDP over this period (the others being the South East and East of England).

Figure 5.1: GDP Change 1981-1997 (1981=100)

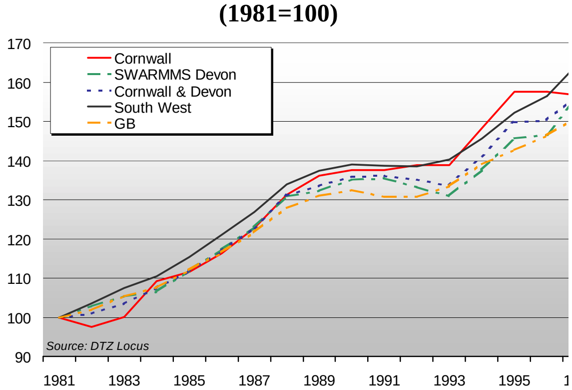
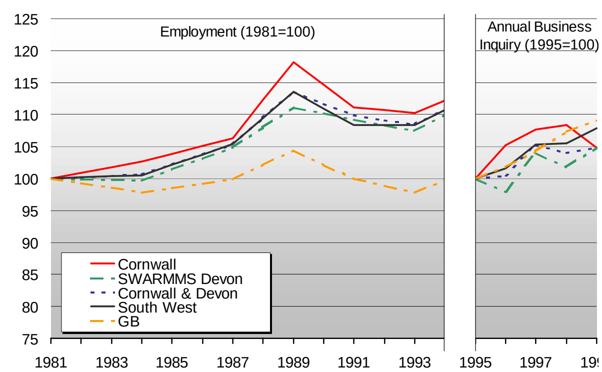


Figure 5.2: Employment Change 1981-1999



5.3 Over the 1991-1998 period, GDP growth in the South West has exceeded the national (GB) average, though it has lagged London, the South East and East of England regions in terms of the overall rate of GDP growth. GDP per head in the region is slightly below that experienced across Great Britain as a whole, consistently running at around 91% of the national level. This is low compared with the London, South

Eastern and East of England regions, but compares favourably when benchmarked against the regions of Northern England and Wales, and on a par with the Midlands.

5.4 While GDP per head in the South West has remained relatively static over the last decade at around 91% of the GB total, its relative performance to other GB regions has improved. In 1977, the South West was one of the regions with the lowest levels of GDP per head in the country. It is now the region with the 6th highest GDP per head, having improved its relative position since the early 1990s when it was ranked 7th (out of 11 regions in GB). The overall average for the region of GDP per head for the region masks marked differences in GDP per head within the region. GDP per capita is markedly higher in the north east of the region than in Cornwall and Devon.

5.5 Employment has also grown significantly in the region over the past two decades with significant employment growth 1984-89 and then again in the period since 1993. Employment has grown as a result of indigenous growth and inward investment and business relocations and has been associated with significant levels of in-migration. Employment growth has tended to be most rapid in the most accessible parts of the region – in the north east and south eastern parts of the region, though the City of Bristol experienced significant loss of employment in the 1980s. This growth has been facilitated by the good access to the national motorway network, high quality rail services and relative proximity to London.

5.6 The economic performance of Cornwall and Devon is mixed. Both areas have grown significantly over the last 20 years in terms of employment, GDP and population. This growth will have been assisted by the completion of a number of major infrastructure projects in the period. The M5 to Exeter was opened in 1977. The A30 dualling from the M5 to Launceston was completed in 1989 and the North Devon Link Road was opened in full in 1989. However the regeneration zones still experience economic problems as reflected in the low GDP per capita, low employment rates and levels of benefit dependency well above the regional average. The economy of the area also exhibits structural weakness in terms of relatively high dependence on employment in declining sectors.

REGIONAL ECONOMIC OBJECTIVES

5.7 The policy framework for regional economic policy is provided by both the SWRDA's Regional Economic Strategy (RES) and Regional Planning Guidance for the South West. Both documents emphasise the high priority to be given to securing the sustainable prosperity of the development of the region.

5.8 The overall mission of the **Regional Economic Strategy** is identified as '*improving the competitive position of the South West of England within the EU and internationally in order to increase sustainable prosperity for the region and all its people*'. The three strategic objectives set out in the RES are to increase prosperity through:

- improving business competitiveness
- addressing social and economic imbalances
- improving regional coherence.

Transport investment is recognised in the RES as being important to the current and future competitiveness of business in the region and hence to prosperity, and to addressing social and economic imbalance.

5.9 Regional Planning Guidance for the South West seeks:

- to safeguard and enhance the distinctiveness and diversity of the South West's environment
- to secure a sustainable level of growth and distribution of development
- to provide a framework for the provision of infrastructure and services so as to ensure an enhanced quality of life
- to provide a safe and efficient transport system to serve the existing and future needs of the South West.

5.10 RPG sets out four specific objectives in relation to the economy. RPG states that local authorities, SWRDA, local economic partnerships and other agencies should support the sustainable development of the regional economy by:

- positively promoting and encouraging new economic activity in the areas where it can bring the greatest economic and social benefits and make the greatest contribution to reducing regional disparities in prosperity

- accommodating continued economic development in sustainable locations in the more prosperous north and east of the region and seeking to develop beneficial economic linkages between these areas and areas to the west whose economies have performed less well

- ensuring that the region's unique environmental and cultural assets are maintained, enhanced and utilised to attract and develop business activity

- developing the skills and abilities of the region's people by improving access to training, education and employment opportunities.

5.11 Both the RES and RPG acknowledge that the economy of the South West is relatively buoyant, but that there are also significant imbalances. Both strategies recognise that future prosperity cannot be taken for granted and that it is therefore important to build on the region's competitiveness and economic strengths. Both RPG and the RES emphasise however that growth is not to be pursued at any cost – captured in the phrase *'better before bigger'* in the RES. This is fundamental in the context of national government policy for sustainable development, but also stems from a view that the quality of life is one of the region's key assets and important to its future prosperity.

5.12 Both the RES and RPG seek to secure continued growth in prosperity and employment in the region consistent with maintaining environmental assets, and to promote a better balance of economic activity in the region. There are various forecasts of the extent to which the regional economy will grow in the next 15 years, but all show significant GDP and employment growth. Cambridge Econometrics forecasts prepared for DTLR indicate that overall employment in the South West is expected to grow by some 22% between 1998 and 2016, or in excess of 500,000 jobs. GDP is also expected to grow significantly (see Figure 5.4).

Figure 5.3: Forecasts for Employment Growth 2000-2015 – South West

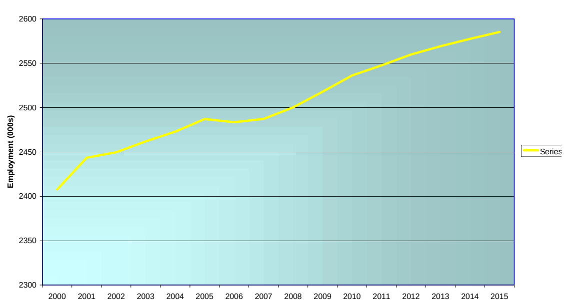
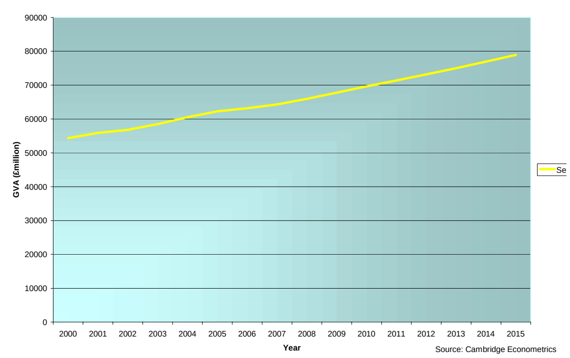


Figure 5.4: Forecasts for GVA Growth 2000-2015 – South West



THE CONTRIBUTION OF THE SWARMMS STRATEGY TO REGIONAL GROWTH

5.13 A key issue in the appraisal of the economic contribution of SWARMMS is whether the anticipated level of growth in the South West can be achieved without the implementation of the SWARMMS strategy. This is a pertinent question because none of the forecasting models used to forecast GDP and employment growth at the regional level take into account the fact that failure to invest in adequate infrastructure could affect competitiveness and constrain growth. It has not been possible within the scope of this appraisal to fully address this issue, but it is possible to make a preliminary assessment.

5.14 It is clear from the business consultation undertaken in connection with this assessment that the business community certainly regard the lack of reliability of the transport networks as a source of significant inefficiency which impacts upon their competitiveness (see Appendix 4). These comments reflect in part the high degree of frustration during a period when there has been major disruption to rail networks and rising levels of congestion on the road network, but they also reflect a widespread concern amongst the business community about the adequacy of transport infrastructure and the impact on business efficiency and profits. It is clear that without the implementation of the Preferred Strategy long distance journeys will become more time consuming and less reliable. The scale of the additional costs associated with increased congestion can be assessed through the modelling undertaken for the SWARMMS study and is reported elsewhere.

5.15 The importance of transport to businesses can also be judged from research on the factors that influence inward investment location decisions. Research indicates that in making location decisions, inward investors take into account the following factors:

- Labour Supply: including availability of the labour force, skill levels, industrial relations, the ability to attract key employees, productivity levels;
- Infrastructure: including the quality of available sites and premises, access to transport networks (road, rail and air), the cost and availability of utilities, environmental regulations etc.
- Market Proximity: including proximity to customers, suppliers and the presence of similar companies;
- Financial Incentives: including grants and tax incentives;
- Quality of Life: including education, housing, ease of travel to work, cost of living and leisure and cultural facilities and the natural attractions of an area.

5.16 The relative importance of these different factors to manufacturing businesses are shown in Table 5.1. A wide range of factors are regarded as being *critical* to the location decision with no one factor being mentioned by more than 19% of companies and no one factor being counted as *important* by more than 31% of businesses. The factors mentioned as being by most as *critical* were:

- 1st = proximity to markets;
- 1st = financial assistance;
- 2nd proximity to major customers (really the same thing as proximity to markets);
- 3rd availability of site;
- 4th = availability of labour;
- 4th = quality of road/rail access.

5.17 The factors which are seen as *important* rather than critical (and which can therefore be telling at the margin in competition between regions) include:

- promotional help by government (agencies)
- quality of labour;
- labour attitudes;
- proximity to major airports;
- cultural factors;
- educational factors.

TABLE 5.1
MOST IMPORTANT LOCATION FACTORS FOR MANUFACTURING PLANTS

	Companies Identifying Factor as Critical or Important to Choice of			
	Country		Region	
	Critical %	Important %	Critical %	Important %
Business Factors				
Proximity to markets	34	51	19	31
Availability of raw materials and components	9	23	12	17
Proximity major customers	17	14	18	6
Availability of site	5	5	17	17
National and Local Characteristics				
Financial assistance	11	20	19	20
Promotion/attitudes of government, etc.	6	19	9	23
Official language/linguistic skills	15	14	2	2
Corporate taxation	6	15	3	-
Labour Factors				
Availability general	8	26	15	32
Quality	8	22	9	29
Availability skilled labour	9	19	11	22
Labour relations	6	17	5	6
Labour attitudes	8	14	0	17
Cost Factors				
Cost land/premises	5	17	11	18
Cost of labour	11	22	9	17
Infrastructure				
Quality of road/rail services	23	20	15	32
Proximity to port	8	11	6	15
Proximity major airports	9	14	6	31
Quality telecommunications	5	12	2	11
Quality of Life and Personal Factors				
Cultural factors	5	17	0	23
Schools for expatriate children	2	11	2	9
Educational facilities	0	6	2	12
Overall attractiveness of area	5	6	6	8

Source: New Location Factors for Mobile Investment in Europe. Netherlands Economic Institute and Ernst & Young (1993).

5.18 A rather similar picture is presented, albeit in a simpler format, in Table 5.2, which indicates that the most important factors in location decisions are proximity to markets, labour quality and infrastructure. Research by Ernst and Young indicates that over time the presence of similar firms, the attitude of government, skills availability, the quality of road and rail and air services and access to ICT and quality of life considerations are becoming more important for high technology businesses.

TABLE 5.2 DETERMINANTS OF MANUFACTURING LOCATION DECISIONS IN EUROPE	
Factor	**All Countries**
Proximity to markets	63%
Labour quality	61%
Infrastructure	51%
Overall costs	41%
Incentives	31%
Availability of material/components	29%
Official languages	27%
Industrial relations	24%
Site availability	12%
Tax	2%
Source: Double-dealing the incentives card. Corporate Location (November 1993). Table originally from English Unit Survey.	

5.19 The picture of what the most important factors are for service sector businesses is a little different. Table 5.3 shows that the five most critical *criteria* determining the location decisions of services businesses at the regional level are:

- Availability of skilled labour;
- Presence of similar firms;
- Supporting services/R&D/cost land/premises/rented premises;
- Quality of telecommunications;
- Quality road/rail services.

The SWARMMS strategy addresses one of the five most critical measures.

5.20 *Important* criteria for service sector businesses at the regional level are proximity to market, proximity to a major airport and presence of supporting services/R&D. Non-cost factors especially knowledge based factors including the presence of similar firms, quality of labour and R&D facilities were identified in the research as being of increasing importance to the location of service sector businesses.

TABLE 5.3
MOST IMPORTANT LOCATION FACTORS FOR SERVICES

	Companies Identifying Factor as Critical or Important to Choice of			
	Country		Region	
	Critical %	Important %	Critical %	Important %
Business Factors				
Proximity to market	20	47	0	40
Presence of similar firms	13	0	27	0
Presence of major customers	13	13	13	7
Supporting services/R&D	13	7	20	27
National and Local Characteristics				
Financial assistance	7	13	7	13
Corporate taxation	7	13	-	-
Promotion/attitude of government	13	27	7	13
Official language/linguistic skills	40	0	0	0
Labour Factors				
Quality of labour	13	13	7	20
Availability of skilled labour	20	7	27	13
Cost Factors				
Cost land/premises	13	7	20	13
Cost of labour	7	33	13	7
Cost of rented premises	13	20	20	7
Infrastructure				
Quality of telecommunications	27	7	27	7
Proximity to major airport	7	13	7	40
Quality of road/rail services	7	0	27	7
Overall attractiveness of area	13	13	13	20

Source: New Location Factors for Mobile Investment in Europe. Netherlands Economic Institute and Ernst & Young (1993).

5.21 The significance of the analysis above is twofold. Firstly, it is clear that accessibility is a key factor in inward location decisions as reflected in both the high importance attached to proximity to markets, suppliers and other firms; and, in the high rating of quality of road and rail services, at least by manufacturing businesses. If the strategic accessibility of the South West is undermined then the ability of the region to attract inward investors will suffer, and this will undermine the pace of growth.

5.22 However, the competitiveness of existing businesses in the region is more important than inward investment to the future growth of the regional economy. Indigenous businesses, especially those that are drivers of the regional economy in that they operate in national and international markets, are likely to regard similar issues as being of key importance to their business as inward investors. The difference is that established businesses have to take as given a number of features of their current location.

5.23 For indigenous businesses market factors and internal issues – work organisation, skills, innovation, product development etc will be key drivers of competitiveness.

These are clearly the responsibility of the business itself. However, business is dependent on government to ensure that the transport infrastructure of the region is adequate for business needs. The priority attached to action to improve transport by business is an indication both that it has a material bearing on business competitiveness, and that it is something that business cannot address for itself.

5.24 The indication is that significant inefficiencies in the transport network could limit growth. Put another way, an efficient transport network is a necessary condition for economic growth, but not a sufficient condition. The increase in congestion anticipated over the next 15 years on the transport network of the South West puts at risk the continued growth of the regional economy, and hence the achievement of regional and national economic objectives. The scale of this down-side risk is very hard to evaluate, but the potential for significant impact is considerable.

6. ASSESSMENT OF THE STIMULUS TO ECONOMIC GROWTH

6.1 This section considers whether the Preferred Strategy can be expected to stimulate GDP or employment growth over and above that forecast for the region as a whole, and in particular if the Strategy will help boost the economic performance of the main regeneration zones in the South West. The section uses the matrix presented in Section 2 as a framework for discussion of this particular aspect of the wider economic effects of the Preferred Strategy.

BENEFITS TO EXISTING BUSINESSES

6.2 Existing businesses may benefit from the Strategy in four ways:

- Easier travel for business travel;
- Quicker, cheaper transport for freight ;
- Quicker, easier journeys for visitors;
- More efficient operation of the labour market.

Business Travellers

6.3 As noted in Section 4 the rail investment programme will generate significant reductions in journey times for rail travellers to London and other destinations outside and within the region and enhance service frequency. This will be of benefit to existing businesses whose staff travel by rail, in particular to those that need to travel to London. The overall level of business travel between Cornwall and West Devon and London – and the proportion of that which is – or would be – rail borne is probably relatively low. It is particularly producer services businesses and some governmental functions which have the highest requirement for travel to London. The employment structure of the regeneration areas of Cornwall and Devon indicate that these sectors are under-represented in the area, in part because of the length of time that it currently takes to travel by train to London. This acts as a disincentive for such firms to locate in the far South West.

6.4 Moreover, overall journey times from Cornwall will remain relatively long even following implementation of the Preferred Strategy. For day trips it is unrealistic to expect that businesses that require staff to travel regularly to London, are likely to consider a location more than 3 hours distant by train – and even this puts such areas at a significant competitive disadvantage compared to others. It is also important to note that the improvements benefit South Devon rather than North Devon. The relatively slow line speeds on services beyond Exeter mean that it is likely that many people will continue to chose to drive to an intermediate destination such as Tiverton Parkway or Taunton to pick up rail services. These stations also benefit from improvements in service frequency and journey time improvements.

6.5 The locations within the regeneration zones most likely to benefit from the rail service improvements are Plymouth, which has a sizeable business services sector, and, to a lesser degree, other parts of South Devon including Torbay. Even here, though the service improvements while welcome, the boost to the competitive advantage of these areas represented by reduced journey times and enhanced service frequency is modest. It is therefore improbable that existing businesses in the area will grow more rapidly than they would otherwise have done – though it may help to prevent the re-location of some businesses to more favoured locations.

6.6 Other locations such as Taunton and Exeter stand to gain more from the reductions in rail journey times and enhanced service frequency associated with the Preferred Strategy being within an easy day return journey to and from London. These areas do have businesses for which the quality of rail links is important and there may be scope for such businesses to capture market share from competitors, or better serve the London and South East market, which in overall terms accounts for a very large share of the UK economy. This will reinforce the objectives of RPG of encouraging economic growth in the Principal Urban Areas.

6.7 As noted in the previous section the road investment programme does not reduce journey times by road from the regeneration areas compared to the position at present. The elimination of the Goss Moor bottleneck, part of the Do Minimum option, will be welcomed by businesses to the west of this section of the A30, as will be the enhancement of the A358/A303 corridor. It is unlikely that these measures in themselves lead to faster growth of indigenous businesses (other than tourism, which is discussed in more detail below) than would otherwise have occurred.

Freight

6.8 Manufacturing businesses and businesses in Cornwall and Devon bear additional costs compared to businesses located closer to the major centres of population in the UK of transporting goods to customers. They may also face higher purchase costs because of their relative isolation. The Preferred Strategy is unlikely, however, to change the cost of transporting goods from and to the far South West relative to the current position.

6.9 The vast majority of freight movements are by road and will continue to be so, even though the Preferred Strategy will encourage freight movements by alternative modes, principally rail. Given this, and the fact that the Preferred Strategy maintains the current strategic accessibility of the South West by road rather than enhancing it, it is not realistic to envisage that the Preferred Strategy would improve the competitive position of manufacturing and primary businesses in Cornwall and Devon.

6.10 Even the establishment of a multi-modal freight terminal at Plymouth would not deliver a significant boost to the competitive position of businesses in the Cornwall and Devon regeneration zones. Halcrow have assessed the market for rail freight services from the peninsula South West. Their assessment points to the possibility of a daily trainload service from Plymouth – which might account for about 5% of the volume of freight movements from Devon and Cornwall. While beneficial for businesses in Cornwall and West Devon the development of such services will not bring about a major change in their competitive position.

Tourism

6.11 Currently 81% of all visitor trips to the West Country are car-borne, with rail travel accounting for only 6% of trips within the region. The improvements made to the strategic road network are of more significance therefore to the tourism industry than the improvements to the rail network. As shown in Section 4 the Preferred Strategy does not reduce journey times relative to the current position – but the Strategy will enhance the reliability of the network (captured by other elements of the economic appraisal). The enhancement of the A303/A358 is also of significance since 34% of visitors to the West Country come from London and the South East.

6.12 The enhancements to rail services between the peninsula South West, London and other parts of the country will also have a significant effect on the tourism sector in the West Country. Even though only 6% of visitors to the region are rail-borne, the proposals made in the Tourism Theme Plan should increase this proportion. Improvements to rail services are also likely to have a greater impact on the attraction of short break visitors by making it more feasible to travel, for example, from London to Cornwall for a weekend, the short break market being a major area of growth in the tourism sector. Capturing additional short break business is important to the objective of attracting more, higher spending visitors and extending the season.

6.13 The whole of the South West peninsula stands to benefit from the stimulus provided to tourism by the Preferred Strategy, but tourism is particularly important in Devon and Cornwall. In Cornwall it is estimated that the industry accounts for around 20% of

GDP. In Devon it accounts for around 10% of GDP. The scale of the journey time improvements in rail services and enhanced reliability of road journeys that would be delivered by the Strategy, will extend the market reach of tourism operators in Cornwall and South Devon. Access from the west to Heathrow may also help increase the number of overseas visitors.

6.14 It is difficult to quantify the extent of these benefits with any precision, but it would not be unreasonable to think that the benefits delivered by the Strategy could enhance the value of tourism expenditure in the West Country by around 1% of its total value by 2016. The value of this enhancement would represent £31 million at current prices, of which £21 million would be in Devon and Cornwall. Based on current output per worker in the industry, this could imply creation of an additional 1,400 jobs in the sector in the West Country, of which 900 would be in Devon and Cornwall.

Efficient Operation of the Labour Market

6.15 There is little evidence that in most of the regeneration areas in the South West (covering all of Cornwall and most of Devon), businesses find it difficult to recruit because of difficulties that potential staff face travelling to work. Journey to work issues are in no way comparable to those in London and the South East.

6.16 The exception to this is in the Greater Bristol area. The proposals contained within the Greater Bristol area plan will help to integrate the labour market in the sub-region, making it more possible for people to travel to work to different parts of the sub-region by public transport. On a more modest scale proposals in the Preferred Strategy will assist in the efficient operation of the local labour market in Plymouth. In both areas the measures will help facilitate central area employment growth, and this will be of benefit to the Objective 2 area in Bristol.

MOBILE BUSINESSES AND INWARD INVESTORS

6.17 The Preferred Strategy brings about an enhancement in the strategic accessibility of the far South West in terms of rail access to London and to other regional centres. As noted in Section 4 the Strategy ensures that the strategic accessibility by road of the region, and of Cornwall and Devon in particular, is *maintained* rather than enhanced. The strategy also ensures that the strategic road network is rather more robust as a result of the improvement of the A303/A358 corridor as an alternative to the M4/M5. The Preferred Strategy also eliminates specific bottlenecks, for example at Temple on the A30. What effect might this have on mobile businesses and inward investors in Cornwall and Devon?

6.18 The key factors influencing inward investment have been discussed in Section 5. Different factors are of key importance to different types of inward investment, but the evidence is that proximity to markets, labour quality, infrastructure (ICT, road and rail), financial incentives and quality of life are all important to the decision to locate to a particular area.

6.19 A high proportion of inward investment in the region is in manufacturing activity. Generally the quality of the road connections are more important to manufacturers than rail services, given the reliance on road freight movements. Often access to international air services is also important. The Preferred Strategy does not do anything to improve the relative competitive position of Cornwall and Devon in this regard – except to the degree that fast rail services offer more rapid access by public transport to Heathrow. The Strategy envisages provision of rail access to Heathrow from the west, but does not define how this is to be provided since this is being studied as part of the Thames Valley MMS.

6.20 The enhancement to rail services may have rather more effect on the attraction of businesses in the UK – and in particular in South East England – seeking to relocate. Over the past 30 years and more it is possible to observe a pattern of dispersal of certain types of economic activity from London, first to the South East, and then further afield, driven by the costs of doing business in London and the South East. The South West region has been a beneficiary of this process. A significant proportion of the activity that disperses maintains business links in London and the South East, so good road and rail links to London and the South East are important factors in location decisions. The improvement of rail services – both through the reduction in journey times and increased frequencies – would be likely to encourage businesses to relocate from the South East.

6.21 The main benefits of this process are likely to flow to major centres where labour market and property costs are lower than in the South East and the quality of life perceived to be higher. Thus the prime beneficiaries are very likely be Taunton and Exeter. It would be reasonable to expect other areas just outside the ambit of the South East including parts of Somerset, Dorset and Wiltshire served by the Berks and Hants line, and the Exeter-Waterloo line, to benefit from in-migration of businesses and people. The attractiveness of these areas as a business location will also be enhanced by the upgrading of the A303.

6.22 Cornwall and Devon are likely to derive some benefit from in-migration of small and medium sized businesses, often where the owners are seeking to relocate for lifestyle reasons or where quality of life considerations are the key drivers. The reductions in journey times and the opening of an alternative strategic route to the South East will foster this. However, there are many attractive places to do business between London and Exeter – and this will limit the scope for attracting business re-locations to Cornwall and Devon. The evidence of the past pattern of business migration indicates that Cornwall, then Devon, are likely to experience some beneficial effects of the spread effects of the South East, but on more modest scale than other areas in the east of the region.

6.23 Overall the Strategy will have some beneficial effects on the ability of the region to attract overseas inward investment to the South West, but in overall economic terms these effects are likely to be modest. This reflects the fact that the Strategy impacts on only one of the many factors that are a major influence on the location decision making process; and the Strategy also delivers only modest improvements compared to the baseline in terms of enhanced strategic accessibility, principally associated with the improvement to rail services.

IMPACTS ON DEVELOPMENT

6.24 It is conventional when assessing wider economic impacts also to consider if proposals will stimulate physical development of sites. Transport improvements may result in the development of sites that would not otherwise have been developed, or bring forward the development in time or alter the scale, nature or value of development. As noted in Section 1 this form of appraisal is of less relevance to the appraisal of the SWARMMS Strategy because of the focus on strategic corridors.

6.25 As noted previously, the principal elements of the Preferred Strategy that alter strategic accessibility are the improvements to rail services. The evidence is that discernible impacts on development associated with rail service improvements are most evident in the immediate vicinity of major stations benefiting from improved accessibility. One can see this in the major commercial developments on the north side of Bristol. The presence of Bristol Parkway has been a factor in the success of these developments – along with the access to the M4 and M32.

6.26 In broad terms the improvement in rail services envisaged by the Preferred Strategy will tend to encourage development within the centre of the Principal Urban Areas within the study area. Enhancement to services will also tend to encourage development in the immediate vicinity of stations (within easy walking distance) if there is land for development. This will be particularly so if the station is either not too far from the traditional centre of commercial activity (Reading and Swindon) or the scale of development land is such as to offer scope to create a new commercial centre (Bristol Temple Meads and Bristol Parkway).

6.27 In general, however, it is hard to envisage that in the regeneration zones in the South West that the rail service improvements contained in the Preferred Strategy will have a very direct impact on development. With the exception of Torbay and Plymouth the towns served by railways in Cornwall and Devon are small and do not have a strong commercial development market. The location of the stations in Torquay and Plymouth mean that it is unlikely that the rail service improvements will very directly stimulate new development, though they will, as noted above, be helpful in stimulating economic development and hence the commercial development market.

6.28 The position is rather different in connection with the plans for the Greater Bristol area. The opening of new lines, including the possibility of a Light Rapid Transit scheme, new stations and enhanced services could result in development in close proximity to new or existing public transport nodes – particularly if actively encouraged through land use planning policies. Plans for Greater Bristol are still under development and the effect of proposals on the spatial pattern of development and economic activity in the area would merit more detailed study when they are finalised.

6.29 The main components of the road based elements of the Preferred Strategy are unlikely to stimulate development on particular sites. The dualling of the A303 can be expected to lead to a general uplift in the demand for commercial property in the A303 corridor.

6.30 The only site where development may to some extent be dependent on the implementation of the Strategy is in the Camborne-Redruth area, where the SWRDA and local partners have aspirations for a major mixed use development. The chance of attracting commercial development to this area will be significantly improved by the commitment to improve the Goss Moor section of the A30 (part of the do minimum strategy). Improvements are also required to the Carland Cross-Chiverton Cross section of the A30, but this section of the A30 is not a bottleneck in the same way as Goss Moor, so more modest improvements are deemed to be adequate to provide the accessibility required to Camborne-Redruth. The improvements to rail services to Camborne-Redruth will also benefit the proposed development in a fairly general way.

IMPACTS ON OTHER REGENERATION ZONES

6.31 The assessment above has been conducted to a large extent in terms of the contribution that the Preferred Strategy will make to the regeneration zones in Cornwall and Devon. It is also relevant to consider whether the Strategy can be expected to contribute to regeneration objectives in other areas.

6.32 **Rural Priority Areas:** Large parts of the South West region are designated as Rural Priority areas. RPA designations cover much of the area covered by Objective 1 and 2 and Assisted Area designations in Cornwall and Devon and the comments made on the impact of the Strategy in these areas apply equally to the RPAs within this area. However, as Figure 2.3 shows RPA designations cover parts of East and Mid Devon, South Somerset, Taunton Deane, extensive areas in Dorset, and small bits of Wiltshire and Gloucestershire (the Forest of Dean).

6.33 The proposed improvements to the A303/A358 and to a lesser extent the A30 will deliver a significant boost to the RPAs in the A303/A358 corridor, including that part of the A303 that remains single carriageway. This will be attributable to the enhanced awareness of the A303 as a high quality strategic route throughout its length, connecting both to the M3 and M5. Enhancement to rail services from Taunton and from Castle Cary and Westbury on the Berks and Hants line will provide a further stimulus to the northern parts of these areas. The more southerly areas benefit from enhancements to the Exeter-Waterloo rail service. The only areas of Dorset not to receive some benefit from the Strategy are the more southerly areas in Dorset which lie outside the route corridors considered by the SWARMMS study.

6.34 These areas in South West Wiltshire, South Somerset and East Devon are well placed to benefit in terms of economic growth and job creation from the westwards dispersal of economic activity from the South East of England. This trend is well established and detailed analysis by DTZ Pieda Consulting indicates that this will continue in years to come. The trend will be reinforced by the fact that many of the RPAs are covered by AONB designations, and there is clear evidence over past years that rural areas have experienced significant job growth. The pace of growth will in part be determined by whether local authorities actively encourage or discourage growth. One consequence that has social impact will be more rapid increases in house prices that would otherwise have been observed.

6.35 The RPAs to the north and west of Taunton and Bridgewater derive some benefit from the Strategy in terms of the enhancement to long distance rail services from Taunton in terms of both journey time savings and enhanced frequency, and to intra-regional services from Bridgewater. More generally the rural areas surrounding Taunton can expect to benefit from the way the Strategy reinforces Taunton's role as an important urban centre, and an important centre for planned expansion. The enhancement of rail services from Tiverton Parkway is also of significance to North Devon and some parts of West Somerset, given that many business people from these areas drive to Tiverton along the A361 to pick up services to London and elsewhere.

6.36 The strategy is unlikely to have significant impacts of the Forest of Dean RPA.

6.37 **Single Regeneration Budget Areas:** Figure 2.3 also shows areas in receipt of SRB Rounds 4-6 funding. The majority of funding in the South West under SRB has been directed to particular neighbourhoods of urban deprivation or to more broadly town/area based projects, notably in Cornwall and other rural areas. Many of the SRB schemes in the South West are in areas covered by Objective 1, 2, Assisted Area, or RPA designations and the assessment of impacts on each of these areas applies to the SRB areas within these other designated regeneration areas.

6.38 There are areas in receipt of SRB funding, however, that fall outside areas designated for other purposes. These are mainly focused on particular pockets of deprivation in urban areas with a number of schemes in Bath and North East Somerset and Mendip. The focus of the SWARMMS Strategy is upon strategic transport links, so the direct impact of the Strategy on urban neighbourhoods receiving SRB is limited. Specific proposals undertaken as part of the area plans may be beneficial to particular areas (eg. South Bristol) but this appraisal has not extended to these micro-level effects. The Strategy will be broadly supportive of the objectives of SRB strategies of those schemes that fall within the route corridors, but it is not realistic to envisage that it will have very direct impacts on outcomes in these areas. Schemes in BANES and Mendip similarly will only benefit indirectly since they are outside the main route corridors.

6.39 **South and West Wales:** The primary significance of the SWARMMS Strategy to the Objective 1 areas of South and West Wales is that it maintains the strategic accessibility of South and West Wales by road. Without the SWARMMS Strategy congestion on the M4 around Bristol would significantly impinge on the strategic accessibility of South and West Wales and constrain growth. The Strategy is unlikely to stimulate additional growth over and above that anticipated.

6.40 The Strategy does deliver some benefits to the regeneration zones in Wales through enhancements to rail services between Swansea, Cardiff (not actually within an Objective 1 area, but the mainline station used by those from the area wishing to travel by rail) and London. These enhancements take the form of increases in service frequency rather than significant journey time savings. There are also enhancements to services to other parts of the South West region. These enhancements can be regarded as being helpful to the achievement of economic development objectives, but the additional stimulus they deliver will be modest.

7. COMMENTARY ON SPECIFIC OPTIONS

7.1 This section brings together comments on particular schemes, focusing in particular on those that are controversial but of potential importance in terms of wider economic effects. Specifically, comments are made on the following schemes:

- The creation of a new strategic route based on dualling of the A303 and A358;
- Improvements to the A30 in Cornwall.

THE ENHANCEMENT OF THE A303 STRATEGIC ROUTE

7.2 The Preferred Strategy includes proposals to enhance the strategic road link between Exeter and the South East of England by dualling the remaining single carriageway sections of the A303 east of Ilminster, and dualling of the A358 Ilminster to Taunton road.

7.3 The principal benefits of the enhancement of the A303/A358 as a strategic route between the far South West and the South East is that it provides an alternative to the M5/M4. This route would serve a number of purposes:

- For some journeys the A303 will provide a quicker more convenient route for business travellers, road freight and visitors between the South East and South West peninsula;
- The creation of this route will help relieve congestion on the M5 and M4, since a certain amount of traffic will opt to use the A303 corridor in preference to the M5 and M4;
- The A303 corridor will provide a strategic alternative to the M5 and M4 when either motorway is disrupted by repairs or accidents. The existence of an alternative strategic route makes the highway network more robust.

7.4 The mainstream economic appraisal provides a basis for assessing the extent to which the development of the A303, as a strategic route, delivers journey time savings and helps to reduce congestion. The main benefits of the creation of this corridor can be seen as twofold:

- First, as part of the overall strategy to maintain the strategic accessibility by road of Cornwall and Devon, by helping relieve congestion around Bristol and on the M4. The mainstream economic appraisal provides the basis for assessing how effectively the A303 strategic route does this.

- Second, the business community and those responsible for economic development have argued that the reliance of the far South West on a single strategic road link to the rest of the country – the M5 – deters inward investment.

7.5 There is no practical way to evaluate the extent to which the reliance of Cornwall and Devon on a single strategic road link to the rest of the country deters inward investment – or the extent to which the creation of an alternative would allow Cornwall and Devon to secure additional inward investment. There is anecdotal evidence from the business community that the reliance on a single strategic road link affects investor perceptions. The creation of a new strategic route from the South West to the South East will, without doubt, be of benefit in promoting the region to inward investors and seeking to attract mobile businesses.

IMPROVEMENTS TO THE A30 IN CORNWALL

7.6 There are three stretches of single carriageway on the A30 between the M5 and the western side of Camborne, Cornwall.

- A short 2.5 mile stretch at Temple on Bodmin Moor which the Preferred Strategy proposed be upgraded to dual 2;
- A 6 mile stretch across Goss Moor. Proposals for dualling this stretch of the A30 are included in the do minimum strategy and hence are not part of this appraisal;
- An 8 mile stretch between Carland Cross and Chilverton Cross, which the Preferred Strategy indicates should be improved as a single carriage way road.

7.7 The Goss Moor section of the A30 has been widely perceived to be a major issue for businesses located in Cornwall particularly to the west of Bodmin. It is perceived to have affected the efficiency with which business can be conducted, acted as a factor that constrains the growth of the tourist industry in the west of Cornwall and an impediment to attracting inward investment. The proposed dualling of this section, however, is included in the 'Do Minimum' strategy, so these particular issues will be dealt with in time.

7.8 The Preferred Strategy proposes the dualling of the short section of the A30 at Temple. There is anecdotal evidence that investor perceptions can be adversely affected by the existence of short sections of single carriageway which act as pinch points and which reduce journey speeds. Given this there are economic benefits to be realised for areas of Cornwall to the west of Temple by dualling this section of the A30.

7.9 The Preferred Strategy envisages that the A30 between Carland Cross and Chilverton Cross will be improved but remain a single carriageway rather than being dualled. From an economic development perspective there would be some benefits were the road to be dualled, since potential investors would be more confident that capacity constraints will not emerge. All sites and premises on the A30 from the western side of Camborne could be marketed as having dual carriageway access to the M5. This would be of benefit to the Camborne-Redruth regeneration proposals. However DTZ understand that the road will function adequately as a single, improved carriageway, thus creating a dual carriageway standard road from the west of Camborne to the M5. Given that this is the case, the additional economic development benefits associated with dualling this section of road would be modest.

8. SUMMARY OF CONCLUSIONS

8.1 The economic appraisal of the Preferred Strategy consists of three elements: the quantified assessment of increases in efficiency of the transport system; the quantified assessment of the effect of the strategy on the reliability of the transport system; and an essentially qualitative assessment of wider economic effects. The assessment of the wider economic effects is intended to pick up on economic effects *not* captured by other elements of the appraisal.

8.2 These wider economic effects focus in particular on the extent to which the Strategy is important to the achievement of the economic objectives for the South West and the distributional effects of the strategy.

8.3 The starting point for the assessment of both these topics is to identify how the Preferred Strategy affects the strategic accessibility of the South West. A key conclusion of the assessment is that if the Strategy is not implemented in full, then the South West will suffer a significant *decline* in strategic accessibility. Congestion on both road and rail networks will become more severe, with longer and less reliable journeys. This will have significant economic costs (assessed as part of the other elements of the economic appraisal). It will act as a constraint on the rate of growth of the economy of the South West as a whole, including the weakest parts of the region – Cornwall and Devon.

8.4 The failure to implement the SWARMMS Strategy will have national as well as regional consequences. Indigenous businesses will experience a loss of competitiveness in both national and international markets. The ability of the region to attract inward investment will be curtailed, and there is the risk that this investment will not simply be lost to the region, but to the UK as a whole. The economic performance of the South West is also of national importance, because of its close relationship with the economically dominant London and South East region (including parts of the East of England). Failure to implement the SWARMMS Strategy would therefore undermine the achievement of both regional and national economic objectives.

8.5 The Strategy would also positively assist in the achievement of regeneration objectives in the key regeneration areas within the South West. In the South West, all of Cornwall and all of Devon, less the Exeter Travel to Work Area and East Devon, plus most of West Somerset has either EU Objective 1 or 2 status, or Assisted Area status. A small area of south Bristol also has Objective 1 status. Large areas of West and North Dorset, and parts of South Somerset and South West Wiltshire are designated as Rural Priority Areas.

8.6 The impact of the Preferred Strategy on the strategic accessibility of Cornwall and South Devon can be summarised as follows:

- The Strategy would deliver a significant enhancement to strategic accessibility in terms of passenger rail services through a combination of journey time savings and increased service frequency. The Strategy also contains proposals to provide rail access to Heathrow from the west;
- The road based elements of the Strategy, to a large extent, ensure that strategic accessibility by road remains as it is now. This is vital if the anticipated growth in the regeneration areas is to be realised. Without the interventions planned the road system would become more congested and road based accessibility of the key regeneration area would decline;
- The Strategy significantly enhances the A303 strategic road corridor from the South West to the South East. This should make the road network more robust, since it reduces the reliance of Cornwall and Devon on the M5/M4 as its sole major road link to the rest of the country and provides a more direct link with parts of South East England.

8.7 These enhancements in strategic accessibility associated with the rail service enhancements and the enhancement to the A303/A358 can be expected to enhance the attractiveness of Cornwall and Devon to inward investors. The net impact on overall levels of international inward investment, however, are likely to be quite modest, since rail services are only one of a number of factors that influence inward investment decisions and the enhancement to strategic road links is relatively modest. One of the most significant aspects of the Strategy as regards international inward investment is the planned provision of rail access to Heathrow from the west.

8.8 The Strategy can be expected do more to encourage the relocation of economic activity from London and the South East to Cornwall and Devon than it does to encourage international inward investment. This will make a real contribution to the achievement of regeneration objectives in Cornwall and Devon, though in absolute terms the effects may be modest. This reflects the fact that Cornwall and Devon will remain relatively remote. Other parts on the South West, notably the M5 corridor south of Taunton and the corridors associated with the A303, the Berks and Hants line and the Exeter-Waterloo line, stand to gain more from such relocation activity. These corridors include many areas designated as Rural Priority Areas.

8.9 The Strategy will also deliver benefits to existing non—tourist businesses in regeneration areas, though the majority of these benefits will be reflected in other elements of the economic appraisal. Overall the effects of the Strategy are more significant in terms of maintaining the competitiveness of the existing business base, and permitting continued employment and business growth, than stimulating faster growth of indigenous businesses. The boost given by improved rail services and enhancements to the road network to the competitiveness of businesses is modest.

8.10 In contrast the tourist sector, which is of particular importance in Cornwall and Devon, stands to gain much from the Strategy. Enhancements in the reliability of journeys by road, combined with the enhancement of the A303/A358, will be of significant benefit to the industry in Cornwall and Devon, but also in locations accessible from the A303. Tourism operators particularly in Cornwall, but also in Plymouth, Torbay and South Devon can be expected to benefit significantly from increased short break business associated with quicker, more reliable rail services from London and other major centres. It is very difficult to quantify this benefit, but a 1% increase in the value in tourism in the South West would be worth £31 million pa (of which £20 million would be in Cornwall and Devon), and create an additional 1,400 jobs in the sector (of which it might be reasonable to expect 900 to be in Cornwall and Devon.

8.11 The Strategy will also stimulate economic development in the Rural Priority Areas that cover areas served by the Berks and Hants line, the Exeter-Waterloo line and in the A303/A358 corridor. It provides some modest support for rural regeneration policies in areas to the west of Tiverton, Taunton and Bridgewater, through the improvement of rail services. The Strategy also delivers a modest enhancement in the frequency of rail services from South Wales to London, and destinations in the South West region which delivers modest benefits to the Objective 1 areas in South Wales.

8.12 To summarise, the most critical aspect of the Strategy is that it supports the overall objectives set out in RPG and the Regional Economic Strategy designed to foster sustainable economic growth in the South West. If the Strategy is not implemented then there is a real risk that congestion will undermine business competitiveness and constrain the pace of economic growth. The Strategy also supports regeneration policies for the far South West and for rural regeneration. It will provide a significant boost to the tourism industry in Cornwall and Devon and will help in efforts to attract inward investment.