

Final Report
South Coast Corridor Multi-Modal Study

Prepared for
Government Office for the South East
August 2002

Halcrow

In association with:

Accent

Chris Blandford Associates

DTZ Pida

Baxter Eadie Ltd

Sustainable Futures

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Department for Transport

South Coast Corridor Multi Modal Study

Final Report

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EXECUTIVE SUMMARY

Background to the Study

The South Coast Corridor Multi Modal Study (SoCoMMS) covers the region between Thanet in Kent and Southampton in the west. The region exhibits a wide range of economic and environmental characteristics, including a number of Priority Areas for Economic Regeneration (PAERs), the fast growing gateway town of Ashford, the major Southampton-Portsmouth conurbation and vibrant new city of Brighton and Hove. Much of the area is sandwiched between the South Downs and the English Channel and over 75% of the land within the study area is subject to an environmental designation of some sort. Figure 1 illustrates the study area.

SoCoMMS is one a number of studies undertaken on behalf of the Government so as to review transport provision in this country. This study, forms one of the second tranche of multi-modal studies proposed by the transport White Paper, 'A New Deal for Transport: Better for Everyone' and has been commissioned by the Government Office for the South East (GOSE).

As stated within 'Guidance on the Methodology for Multi-Modal Studies' (GOMMMS), the multi-modal studies are:

'intended to be investigations of problems on or with all modes of transport. ... In practice, it is expected that the Studies will major on problems on the road, rail and bus systems, including access to ports and airports....'

and are expected to identify solutions that include:

walking cycling air transport, shipping and pipelines, as well as roads, railways, buses and other forms of public transport. Solutions may also relate to non-transport policies, for example land-use, health and education.'

The overall aims of the South Coast Corridor Multi Modal Study, as stated in the original study brief, are to:

- ## identify and investigate congestion, safety and environmental problems of transport along the south coast between Southampton (Hants.) and Thanet (Kent); and
- ## propose measures aimed at resolving these problems and improving access to and between regeneration areas and other areas of economic activity'.

The study brief also established a series of detailed objectives for the SoCoMMS study. These include the need to make recommendations for an over-arching strategy to guide the future development of the transport systems on the South Coast Corridor.



Figure 1 : Study Area

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Study Approach

SoCoMMS has proceeded via both a *top-down* policy driven approach and a *bottom-up* problem methodology. The project has thus attempted both to reflect the wider policy environment, with its emphasis on sustainable economic growth and regeneration, and the need to develop specific measures to address current and future transport problems.

The SoCoMMS study process has included:

- €# identifying the strategic and local policy objectives within the study area;
- €# understanding the current transport conditions and the associated problems and issues;
- €# understanding how the problems and issues will change in the future;
- €# providing information and consulting with a range of interested parties as the study has progressed;
- €# developing an appraisal framework and appraisal tools covering land use/transport modelling, environmental impact assessment, cost/benefit analysis and the geographical presentation of data and analysis results;
- €# identifying and developing solutions and strategies for the area;
- €# testing and appraising the options/ strategies;
- €# undertaking further consultation to gain reactions to and to develop consensus for the most promising solutions / preferred options; and
- €# identifying a preferred option, possible funding sources and an implementation programme.

A wide variety of potential measures have been explored in the course of the study, covering highway, rail, bus, LRT, local transport and demand management schemes. Several alternative strategic options have also been evaluated in arriving at the preferred, recommended strategy.

Current and Future Problems

The broad problem issues to have emerged from the analysis conducted within the study and which have been central to the development of the strategy are summarised below:

- €# **The Car:** the average car journey is less than 25km and very little interaction occurs between towns more than 50km apart. As documented above, serious congestion occurs in peak periods on the approaches to towns and cities corridor-wide. Congestion can be correlated closely with a number of bottlenecks within the sub-regional highway network.

- €# **Public Transport – General:** less than 12% of all motorised trips are by public transport, reflecting a steady decline over several decades, fuelled by an increasingly dispersed land-use pattern. Poor interchanges and a lack of integration are amongst the greatest problems affecting public transport.
- €# **Trains:** over 40% of rail trips are to London. In the east-west direction, the pattern of rail trips is similar to car, with most of the remaining journeys being relatively short between adjacent towns. The new South Central and South-West Trains franchises are proposing significant investment in stations and radial routes to London. South Central are also proposing modest investment on the Coastway line.
- €# **Buses:** bus tends to play a significant role within larger conurbations (for example, carrying 20% of motorised trips in Brighton and Hove). However, across the wider corridor, bus accounts for less than 6% of motorised journeys, largely due to the difficulties in providing viable services outside of urban areas.
- €# **Walking:** walking plays a major role for short trips, but this figure could potentially be much higher. It is also key to many public transport based trips.
- €# **Cycling:** cycling accounts for 4% of journeys to work and as with walking, could account for more if facilities could be improved.
- €# **Freight:** with notable exceptions, such as Southampton Port, most freight movements are by road and are generally between the study area and other parts of the UK on a north-south axis. There are not currently, nor are there projected to be, major east-west movements of freight within the corridor.

Looking ahead and in the absence of any strategy, the number of vehicle km driven within the corridor will grow by around 30% by 2016 and 45% by 2030. This is despite a projected increase in rail use of 30% by 2016.

Analysis of the traffic situation has been supplemented by the three extensive rounds of public consultation. These have endorsed the observations and modelling and added a number of additional themes that have influenced the development of the strategy:

- €# **Balance:** a **willingness** exists to make greater use of an improved public transport service, but at the same time, significant improvements to the highway network are required, particularly at bottlenecks;
- €# **Managed solutions:** a wide appreciation exists that easy solutions do not exist for current problems. A mix of public transport, private transport and demand management measures is recognised as the most likely way forward. Little support exists for the ‘all road’ or ‘rail only’ solutions.
- €# **Better transport facilities:** a wide support exists for a significant improvement in the quality of transport services and infrastructure, coupled with a realistic view of the need to promote schemes that have a reasonable chance of eventual delivery.

The Policy Context

The general context for all multi-modal studies is the Government's five key objectives for transport, concerning the natural environment, safety, economic activity, accessibility and integration.

Analysis of the regional policy environment identifies a further set of more local issues and objectives, which must be reflected in a vision for the future. Principal amongst these are:

- €# The relationship between transport and land-use, reflected in policy goals to restrict development to suitable, mainly urban brownfield sites;
- €# Urban regeneration, reflected in the corridor's designated PAERs and the policy goal of promoting more equitable economic development across the region;
- €# Protection and enhancement of the region's bio-diversity, along with its landscape and heritage;
- €# Increased sustainability of rural communities;
- €# Reduced reliance on cars, pursued through policies to promote better integration between modes, improved public transport, traffic management, etc;
- €# Social inclusion, through the promotion of equitable programmes of development.

As with the broad, national policies, these regional priorities also imply a need for balanced development. This need is represented strongly within the recently published transport strategy of the South East England Regional Assembly (SEERA). SEERA has produced a vision statement which closely mirrors the work undertaken within SoCoMMs and is as relevant to the study corridor as to the South East as a whole:

'to create a high quality transport system to act as a catalyst for continued economic growth and provide an improved quality of life for all in a sustainable, socially inclusive manner: a regional transport network which by 2021 matches the best in north west Europe'.

This reflects the policy agenda of creating an economically vibrant geographical region, mixing an increased level of internal sustainability (jobs and industries) with improved links to major commercial centres in Southern England and mainland Europe.

One important point to emerge from the analysis of both policies and problems is that the study area neither fulfils the role of a traditional linear corridor nor, it is argued, should it. Rather, the region comprises a set of inter-acting sub-regional centres, hubs and spokes. The SoCoMMS strategy aims to reinforce and develop the pattern of sustainable settlements within the existing hierarchy. The strategy also sets out to avoid introducing measures such as new infrastructure that could reinforce some settlements at the expense of others, generate more longer trips and fundamentally alter the geographic balance of the region.

Principles of Strategy Development

The development of the strategy reflects the findings of both the problem and policy-led analyses. The principles of the SoCoMMs strategy can thus be summarised as:

- €# Compliance with the Government's broad transport objectives, as set out within the GOMMMS framework and which form the specific objectives of the SoCoMMs study
- €# Reflection of the extensive analysis and modelling of current and future problems across the transport system;
- €# Compatibility with the regional policy agenda, led by the goal of sustainable economic regeneration;
- €# Close compatibility with SEERAs' vision for transport;
- €# A spatial perspective that seeks to reinforce the current settlement pattern, in terms of the need to avoid generating additional, longer trips on the network and support the development of sub-regional hubs;
- €# Recognition that infrastructure and service improvements must be accompanied by persuasive measures to manage demand and utilise enhanced public transport;
- €# A balanced approach to the development of each mode within an environmentally sustainable framework.

The strategy has thus been developed in response to a set of broad, cross-sector regional aspirations, as well as to address specific transport problems. In short, the strategy aims to address and support issues beyond the boundary of the transport system alone. Chief amongst these issues is urban regeneration. The strategy aims to facilitate regeneration to reinforce sub-regional hubs (rather than provide solely for end-to-end movements) in order to both address specific problems and support the wider policy agenda.

These principles can be translated into a list of key needs upon which the detailed components of the strategy have been developed:

- €# Focus on highway bottlenecks and upon improving sub-regional accessibility; i.e.: a local problem-centred approach to highway developments;
- €# For the minority of trips over a longer distance on the corridor, rail should be developed to become the 'mode of first choice', in order to limit traffic generation and exploit the current basic rail alignment;
- €# Rail service and infrastructure enhancements to additionally support shorter trip lengths on the corridor (e.g.: through a mix of enhanced service levels and improved interchanges
- €# Compatibility with radial rail enhancements on high density London routes (e.g.: Brighton Main Line, Arun Valley, etc);

- €# Avoidance of measures likely to alter settlement pattern within corridor and further generate long distance vehicle trips;
- €# Support to schemes and developments likely to promote urban regeneration, including local highways, urban public transport (particularly bus), park and ride, etc.
- €# Incorporation of local measures into the strategy (bus, green travel plans, walking, cycling, etc) in recognition of the sub-regional issues and to support the emphasis on sustainable regeneration;
- €# Balance, between modes and between economic and environmental considerations.

These strategic principles, under-pinned by the problem and policy analysis, form the basis for the recommended schemes and service options.

Elements of the SoCoMMS Strategy

The Local Initiatives- A key element of the preferred strategy is to encourage use of sustainable travel modes, wherever possible. The aim of these elements is to reduce the demand for growth in car journeys, particularly in the peak period. This recognises that there are a large number of journeys, made within the study area, which are local in nature. Thus, the aim is to target journeys to work and schools that are made during the peak periods, as these are times of greatest congestion. The strategy would seek to provide alternative means of travel to the car which would have a benefit in terms of the environment, fewer accidents and reduced peak congestion. Significantly, in view of the importance of economic regeneration in general and the PAERS in particular, the transfer from car to other modes must be achieved without damage to the local and regional economies. To achieve this, much greater emphasis will be placed on Local Authority, Community and Business led initiatives such as:

- €# Provision of increased facilities for local journeys to be made by bus, walking or cycling.
- €# Develop Green Travel Plans for workplaces.
- €# Develop Safer routes to school initiatives.
- €# Development of 'home zones'.
- €# More sustainable working practices such as increased use of teleworking, greater flexibility of working hours, increased use of teleconferencing facilities.
- €# Greater use of the internet, particularly for shopping journeys.
- €# Better planning controls, imposing restrictions on car parking and ensuring that new developments are accessible for sustainable modes; and
- €# Education programmes, highlighting potential alternatives to the car and implications of increased car use.

Locally based Public Transport Improvements- The strategy provides greater choice for local movement. While the above local initiatives will contribute to this there are a number of other public transport measures that also need to be added. These include:

- £# encouragement of Quality Bus Partnerships or contracts;
- £# introduction of more frequent and extensive bus services, particularly in the evening and at weekends;
- £# increased number of bus priority measures;
- £# improved interchange between walking, cycling, bus and rail, particularly at “hub” stations;
- £# provide cross-ticketing between different modes of transport;
- £# improved information systems and improved access to bus services;
- £# provision of improved walk/cycle routes to schools, stations and town centres (to be implemented on a whole route basis);
- £# introduction of edge of city Park and Ride systems with a corresponding review of central area parking provision; and
- £# introduction of new or extended public transport systems.

Fixed track local public transport measures have also been considered. Stage 1 of the South Hants Rapid Transit System (SHRT) is included in the Base Case. Development of Stage 2, along the existing Fareham- St Denys rail line to Southampton is suggested, though the alternative of higher frequency heavy rail services on the same route could also be considered. More detailed analysis of the options is required over the next 20 years. A Light Rapid Transit System is recommended for Brighton. This should serve the four main corridors into the town. Both measures should be developed around 2020, by when traffic growth will justify them.

A key feature of the public consultation was the criticism that there is a lack of transport integration. The public had a poor perception of bus and rail transport due to difficulties with interchanges, obtaining information, and buying through tickets. This strategy component seeks to overcome these concerns and provide a more integrated system. In particular, this element is attempting to cater for the ‘whole journey’ concept. A rail journey for example is one part of a series of trip chains involving a walk, cycle, bus or car journey to a station, followed by the rail journey, and then a further egress journey by another mode.

The aim of this element is to increase the attractiveness of public transport and provide an alternative to the car for many journeys.

Strategic Public Transport Improvements- Rail Strategy – The rail strategy addresses a number of key issues, all of which are intended to increase accessibility and improve the public transport mode share:

- £# Lack of a long distance public transport mode along the corridor as an alternative to road;

- €# High rail travel between adjacent/major towns on the corridor;
- €# A need for targeted frequency improvements for local services to support regeneration initiatives (eg: Hastings);
- €# Poor quality of stations, their access facilities and interchanges across the corridor.

The strategy recognises the need for the rail network to fulfil several rules – local, regional and London orientated. Sufficient spare capacity exists within the network for all of these to be undertaken, which will be released by the recommended local infrastructure enhancements.

The inputs to the strategy involve a wide variety of, generally small, investment schemes aimed at overcoming local bottlenecks and facilitating increased capacity. These include new signalling, additional platforms and some extra track. The largest single scheme is the double tracking of the single track stretch on part of the line between Ashford and Hastings. Significant investment in a general programme of station upgrading is also proposed.

The outputs from the strategy centre around a new half hourly rail service between Ashford, Brighton and Southampton. This creates a new strategic link in the corridor, providing a public transport alternative to car which will prove highly attractive to longer distance travellers (including those between major towns on the corridor). In addition, the strategy provides:

- €# Six new stations to support developing areas;
- €# Upgrading of most stations in the corridor;
- €# Higher frequency local services at certain points, including Hastings, for which five trains per hour are proposed between Ore and Bexhill;

In the longer term, significant service enhancements are recommended in South Hants, including direct services between Brighton and Southampton Airports to coincide with the possible introduction of SHRT stage 2.

Targeted Road based Improvements - The strategy recognises that more efficient use should be made of existing road capacity. This is achieved, in part, through a number of demand management and pricing measures (see below). Measures also include the implementation of enhanced intelligent transport systems (ITS) on the M27 which involve better traffic management and control, access control at busy motorway junctions, speed management and variable speed limits, automatic incident detection and lane priorities as well as the collection and provision of real time information.

For the preferred strategy to be effective it must address the issues associated with car dependency. It is no longer possible or appropriate to satisfy all demand for road travel, however some improvements are essential to the continued economic and social well-being of the region. There is currently severe traffic congestion at many locations along the A27 Trunk Road and this is predicted to worsen in the future. This will make it more difficult for business and freight operators to gain access to many of the South Coast towns from the national road network.

After considering all available options the development of the strategy concluded that these problems could only be addressed through localised highway improvements. These are aimed at the bottlenecks that cause congestion. The strategy includes a number of measures to improve the current road network's overall efficiency. These include:

- €# improvements to the operation of the M27;
- €# removal of bottlenecks on the A27 between Havant and Polegate- such as at Chichester, Arundel, Worthing, East of Lewes;
- €# improvements between Bexhill and Hastings;
- €# improvements to the eastern approach to Dover;

In addition to the above, there may be a need to provide local capacity, safety and environmental improvements as and when needed.

Highway improvements are of particular importance to rural communities. Public transport will continue to serve a relatively small portion of the market and the car will remain the most economically efficient means of providing mobility. Reducing congestion on the approaches to larger towns and improving trunk routes will also reduce the need to divert onto sensitive rural roads, bringing environmental benefits to these areas.

Promotion of Rail and Sea Based Freight Initiatives-It is recognised that the majority of freight movements within the South Coast corridor will continue to be made by road. Nonetheless the strategy should support and facilitate the transfer of freight movement from road to rail and sea. In particular the strategy should seek to encourage further use of rail and sea through encouraging:

- €# freight quality partnerships;
- €# road and rail access to ports – the strategy includes A2 enhancements at Dover;
- €# transhipment of selected international freight between international and coastal shipping; and
- €# further use of coastal shipping for bulky goods (building materials, etc)

It should, however, be emphasised that most freight movements are on a north-south axis between the ports and London, the Midlands and the North. Some North-South routes are in the process of being improved (e.g. the Channel Tunnel Rail Link), others such as the A21 north of Hastings, whilst outside the scope of SoCoMMS need addressing.

Promotion of Personal Safety, Road Safety and Accessibility for the Mobility Impaired-In accordance with general government policy and good design practice all strategy measures should be designed to promote personal safety and aid movement for the mobility impaired. To ensure that this is achieved the overall strategy should be taken forward within the context of existing mobility policies, such as the rail DDA (new disabled access act) or an agreed mobility impaired accessibility policy to be developed through consultation with local groups and organisations.

Ensuring Balance - Demand Management Each of the above strategy elements will only be effective if a state of equilibrium is achieved between the demand for travel by car and other modes of transport. To ensure this, the strategy must have at its core measures that seek to control the overall level of future car usage, particularly in locations where there are, or will be, good alternative transport systems. Moreover, this

balance should be planned and delivered as a region-wide initiative, to ensure both consistency and maximum effectiveness. All of the above measures should therefore be introduced within an overall policy regime that includes:

- £# significantly increased long stay public parking charges within each of the South Coast towns, using a fee hierarchy that reflects the town's status;
- £# increases to short stay public parking charges so as to encourage off-peak modal transfer to public transport and park and ride;
- £# a levy on all private workplace parking spaces in core urban areas, together with all parking spaces in "out of town" retail parks along the South Coast; and
- £# car based cordon charges for entry into the major conurbation's of Southampton, Portsmouth and Brighton & Hove so as to encourage use of the new Park and Ride facilities.

The demand management measures are targeted on those trips for which alternative modes can be developed, ie. those with a destination in urban areas or at a major traffic generator. As noted earlier, other forms of demand management have been considered and rejected as inappropriate on a mix of traffic and economic (e.g. regeneration) grounds.

It is this final component that will determine the overall success of the strategy itself. It is essential therefore that any funding commitment is directly linked to the production of a corridor wide implementation plan, directly linking the funding of any new infrastructure to the progressive implementation of these balancing measures, and that these measures are introduced consistently throughout the corridor and neighbouring areas as part of the Regional Transport Strategy.

Strategy Development Plans – Nine Strategy Development Plans (SDPs) have been developed in order to illustrate detailed aspects of the strategy and to refine a number of the key measures. These SDPs cover:

- £# Rail Elements;
- £# Bus elements;
- £# South Hampshire;
- £# Chichester;
- £# Arundel;
- £# Worthing;
- £# Brighton & Hove;
- £# East of Lewes; and
- £# Bexhill-Hastings.

The Long-term - Looking ahead to 2030 and beyond, the role of demand management measures is likely to grow, both as means of funding sustainable transport measures and encouraging a further mode transfer to rail, bus, walking and cycling. Figure 2 illustrates the principal elements of the Strategy.

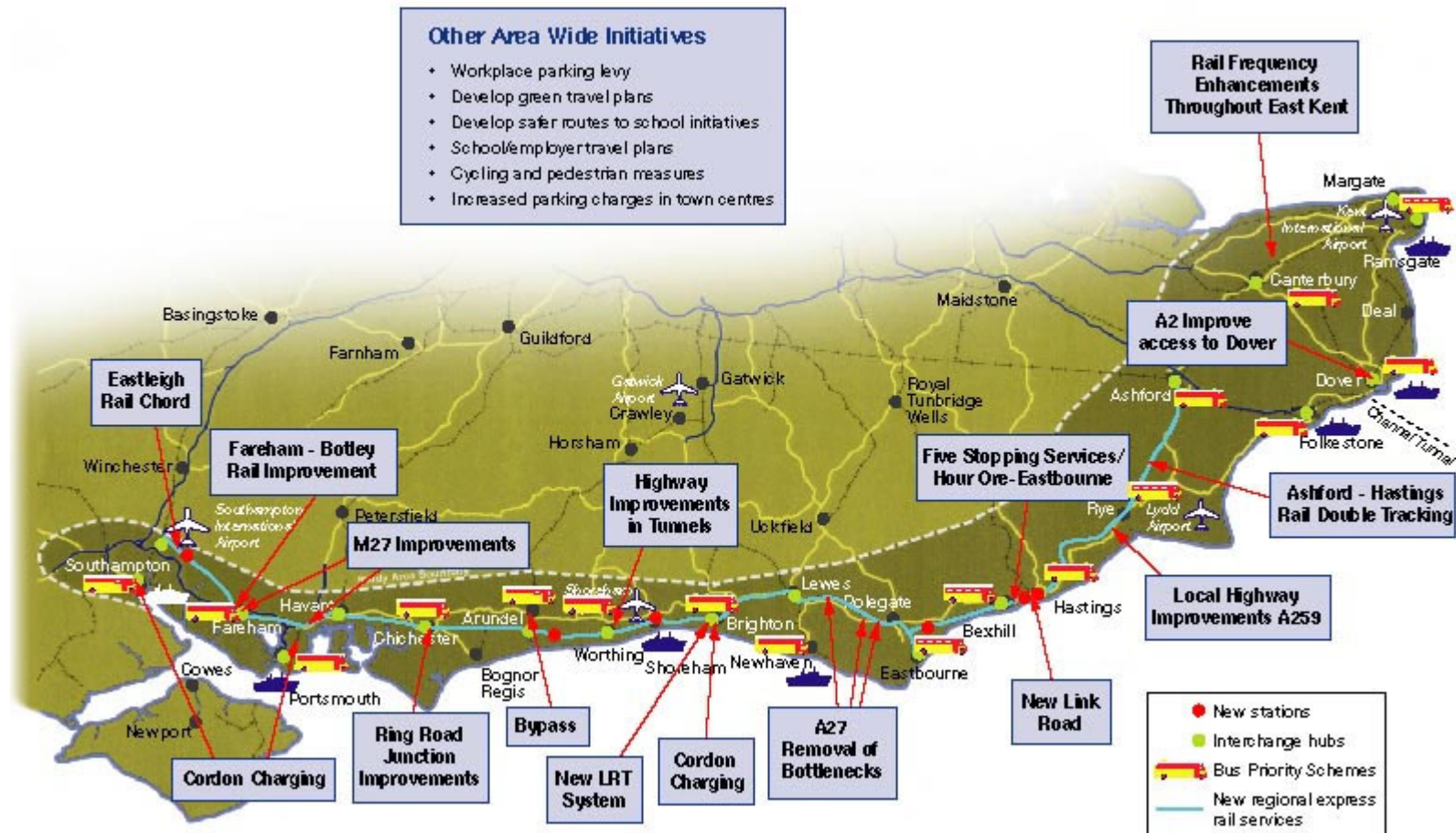


Figure 2 Summary of Principle Elements of Strategy

Strategy Appraisal

The SoCoMMS strategy has been appraised in accordance with the Government's guidelines for the multi-modal studies. This has covered four key aspects:

- £# An Appraisal Summary Table (AST) which gives a summary appraisal against Central Government's five objectives for transport (safety, economy, accessibility, integration and the environment);
- £# An assessment of the degree to which the local and regional objectives identified would be achieved by the strategy.
- £# An assessment of the degree to which the problems identified would be ameliorated by the strategy, compared to the situation if there was no positive policy intervention.
- £# Supporting analyses of distribution and equity, affordability and financial sustainability and practicality and public acceptability. This also includes the issue of scheme "deliverability".

The appraisal summary table is shown in Figure 3.

Two of the principal appraisal issues have been the implications of the strategy for the environment and its wider and more local economic impacts.

Environment - With or without the preferred strategy, traffic activity is set to increase considerably over the next 15 and 30 years with a consequent worsening in the human environment and in road safety (albeit that technological improvements in car design will mitigate some of these effects, as in the case of local air pollution).

The preferred strategy does nonetheless offer two significant benefits over the Do-Nothing situation. Firstly, by reducing overall car usage growth, future environmental and road safety problems will be reduced. Secondly, the strategy concentrates the traffic growth in areas where it can best be accommodated (i.e. on the Motorways and Trunk Roads).

On the negative side the strategy requires the construction of new sections of railway, new stations, park and ride sites and new sections of road. These in themselves will impact on the physical environment. The highway schemes, in particular, will have a significant environmental impact; for example on parts of the region's landscape and biodiversity. Whilst recognising local and national concerns for conservation and environmental protection, the study has taken the view, supported by its analysis, that the recommended schemes form a key part of an effective and balanced strategy. The challenge will be to provide them in such a way as to minimise this. It is likely therefore that there will need to be a commitment to paying a construction cost premium, so as to minimise damage to the environment. The recommended tunnel at Worthing is an example of a case where such a premium must be paid.

Figure 3 - Appraisal Summary Table

Core Strategy			Problems	Present Value Cost To Government £510M															
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT															
ENVIRONMENT	Noise	In 15th year: 193 zones "losers", 322 zones "winners". The winners are largely associated with road infrastructure improvements and the losers are largely associated with increased rail services	Change in estimated population annoyed in 15 th year with Strategy compared with present Do-minimum: +10028	Change in estimated population annoyed in 15 th year with Strategy compared with future Do-minimum: +1226															
	Local Air Quality	Overall, no zones with AQMA are worsened by the strategy (for both Nitrogen Dioxide and PM10). Two zones with AQMA are potentially improved by the strategy for Nitrogen Dioxide. However all AQMA are outside of the study area.	NO2: 445 zones "winners" NO2: 64 zones "losers" NO2: 35 zones no change PM10: 442 zones "winners" PM10: 67 zone no "losers" PM10: 35 zones "no change"	Emissions estimate NO2: -3,113,286 Emissions estimate PM10: - 33257															
	Greenhouse Gases	A net reduction is predicted for the majority of zones		Reduction of 137,742 tonnes of CO2 for 2016 (-2%) against future do-minimum															
	Landscape	Due to limited new road and rail infrastructure schemes the strategy will have a neutral-slight negative impact on the majority of the study area. However large negative impacts have been identified in certain parts of the study area including Arundel, Lewes, Selmeston and Hastings	<table><tr><td>Impact of Strategy on Resource</td><td>Slight -ve</td><td>Moderate -ve</td><td>Large -ve</td></tr><tr><td>National e.g. AONB and National Park</td><td></td><td></td><td>1 on AONB</td></tr><tr><td>Regional e.g. Special Landscape Area and Area of Great Landscape Value</td><td>1 on Ancient Woodland</td><td>1 on Ancient Woodland</td><td>-</td></tr></table>	Impact of Strategy on Resource	Slight -ve	Moderate -ve	Large -ve	National e.g. AONB and National Park			1 on AONB	Regional e.g. Special Landscape Area and Area of Great Landscape Value	1 on Ancient Woodland	1 on Ancient Woodland	-	Large Negative Impact			
	Impact of Strategy on Resource	Slight -ve	Moderate -ve	Large -ve															
	National e.g. AONB and National Park			1 on AONB															
	Regional e.g. Special Landscape Area and Area of Great Landscape Value	1 on Ancient Woodland	1 on Ancient Woodland	-															
	Townscape	A neutral-slight negative impact on the majority of the study area with a number of areas experiencing a beneficial impact. However a slight negative impact has been identified in Hastings due to townscape benefits within parts of Bexhill and Hastings.	Multiplicity of features do not lend themselves well to a matrix.	Moderate Negative Impact															
Heritage of Historic Resources	There will be a neutral-slight negative impact on the majority of the study area. However a large negative impact has been identified on the historic environment in Arundel.	<table><tr><td>Resource</td><td>Number of Resources</td></tr><tr><td>Scheduled Ancient Monuments</td><td>At least 4</td></tr><tr><td>Listed Buildings</td><td>At least 38</td></tr><tr><td>Historic Parks and Gardens</td><td>2</td></tr><tr><td>County and Local Archaeological Sites e.g. SMR and Local Plan Designations</td><td>8</td></tr><tr><td>Conservation Areas</td><td>1</td></tr></table>	Resource	Number of Resources	Scheduled Ancient Monuments	At least 4	Listed Buildings	At least 38	Historic Parks and Gardens	2	County and Local Archaeological Sites e.g. SMR and Local Plan Designations	8	Conservation Areas	1	Large Negative Impact				
Resource	Number of Resources																		
Scheduled Ancient Monuments	At least 4																		
Listed Buildings	At least 38																		
Historic Parks and Gardens	2																		
County and Local Archaeological Sites e.g. SMR and Local Plan Designations	8																		
Conservation Areas	1																		
Biodiversity	There will be a neutral-slight negative impact on the majority of the study area. However, a serious adverse impact on biodiversity has been identified along the route of the proposed Hastings-Bexhill Link Road.	<table><tr><td>Impact Resource</td><td>Minor -ve</td><td>Significant -ve</td><td>Serious -ve</td></tr><tr><td>National e.g. SSSI, NNR</td><td>1 on SSIs</td><td></td><td>2 on SSIs</td></tr><tr><td>Regional e.g. CWS, SINC</td><td>15 on SINC's and 1 on Ancient Woodland</td><td>1 on Ancient Woodland and 1 on SINC</td><td></td></tr><tr><td>Local Plan Designations</td><td>2 on Woodland Protection Areas</td><td></td><td></td></tr></table>	Impact Resource	Minor -ve	Significant -ve	Serious -ve	National e.g. SSSI, NNR	1 on SSIs		2 on SSIs	Regional e.g. CWS, SINC	15 on SINC's and 1 on Ancient Woodland	1 on Ancient Woodland and 1 on SINC		Local Plan Designations	2 on Woodland Protection Areas			Large Negative Impact
Impact Resource	Minor -ve	Significant -ve	Serious -ve																
National e.g. SSSI, NNR	1 on SSIs		2 on SSIs																
Regional e.g. CWS, SINC	15 on SINC's and 1 on Ancient Woodland	1 on Ancient Woodland and 1 on SINC																	
Local Plan Designations	2 on Woodland Protection Areas																		
Water Environment	The balance of new schemes and upgrades suggests that on a regional scale the overall impact is generally low. However one scheme (the Worthing Tunnel), which passes through a regionally important groundwater resource with little scope for mitigation, has in itself a major impact and is sufficient (by accumulation of all local measures) to rate the impact of the core strategy as significant		Significant negative impact																
Physical Fitness	Measures to improve cycling and walking facilities are likely to bring about an increase in walking and cycling and therefore improve physical fitness. At a strategic level it is unclear what changes in the number of cyclists and pedestrians will occur.		Beneficial Impact																
Journey Ambience	Traveller care is significantly improved under the strategy by the improvements to rolling stock, facilities at stations, and public transport access to stations. New and improved roads will also reduce traveller stress as will reduced access times to stations.		Large Beneficial Impact																
SAFETY	Accidents	Significant accident savings associated with reduced highway demand and new highway infrastructure.	Savings: Fatal 226 Serious 1638 Slight 13,525	PVB 298.3															
	Security	The provision of CCTV, help points, and improved lighting at all stations across the study area will help to improve personal security for all passengers that use these interchanges		Large Beneficial Impact															
ECONOMY	Transport Economic Efficiency			User Benefits: NPV £1409M Private Providers NPV£-129M Public Providers NPV£2192M Other Government NP£1637M															
	Reliability	Improvements to the transport networks will enhance capacity and improve journey time reliability for road users. Proposals for improved rail infrastructure and rolling stock will improve reliability for rail users.		Moderate Beneficial Impact															
	Wider Economic Impacts			Beneficial															
ACCESSIBILITY	Option Values	New rail stations provide strong beneficial effects at the local level for each station as does the introduction of two Light Rail Transit systems. The combined effect will provide overall area wide opportunities within the study area.		Large Beneficial Impact															
	Severance	Provides relief from existing severance for those in Arundel, Chichester, Wilmington, Worthing and Selmeston		Slight positive impact															
	Access to the Transport System	Positive impacts are associated with the introduction of new stations and improving bus services		Large Beneficial Impact															
INTEGRATION	Transport Interchange	The upgrading of existing interchanges, improved information and access for all travellers, introduction of new stations and Park and Ride measures contribute to providing an integrated transport system and a seamless journey.		Large Beneficial Impact															
	Land-Use Policy	Performs well against national and regional guidance as well as LTP's and Structure Plans		Beneficial Impact															
	Other Government Policies	Consistent with other Government policies relating to access to employment opportunity, reducing road accidents, promoting urban regeneration and promoting slow modes.		Beneficial Impact															

Economy – The strategy has been evaluated in a traditional cost-benefits analysis and shown to be good value for money. The overall strategy has a Net Present Value (NPV) of £1.86Bn and a Benefit:Cost (B:C) ratio of 2.8:1.

Each major element of the strategy has been appraised independently (highway, rail, LRT, bus) and delivers a B:C ratio of greater than one.

The wider economic benefits of the strategy have also been considered. Firstly, it should be noted that the high economic NPV is an indication of the magnitude of the benefits likely to arise from implementation of the strategy. Secondly, a comprehensive accessibility analysis indicates that these benefits are likely to be distributed in those areas where a policy exists to promote economic regeneration and urban renaissance.

Many SoCoMMS measures are targeted to facilitate wider economic benefits, particularly by improving the attractiveness of urban centres (many of which are PAERs) and reducing the costs of travelling to and within such areas. This accords with the local policy agenda whilst the accessibility analysis demonstrates that the benefits from the strategy tend to be focussed within those areas for which regeneration is an important aim.

Delivering the Strategy

The SoCoMMS findings and recommendations will be passed over formally to the South East Regional Assembly (SEERA) on completion of this study. This will allow SEERA to further develop the South East Regional Transport Strategy, which is currently in a draft status. The recommendations and findings will also be presented to local authorities, other statutory agencies responsible for transport, and other interested groups.

The indicative costs of implementing the strategy in the SoCoMMS corridor is £1.1Bn. This comprises:

- £# £594m of strategic highways investment (of which £275m is allocated to Worthing-Lancing improvement);
- £# £99m investment in local public transport and persuasive measures;
- £# £283m investment in LRT (does not include extension to Southampton);
- £# £26m investment in bus measures;
- £# £108.5m investment in rail.

In addition, the strategy will require public support for additional operating and maintenance costs for the various highway, rail, bus and local transport proposals (for example, by 2018, half-way through the period covered by the strategy, additional operating costs, net of additional fare-box revenues, will amount to £61.7m p.a.).

Potential sources of funds have been identified and recommendations made on those areas where additional powers will be required to further implementation. In order to facilitate delivery of the strategy, particularly where inter-agency collaboration and coordination are required, it is suggested that a series of Joint Transport Panels be formed, comprising all of the key statutory stakeholders, to manage the implementation projects.

The fundability of the strategy is greatly enhanced by the projected revenue from the demand management measures (parking and congestion charging). In around 15 years (half way through the study period) the income from these measures will be in the region of £130m p.a. Whilst all schemes will require capital funding from existing public or private sources, significant potential exists to recover a large proportion of these costs from the demand management revenues.

Figure 4 illustrates the proposed timing and the capital costs of the various strategy components. It can be seen that a number of schemes are identified for short-term delivery (before 2007). These include the local transport and bus measures, along with selected highway schemes which address particular bottlenecks or which support related regeneration programmes.

Summary of Recommendations

An important aspect of the recommended strategy is that it represents a balanced set of inter-dependent measures. It is not designed to 'pick-and-mix' and removal of one set of proposals will jeopardise the wider benefits from the remainder. This reflects the incremental approach to the development of the strategy and the complexity of the issues faced across the corridor.

The leading recommendation is therefore that, so far as is possible, the strategy be implemented as a coherent package of measures as described here. Specific, scheme or service, recommendations are as follows.

Highways

In order to address a series of bottlenecks at various points within the corridor, predominantly along the M27/A27, a series of highway improvement measures are recommended. These are additionally designed to increase accessibility within the corridor and support regeneration and economic development. The recommendations are as follows:

- €# **A29/A27 junction:** minor improvements be considered at the Fontwell and Slindon Common roundabouts;
- €# **Chichester Bypass:** A series of improvements be implemented, including grade separation of a number of junctions, accompanied by local traffic management and bus priority measures within the vicinity;
- €# **Arundel Bypass:** a new bypass be constructed around Arundel;
- €# **Worthing-Lancing:** a scheme be implemented to by-pass the current stretch of the A27, comprising of a possible tunnel solution with accompanying traffic management and public transport measures;
- €# **Lewes-Beddingham:** Improvement to dual carriageway and grade separation of the level crossing.
- €# **East of Beddingham:** a mix of on and off-line improvements be implemented at Selmeston and Wilmington to provide increased highway capacity, safety improvements and relief to adjacent properties and nearby villages

Scheme	Capital Cost (£m)	Timing -scheme opening				
		2003-2007	2008-2012	2013-2017	2018-2022	2023-2032
Highway						
Chichester Bypass - Junctions	35.4					
A29/A27 Junction	4					
Fontwell roundabout						
Slindon Common roundabout						
Arundel Bypass	27					
Bypass						
Worthing-Lancing Improvement	275					
Tunnel						
Lewes-Beddingham	22.7					
East of Beddingham	42.2					
Selmeston bypass						
Wilmington bypass						
Bexhill -Hastings	24					
Link Road						
Lyddon-Dover	24.6					
M27	117					
Designation A27 to M27 w of Havant						
Junction to 3 to 4 widening						
Junction 11-12 widening						
Junction 5 improvements						
Other junction improvements						
VMS Signs on M27						
Local Safety/Enhancements Measures	22					
RAIL SCHEMES	108.5					
Station enhancements						
New stations						
Kent lines investment & service upgrades						
Coastway East investment & upgrades						
Coastway West investment and upgrades						
Coastway Express Service						
Eastleigh Chord; S.Hants capacity upgrade						
Re-assessment of Willingdon chord						
Re-assessment of Lewes-Tonbridge Wells						
LIGHT RAPID TRANSIT	283					
S.Hants Stage 2: Fareham-Soton (not included in cost)						
Brighton LRT						
BUS SCHEMES	26					
Bus priority infrastructure and services						
PERSUASIVE AND GP MEASURES	98.7					
Marketing, pricing and management						
Green/employer/school/etc travel plans						
Pedestrian/cycle priority measures						
Parking : town centres						
Parking : Workplace, PNR and employee						
Town centre congestion charging						
Park and Ride						
Key						
Partial opening						
Complete opening						

Figure 4 – Summary of Scheme Capital Costs and Timings

- €# **Bexhill-Hastings:** a new link road be constructed to increase capacity and relieve congestion to the west of Hastings;
- €# **Lyddon-Dover:** capacity improvements be implemented on the final stretch of the A2;
- €# **M27:** a mix of improvement measures be implemented, including widening and junction enhancements;
- €# **Local safety measures:** a number of specific recommendations are made for measures to enhance road safety, including several sites between Hastings and Ashford.

Railways

A variety of rail improvements are proposed to enhance the general quality of service, improve the frequency of local services and, most significantly, provide a new express service along the corridor:

- €# **East Kent:** deliver infrastructure enhancements to allow increased frequency of local services between Margate, Ramsgate, Canterbury, Dover, Folkstone and Ashford;
- €# **East Coastway:** deliver a number of infrastructure enhancements to permit increased frequencies, including a high frequency service between Ore, Hastings and Eastbourne;
- €# **West Coastway:** deliver minor short-term infrastructure enhancements, followed by the construction of a chord at Eastleigh and associated capacity enhancements in the longer term;
- €# **Coastway Express:** introduce a new half-hourly express service between Ashford, Brighton and Southampton; double track the remaining section between Ashford and Hastings to permit this;
- €# **Station enhancements:** undertake a major programme of station renovation and enhancements across the corridor in order to transform the waiting and interchange facilities;

New stations: introduce six new stations on the corridor, linked to regeneration, development or parkway initiatives; In addition, suggestions are made that a complete re-casting of the Coastway timetable be undertaken in order to optimise the operations of the five TOCs concerned.

Light Rapid Transit

- €# An extension to the SHRTS LRT should be considered, serving Fareham and Southampton, to be implemented around 2020; alternatively heavy rail services should be enhanced on the same route.
- €# A new LRT system is recommended for Brighton, serving major arterial routes in the town, Hove and Shoreham, also to be implemented around 2020.

Bus and Local Transport

Bus and local transport measures are a key element of the strategy, both in increasing accessibility and promoting traffic reduction measures. These involve:

- £# A series of recommendations for bus priority and other measures are made for specific corridors and urban areas; furthermore, public funding for improved bus services be increased.
- £# A number of recommendations, based on best practice within the study area, are made for local transport improvements, including employee travel plans, school travel plans, walking and cycling.

Demand Management

The strategy recognises the need to restrain some vehicular trips in order to promote the sustainability objectives. These are as follows:

- £# Increased parking charges in town centres;
- £# Workplace parking charges for employees – in selected towns, with appropriate public transport enhancements;
- £# Urban congestion charging in Brighton and Southampton-Portsmouth – in the longer term, again, under-pinned by public transport improvements;
- £# Park and Ride – an increased number of sites at various locations throughout the corridor, in association with highway, bus and rail enhancements.

1 Introduction

1.1 Background to the Study

1.1.1 The South Coast Corridor Multi Modal Study (SoCoMMS) is one of a number of studies undertaken on behalf of the Government to review transport provision in this country. This study forms one of the second tranche of multi-modal studies proposed by the transport White Paper, 'A New Deal for Transport: Better for Everyone'¹ and has been commissioned by the Government Office for the South East (GOSE).

1.1.2 In July 2000, the Government published its 10 Year Plan for Transport². This sets out the measures and resources needed to achieve the Government's integrated transport policy. The recommendations from the multi-modal studies will contribute towards the delivery of this policy.

1.1.3 As stated within 'Guidance on the Methodology for Multi-Modal Studies' (GOMMMS), the multi-modal studies are:

'intended to be investigations of problems on or with all modes of transport. ... In practice, it is expected that the Studies will major on problems on the road, rail and bus systems, including access to ports and airports....'

and are expected to identify solutions that include:

walking, cycling, air transport, shipping and pipelines, as well as roads, railways, buses and other forms of public transport. Solutions may also relate to non-transport policies, for example land-use, health and education.'

1.2 Study Objectives

1.2.1 The overall aims of the South Coast Corridor Multi Modal Study, as stated in the original study brief, are to:

¹ A New Deal for Transport: Better for Everyone, Cm 3950, HMSO, London, July 1998

² Transport 2010 The 10 Year Plan, Department of Environment, Transport and the Regions, HMSO, London, July 2000

- ## identify and investigate congestion, safety and environmental problems of transport along the south coast between Southampton (Hants.) and Thanet (Kent); and
- ## propose measures aimed at resolving these problems and improving access to and between regeneration areas and other areas of economic activity’.

1.2.2

The study brief also established a series of detailed objectives for the SoCoMMS study. These include the need to:

- ## make recommendations for an over-arching strategy to guide the future development of the transport systems on the South Coast Corridor;
- ## consider and recommend specific local measures on sections of the A27 which have been the subject of previous road scheme proposals, examine their interrelationship with the overall strategy for the South Coast and produce up to eight local action plans for specific sections of the corridor;
- ## develop plan(s) to address the most urgent strategic and local transport problems across all modes, looking in particular at opportunities for modal transfer, whilst ensuring that all measures are consistent with the strategy;
- ## produce a feasible implementation programme which identifies potential constraints to implementation, including funding and legislative considerations;
- ## identify what further work may be necessary to progress particular measures contained within the implementation package; and
- ## inform and engage with all interested parties in both determining issues and problems and in formulating optimal solutions and strategies.

1.2.3

The recommendations from the study will feed through into the South East England Regional Assembly’s (SEERA) Regional Transport Strategy, which in turn forms a part of the Regional Planning Guidance (RPG9). In developing an overarching strategy for the south coast, SoCoMMS builds on the work already undertaken within earlier multi-modal studies, including:

- ## M27 Integrated Transport Study;
- ## A27, Worthing – Lancing Integrated Transport Study; and
- ## the Access to Hastings Multi-Modal Study.

1.2.4 The study has been overseen by a Steering Group that included representatives of:

- ## Government Office for the South East;
- ## Highways Agency;
- ## South East England Regional Assembly;
- ## South East England Development Agency;
- ## Department for Transport (Multi Modal Studies Unit);
- ## East Sussex County Council;
- ## Hampshire County Council;
- ## Kent County Council
- ## West Sussex County Council;
- ## Brighton & Hove City Council;
- ## Portsmouth City Council;
- ## Southampton City Council;
- ## Freight Transport Association;
- ## Confederation of Passenger Transport;
- ## Strategic Rail Authority;
- ## South East Forum for Sustainability; and
- ## South East Chambers of Commerce (represented by Sussex Enterprise).

1.2.5 It is acknowledged that a strategic study such as SoCoMMS may cause concern in some areas due to the nature and location of some of its proposals. It should be emphasised that no decisions have yet been taken about the various schemes proposed here. The Final Report will be considered by the Regional Planning Body, who will then make recommendations to Ministers. Schemes would then be developed and appraised in more detail by the appropriate delivery agencies.

1.3 Study Area

1.3.1 Figure 1.1 shows the study area that SoCoMMS has investigated. The south coast transport corridor is well defined between Southampton and Brighton, being hemmed in to the north and south by the South Downs and the sea respectively. To the east of Brighton the transport corridor passes through the South Downs and crosses the Pevensey Levels to Hastings. To the east of Hastings the rail based transport system passes inland to Ashford and then on to Ramsgate and Margate via both Dover and Canterbury. Similarly, the road network in this area splits at Brenzett with the A259, A20 and A256 route following the coast through Folkestone and Dover while the A2070, A28 route passes through Ashford and Canterbury.



- 1.3.2 In addition to the above, the study has defined an area of influence which reflects that
- ## the alternative travel routes for longer distance movements are via London for rail and via the M25 for road based trips;
 - ## there are major land use influences (current and proposed), particularly to the west at Dibden Bay and to the north at Winchester, Gatwick, Bluewater and Tunbridge Wells;
 - ## the main access route to areas such as Bournemouth and the Isle of Wight is through the study area; and
 - ## there are other locations for which transport measures might influence travel on the south coast (for example rail improvements at Gatwick Airport).

1.4 Study Approach

1.4.1 The aims and objectives of the study provide an overall framework within which this study has been undertaken. In addition, the guidance provided within 'Guidance on the Methodology for Multi-Modal Studies' (GOMMMS) sets out an overall methodology through which these aims and objectives should be achieved.

- 1.4.2 The SoCoMMS study process has included:
- ## identifying the strategic and local policy objectives within the study area;
 - ## understanding the current transport conditions and the associated problems and issues;
 - ## understanding how the problems and issues will change in the future;
 - ## providing information and consulting with a range of interested parties as the study has processed;
 - ## developing an appraisal framework and appraisal tools covering land use/transport modelling, environmental impact assessment, cost/benefit analysis and the geographical presentation of data and analysis results;
 - ## identifying and developing solutions and strategies for the area;
 - ## testing and appraising the options/ strategies;
 - ## undertaking further consultation to gain reactions to and to develop consensus for the most promising solutions / preferred options; and
 - ## identifying a preferred option, possible funding sources and an implementation programme.

- 1.4.3 The study has involved the testing and appraisal of a wide range of options, both of individual schemes and alternative strategies. These alternatives have included strategies based on public transport measures alone, major new highway construction and area wide road pricing. The study has also drawn on the outcomes of previous studies which includes: the M27ITS; the Worthing to Lancing Integrated Transport Strategy and the Access to Hastings Multi-Modal study.
- 1.4.4 An essential element of the study process has been to involve key stakeholders in consultation at various phases during the study. These have included representatives of businesses, transport users and operators, local authorities, environmental and social groups. A series of 36 workshops have been held at three phases to assist the study team in identifying problems and issues in the corridor, identifying the potential solutions for the area, and reviewing the composition of the preferred strategy.
- 1.4.5 In addition, a number of other meetings/presentations were held with a wide range of organisations. An exhibition was also held at a series of locations along the corridor to inform the public of the study.
- 1.4.6 A number of background reports have been produced during the study. These are available from the SoCoMMS website <http://www.socomms.org.uk>. A series of newsletters have also been produced and these have been made available through the website, local authorities, transport operators, local groups and via the consultation database.
- 1.5** ***Purpose of the Report***
- 1.5.1 The purpose of this report is to draw together the elements that have comprised the SoCoMMS study. Chapter 2 provides a review of the corridor and the issues that are faced. Chapter 3 outlines the future for the south coast area if nothing is done. The development of a strategy is outlined in chapter 4 with the preferred strategy itself documented in chapter 5. The implications of the strategy for the local level are outlined in chapter 6. The appraisal of the strategy is given in chapter 7, while issues related to the delivery of the strategy are outlined in chapter 8.

2

Existing Transport Conditions, Problems and Issues

2.1

2.1.1

Introduction

This chapter provides a brief review of existing conditions within the corridor. A fuller description is provided in the Problems and Issues Report. SoCoMMS has identified a number of key challenges within the area. These have been based on a wide range of sources including:

- ## Previous studies;
- ## Regional and local transport and development plans;
- ## Existing travel data;
- ## Participation workshops;
- ## Freight related interviews;
- ## Public consultation;
- ## Meetings of expert topic groups;
- ## Local authority responses;
- ## Responses from other organisations; and
- ## The SoCoMMS strategic model.

2.1.2

No single source of information or data purports to show the whole picture. Taken together, however, they provide a good understanding of the strategic transport-related problems and issues within the study area.

2.2

2.2.1

Social and Demographic Context

A review of current social and demographic characteristics (Neighbourhood Statistics, ONS) was undertaken to provide a basis for developing future year forecasts. The review highlighted the diversity within the area in terms of social, economic and demographic characteristics. In particular:

- ## **Population Densities-** the highest densities within the corridor are between Brighton and Worthing and in South East Hampshire where settlements are located between the sea and the South Downs (Figure 2.1).
- ## **Age Structure-** Many of the south coast towns have the highest proportions of elderly people in the south east. The areas with the higher proportions of elderly people include the Manhood Peninsula, Bognor Regis, Worthing, the towns east of Brighton (e.g. Rottingdean,



Figure 2.1: Population Density (based on 1998 ONS data)

- £# Peacehaven, Newhaven, Seaford), Eastbourne, Bexhill, New Romney and Birchington (Figure 2.2).
- £# **Employment Densities**- The highest densities are within Brighton, Portsmouth and Southampton (Figure 2.3).
- £# **Unemployment**- The highest unemployment locations along the south coast are in Brighton, Hastings, Dover, Folkestone and Thanet (Figure 2.4).
- £# **Car Ownership**- The locations with the highest proportion of non- car owning households are in the coastal towns. These include the central areas of Southampton, Portsmouth, Worthing, Brighton and Hove, Eastbourne, Hastings, Folkestone, Dover and Ramsgate (Figure 2.5).
- £# **Social Inclusion**- Data indicates that, generally, the coastal corridor has higher levels of deprivation than the national average. In particular, areas such as Brighton, Thanet and Hastings include wards that are in the most deprived 10% of wards in the country (Figure 2.6).

2.2.2 At the western end of the corridor some areas within South Hampshire have seen strong economic growth, while to the east, some parts of East Sussex and East Kent have struggled in economic terms. A series of Priority Areas for Economic Regeneration (PAERs) have been identified in South Hampshire (Southampton, Portsmouth and the Isle of Wight) the Sussex coastal towns from Shoreham Harbour to Hastings, the former coalfields and coastal towns of East Kent. Each PAER has its own distinctive set of problems and will need individually tailored strategies.

2.3 *Travel* *Overall Use of Modes*

2.3.1 Current travel demand data demonstrates that the car is the dominant mode of transport (Figure 2.7). For example, travel to work data for the study area, shows that typically around two-thirds of journeys to work are made by car. Walking is the second most important mode for the journey to work. The largest use of bus to travel to work is in the major urban areas including Brighton, Hove and Southampton with over 10% of movements. Overall, cycling comprises less than 5% of journeys made to work. However there is a considerable range in cycle use from Gosport where 16% of journeys are made by bicycle to Hastings where only 1% are made. Typically there are three times as many foot journeys to work as bicycle journeys.



Figure 2.2: Percentage of the Population Over 60 years (source 1998 ONS data)

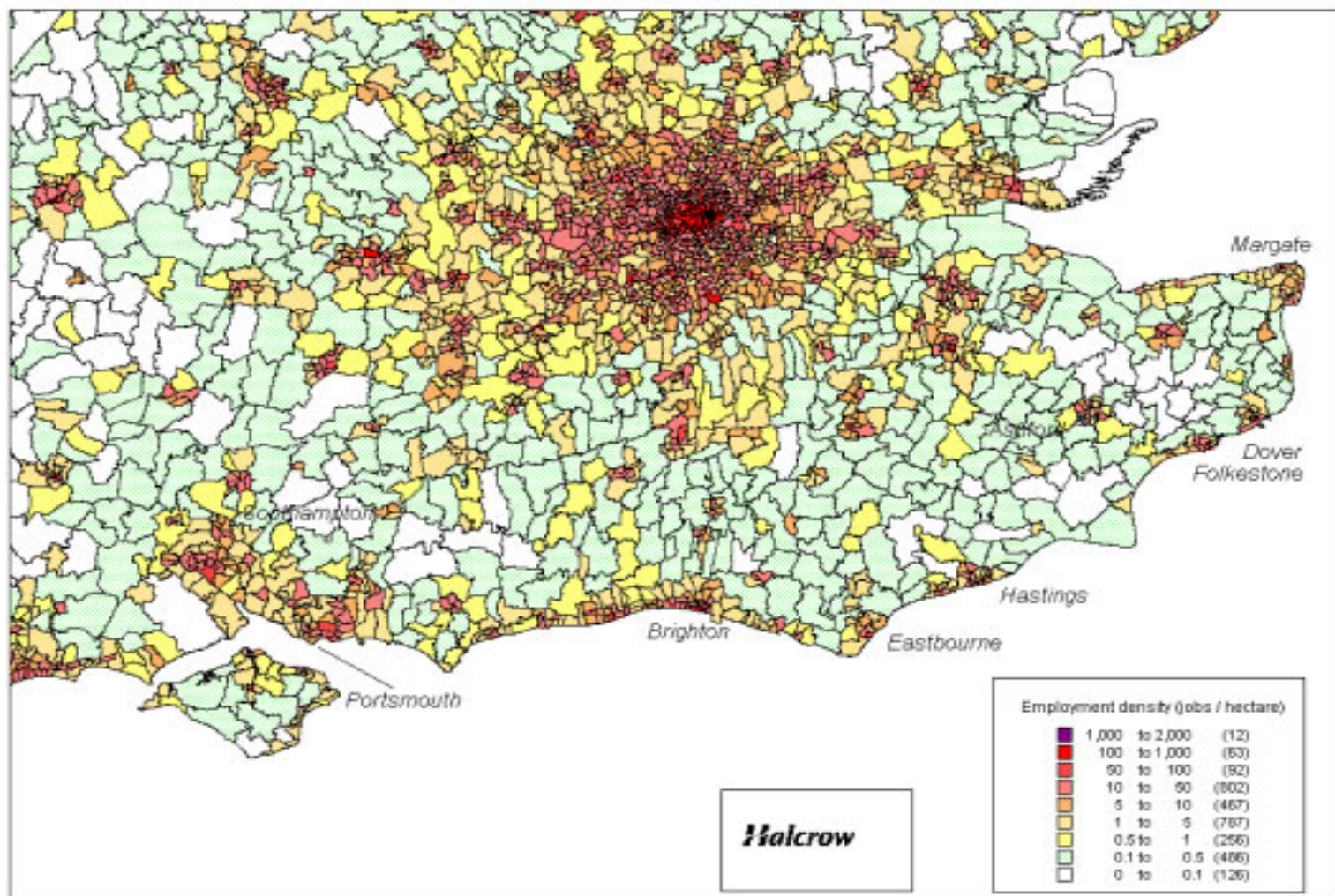
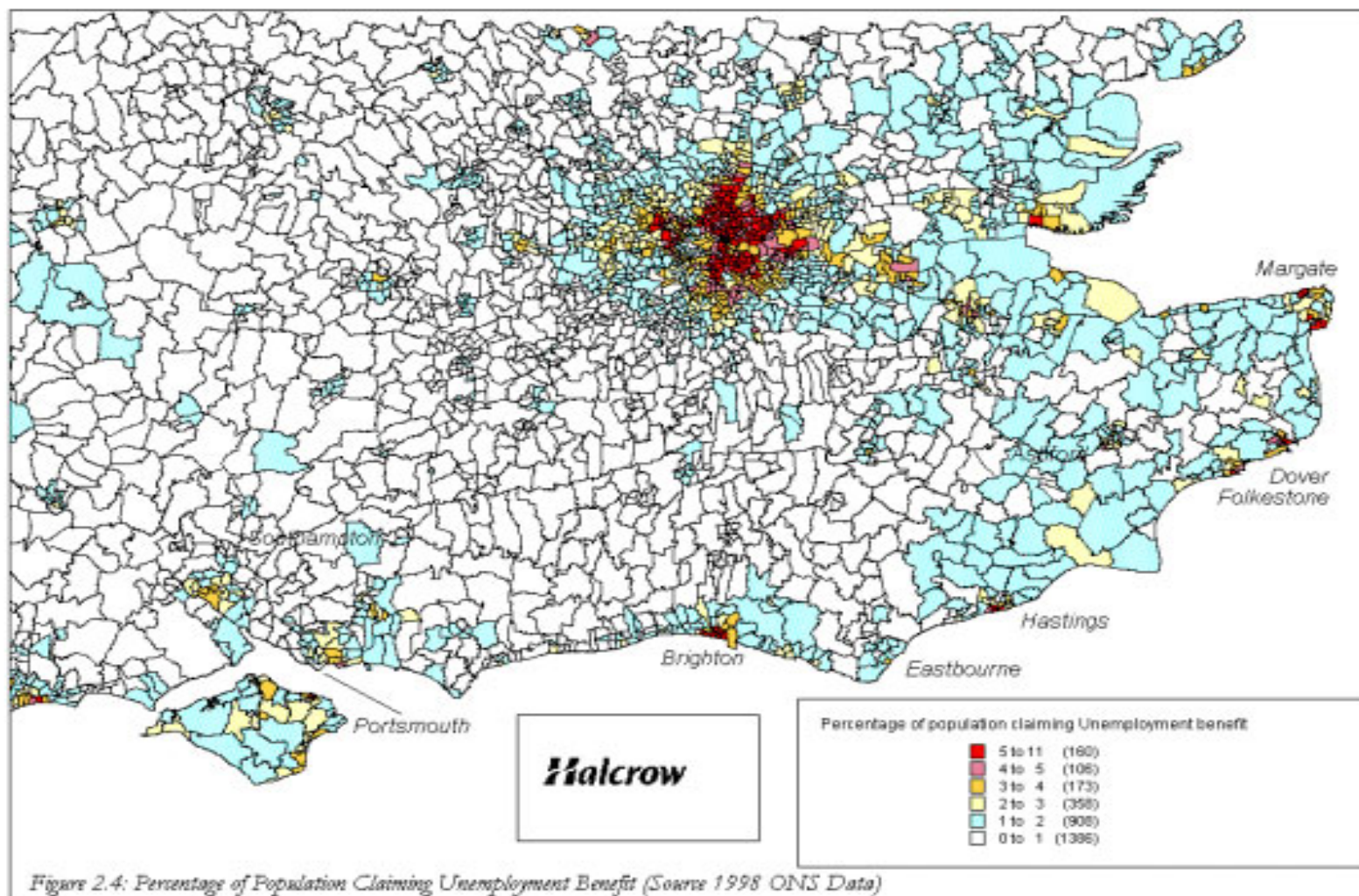


Figure 2.3: Employment Density (Source 1998 ONS Data)



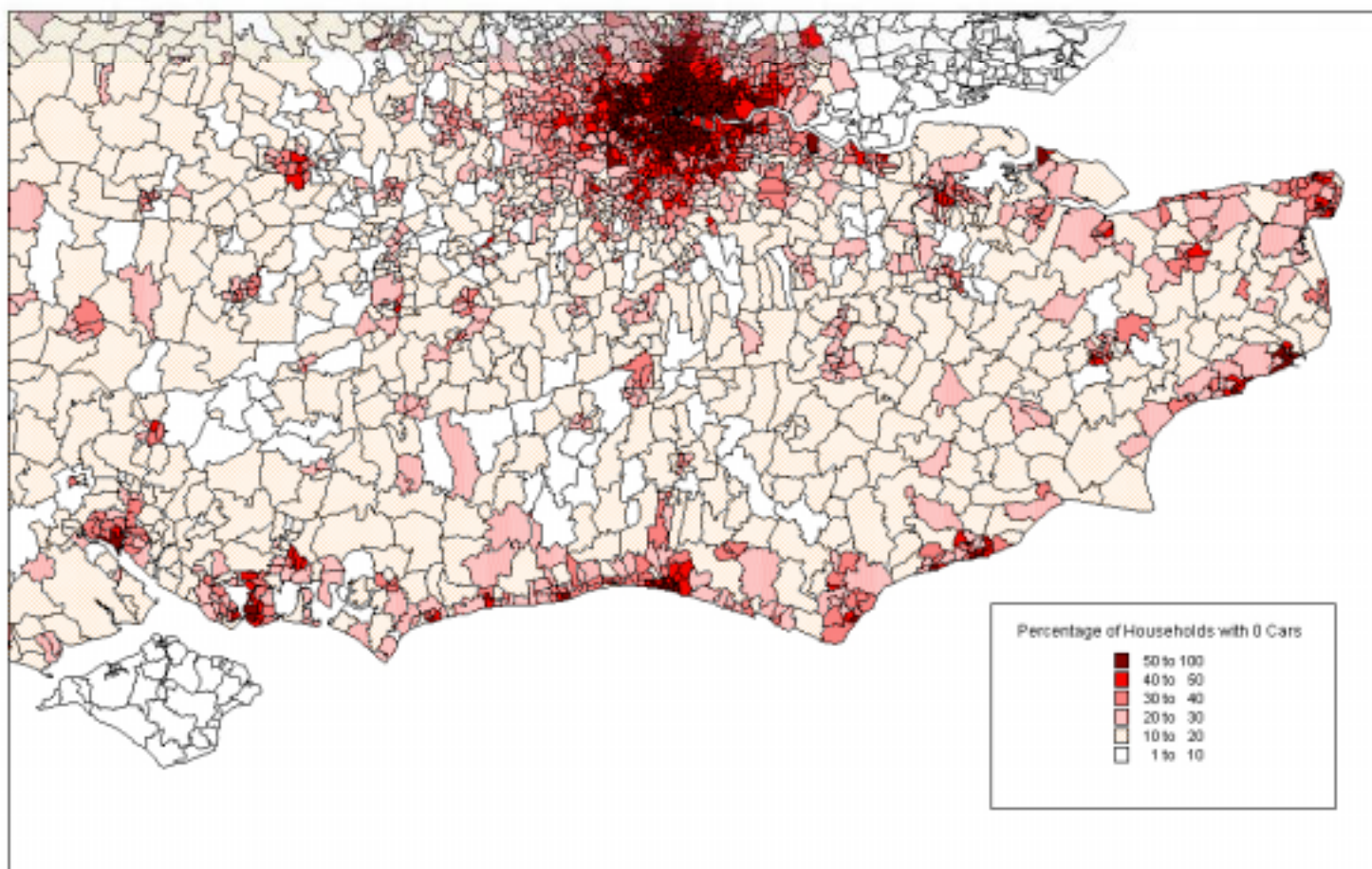
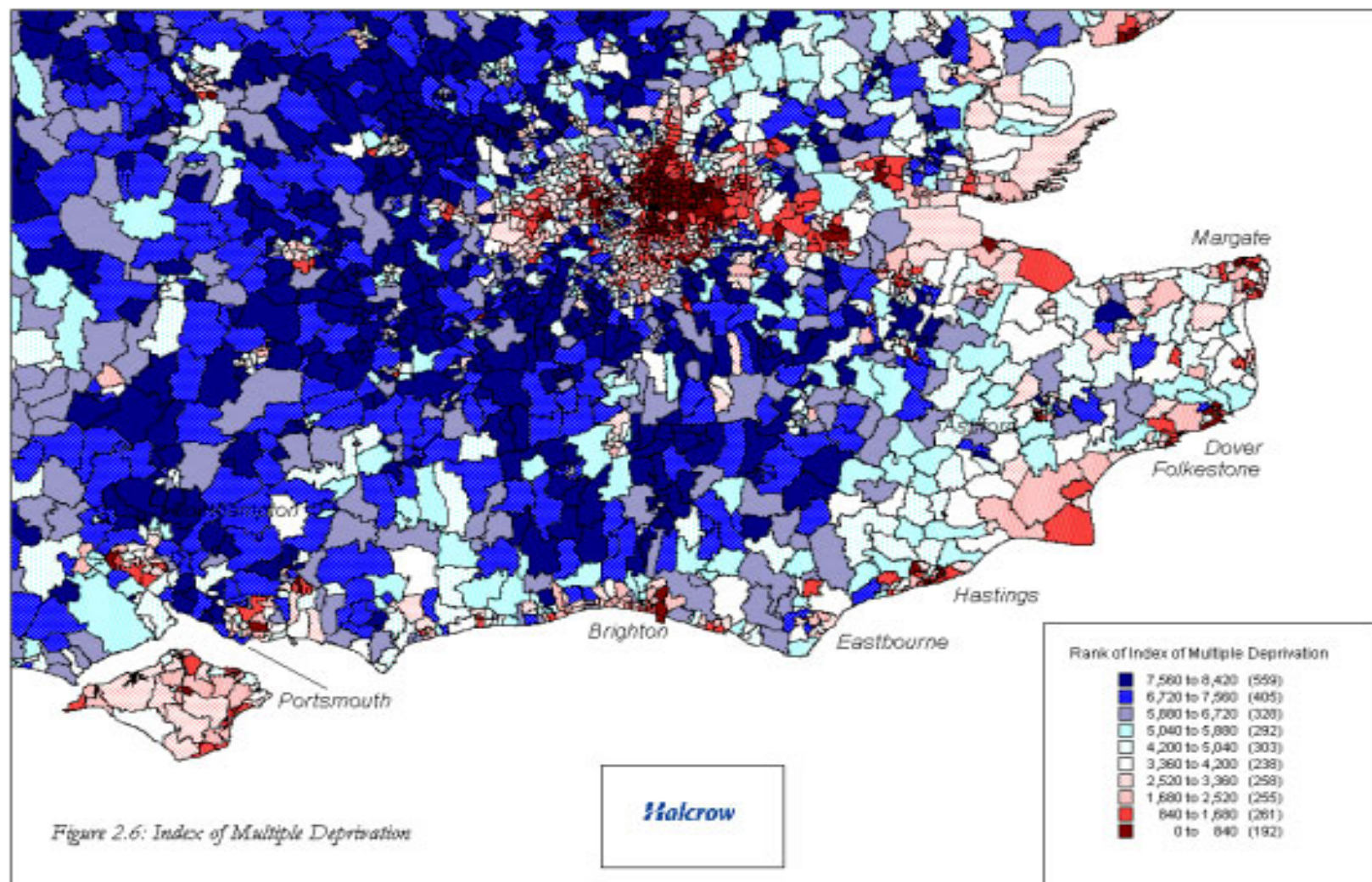


Figure 2.5: Percentage of Households with 0 cars



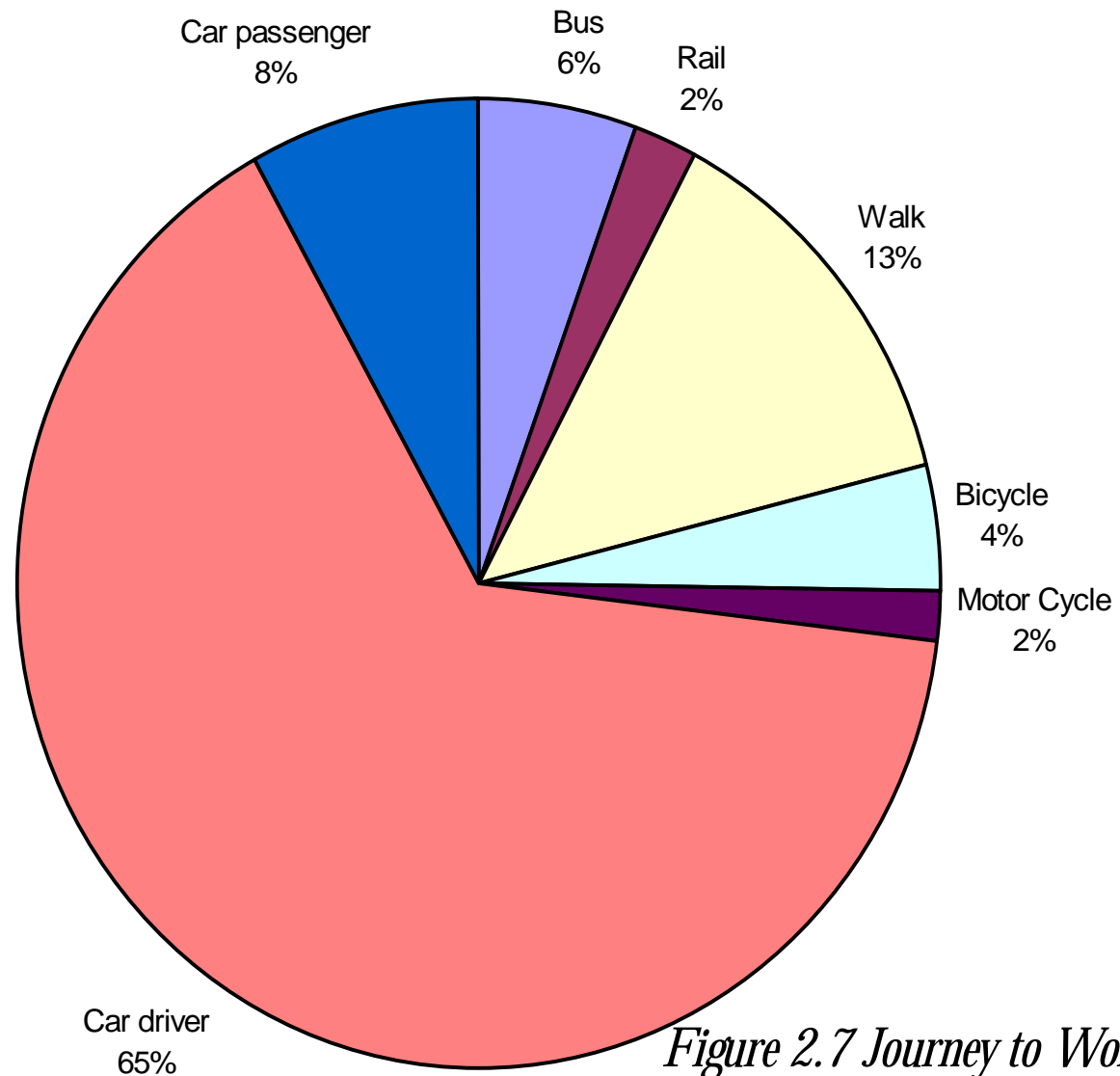


Figure 2.7 Journey to Work Data

Highway Characteristics

- 2.3.2 The standard of the road network along the south coast is varied in character. The main coastal corridor comprises:
- ## The high quality M27 linking Southampton and Portsmouth.
 - ## The A27 (continuing from the M27) between Havant and Lewes, which provides a dual carriageway route with discontinuities at Arundel, Lancing and Worthing.
 - ## The A27 and A259, a single carriageway route providing varying quality between Lewes and Folkestone, and passing through urban areas such as Bexhill, Hastings, Hythe, and a number of other villages.
 - ## The A20, a dual carriageway route between Folkestone and Dover.
 - ## The A256, a mixed standard route between Dover and Thanet.
 - ## The A2070 and A28 single carriageway route between Brenzett and Thanet providing varying quality and passing through Canterbury.
- 2.3.3 The main alternative routes for longer distance traffic to the coastal trunk road include:
- ## the M3, M25, M20 route to the north providing a route between Southampton and Folkestone;
 - ## the A259 to the south, primarily between Emsworth and Pevensey which runs through the coastal towns such as Bognor Regis, Littlehampton, Worthing, Brighton and Eastbourne; and
 - ## the A272 / A265 / A268 / A28 route between Winchester and Ashford, which runs to the north of the South Downs passing through a number of towns including Midhurst, Billingshurst, Haywards Heath and Tenterden.
- 2.3.4 Journey times for longer distance movements along the corridor are high, particularly in the eastern part of the corridor. The use of the M25 in combination with the M2, M20, M23 / A23, A3 / A3(M) and M3 provides an attractive alternative for longer distance movement along the coast. For example the off-peak journey time from Margate to Southampton via the M25 is 2 hours 30 minutes, and via the coastal route (i.e. A259, A27 and M27) is 3 hours 50 minutes. (Journey times are taken from the Autoroute Journey Planner).
- 2.3.5 The highest flows on the south coast network are at the western end of the corridor. Sections of the M27 have AADT (Annual Average Daily Traffic Flow)

values in excess of 100,000 vehicles per day. At the other end of the spectrum, flows on the rural sections of the A259 are less than 10,000 vehicles per day for sections in East Sussex and Kent. Average Annual Daily Travel flows for major highways are shown in Figure 2.8)

2.3.6 Travel demand data have been assembled to assess the range of movements being made in the area. The data indicate that during a weekday there are at least 3 million journeys made between 0700 and 1900. Commuting trips by car comprise nearly 30% of 12-hour movements while car based business trips comprise 17% of daily journeys. Goods vehicle movements (including vans) comprise 17% of daily movements.

2.3.7 An analysis of highway demands shows that there is considerable demand for local movements (see Table 2.1). Two thirds of trips within the corridor are made entirely within a single county area (e.g. car journeys within West Sussex). Twenty per cent of journeys are from the study area to the area of influence while relatively few are to London. The large volumes of local trips in and around town centres contribute significantly to congestion on the strategic network.

Movement	Car Commuting	Car Employers Business trips	Car- other trips	Light Goods	Other Goods	Total
Core area – local movements within county	20%	10%	25%	7%	4%	67%
Core area – movements between adjacent counties	2%	1%	3%	1%	1%	6%
Core area – longer distance	0%	0%	0%	0%	0%	0%
Core area to area of influence	6%	4%	7%	2%	2%	20%
Core area to London	1%	1%	1%	0%	0%	3%
Core area to other	0%	1%	1%	0%	1%	4%
Totals	28%	17%	37%	10%	7%	100%

Table 2.1: Trip breakdown in the corridor by purpose and spatial distribution – journeys by car (*source SoCoMMS model*)

2.3.8 Use of the key trunk road corridor has been examined at a number of locations. The findings are:.

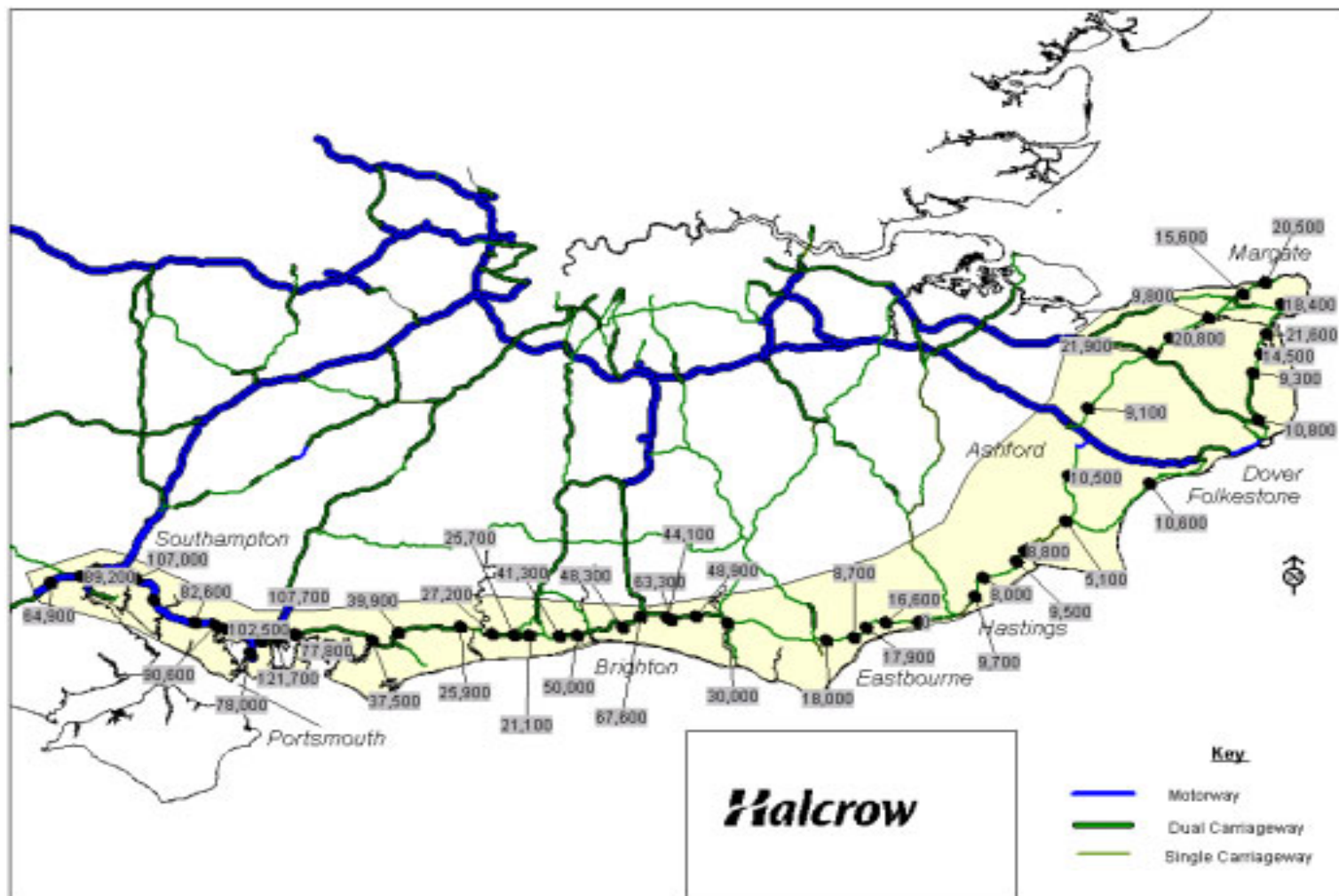


Figure 2.8: 2000 AADT Flows

- £# **M27-** 67% of traffic on the M27 is local (in that one end of the journey is within the South Hampshire area). Less than 10% of traffic using the M27 traffic is pure through traffic (travelling the entire length of the M27).
- £# **A27 West of Brighton-** the A27 caters for a mix of both local and longer distance traffic and serves a number of towns including Chichester, Worthing and the Brighton conurbation. To the east of Lancing, some 45% of A27 traffic has a destination within the Brighton & Hove area.
- £# **East of Brighton-** Recent roadside interview data collected by East Sussex County Council (1998 and 1999) have been used to assess movements on this section of the corridor. The data demonstrate the high proportion of short distance traffic. The information gathered at Icklesham, Glyne Gap (between Bexhill and Hastings), and east of Lewes, show that on an average day, there are 350 vehicles travelling between Kent and Brighton and the western part of the study area. By contrast, examination of the regional trip matrices show an additional 1200 vehicles making the same movement along the motorway network. These data emphasise the current lack of long distance journeys on the south coast route. The interview data show that most journeys are between adjacent towns. For example, between Lewes and Polegate, nearly 50% of traffic movements are between Eastbourne/Polegate and Lewes/Brighton.
- £# **Kent-** In East Kent, only 30% of traffic on the A28 is passing through Canterbury. Thus many of the movements on the A28 are to the city of Canterbury. The dominant flows in the East Kent area are on the M2, M20 and A2 with a focus on movements between the ports/ Channel Tunnel and the M25.

2.3.9 Relatively little traffic is making end to end movements along the corridor. Those journeys which are made from end to end are typically using the motorway network. Many of the journeys using corridor's network are shorter in distance between adjacent towns.

Rail Travel

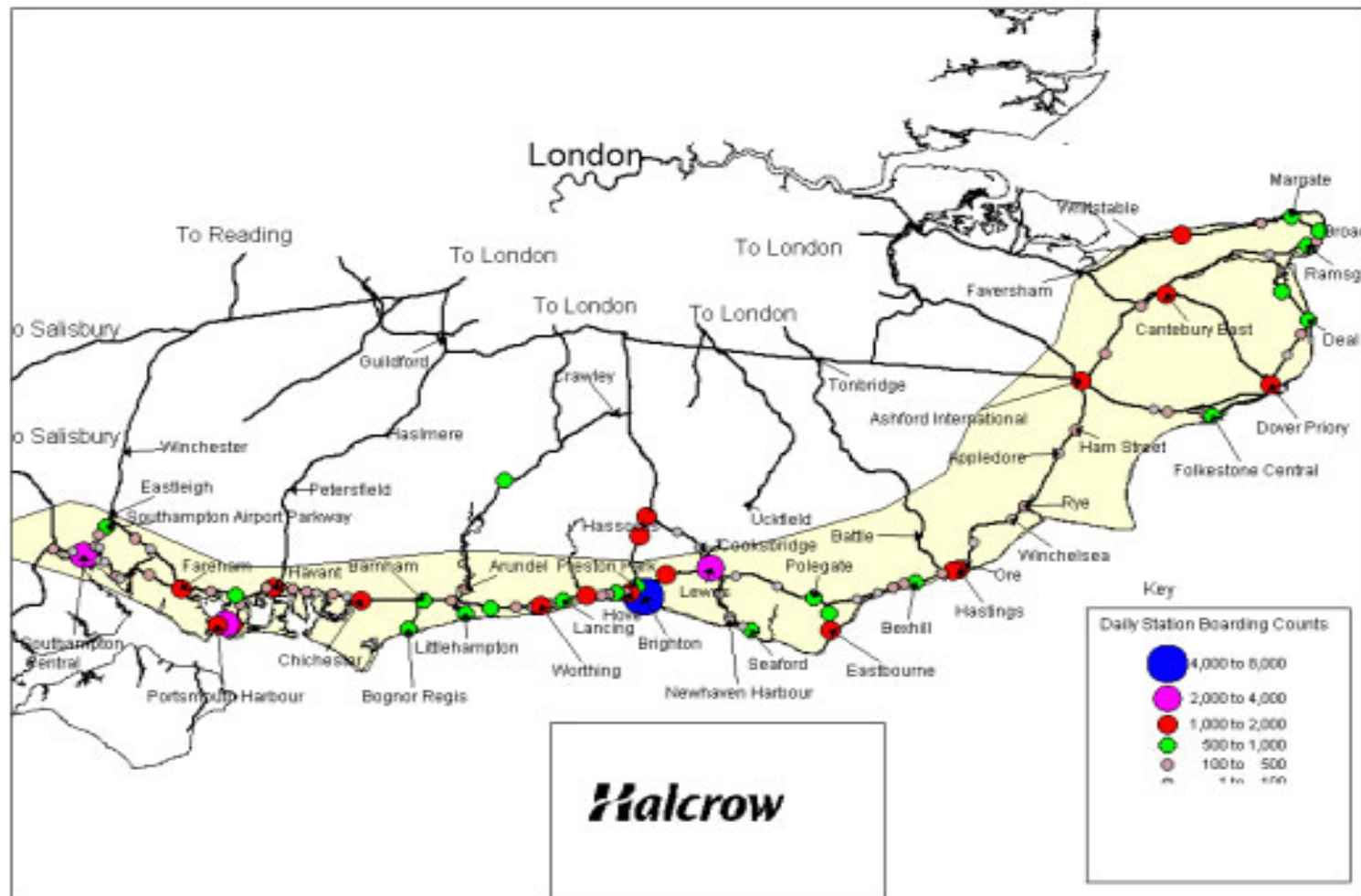
2.3.10 The rail network within the study area consists primarily of two types of route. These are the coastal line and its branches, linking Southampton through to Margate, and the radial routes connecting the south coast to London. The coastal route is characterised by its disjointed structure, both in terms of services and infrastructure. Services are provided by a range of operators including South West Trains, South Central and Connex South Eastern. In infrastructure terms,

Portsmouth, Bognor Regis, Littlehampton, Brighton, Newhaven / Seaford and Eastbourne are all termini. Where these stations are served by through services, these have to enter and leave the stations from the same direction.

- 2.3.11 A journey from Southampton to Margate, via the south coast route would typically involve changing trains at Brighton, Hastings and Ashford and take around 5 hours to complete. The equivalent journey made by changing between London termini would take around 3 hr 30 minutes, some 1 hr 30 minutes faster than using the south coast route (source National Rail Timetable).
- 2.3.12 A series of radial services provide direct connections between London and Southampton, Portsmouth, Bognor Regis / Littlehampton, Brighton, Eastbourne, Hastings, Ashford, Channel Tunnel, Dover, Ramsgate and Margate. In many cases these complement parts of the south coast service patterns.
- 2.3.13 There are 25 million annual rail trips originating in the study area. Of these, some 45% are commuting journeys to work, while business trips account for 10% and 45% of journeys are for other purposes (e.g. visiting friends). Figure 2.9 gives station boarding counts.
- 2.3.14 Table 2.2 performs a similar analysis as undertaken for the highway matrices on trip characteristics. The table shows that trips to London from the corridor form 40% of the total rail trips. Of these, nearly half are related to commuting to work. This demonstrates the importance of the London commuter market to the train operators. 'Other' journeys (such as leisure trips) to London are the second largest market segment. Local commuting journeys to work within the study area form 12% of trips.

Movement	Work	Business	School	Other	Total
Core areas – local movements within county	12%	3%	2%	11%	28%
Core area – movements between adjacent counties	4%	1%	1%	3%	9%
Core area – longer distance	0%	0%	0%	0%	0%
Core area to area of influence	8%	2%	1%	7%	18%
Core area to London	20%	4%	3%	14%	40%
Core area to other	1%	1%	0%	3%	3%
Total	45%	10%	6%	38%	100%

Table 2.2: Trip breakdown in the corridor by purpose and spatial distribution – journeys by rail (source SoCoMMS model)



Bus Travel

- 2.3.15 Bus timetable data have been assembled from local bus guides published by the operators and local authorities, and from the Great Britain Bus Timetable (version 2001). Bus service provision within the corridor comprises a range of services including:
- ## Urban services in each of the major towns and conurbations;
 - ## Inter-urban services linking the coastal towns;
 - ## Community bus services; and
 - ## Long distance express services.
- 2.3.16 A number of operators provide services within towns and between the towns on the south coast. These service providers include:
- ## Hampshire Bus;
 - ## Provincial;
 - ## Coastline;
 - ## South Coast Buses; and
 - ## East Kent.
- 2.3.17 In addition, there are a number of urban service providers including:
- ## Southampton City Transport;
 - ## Brighton and Hove Bus Company
 - ## Eastbourne Buses.
- 2.3.18 The largest volume of higher frequency routes are in the major urban centres. Typically these operate as short distance routes linking the central areas to outlying suburbs. These can include out-of town retail areas or hospitals (such as the Conquest Hospital in Hastings). The main inter-urban services along the coast operate between Portsmouth and Brighton, and between Brighton and Dover services. These serve each of the main coastal towns. These are supplemented by less frequent services to the main towns from surrounding villages and include a number of community bus services.
- 2.3.19 In demand terms, bus generally plays a much more significant local role than rail, particularly within the major conurbations of Southampton, Portsmouth and Brighton & Hove. At present bus travel accounts for 15%, 11% and 20% of all motorised journeys within Southampton, Portsmouth and Brighton & Hove respectively. Across the whole corridor however, bus journeys make up some 6%

of all motorised trips. Figure 2.10 shows the percentage of journey to work trips from each ward by all modes of public transport.

Walking and Cycling

2.3.20 **Walking** -For short distance trips, walking plays a major role. As important however, in the context of this study, walking also forms a key part of any public transport trip, providing a means of gaining access to the bus stop or rail station. Walking accounts for 13% of journeys to work (Figure 2.11 shows the percentage from each ward). This figure could potentially be much higher as the car is currently used for many short distance trips.

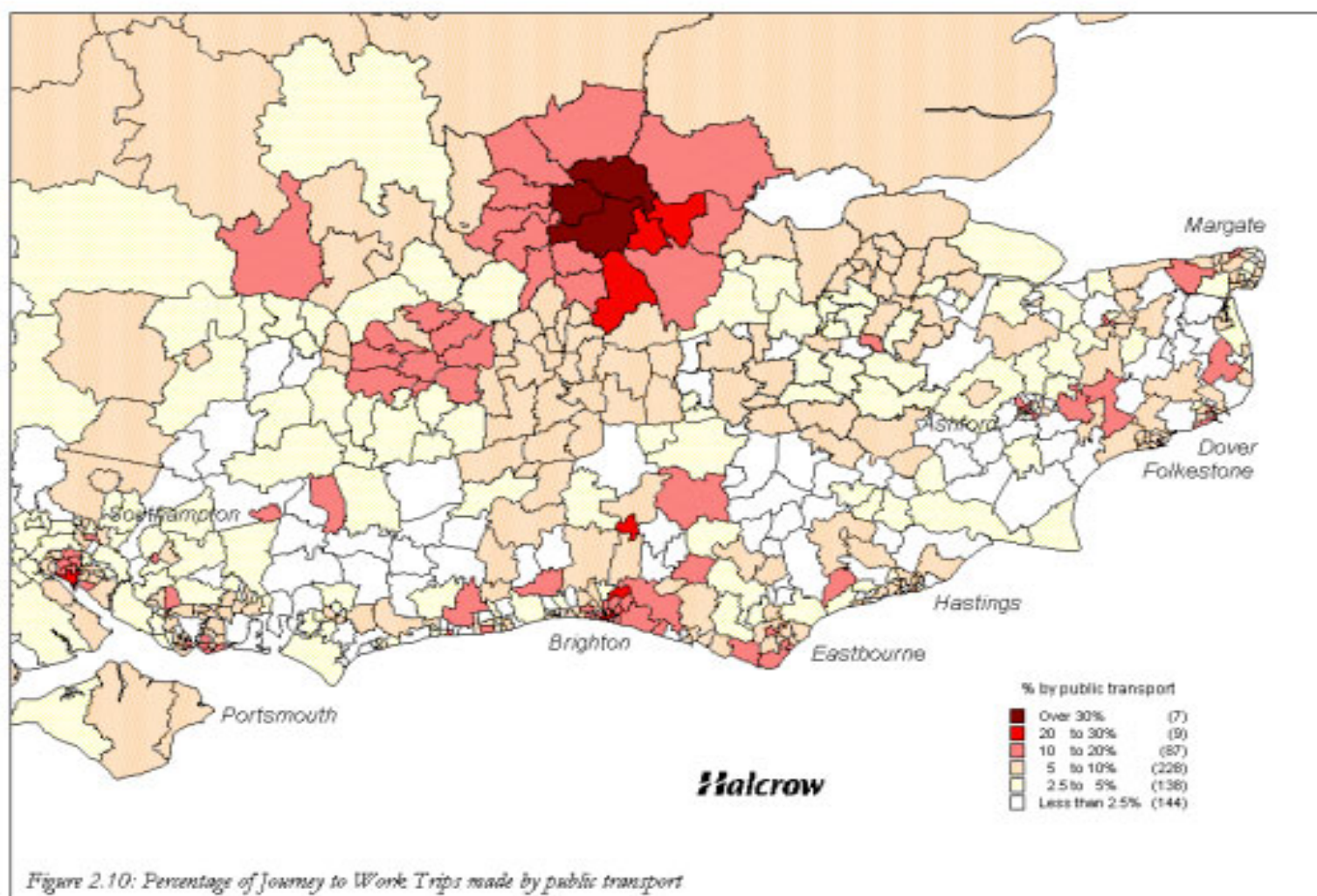
2.3.21 **Cycling** –Cycling accounts for 4% of journeys to work (Figure 2.12 shows the percentage from each ward). As with walking, cycling can form an important element of a rail journey by providing access to the station. Most cycling takes place on the road network due to a lack of dedicated cycle facilities coupled with the fact that most cyclists can only access the highway network from their homes. Cycling tends to be discouraged by the high traffic volumes and perceived dangers from speeding vehicles.

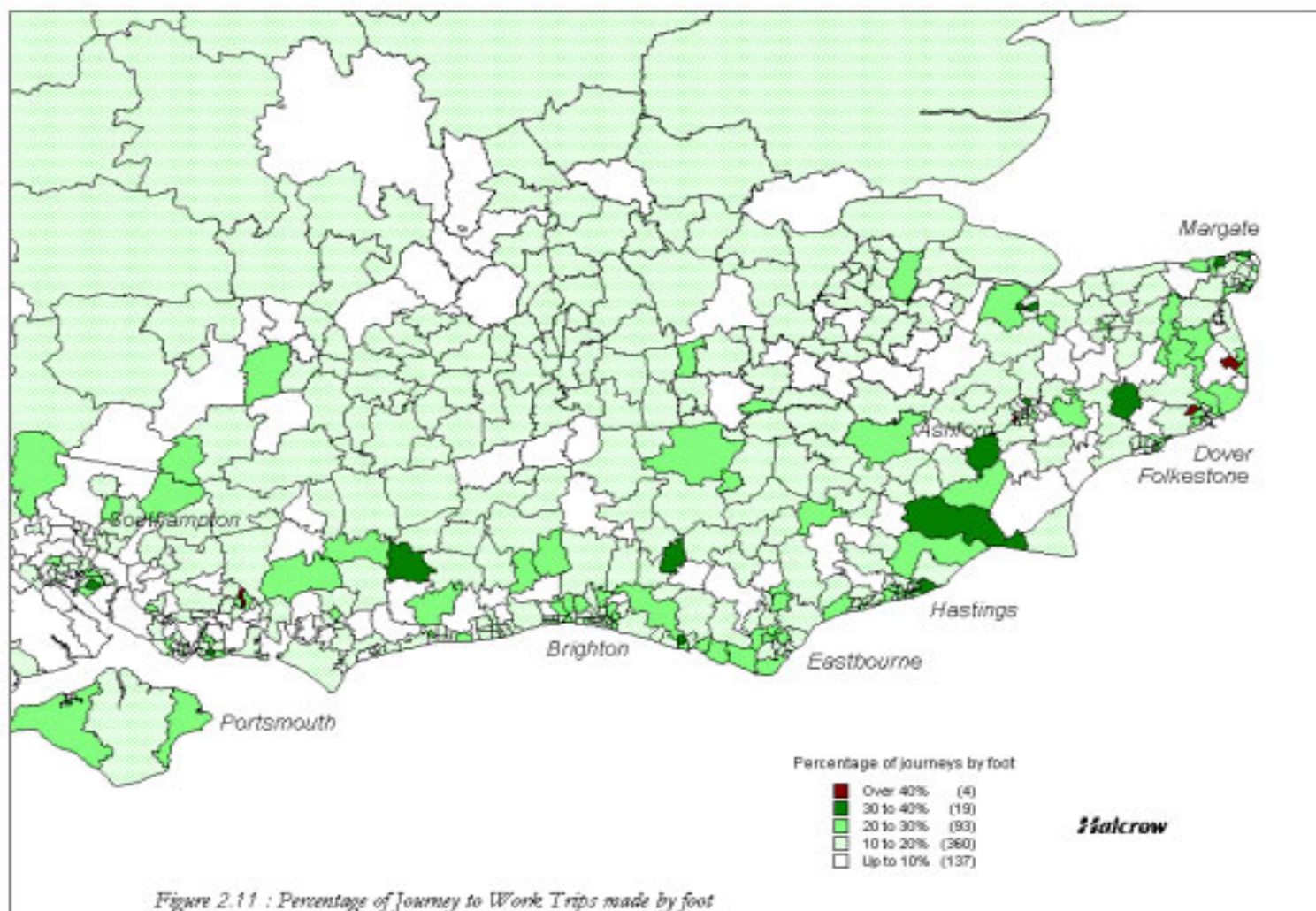
2.3.22 Some towns can have significantly higher levels of cycling; eg: Brighton, due to the prevailing geography, topography and demographic structure.

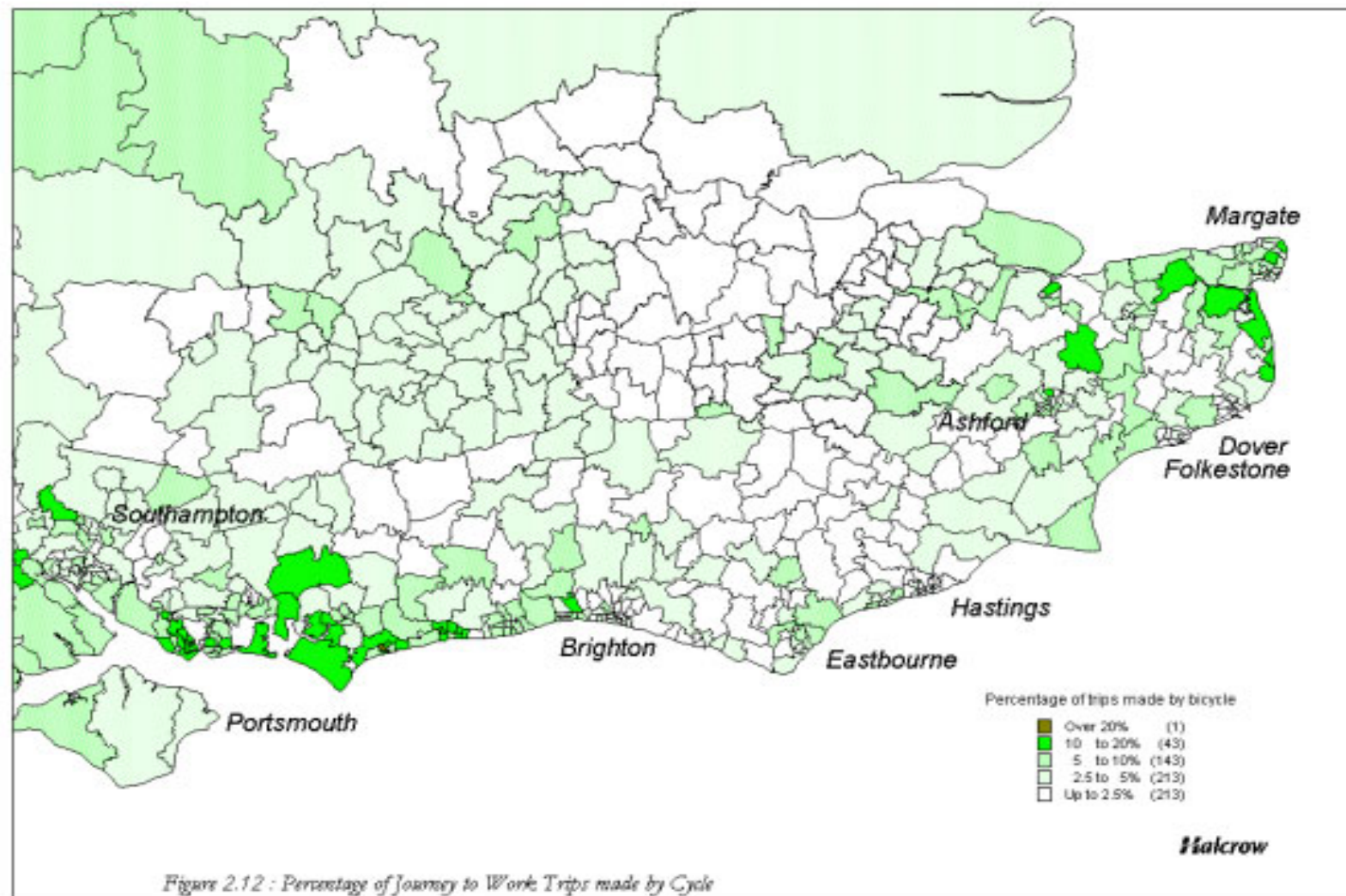
Freight

2.3.23 With notable exceptions, particularly Southampton Port, most freight movement is made by road. Freight movements are however generally between the south coast and the rest of the UK, rather than along the corridor. Where freight movement does occur on roads within the corridor, it is generally as the start or finish of a longer trip, using north – south radial routes. This reflects the south coast's function as a gateway to Europe and the rest of the world. For example, in Kent most HGV movements are on the M20 motorway between the M25 and Dover, Folkestone and the Channel Tunnel.

2.3.24 Traffic data for the travel corridors show that north-south routes typically have higher proportions of goods vehicle movements (see Table 2.3). The data show that the A27 and A259 have lower proportions of goods vehicles using these routes, with 5% of the flow typically being heavy vehicles. On the A259 east of Hastings there are typically 400 –500 heavy goods vehicles using the route per day (in both directions).







Corridor	Proportion of Flow being Heavy vehicle
A21	7%
A27	5%
A259	4%
A299	5%
A28	5%
M2	12%
M20	12%
M27	9%

Table 2.3: Heavy Goods Vehicle proportions by corridor (AADT) (Source Highways Agency)

- 2.3.25 The movement of freight by rail within the corridor is typically focussed on the port of Southampton and the Channel Tunnel. These are primarily north-south movements towards London and the Midlands.

Ports and Airports

- 2.3.26** Within the study area there are 7 ports with substantial capacity geared to handling overseas freight. These include Ramsgate, Dover, Folkestone, Newhaven, Shoreham, Portsmouth and Southampton. In addition, the Channel Tunnel also provides a key link with mainland Europe. In the last decade these ports have experienced a wide difference in their respective traffic growths. There was a steady growth in passengers crossing the Channel by sea through the 1990's until 1997. The opening of the Channel Tunnel, and the recent abolition of duty free status for goods has reduced the number of passenger movements by sea. The data shows that in 1999 Dover handled nearly 80% of international sea passenger movements from the south coast ports. By contrast, Folkestone port has now closed to cross-channel shipping and Ramsgate only operates freight services.

- 2.3.27 In freight terms, Southampton and Dover are clearly dominant over the other ports. In 1999 Southampton handled 53% of south coast freight while Dover handled 31%. The cross-channel movement of cars is now dominated by Dover and the Channel Tunnel, with Portsmouth also having a significant market share. As with the car market, Dover and the Channel Tunnel handle the largest number of HGVs.

Newhaven is one of the more successful smaller ports with a recently improved cross-channel service. However, access east and west from the A26-A27 junction is poor.

- 2.3.28 Within the study area there are airports at Southampton, Lydd, Shoreham and Manston. Southampton airport positions itself as the leading business airport for central southern England. Its passenger profile has a high business traveller focus. In 2000 there were 855,000 passengers using the airport, of which 219,000 were on European flights. Shoreham and Lydd airports cater for light aircraft and helicopters. Manston airport (Kent International airport) is owned by the Wiggins Group on the site of a former RAF air base located close to Ramsgate. This airport is principally used for freight, with an anticipated demand of 6,000 tonnes per month in 2001.
- 2.3.29 Gatwick Airport lies some 25 miles north of the study area and is London's second busiest airport providing a mix of domestic, international, charter, freight and business services. Whilst not being in the corridor itself, it provides a major transport and employment hub in close proximity to the south coast. Gatwick Airport is served by rail directly from a number of south coast towns.
- 2.4** ***Current Transport Issues that the Strategy Should Address***
- 2.4.1 A key element of the SoCoMMS study has been to engage stakeholder groups and the public at various stages. The first of these was to identify current transport problems and issues along the corridor. These responses supplemented the objective review of problems based on an analysis of current data.
- 2.4.2 The review of existing data has highlighted from a social, economic and demographic perspective, that the South Coast corridor has diversity in terms of demography, social inclusion and economic performance.
- 2.4.3 A key challenge for SoCoMMS is to provide transport improvements that can assist the areas, which are designated for regeneration.
- 2.4.4 From consultation, a key issue related to transport (and the South Coast is no different to other areas in this respect) is one of increased car dependency. This arises due to an increased decentralisation of facilities (e.g. shops); and the car being seen as part of a quest for 'material' quality. The result has led to increased traffic growth resulting in congestion, pollution, and overcrowded streets in South

Coast cities and towns. This in turn makes buses, cycling and walking an unattractive alternative.

- 2.4.5 In rural areas, car dependency is often greater, although congestion, safety and environmental problems are generally lower. The demise of public transport has lead to real problems of social exclusion, affecting a significant part of the population including the old, the young, women, the low waged and the mobility impaired.
- 2.4.6 **Congestion-** Most congestion problems are currently confined to the peak periods and occur at a number of locations along the M27/A27/A259 corridor, as well as within the principal towns. On the motorways and trunk roads, congestion tends to be at its worst where east-west movements meet north-south movements. Problems occur throughout the corridor, but particularly on the M27 near to the M3 and A3(M), on the A27 at Chichester, Arundel, Worthing and Polegate, on the A259 between Bexhill and Hastings and in East Kent at Ashford and Canterbury. With increasing demand to travel by car, fuelled by further new development, increasing affluence and increased leisure time, such congestion will increasingly occur outside these times.
- 2.4.7 Within the urban areas the worst problems occur on the main approaches to the cities of Brighton & Hove, Portsmouth and Southampton. In addition, there are also significant congestion problems at peak times on the approaches to many of the smaller towns (such as Canterbury, Chichester, Bognor Regis, and Worthing).
- 2.4.8 The region also exhibits significant seasonal traffic variations. Whilst these are mostly related to tourist traffic in the summer months, special events can also have a very major local impact, for example, music festivals, horse race meetings, show-jumping, etc.
- 2.4.9 Such problems also affect the reliability of road based public transport. They also make it difficult for freight operators and businesses to accurately predict the times of freight deliveries. Congestion also detracts from the general accessibility of the coastal towns.
- 2.4.10 A key challenge relates to congestion in that there are road-based problems today and these will worsen in the future. This is likely to have significant implications for the economic prosperity of the region.

2.4.11 **Public Transport-** The study sought to identify why people did not use other modes of transport. There are areas where public transport is perceived by users to be providing an acceptable service. Typically this was in relation to rail services to London and bus services in Brighton & Hove where patronage has been increasing in recent years. In other areas, the consultation highlighted a number of issues:

- ## Lack of investment;
- ## Quality of service;
- ## Limited through services;
- ## Slow travel times;
- ## Buses affected by congestion;
- ## Reliability problems; and
- ## Perceived personal safety.

2.4.12 However, there were other key issues identified in the study. Transport integration was often highlighted as a major concern. This being issues related to:

- ## Poor integration between modes, particularly in terms of interchange;
- ## A lack of an integrated policy;
- ## Difficulties in finding out information for journeys using many modes and difficulties purchasing tickets for cross-mode journeys; as well as
- ## Integration of transport with land use, education and health policies.

2.4.13 Concerns were also highlighted over accessibility within the study area. These issues particularly affect businesses. This was considered to arise due to;

- ## Poor levels of public transport provision;
- ## Under-developed highway network;
- ## High levels of congestion; and
- ## Remoteness of parts of the study area

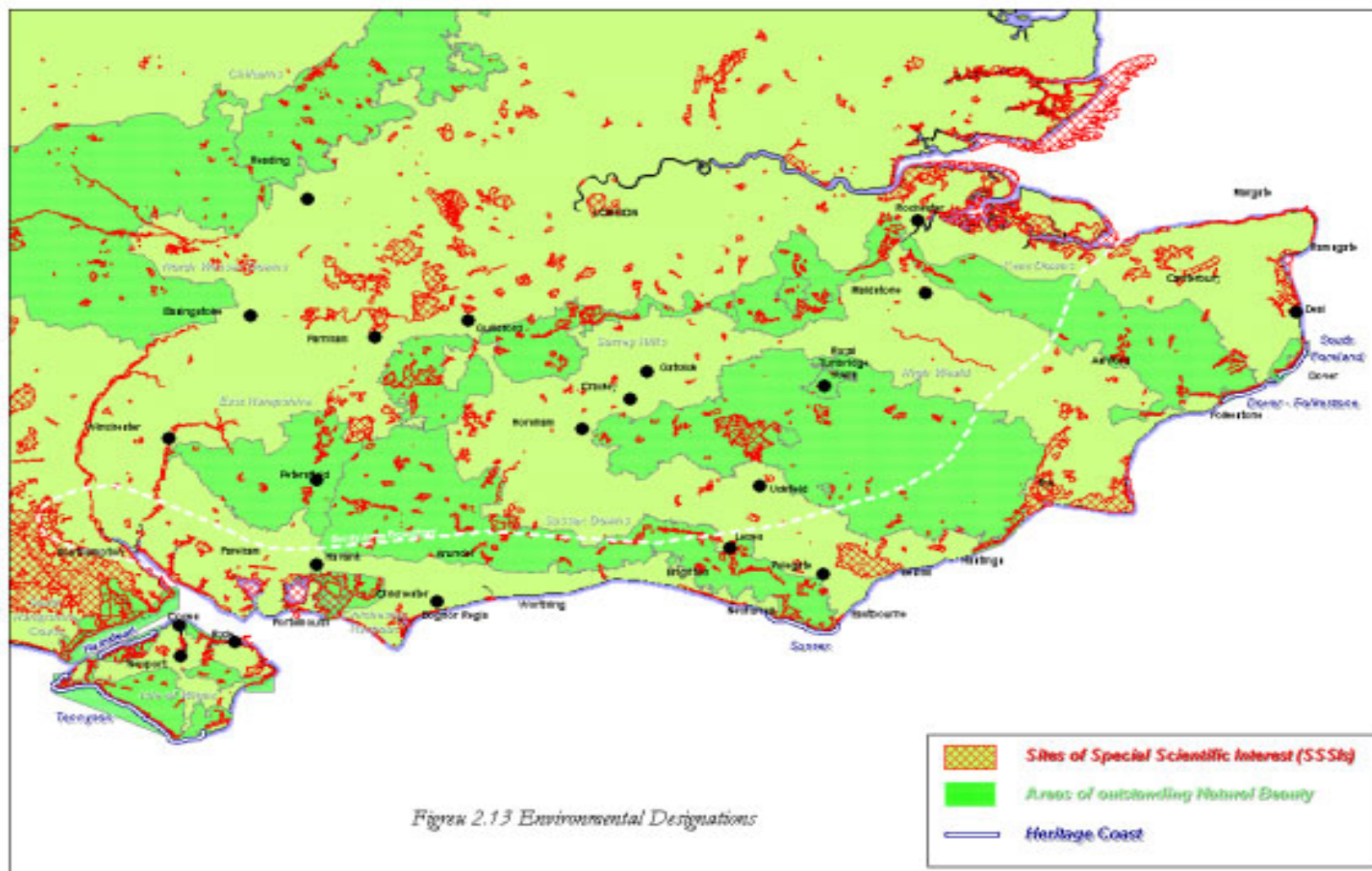
2.4.14 Public Transport is not always seen as an attractive nor an available alternative means of travel.

2.4.15 **Walking and Cycling Modes** – Key issue in relation to walking and cycling were also identified in the study. These included:

- ## Poor quality footpaths;

- ## Lack of footways in rural areas;
- ## Perceived traffic danger;
- ## Inconsistent and incomplete cycle networks;
- ## Lack of facilities for cyclists at workplaces and stations;
- ## Lack of facilities for bicycles on trains particularly with the new rolling stock.

- 2.4.16 **Environment-** There is general concern about increasing car use and its impact on the environment. In terms of increased noise, air pollution, reduced air quality and visual intrusion.
- 2.4.17 The rural areas of the South Coast Corridor contain areas of significant environmental, landscape and heritage importance. These are in a number of Nationally and Internationally important locations including the South Downs, the High Weald, the New Forest and the Heritage Coastal areas such as around Beachy Head. Within these areas there are distinctive landscapes, protected habitats, and areas that have been designated for their geological, vegetation and wildlife importance.
- 2.4.18 Many of the urban areas have an historic past and contain listed buildings and heritage sites. The cities of Southampton, Portsmouth and Brighton & Hove all have their attractions, while many of the smaller towns can boast of castles and historic town centres.
- 2.4.19 All of these attractions are affected by the impacts of the South Coast's transport system (through exposure to traffic noise and air pollution) and potentially contribute towards the South Coast's transport problems (through attracting car-borne tourists into the area). In total, 76% of the land area covered by SoCoMMs is subject to environmental designations of one form or another (Figure 2.13).
- 2.4.20 To ensure the preservation of our national heritage, constraints have been placed on the possible siting of new development and transport infrastructure. This will tend to concentrate future developments onto the coastal plain, between the Downs and the Sea, further fuelling traffic congestion within the corridor.



- 2.4.21 The proposed designation of the South Downs and the New Forest as National Parks will further add to these constraints, adding to the degree of protection afforded to these areas and increasing their attraction to tourists.
- 2.4.22 A key challenge for implementation of the strategy will be to take account of environmental considerations.
- 2.4.23 **Safety-** Throughout the study corridor road safety has been identified as a key issue, transcending the type of location, whether it be city or town, urban or rural. All local authorities have recognised the issue within their Local Transport Plans and all have ongoing strategies in place to address the issue. Despite these initiatives however, the problem continues to dominate road based transport concerns. A key common feature identified through the study area is that traffic speed and driver behaviour lies at the core of the issue.
- 2.4.24 Particular problems exist along the A27 at Chichester, Arundel, Worthing and between Lewes and Polegate and on the A259 between Hastings and Folkestone. In addition, there are general road safety problems associated with excessive travel speed. These occur in both rural and urban areas.
- 2.4.25 In putting forward any proposals within this study, the issue of improving road safety should be given a high priority, along with the other key objectives of improving efficiency, improving the environment, creating greater accessibility and maximising integration.
- 2.4.26 **Ports-** To understand the needs of the port operators a series of interviews were undertaken specifically for SoCoMMS. These took place with the operators of each of the seven seaports and the Channel Tunnel.
- 2.4.27 The key issues raised by the port operators can be summarised as follows:
- ## The roads linking the ports with the M25, and for Portsmouth and Southampton the M27 and M3 / A34, are the most important arteries.
 - ## Port related freight traffic is thought to make little use of other roads within the south coast corridor.
 - ## Each port does have a degree of dependence on the corridor's road infrastructure, but more for workers' access over short distances than for the longer distance movement of passengers and cargo.

- ## Port managers are broadly satisfied with the road infrastructure to and from their dock gates, with some local exceptions. Generally, there is little pressure for further investment to enhance the ability of ports to win business.
- ## Rail services are important for both the Channel Tunnel and Southampton.
- ## Rail facilities along sections of the corridor are not used by the ports and there was no suggestion that future port traffic could be moved by rail parallel to the coast.
- ## In terms of their immediate impact on the south coast transport corridor, the most significant factor is that the ports are very substantial providers of direct and indirect jobs. The ports therefore generate significant work based travel demand. At both Southampton and Dover the ports and maritime sectors are seen as the largest single source of local employment. The continued prosperity of the ports is of fundamental importance at each town or city. Where the prospect of a port failing has emerged, as in Ramsgate, Newhaven and Folkestone, this is a cause of great concern to local authorities.

2.4.28

In terms of problems, the port operators considered that these divide into two categories, these being land transport related and other issues. The key considerations are given under each heading below:

Land Transport Related Issues

- ## There are problems of access between the port gates and nearby dual carriageway links that form part of the national road system, e.g. Dover, Folkestone and Shoreham.
- ## There are problems related to insufficient marshalling area facilities, e.g. Dover and Portsmouth.
- ## There are problems associated with disrupted service parking for HGVs, e.g. Dover and the Channel Tunnel.

Other Issues

- ## There are problems associated with the close proximity of ports to residential areas and urban centres, e.g. Dover, Folkestone, Shoreham and Southampton.

- £# There are problems associated with competition from adjacent and much larger port neighbouring facilities, e.g. Ramsgate and Folkestone competing with Dover and the Channel Tunnel.
- £# There are problems associated with the operational and financial viability of smaller ports, e.g. Ramsgate, Folkestone and Newhaven.
- £# There is difficulty in obtaining planning permissions for new developments, allowing future port expansion to take place, e.g. Southampton and possibly Dover.

2.4.29

Airports- As part of SoCoMMS, we have had discussions with representatives of airports within the area. The key transport problems and barriers to increasing current levels of public transport usage by passengers are as follows:

- £# The 'time sensitive / cost insensitive' nature of business passengers.
- £# The current lack of public transport to meet early morning and late evening flight times.
- £# The scattered residential locations of passengers, often in rural areas with little public transport access.
- £# Infrastructure constraints, such as the need to negotiate the bridge over the rail tracks at Southampton Airport Parkway rail station.
- £# The need to provide a high quality 'early and late' public transport service; eg: to allow business passengers to take early morning flights from the airport.

2.4.30

The main obstacles to implementing a staff related company travel policy for those working at BAA Southampton and its business partners are given below:

- £# The work shift patterns of staff – particularly those who start very early and those who finish very late – which makes public transport usage an unrealistic option due to lack of available services and concerns over personal security.
- £# The diverse range of residential locations of staff, many of whom live in areas not well served by public transport.
- £# The requirement of airline crews to reside within 45 minutes of the terminal.

3

Looking to the Future

3.1

Introduction

3.1.1

This chapter highlights the future challenges which face the South Coast Corridor. This is based on the review of policy initiatives at national, regional and local level, as well as an analysis of future traffic demands if limited interventions are pursued in the area. This provides the lessons to be adopted in the development of the strategy, which is outlined in the following chapter.

3.2

The Key Challenges in the Future- National Planning Policy Context

3.2.1

The concepts of sustainable and integrated development and transport are increasingly enshrined in Government policy, in particular Planning Policy Guidance (PPG) Notes – PPG1 (General Policy and Principles), PPG3 (Housing) and PPG13 (Transport) – the Transport White Paper 1998 and ‘Transport 2010’, the Government’s 10-year Transport Plan.

3.2.2

There are a number of common practical themes arising from these:

- ## Integrating land use and transport planning, including improving accessibility to public transport and developing public transport corridors.
- ## Reducing the need to travel and dependence on the car.
- ## Encouraging the concentration of development in existing towns and cities, rather than dispersal.
- ## Concentrating retail, leisure and tourism development in central and edge-of-centre locations.
- ## Maximising the re-use of previously developed (‘brownfield’) land also supported by the Urban Task Force’s urban White Paper on achieving an ‘urban renaissance’.
- ## Creating mixed communities also supported by the Government’s regeneration and social exclusion policies and programmes.

3.2.3

These key themes provide the framework for the future development of the south coast corridor. Evolving land use and transport policy is intended to boost public transport use by concentrating development in accessible locations, by improving the quality of rail and bus services and physical connections to them, and by making car use less attractive. National policy thus provides a positive backcloth against which regional and local policy is set.

3.3

3.3.1

Regional Planning Policy Context

The recently published RPG9 for the South East (March 2001) covers the period up to 2016 and sets out the framework for the long term future of the South East. The main principles that govern the continuing development of the region include the following:

- ## Urban areas should become the main focus for development through making them more attractive, accessible and better able to attract investment.
- ## Greenfield development should normally take place only after other alternatives have been considered and should have regard to the full social, environmental and transport costs of location.
- ## Access to jobs, services, leisure and cultural facilities should be less dependent on longer distance movement and there should be increased ability to meet normal travel needs through safe walking, cycling and public transport with reduced reliance on the car.

3.3.2

RPG9 sets out the housing requirement for London and the South East between 2001 and 2006. This states that in London, provision should be made to accommodate on average, an additional 23,000 households per year. In the Rest Of The South East (ROSE) provision should be made for an annual average rate of 39,000 net additional dwellings. This is subject to review before 2006 and in the light of monitoring and the findings of Urban Capacity Studies. In the ROSE, Development Plans should make provision for net additional dwellings so as to achieve the annual average level of provision given in table 3.1 below.

County	Annual Average Rate of household provision	Total (2001 – 2006)
East Sussex	2,290	13,740
Hampshire	6,030	36,180
Isle of Wight	520	3120
Kent	5,700	34,200
West Sussex	2,890	17,340

Table 3.1: Additional Household Provision 2001-2006

3.4

3.4.1

Regional Transport Strategy

The Regional Assembly's Draft Transport Strategy builds on RPG9 to provide a framework for the development of transport across the South East. The strategy

responds to the great diversity of the region and the need for balance amongst a range of needs and issues.

3.4.2 The strategy promotes the concept of 'invest and manage', implying the need for both 'carrots and sticks' in order to deliver efficiency and sustainability. The strategy also promotes a network of transport hubs and spokes around which an enhanced system is developed. The development of hubs also reinforces the spatial strategy of fostering urban renaissance across the region.

3.4.3 The Assembly's spatial strategy is of particular importance to this study. The strategic planning agenda places emphasis on urban development and reducing longer distance movements. SoCoMMS has identified a need to support and regenerate existing communities, to promote a mixed land-use and to avoid the development of infrastructure that significantly alters the existing settlement pattern (ie. by encouraging an excessive number of longer distance trips and concentrating activities or services in a declining number of major centres at the expense of smaller towns). Chapter 4 addresses this issue further.

3.5 *Planning Context- Structure Plan Guidance- Study Area*

3.5.1 The County Structure Plans set out the housing provision and locations for future development. A review of these plans indicates significant pressures for additional housing stock within the South Coast area.

3.5.2 The Hampshire County Structure Plan (December 2000) is a joint Structure Plan for the county of Hampshire and the cities of Portsmouth and Southampton and covers policy up to 2011. Provision is made for the development of 80,290 additional dwellings between 1996 and 2011 with a focus on locating new development within town centres and urban areas. The Plan demonstrates that previously developed land will not be sufficient to meet Hampshire's needs by 2011 and 12,000 of the 80,290 will be met by the development of new communities, known as Major Development Areas (MDAs) at locations west of Waterlooville and south east of Eastleigh.

3.5.3 The West Sussex Structure Plan, initially adopted in 1993 was revised to make provision for a further 12,800 homes in addition to the 37,900 already proposed between 1994 and 2011 and to show how these would be distributed between the seven District and Borough Council areas.

- 3.5.4 The East Sussex County Council and Brighton and Hove Council adopted a Replacement Structure Plan in December 1999. It became available in May 2000 and covers policy up to 2011. Policy H1 sets out the housing provision for the plan period. 35,000 dwellings are proposed to 2006, in line with the RPG requirement with an additional 10,400 dwellings proposed for the later 5 year period to 2011. It is estimated that this additional requirement will require new land allocations for approximately 3,800 dwellings. The majority of these new allocations will be required in Wealden District where they will largely be focussed on the existing towns of Uckfield, Hailsham and / or Polegate.
- 3.5.5 The Kent Structure Plan was adopted in 1996 and provides for development and change in Kent to 2011. The Plan focusses on the concentration of economic activity and employment in East and North Kent with 57,500 new dwellings proposed for between 2001 and 2011.
- 3.6** ***Future Planning Forecasts- 2016 Planning Data***
- 3.6.1 A future year Reference Case has been developed for 2016. As far as possible, this has attempted to maintain consistency with the other multi-modal studies, which are proceeding simultaneously. In so doing, we have used the available TEMPRO projections (a set of forecasts produced by the Department for Transport) as control totals at the County level for those counties in the study area within the South East Region. In order to determine distributions across the Counties, reference was made to the relevant County Structure Plans, which set out housing allocations for each of the districts. We consulted the County authorities to obtain their views on the distribution of these figures between the respective districts in their area.
- 3.6.2 Following consultation with the study area and area of influence local authorities, a set of planning data were derived for each district. These are shown in **Table 3.2**.

	HOUSEHOLD		POPULATION		EMPLOYMENT		WORKFORCE	
District	1998	2016	1998	2016	1998	2016	1998	2016
Bournemouth	71,533	81,215	158,212	168,294	75,309	86,318	67,663	76,742
Christchurch	19,812	22,013	42,566	45,026	19,501	31,787	17,134	18,911
East Dorset	36,248	40,405	80,586	80,465	31,308	34,144	35,241	37,014
North Dorset	24,799	31,009	59,029	63,614	29,267	30,637	27,156	31,807
Poole	59,833	68,342	138,062	141,062	66,369	79,885	63,065	69,120
Purbeck	20,417	24,231	45,028	47,050	22,621	26,211	20,417	22,584
West Dorset	39,666	49,446	88,654	104,497	48,833	59,338	38,041	47,024
Weymouth & Portland	26,687	31,284	61,545	65,773	19,187	23,976	27,853	32,229
DORSET	298,995	347,944	673,682	715,782	312,395	372,295	296,570	335,431
Brighton & Hove	114,757	129,626	250,327	245,314	120,175	135,137	113,801	111,127
Eastbourne	40,499	51,032	87,903	98,753	33,712	34,210	39,550	47,401
Hastings	35,521	42,931	79,454	90,915	33,460	34,312	35,168	42,730
Lewes	38,999	44,894	83,583	94,834	36,487	43,593	35,084	40,779
Rother	40,551	46,255	88,587	101,104	30,243	33,174	36,075	43,475
Wealden	61,293	70,711	138,937	152,831	54,230	58,336	66,286	76,416
EAST SUSSEX	331,620	385,449	728,791	783,750	308,307	338,763	325,964	361,928
Basingstoke	60,835	81,194	145,941	172,696	80,352	106,973	77,444	97,573
East Hants	45,506	54,791	109,744	118,670	46,759	48,374	56,156	64,082
Eastleigh	46,475	57,102	110,918	123,025	58,212	59,857	58,695	66,434
Fareham	43,749	51,752	103,585	112,081	44,376	55,872	46,803	50,436
Gosport	31,855	36,886	75,651	80,229	22,351	22,083	32,998	36,905
Hart	35,827	43,846	85,066	94,447	31,978	47,933	48,305	57,613
Havant	49,126	54,174	116,437	118,842	41,515	44,545	47,225	47,537
New Forest	73,218	82,469	168,191	179,222	65,782	79,766	78,048	82,442
Portsmouth	75,403	90,596	187,088	197,261	110,015	111,447	80,850	89,754
Rushmoor	35,126	40,157	86,063	88,034	42,878	54,383	47,462	51,060
Southampton	88,595	100,969	212,820	220,692	113,897	115,955	99,976	107,036
Test Valley	45,419	60,427	109,908	128,766	53,407	66,961	58,151	68,246
Winchester	44,132	56,447	108,373	121,360	75,341	79,172	54,205	62,500
HAMPSHIRE	675,266	810,812	1,619,785	1,755,331	786,863	893,393	786,318	881,617
ISLE OF WIGHT	54,100	65,676	124,312	136,375	53,921	59,943	50,820	58,464
Ashford	41,346	56,541	98,303	117,976	47,802	54,847	48,143	58,988
Cantebury	57,367	70,139	136,852	153,357	58,141	65,943	62,268	70,544
Dartford	35,464	47,553	84,185	99,856	40,720	51,908	43,500	52,924
Dover	44,925	52,129	106,814	116,150	43,162	44,384	49,121	53,777
Gravesham	37,339	42,611	90,400	97,235	30,373	35,763	42,128	45,700
Maidstone	57,700	70,616	138,954	155,626	71,320	76,966	71,430	81,237
Medway	96,912	112,058	239,222	258,895	86,613	95,153	117,984	130,483
Sevenoaks	45,728	49,577	109,954	114,956	46,884	51,667	53,839	56,328
Shepway	42,396	50,292	98,089	108,259	37,982	40,985	44,133	48,717

	HOUSEHOLD		POPULATION		EMPLOYMENT		WORKFORCE	
District	1998	2016	1998	2016	1998	2016	1998	2016
Swale	48,381	63,515	116,928	136,601	44,047	45,459	55,561	66,934
Thanet	53,864	60,600	124,349	133,018	38,523	40,461	51,394	54,537
Tonbridge & Malling	42,833	50,617	104,473	114,643	55,868	58,555	53,318	59,614
Tunbridge Wells	42,959	49,499	101,076	109,579	55,986	69,643	50,080	54,790
KENT	647,214	775,747	1,549,599	1,716,316	657,421	731,735	742,899	834,574
Elmbridge	52,778	58,023	126,816	131,321	54,173	60,437	62,670	66,842
Epsom & Ewell	27,925	33,229	68,874	73,429	28,125	52,772	34,817	37,449
Guildford	50,779	57,190	124,161	129,667	66,379	73,390	64,770	69,372
Mole Valley	33,028	36,233	77,035	79,788	53,279	56,710	38,077	39,734
Reigate and Banstead	48,855	61,678	117,788	128,800	58,335	91,296	60,123	66,976
Runnymede	31,965	37,793	74,841	79,846	46,313	66,975	38,735	42,159
Spelthorne	38,077	42,157	86,747	90,251	46,744	57,801	45,921	48,465
Surrey Heath	33,384	37,581	82,357	85,961	46,221	53,354	44,380	47,708
Tandridge	32,110	35,490	77,757	80,660	33,304	46,598	38,565	40,895
Waverley	46,910	50,873	113,001	116,404	56,331	61,135	55,463	58,202
Woking	38,003	41,849	90,078	93,381	45,686	49,186	47,642	51,360
SURREY	433,814	492,096	1,039,455	1,089,508	534,890	669,653	531,163	569,161
Adur	25,089	27,473	57,450	57,530	20,368	20,895	27,187	27,614
Arun	62,892	75,145	137,911	155,104	49,760	55,846	61,688	71,348
Chichester	46,297	57,706	105,353	120,055	59,350	71,801	48,071	58,827
Crawley	39,506	46,211	95,280	102,832	68,740	76,139	49,864	55,529
Horsham	50,663	64,171	119,880	137,796	57,235	69,265	61,679	73,032
Mid Sussex	52,740	66,426	125,219	143,456	58,707	65,690	66,102	78,901
Worthing	44,416	49,438	97,697	102,276	48,245	53,632	45,300	48,070
WEST SUSSEX	321,603	386,570	738,790	819,130	362,405	413,267	359,891	413,321

Table 3.2: Demographic Data- 2016 SoCoMMS Reference Case

- 3.6.3 The future year planning data indicates that some 215,000 new houses would be required between 1998 and 2016 in the districts that cover the SoCoMMS study area. This relates to an 18% increase in the household stock within the area. This will significantly increase the demands for travel.
- 3.6.4 The planning data forecast for the reference case indicates that there could be an additional 10% of jobs compared to 1998.
- 3.6.5 A key challenge facing the south coast is the ability of the transport network to cater for future development pressures.

3.7

SoCoMMS Strategic Model

3.7.1

A strategic transport model has been developed for the SoCoMMS study with the aim of testing a range of schemes, policy measures, and strategies within the study area. The model is multi-modal in nature in that it has representations of the highway, rail and interurban bus/coach networks. The model operates within the EMME/2 software.

3.7.2

The SoCoMMS model has been developed from a range of existing sources. The highway model has been developed from SERTM (South East Regional Traffic Model), ORBIT (a multi-modal study investigating orbital movements around London) and local models developed for other multi-modal studies (e.g. the Access to Hastings Study and M27 Integrated Transport Study). The rail element of the model has been developed from data obtained from the DTLR (Department of Transport, Local Government and the Regions). The network databases have been developed in a Geographic Information System (GIS). The model covers an area from the south coast to London and the River Thames (northern boundary) and Wiltshire / Dorset (western boundary).

3.8

Travel Forecasts for 2016 Do-minimum

3.8.1

In developing a strategy for the south coast, account has been taken of those transport initiatives that are currently under construction, currently committed and those measures likely to be in place by 2016. Within the study area, these include:

Trunk Roads Schemes

£# A27 - Polegate bypass- D2 standard

Major Rail Improvements

£# Completion of CTRL from Ashford to St Pancras – currently under construction (this will need to take into account changes to service patterns on the existing network)

£# Virgin Cross- Country service improvements

£# Completion of Thameslink 2000 and associated timetable changes

Franchise Proposals-

£# Measures arising from franchise proposals put forward by South Central, South West Trains and Connex South Eastern

Local Transport Plans- Through the Local Transport Plan process, a number of initiatives have been accepted for funding in the December 2000 statement. These include:

- £# Crawley Fastway (guided bus scheme in the Gatwick Area)
- £# East Kent Access – A256 upgrade to dual carriageway
- £# South Hampshire Rapid Transit (including provision of light rail between Portsmouth and Fareham and bus improvements between Portsmouth and Waterloo-Horndean Bus Improvements
- £# A280 Angmering Bypass

Other Schemes

- £# East Kent Access Phase 2
- £# A259 Bognor Regis Relief Road.
- £# M20 junction 10a

3.8.2 In addition, there are a number of schemes in the Area of Influence being pursued which affect movements to/from the South Coast corridor. These include:

Trunk Roads Schemes

- £# M2 widening to D4 standard between Cobham and junction 4
- £# A2- Bean – Cobham Widening Phase 1 (Bean-Tolgate) -D4 standard
- £# A2 – Bean – Cobham Widening Phase 2 (Tolgate- Cobham) – D4 standard
- £# A21 - Lamberhurst bypass – D2 standard
- £# A249 - Iwade – Queenborough Improvement (Kent) – D2 standard
- £# M25 - J12-J15 Widening (Surrey) –D5/D6 standard
- £# A2/A282 – Dartford Improvement (M25) – D4 standard
- £# A23 - Coulsdon Inner Relief Road (S London)- D2 standard

Schemes from Multi Modal Studies and Road Based Studies

- £# A21 Tonbridge to Pembury Improvements
- £# A3 Hindhead Common Tunnel
- £# Service improvements Wadhurst to Tonbridge

Other Schemes

- £# A24 Horsham – Capel Improvement

3.8.3 The SoCoMMS strategic transport model has been used to assess the performance of the network in 2016 compared to today. The model has network representations for road and rail systems.

3.8.4 The key statistics for the core study area for the 2016 Do-minimum indicate:

- £# Vehicle trip origins across the South Coast are forecast to grow by 28%;
- £# The growth in trip origins by county indicates 32% in Kent, 30% in East Sussex, 33% in West Sussex and 24% in Hampshire;
- £# Vehicle kilometres across the South Coast are forecast to increase by 30%;
- £# The total travel time spent in vehicles across the south coast is forecast to increase by 51%.

3.8.5 As a consequence, average daily travel speeds in towns will reduce from a current level of 20 mph to 15 mph and travel speeds along the M27 / A27/ A259 corridor will reduce from:

£#	62mph to 54 mph	Cadnam and Havant
£#	45 mph to 40 mph	Havant to Brighton
£#	42 mph to 38 mph	Brighton to Hastings
£#	41 mph to 36 mph	Hastings to Ashford
£#	43 mph to 42 mph	Ashford to Thanet, via Canterbury
£#	52 mph to 51 mph	Ashford to Thanet, via Dover

3.8.6 The locations of increased congestion on the coastal trunk route (M27/A27/A259) are identified as:

- £# M27 Junction 2 to 12;
- £# A27 (M27 to Westbourne);
- £# A27 Chichester bypass;
- £# A27 Arundel;
- £# A27 Worthing- Lancing;
- £# A27 Shoreham –Portslade;
- £# A27 Hangleton- A27 Lewes;
- £# A27 Beddingham level crossing;
- £# A259 Bexhill-Hastings;
- £# A2 Dover- A256 junction
- £# A299 Birchington.

3.8.7 These increases in congestion are in spite of significant enhancements to the rail system, such as CTRL. The model forecasts an increase in rail trips of 31% between now and 2016.

3.8.8 The increased traffic volumes on the highway network would have implications for safety in the future. Increased vehicle kilometres could lead to increased accidents in the future and a spreading of safety problems.

3.8.9 Increased travel will also impact upon the human environment. Increased traffic levels will generate higher noise levels whilst congestion will also increase pollution problems.

3.9

Forecasts to 2030

3.9.1 The development of the 2030 forecasts again made use of TEMPRO information collated by the SERAS team. The approach was to identify the incremental growth in land use characteristics for each county/district between 2016 and 2030. Thus we made use of the reference case forecasts derived for the 2016 scenario and developed a 2030 forecast which took the intermediate forecast into account. A series of zonal growth factors were derived to identify growth between 2016 and 2030 and these were applied to the 2016 matrices.

3.9.2 A series of TEMPRO policy based forecasts were obtained for 2030 at the county level. The incremental change in population, households, workforce and jobs between 2016 and 2030 was identified. This was allocated between the district authorities within a county area using the same distribution as applied in the derivation of the 2016 forecasts.

3.9.3 A GDP growth of 2.25% per year was used in the generation of the future forecasts between 2016 and 2030.

3.9.4 There were no additional network improvements assumed over those identified in the 2016 Do-minimum plus.

3.9.5 The results of the 2030 do-minimum, in comparison with today indicated:

- ## A growth in vehicle trips in the study area of 44% between 2000 and 2030;
- ## An increase in vehicle kilometres of 40% between 2000 and 2030 along the trunk road corridor along the south coast;
- ## An increase in vehicle hours of 74% between 2000 and 2030 along the trunk road corridor along the south coast; and
- ## A growth in rail trips in the study area of 44% between 2000 and 2030.

3.10

3.10.1

Summary

The travel forecasts for the South Coast indicate that travel demands will grow for both road and rail. In the absence of any strategy this will lead to:

- ## a worsening in congestion on the highway network;
- ## worsening reliability for road based public transport if there is no provision of priority measures;
- ## worsening reliability for freight movements which would have a consequent impact on businesses within the corridor;
- ## further safety problems on the network caused by additional traffic; and
- ## a poorer environment for the south coast area.

3.10.2

Such deterioration has implications beyond the transport system alone. Rising congestion will lead to a worsening of environmental conditions such as noise, air pollution and townscape. The attractiveness of the South Coast region to investors will fall, as costs to businesses rise. Overall, the quality of life in an area renowned for both its physical and human environment will decline.

4 Strategy Development Process

4.1 *Overall Approach to Strategy Development*

4.1.1 The Terms of Reference stress the importance both of assessing immediate and long-term transport problems within the corridor and addressing strategic issues by proposing an over-arching transport strategy for the area. To this end, the strategy has been developed to reflect both identifiable *problems* within the transport system and the strategic *policy* context.

4.1.2 The approach to strategy development has followed both a *bottom-up* problem-oriented process and a *top-down* policy-led method. The bottom-up approach has been heavily analytical, involving the wide range of data collection, modelling and consultation processes described here and in the supporting documents. This has addressed both existing and future problems concerning congestion, safety and the environment across the study region.

4.1.3 The top-down approach has been based on analysis of the wider policy environment, involving the economy, sustainability, development control, etc as well as transport. This is of particular importance for a study such as this, covering a large, diverse region with a variety of stakeholders and a number of major policy issues which extend well beyond the confines of the transport system.

4.1.4 These two approaches, bottom-up and top-down, have converged at a number of points of the study. The initial generation of measures to test has reflected a need both to address the identified problems and meet the policy agenda for the region. The appraisal of measures, following the GOMMMS methodology, takes account of both direct impacts on problems and wider policy implications. The Strategy Development Plans also provide an opportunity to demonstrate the role of the strategy in addressing both problems and the wider policy agenda.

4.2 *Analysis of Problems*

4.2.1 Chapters 2 and 3 have reported upon the detailed analysis of current and future traffic, accessibility, safety and environmental conditions across the corridor. Concurrent with this analysis, the strategic multi-modal traffic model has been developed to support the design and testing of the various elements of the strategy.

4.2.2 The broad problem issues to have emerged from this analysis and which have been central to the development of the strategy are summarised below:

- £# **The Car:** the average car journey is less than 25km and very little interaction occurs between towns more than 50km apart. As documented above, serious congestion occurs in peak periods on the approaches to towns and cities corridor-wide. Congestion can be correlated closely with a number of bottlenecks within the sub-regional highway network.
- £# **Public Transport – General:** less than 12% of all motorised trips are by public transport, reflecting a steady decline over several decades, fuelled by an increasingly dispersed land-use pattern. Poor interchanges and a lack of integration are amongst the greatest problems affecting public transport.
- £# **Trains:** over 40% of rail trips are to London. In the east-west direction, the pattern of rail trips is similar to car, with most of the remaining journeys being relatively short between adjacent towns. The new South Central and South-West Trains franchises are proposing significant investment in stations and radial routes to London. South Central are also proposing modest investment on the Coastway line.
- £# **Buses:** bus tends to play a significant role within larger conurbations (for example, carrying 20% of motorised trips in Brighton and Hove). However, across the wider corridor, bus accounts for less than 6% of motorised journeys, largely due to the difficulties in providing viable services outside of urban areas.
- £# **Walking:** walking plays a major role for short trips, but this figure could potentially be much higher. It is also key to many public transport based trips.
- £# **Cycling:** cycling accounts for 4% of journeys to work and as with walking, could account for more if facilities could be improved.
- £# **Freight:** with notable exceptions, such as Southampton Port, most freight movements are by road and are generally between the study area and other parts of the UK on a north-south axis. There are not currently, nor are there projected to be, major east-west movements of freight within the corridor.

- 4.2.3 Looking ahead and in the absence of any strategy, the number of vehicle kilometres driven within the corridor will grow by around 30% by 2016 and 45% by 2030. This is despite a projected increase in rail use of 30% by 2016.
- 4.2.4 Analysis of the traffic situation has been supplemented by the three extensive rounds of public consultation. These have endorsed the observations and

modelling and added a number of additional themes that have influenced the development of the strategy:

- ## **Balance:** a willingness exists to make greater use of an improved public transport service, but at the same time, significant improvements to the highway network are required, particularly at bottlenecks;
- ## **Managed solutions:** a wide appreciation exists that easy solutions do not exist for current problems. A mix of public transport, private transport and demand management measures is recognised as the most likely way forward. Little support exists for the 'all road' or 'rail only' solutions.
- ## **Better transport facilities:** a wide support exists for a significant improvement in the quality of transport services and infrastructure, coupled with a realistic view of the need to promote schemes that have a reasonable chance of eventual delivery.

4.2.5 One key point to emerge from the analysis concerns the geography of the corridor. The settlement pattern reflects that of a relatively complex sub-region, rather than a conventional corridor, in that trips are centred around three sub-regional centres (Portsmouth-Southampton; Brighton; and the growing town of Ashford) with London serving as the dominant regional centre for the corridor as a whole. This can be contrasted with a conventional linear corridor serving a dominant regional or national centre (eg: London) from one or two major sub-regional centres via a larger number of lesser towns.

4.2.6 The demand for travel on the SoCoMMs corridor, clearly demonstrated by the data, reflect a hierarchy of movements:

- ## Heavy flows through the area of influence to and from London;
- ## Flows centred on sub-regional movements to and from the three principal centres;
- ## Other significant movements focussed upon smaller towns such as Chichester, Hove, Eastbourne, Hastings, Dover, etc.

4.2.7 There are relatively few long-distance movements along the corridor and although these will increase as Ashford grows and the Channel Tunnel attracts more traffic, with the existing settlement pattern, such movements will constitute a small minority of total multi-modal traffic.

4.2.8 The emphasis here is on our assumptions about the *existing settlement pattern*. Transport infrastructure investment has the capability to alter the settlement pattern and hence the distribution and level of traffic movements. This has been an important factor in the development of the strategy (see below).

4.3 The Policy Context

4.3.1 The general context for all multi-modal studies is the Government's five key objectives for transport, concerning the natural environment, safety, economic activity, accessibility and integration.

4.3.2 Analysis of the regional policy environment identifies a further set of more local issues and objectives, which must be reflected in a vision for the future. Principal amongst these are:

- ## The relationship between transport and land-use, reflected in policy goals to restrict development to suitable, mainly urban brownfield sites;
- ## Urban regeneration, reflected in the corridor's designated PAERs and the policy goal of promoting more equitable economic development across the region;
- ## Protection and enhancement of the region's bio-diversity, along with its landscape and heritage;
- ## Increased sustainability of rural communities;
- ## Reduced reliance on cars, pursued through policies to promote better integration between modes, improved public transport, traffic management, etc;
- ## Social inclusion, through the promotion of equitable programmes of development.

4.3.3 As with the broad, national policies, these regional priorities also imply a need for balanced development. This need is represented strongly within the recently published transport strategy of the South East England Regional Assembly (SEERA). SEERA has produced a vision statement which closely mirrors the work undertaken within SoCoMMs and is as relevant to the study corridor as to the South East as a whole:

'to create a high quality transport system to act as a catalyst for continued economic growth and provide an improved quality of life for all in a sustainable, socially inclusive manner: a regional transport network which by 2021 matches the best in north west Europe'.

- 4.3.4 This reflects the policy agenda of creating an economically vibrant geographical region, mixing an increased level of internal sustainability (jobs and industries) with improved links to major commercial centres in Southern England and mainland Europe.
- 4.3.5 SEERA also emphasise the importance of sub-regional development within the South-east and advances the notion of ‘hubs’ as one of the essential building blocks of a transport strategy. Hubs reinforce the importance of a hierarchy of settlements, each level fulfilling a particular set of needs in terms of employment, services, etc. Hubs also emphasise the local dimension in transport planning, in particular, the need to provide and support as wide a range of activities as possible within a local arena. This contributes to a reduction in the number and length of vehicular trips and promotes more sustainable communities. Figure 4.1 reproduces SEERAs view of regional hubs and gateways.
- 4.3.6 SEERA’s view of the role of hubs in the geographical development of the wider region accords entirely with the analysis of traffic patterns and trends undertaken within SoCoMMs. Figure 4.2 super-imposes regional hubs and spokes on the SoCoMMs area. Three major hubs can be identified within the SoCoMMS region:
- £# Ashford, due to growth by around 20% over the next decade and occupying a key strategic location;
 - £# Brighton and Hove;
 - £# Southampton-Portsmouth, regarded as a continuous conurbation within the strategy (including Gosport and Havant).
- 4.3.7 A second tier of settlement can be identified which complements the larger hubs and whose position within the regional hierarchy should not be compromised. These include Dover, Margate, Folkestone, Hastings, Eastbourne, Lewes, Worthing, Bognor Regis and Chichester.
- 4.3.8 The top-down approach thus supports the bottom-up in proposing that the study area be treated as several sub-regions and not, in the traditional sense, as a linear corridor. This geographical perspective has heavily influenced the subsequent development of the strategy in terms of proposed transport infrastructure and services.



The map is a simplified representation of the South East England region, showing only the major transport routes and hubs. It is not intended to be a detailed map of the region.

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Figure 4.1 SEERA's transport hubs and spokes

- ★ Gateways
- Hubs
- Regional Freeway
- Regional Spokes
- Short Sea Shipping Routes
- Potential Short Sea Shipping Routes
- ✈ Airport
- ⚓ Port
- Channel Tunnel
- Motorway
- Trunk Road
- Railway

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Figure 4.2 SoCoMMS Strategy with Regional Hubs and Spokes

4.4

Principles of Strategy Development

4.4.1

The development of the strategy reflects the findings of both the problem and policy-led analyses. The principles of the SoCoMMS strategy can thus be summarised as:

- ## Compliance with the Government's broad transport objectives, as set out within the GOMMMS framework and which form the specific objectives of the SoCoMMS study;
- ## Reflection of the extensive analysis and modelling of current and future problems across the transport system;
- ## Compatibility with the regional policy agenda, led by the goal of sustainable economic regeneration;
- ## Close compatibility with SEERAs' vision for transport;
- ## A spatial perspective that seeks to reinforce the current settlement pattern, in terms of the need to avoid generating additional, longer trips on the network and support the development of sub-regional hubs;
- ## Recognition that infrastructure and service improvements must be accompanied by persuasive measures to manage demand and utilise enhanced public transport;
- ## A balanced approach to the development of each mode within an environmentally sustainable framework.

4.4.2

The importance of economic regeneration should be stressed here. This, together with the associated aim of supporting continued economic growth feature in the policy agenda of most public authorities within the study area. This emphasises the role of the strategy in facilitating close links between planning, regeneration and transport.

4.4.3

The strategy has thus been developed in response to a set of broad, cross-sector regional aspirations, as well as to address specific transport problems. In short, the strategy aims to address and support issues beyond the boundary of the transport system alone. Chief amongst these issues is urban regeneration. The strategy aims to facilitate regeneration to reinforce sub-regional hubs (rather than provide solely for end-to-end movements) in order to both address specific problems and support the wider policy agenda.

4.4.4

These principles can be translated into a list of key needs upon which the detailed components of the strategy have been developed:

- ## Focus on highway bottlenecks and upon improving sub-regional accessibility; i.e. a local problem-centred approach to highway developments;
- ## For the minority of trips over a longer distance on the corridor, rail should be developed to become the 'mode of first choice', in order to limit traffic generation and exploit the current basic rail alignment;
- ## Rail service and infrastructure enhancements to additionally support shorter trip lengths on the corridor (e.g. through a mix of enhanced service levels and improved interchanges
- ## Compatibility with radial rail enhancements on high density London routes (e.g: Brighton Main Line, Arun Valley, etc);
- ## Avoidance of measures likely to alter settlement patterns within the corridor and further generate long distance vehicle trips;
- ## Support to schemes and developments likely to promote urban regeneration, including local highways, urban public transport (particularly bus), park and ride, etc.
- ## Incorporation of local measures into the strategy (bus, green travel plans, walking, cycling, etc) in recognition of the sub-regional issues and to support the emphasis on sustainable regeneration;
- ## Balance, between modes and between economic and environmental considerations.

4.4.5 These strategic principles, under-pinned by the problem and policy analysis, form the basis for the recommended schemes and service options which are described in detail in Chapter 5.

4.4.6 In practice, these principles have influenced the detailed design of the strategy in three ways:

- ## In terms of the **measures and options** put forward to test, which were developed with the specific principles, problems and policy issues in mind;
- ## Through the **incremental approach** to building the strategy around a core set of components; and
- ## In terms of the content of the **appraisal framework** used to evaluate individual components and the strategy as a whole (though in practice, this is largely fixed by the GOMMMS criteria).

4.4.7 The **measures and options** initially put forward were devised to directly address the problem, and policy themes listed above (removing bottlenecks; enhancing urban accessibility; supporting the settlement pattern; etc). An important associated consideration has been the need to achieve balance between the needs

of a variety of stakeholders. This recognises the fact that clear conflicts exist between some issues, for example, some types of economic development and environmental sustainability.

- 4.4.8 The **incremental methodology** by which the detailed strategy was constructed involved an iterative process of testing various permutations of strategic components against a simplified GOMMMS appraisal framework (economics, accessibility, environment, integration and safety). In short, a large number of tests were conducted involving successively more or less highways, railways, light rail, demand management, etc in order to identify the broad mix of measures which best addressed the problems and policy agenda. The process became increasingly scheme specific with successive iterations, culminating in the recommended strategy.
- 4.4.9 The **appraisal** process allowed a final iteration and refinement of the strategy, as detailed economic, environmental and accessibility issues were taken into account (as prescribed within GOMMMS). At this stage, some significant modifications were made to individual elements of the strategy (eg: rail infrastructure, the alignment of highway improvements, selection of corridors for bus priority) though the principal focus of the strategy proved to be robust. These are discussed later in the chapter.
- 4.4.10 Figure 4.3 summarises the approach to development of the strategy.
- 4.4.11 Concurrent with these activities, alternative strategies were reviewed and tested, for instance highway dominated; public transport dominated; area-wide road pricing; etc. This provided a detailed account of the comparative effects of pursuing a different approach to transport in the corridor from that recommended by the study.
- 4.5** ***The Development, Testing and Sifting of Measures***
- 4.5.1 The development of the SoCoMMS strategy, following the above process, has involved a large variety of tests and permutations of tests, using the strategic model. The measures were proposed in response to the analysis of policies and problems and were subjected to a process of sifting, initial appraisal and comprehensive evaluation tests to deliver a strategy that best addresses both problems and policies. The approach is described in more detail in the Strategy Development Report.

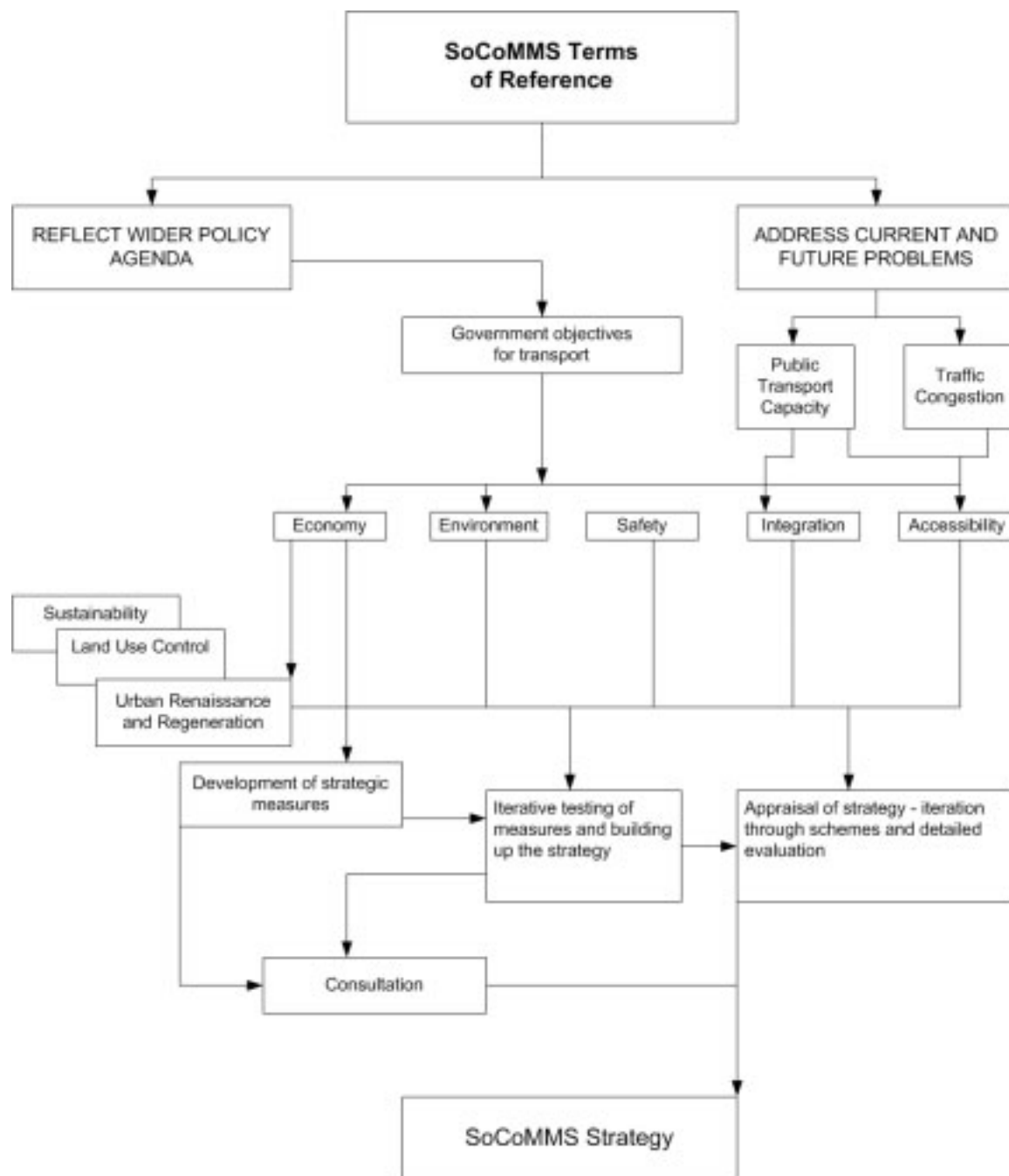


Fig. 4.3
Approach to Strategy Development

4.5.2

An initial sifting was undertaken (reported in the Initial Options Testing Report). This drew on measures identified in previous studies as well as suggestions made during the second consultation phase in October 2001. Measures were initially tested in isolation, such as individual rail or highway schemes, policy measures such as trunk road tolls, urban tolls, or reduced fares. Sixty tests were undertaken, summarised below:

Rail Improvements:

- ## Rolling stock & station quality improvements
- ## Improved access to stations
- ## Reductions in fares, either for leisure or all segments
- ## Improved travel times
- ## Station rationalisation
- ## The provision of new stations and chords;
- ## The provision of new services (e.g. Southampton- Ashford)
- ## Infrastructure Improvements and associated frequency enhancements (e.g. East Kent & S Hampshire capacity & frequency enhancements, Brighton Cross)
- ## New routes (e.g. Lewes-Uckfield, or Lewes-Uckfield-Tunbridge Wells)

Urban Initiatives:

- ## Examining the impact of measures such as green travel plans, safe routes to school etc).
- ## Improvements to bus, walking and cycling networks.
- ## Demand management measures such as Town Centre Parking Restraint, Urban congestion charging, Workplace parking levies.
- ## Infrastructure Based measures – including improved urban public transport
- ## Park-and-ride initiatives

Strategic Interventions:

- ## Entry charge to National Park
- ## Tolls on motorways, motorways and trunk, or all roads
- ## A fuel duty escalator

Highways :

Individual Elements (e.g. M27 Upgrade, Arundel bypass, improvements at Chichester, Worthing-Lancing, Beddingham, Selmeston, Wilmington, Bexhill-Hastings, Winchelsea, Rye, on the A2 and in East Kent)

4.5.2 Following on from the individual tests, measures were tested in combination. Initially these included combinations of highway measures or public transport measures:

- ## Packages of rail improvements (alternative combinations of service enhancement, infrastructure, travel time and quality improvements)
- ## Packages of Highway Schemes (e.g. the Remitted schemes on their own through to various combinations of schemes, the upgrade of the existing A27 and A259 to dual carriageway, and the provision of a new motorway from Havant to Ashford)

4.5.3 An initial 'simplified' appraisal was undertaken at this stage. These tests indicated the effect of improvements on mode share, their impact on travel flows across the highway and public transport networks, and on congestion problems. A preliminary assessment was also made of likely environmental and economic impacts.

4.5.4 The rail tests indicated that compared to quality, access and fare changes, travel time improvements were the most effective in obtaining increased rail usage and a modal transfer from private vehicles. However, it was noted that modal transfers were small with an 18% increase in rail use equating to a 1% reduction in car use. The tests on services and infrastructure provided a number of general lessons as to those areas where rail patronage could be enhanced.

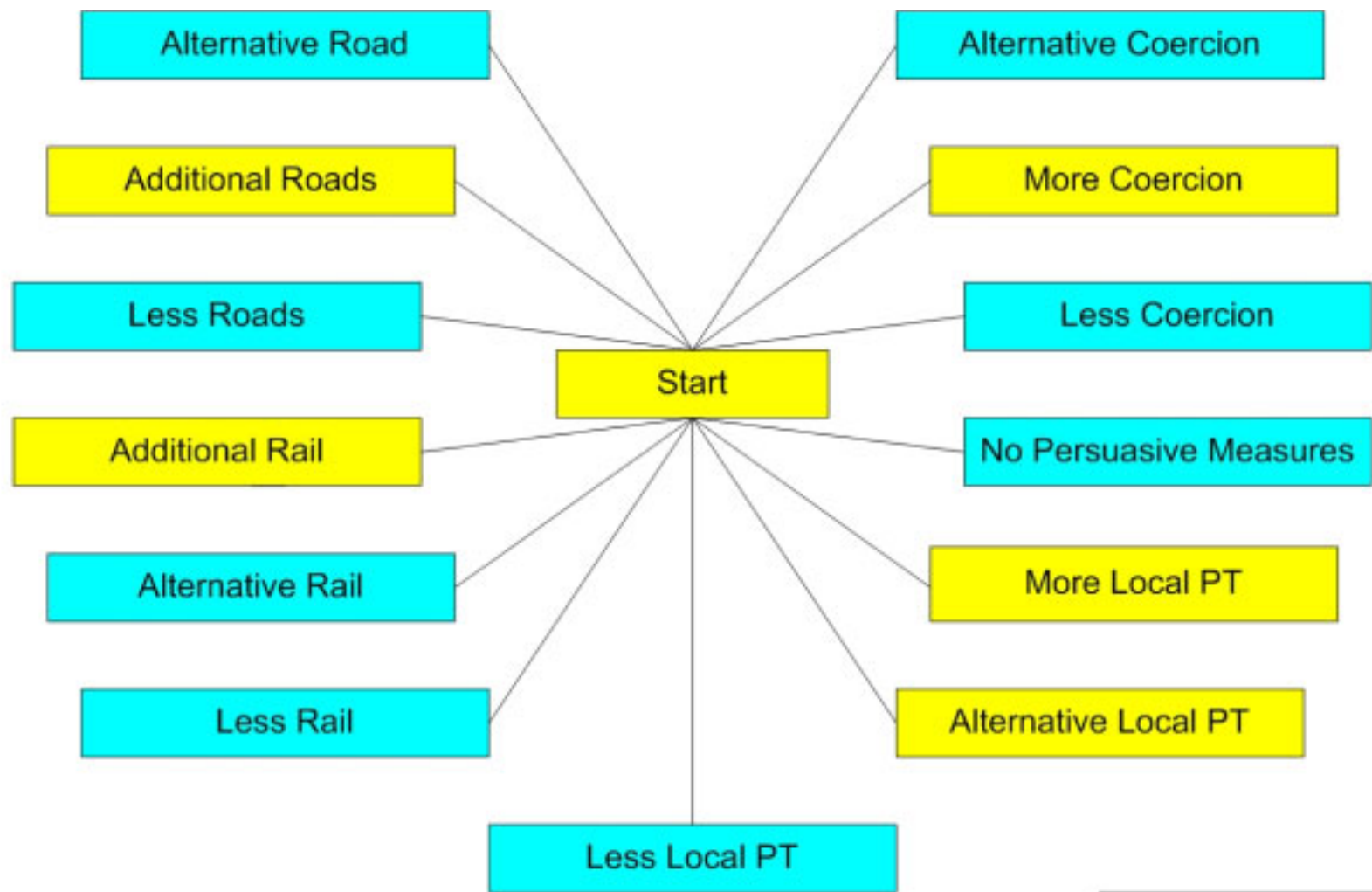
4.5.5 The urban initiative tests highlighted the importance of local measures within the overall strategy. Given the nature of demands in the corridor, in that there is a high proportion of short distance traffic, measures to encourage sustainable modes in urban areas (where it is generally feasible to provide alternatives to car) should be pursued. General reductions in travel demand were found to have a marked impact on travel conditions. This was further borne out by the range of demand management tests that were undertaken. The tests assuming tolls on motorways and trunk roads in the region highlighted problems in relation to traffic diversions. The impact of tolls on the A27 would cause traffic to divert onto neighbouring

routes of lower standard thus increasing congestion, safety and environmental problems on these routes. Tolls in relation to trip ends, or in the major centres, were found to be more effective in influencing travel demands.

- 4.5.6 The tests indicated the extent to which road schemes eased local and strategic traffic problems, and in particular, the diversionary impacts of schemes. The tests identified where traffic relief was obtained for each measure.
- 4.5.7 The main message from the initial tests were that single modal measures had little impact on overall mode share. Road and rail operations were found to be strongly complementary with rail serving movements to London and some local journeys to urban areas while road catered for a dispersed pattern of movements. Thus there was little interaction between modes.
- 4.5.8 These were then followed by tests on combinations of measures across modes and policy measures. An initial starting combination was developed based on those measures judged as 'good performers' from the initial tests. This included a range of rail improvements, road schemes, local initiatives (such as 'soft measures'), demand management and strategic interventions. As with the previous round of tests, the aim was to investigate the impacts on modal share and congestion.
- 4.5.9 The combination tests demonstrated the scope for greater integration between road and public transport. Some form of pricing was identified as a key element in promoting this.
- 4.5.10 A series of 'exclusion' tests were undertaken to assess the marginal contribution of measures. The range of tests are shown in figure 4.4. These involved the systematic removal of elements of the strategy (highway schemes, rail measures, pricing etc.) in order to assess their marginal impacts. This amounted to a Cross-checking of the benefits of each element of the emerging strategy in order to confirm its role and value.
- 4.5.11 The SoCoMMS strategy seeks to be a balanced strategy across the needs of different modes and different criteria. The robustness of the strategy has been further tested through a series of sensitivity tests. These have included a series of 'what if tests? Such as:

What if we did nothing;

What if the public transport schemes were not included;



Key	
Accepted	Rejected

Figure 4.4 - Overview of Iterative/Incremental Approach

- ## What if additional public transport measures were added;
- ## What if the package did not include road schemes;
- ## What if selected schemes were removed;
- ## What if a motorway were added;
- ## What if various levels of restraint were added.

4.5.12 The undertaking of these tests highlighted those measures which contributed most to the strategy, as well as highlighting other issues that arise from the strategy (such as impacts arising from traffic re-assignment). For each test there was an examination of traffic flow changes, impacts on volume/capacity ratios, mode share and travel times. Examination of the test results allowed the study team to develop an 'emerging preferred strategy'. This has been presented to the public during a consultation phase, along with an explanation of some of the alternative approaches. The consultation feedback from the public and key stakeholders allowed the study team to review the strategy. In particular, the consultation identified additional issues that should be considered within the strategy.

4.5.13 A series of sensitivity tests have also been undertaken. These considered the impact of alternative land use scenarios to examine the robustness of the strategy against alternative assumptions. The tests undertaken included:

- ## Local Economy- where there is an increase in the towns compared with the do-minimum, with a corresponding decrease in population in London and other areas
- ## Linear Corridor- where employment growth is increased substantially in coastal towns
- ## European Gateway- where there is a greater focus on movements to ports and stations with connections to Europe
- ## Stellar Development – greater development in London and reduction in coastal towns
- ## Urban Renaissance- growth in local population, households, employed residents and jobs with increased local GDP growth

4.5.14 The results of these tests indicate that strategic travel demand is little affected by the alternative land-use scenarios. This is in large part due to the highly constrained transport network, located as it is for much of the region between the Downs and the Sea. All scenarios tend to channel both private and public

transport trips on the limited number of east-west links. Whilst some scenarios constrain economic growth, this simply delays by three or four years the point at which critical situations are reached. Neither the strategy nor individual elements of it have been found to be sensitive to these scenarios.

4.6

Rejected strategies

4.6.1

In addition to pursuing the incremental development of a preferred strategy, a number of alternative strategic options were tested. These are summarised in Table 4.1 and outlined below.

Table 4.1 Summary of other strategy tests

Test	Rationale	Results	Comments
Coastal Motorway	Corridor length highway to maximise linkages	Higher speeds and lower long distance journey times; Little impact on current bottlenecks; Increase in mean trip length	Fails to cater for dominant local trips; generates more road trips; very strong environmental constraints; does not support Regeneration
High Speed Rail	Public transport led in attempt to maximise mode shift	Low diversion from car Congestion on roads – still poor; Does not serve main rail markets	Fails to cater for high proportion of local trips; Does not serve majority of origins/destinations Very high cost
Trunk Road Tolls	Manage demand and raise funds	High diversion on to secondary roads Environmental dis-benefits Little impact on mode split	Displaces traffic onto environmentally sensitive roads
Area-Wide road pricing. Full Network	Manage demand and raise funds	Little impact on mode split and congestion in east of region Deters significant number of trips, with negative economic impacts.	Increases cost of travel in region expensive to operate Public transport does not provide an alternative for most trips Does not support regeneration
Do Nothing	Benchmark for other tests	Worsening of traffic environmental, economic indicators.	

- 4.6.2 **Do-Nothing** – This is not a credible option. Doing nothing will mean a continuing increase in car dependency, a consequent further decline in the viability of public transport and an accompanying worsening of traffic congestion, air pollution, exposure to traffic noise and the further marginalisation of socially excluded groups.
- 4.6.3 **Build a New Motorway** – This is not the answer for the following reasons:
- £# It will not address congestion problems at existing bottlenecks as effectively because a new motorway would have more limited access – and not serve local journeys.
 - £# It will encourage growth in longer distance east- west car movement, thereby increasing car dependency and undermining the viability of rail improvements.
 - £# It will attract longer distance through traffic, using the road as an alternative to the M25 to the north.
 - £# Finally, it will be damaging to the physical environment of the area, passing through several areas of outstanding natural beauty, and perhaps through urban areas.
- 4.6.4 **Tolling Motorways and Trunk Roads** – This is not the answer either as it will encourage car users to use the non-motorway / trunk road network as an alternative. This will have the consequence of increasing:
- £# Congestion on the non-motorway / trunk road network.
 - £# Overall number of road accidents, because more traffic will be using unsuitable roads.
 - £# Air pollution and traffic noise within sensitive urban areas and in tranquil rural areas.
- 4.6.5 **Area-wide road pricing** - An option of tolling the full network reduces traffic levels by a small amount, but is limited by the lack of alternative modes for the majority of trips. Significant generalised time penalties are imposed on travellers as the charge rate increases, with implications for economic efficiency and wider regeneration benefits. It does not significantly affect the need for other schemes, though does reduce their benefits.
- 4.6.6 **Improving Public Transport on its own**- Whilst this approach can be successful in increasing the use of bus and rail services, it will have limited effect on the

overall use of private vehicles within the corridor. Thus, on its own, it will not tackle many of the congestion ‘hot spots’. Such measures need to be balanced with other approaches.

- 4.6.7 In most cases, the common reason for rejecting alternative strategies was that they failed to address the diversity or complexity of the corridor. A particular alternative may optimise the outcome for a particular stakeholder group (eg: a motorway would reduce travel costs for those wishing to make medium-distance trips) but this would be at the expense of other interests (local travellers, the environment, etc). Hence, the proposed strategy seeks to achieve balance between the large variety of interests and needs in the region.

4.7 *Strategy Development Plans*

- 4.7.1 Having established an overall strategy for the South Coast, this has been examined in more detail through a series of Strategy Development Plans (SDPs). The purpose of these is to examine the implementation of strategy elements at the local level. The Strategy Development Plans provide an opportunity to assess issues in more detail at the local level. These include aspects such as a more detailed examination of ‘soft measures’ on influencing travel demands, the form of infrastructure improvements, the ability to provide public transport improvements, issues related to institutional arrangements and more detailed appraisal of elements. The SDPs have drawn heavily upon previous work undertaken within the study area; for example, at Hastings, Beddingham, Worthing, Arundel, Chichester, and in South Hampshire.

- 4.7.2 The SDPs have also allowed measures to be fine tuned, for example, by reducing the environmental impacts of some options. Each Strategy Development Plan seeks to provide advice and recommendations to be fed back to the finalising of the SoCoMMS Transport Strategy.

- 4.7.3 The SDP’s undertaken within SoCoMMS include:

- ## Rail Elements;
- ## Bus elements;
- ## South Hampshire;
- ## Chichester;
- ## Arundel;
- ## Worthing;
- ## Brighton & Hove;

East of Lewes; and
Bexhill-Hastings.

4.7.4 In the process of carrying out the more detailed modelling and appraisal within the SDPS, the strategy was further refined. In particular, firmer conclusions were drawn on the alignment and design standard of highway schemes and the rail element of the strategy was amended to reflect value-for-money and deliverability criteria.

4.8 Summary

4.8.1 In summary, the development of the strategy has followed a methodology comprising both top-down (policy-led) and bottom-up (problem-led) approaches. A number of consistent themes emerged from these approaches which subsequently guided and focussed the development and testing of specific schemes and services.

4.8.2 The strategy is heavily influenced by issues beyond the transport system alone, such as urban regeneration and the need to reinforce sub-regional hubs.

4.8.3 The study area is not viewed as a traditional linear corridor and the strategy avoids developing it as such. Instead, the strategy aims to support the current settlement pattern, facilitate urban regeneration and limit the generation of new and longer vehicular trips.

4.8.4 The strategy also reflects the many and various aspirations of a multi-stakeholder policy environment. This region of South-East England, possibly more than any, embodies the constraints and pressures that arise when major environmental, social, economic and mobility issues converge. The study argues that no simple, single solution exists to the transport problems that emerge from this situation, hence balance is an essential component of a successful strategy.

4.8.5 Details of the strategy are outlined in chapters 5 and 6.

5

The SoCoMMS Strategy

5.1

Introduction

5.1.1

Chapters 5 and 6 outline the strategy that has emerged for the South Coast. This chapter provides an overall summary of the strategy, in broad terms. In chapter 6, there is a more detailed description of elements at the local level.

5.2

Overview of the SoCoMMS Strategy

5.2.1

The key principles on which the SoCoMMS strategy has been developed are:

- ## Compliance with Government's transport objectives;
- ## Reflection of the analysis of current and future problems;
- ## Compatibility with the regional policy agenda;
- ## Compatibility with SEERA's vision for transport;
- ## Reflection of a regional spatial perspective;
- ## Acceptance of a need for demand management; and
- ## Balance-between modes and charging issues.

5.2.2

The elements of the strategy are based on the following policy interventions:

- ## local initiatives (public and private sector);
- ## local public transport improvements;
- ## strategic public transport improvements;
- ## targeted road improvements;
- ## freight initiatives;
- ## safety and mobility initiatives; and
- ## balance - demand management.

5.2.3

These seek to take account of:

- ## Reducing the need to travel by car;
- ## Providing better integration for public transport;
- ## Promoting the use public transport to/from main urban areas;
- ## Providing more opportunities to travel by rail;
- ## Providing enhancements to assist freight movement;
- ## Providing new road/rail infrastructure;
- ## Providing local road safety and other measures;

Improving access to ports and airports.

5.3

Elements of the SoCoMMS Strategy

5.3.1

The Local Initiatives- A key element of the preferred strategy is to encourage use of sustainable travel modes, wherever possible. The aim of these elements is to reduce the demand for growth in car journeys, particularly in the peak period. This recognises that there are a large number of journeys, made within the study area, which are local in nature. Thus, the aim is to target journeys to work and schools that are made during the peak periods, as these are times of greatest congestion. The strategy would seek to provide alternative means of travel to the car which would have a benefit in terms of the environment, fewer accidents and reduced peak congestion. Significantly, in view of the importance of economic regeneration in general and the PAERS in particular, the transfer from car to other modes must be achieved without damage to the local and regional economies. To achieve this, much greater emphasis will be placed on Local Authority, Community and Business led initiatives such as:

- ## Provision of increased facilities for local journeys to be made by bus, walking or cycling.
- ## Develop Green Travel Plans for workplaces.
- ## Develop Safer routes to school initiatives.
- ## More sustainable working practices such as increased use of teleworking, greater flexibility of working hours, increased use of teleconferencing facilities.
- ## Greater use of the internet, particularly for shopping journeys.
- ## Better planning controls, imposing restrictions on car parking and ensuring that new developments are accessible for sustainable modes; and
- ## Education programmes, highlighting potential alternatives to the car and implications of increased car use.

5.3.2

Locally based Public Transport Improvements- The strategy provides greater choice for local movement. While the above local initiatives will contribute to this there are a number of other public transport measures that also need to be added. These include:

- ## encouragement of Quality Bus Partnerships or contracts;
- ## introduction of more frequent and extensive bus services, particularly in the evening and at weekends;
- ## increased number of bus priority measures;

- ## improved interchange between walking, cycling, bus and rail, particularly at “hub” stations;
- ## provision of cross-ticketing between different modes of transport;
- ## improved information systems and improved access to bus services;
- ## provision of improved walk/cycle routes to schools, stations and town centres (to be implemented on a whole route basis);
- ## introduction of edge of city Park and Ride systems with a corresponding review of central area parking provision; and
- ## introduction of new or extended public transport systems.

- 5.3.3 Fixed track local public transport measures have also been considered. Stage 1 of the light rail element of the South Hants Rapid Transit (SHRT) is included in the Base Case. Development of Stage 2, along the existing Fareham- St Denys rail line to Southampton is suggested, though the alternative of higher frequency heavy rail services on the same route could also be considered. More detailed analysis of the options is required over the next 20 years. A Light Rapid Transit System is recommended for Brighton. This should serve the four main corridors into the town. Both measures should be developed around 2020, by when traffic growth will justify them.
- 5.3.4 A key feature of the public consultation was the criticism that there was a lack of transport integration. The public had a poor perception of bus and rail transport due to difficulties with interchanges, obtaining information, and buying through tickets. This strategy component seeks to overcome these concerns and provide a more integrated system. In particular, this element is attempting to cater for the ‘whole journey’ concept. A rail journey for example is one part of a series of trip chains involving a walk, cycle, bus or car journey to a station, followed by the rail journey, and then a further egress journey by another mode.
- 5.3.5 The strategy includes a significant investment in public transport interchange facilities (rail and bus) and proposes the expansion of park-and-ride measures. The emphasis is on improving the quality of the facility (eg: in terms of waiting rooms, information, security, etc). The strategy also aims to focus investment in interchanges at existing rail hubs, building on other ongoing investment (eg: by rail and bus operators) and on the service enhancements proposed here.
- 5.3.6 The aim of this element is to increase the attractiveness of public transport and provide an alternative to the car for many journeys.

- 5.3.7 **Strategic Public Transport Improvements- Rail Strategy** – The rail strategy addresses a number of key issues, all of which are intended to increase accessibility and improve the public transport mode share. The key issues are:
- ## Lack of a long distance public transport mode along the corridor as an alternative to road;
 - ## High rail travel demand between adjacent/major towns on the corridor and to London;
 - ## A need for targeted frequency improvements for local services to support regeneration initiatives (eg: Hastings);
 - ## Poor quality of stations, their access facilities and interchanges across the corridor.
- 5.3.8 The strategy recognises the need for the rail network to fulfil several rules – local, regional and London orientated. Sufficient spare capacity exists within the network for all of these to be undertaken, which will be released by the recommended local infrastructure enhancements.
- 5.3.9 The inputs to the strategy involve a wide variety of, generally small, investment schemes aimed at overcoming local bottlenecks and facilitating increased capacity. These include new signalling, additional platforms and some extra track. The largest single scheme is the double tracking of the remaining single track stretch between Ashford and Hastings. Significant investment in a general programme of station upgrading is also proposed.
- 5.3.10 The outputs from the strategy centre around a new half hourly rail service between Ashford, Brighton and Southampton. This creates a new strategic link in the corridor, providing a public transport alternative to car which will prove highly attractive to longer distance travellers (including those between major towns on the corridor). In addition, the strategy provides:
- ## Six new stations to support developing areas;
 - ## Upgrading of most stations in the corridor;
 - ## Higher frequency local services at certain points, including Hastings.
- 5.3.11 In the longer term, significant service enhancements are recommended in South Hampshire, including direct services between Brighton and Southampton Airport to coincide with the possible introduction of SHRT LRT stage 2.

- 5.3.12 **Targeted Road based Improvements** - The strategy recognises that more efficient use should be made of existing road capacity. This should include the implementation of enhance intelligent transport systems (ITS) which includes better traffic management and control, access control at busy motorway junctions, speed management and variable speed limits, automatic incident detection and lane priorities as well as the collection and provision of real time information.
- 5.3.13 Improvements in technology are allowing the strategic road network to operate more efficiently. This has been demonstrated by flexible operating regimes to be pursued as network conditions change. Enhanced ITS systems will provide much more reliable and up to date 'real time' traffic so that drivers can better plan their routes and journeys.
- 5.3.14 For the preferred strategy to be effective it must address the issues associated with car dependency. It is no longer possible or appropriate to satisfy all demand for road travel, however some improvements are essential to the continued economic and social well-being of the region. There is currently severe traffic congestion at many locations along the A27 Trunk Road and this is predicted to worsen in the future. This will make it more difficult for business and freight operators to gain access to many of the South Coast towns from the national road network.
- 5.3.15 After considering all available options the development of the strategy concluded that these problems could only be addressed through localised highway improvements. These are aimed at the bottlenecks that cause congestion. The strategy includes a number of measures to improve the current road network's overall efficiency. These include:
- ## improvements to the operation of the M27;
 - ## removal of bottlenecks on the A27 between Havant and Polegate- such as at Chichester, Arundel, Worthing, East of Lewes;
 - ## improvements between Bexhill and Hastings;
 - ## improvements to the eastern approach to Dover;
- 5.3.16 In addition to the above, there may be a need to provide local capacity, safety and environmental improvements as and when needed. These could be achieved through junction alterations, traffic management, signal control and improved signing, for example, on the A259 east of Hastings.

- 5.3.17 Highway improvements are of particular importance to rural communities. Public transport will continue to serve a relatively small portion of the market and the car will remain the most efficient mode. Reducing congestion on the approaches to larger towns and improving trunk routes to reduce the need to divert onto sensitive rural roads will benefit these communities.
- 5.3.18 **Promotion of Rail and Sea Based Freight Initiatives**-It is recognised that the majority of freight movements within the South Coast corridor will continue to be made by road. Nonetheless the strategy should support and facilitate the transfer of freight movement from road to rail and sea. In particular the strategy should seek to promote further use of rail and sea through encouraging:
- ## freight quality partnerships;
 - ## road and rail access to ports – the strategy includes A2 enhancements at Dover;
 - ## transhipment of selected international freight between international and coastal shipping; and
 - ## further use of coastal shipping for bulky goods (building materials, etc)
- 5.3.19 It should, however, be emphasised that most freight movements are on a north-south axis between the ports and London, the Midlands and the North. Some North-South routes are in the process of being improved (e.g. CTRL), others such as the A21 north of Hastings, whilst outside the scope of SoCoMMS need addressing.
- 5.3.20 **Promotion of Personal Safety, Road Safety and Accessibility for the Mobility Impaired**-In accordance with general government policy and good design practice all strategy measures should be designed to promote personal safety and aid movement for the mobility impaired. To ensure that this is achieved the overall strategy should be taken forward within the context of existing mobility policies, such as the forthcoming rail Disabled Access Act (DDA) or an agreed mobility impaired accessibility policy to be developed through consultation with local groups and organisations.
- 5.3.21 **Ensuring Balance: Demand Management** Each of the above strategy elements will only be effective if a state of equilibrium is achieved between the demand for travel by car and other modes of transport. To ensure this, the strategy must have at its core measures that seek to control the overall level of future car usage, particularly in locations where there are, or will be, good alternative transport

systems. All of the above measures should therefore be introduced within an overall policy regime that includes:

- ## significantly increased long stay public parking charges within each of the South Coast towns, using a fee hierarchy that reflects the town's status;
- ## increases to short stay public parking charges so as to encourage off-peak modal transfer to public transport and park and ride;
- ## a levy on all private workplace parking spaces in core urban areas, together with all parking spaces in "out of town" retail parks along the South Coast; and
- ## car based cordon charges for entry into the major conurbation's of Southampton, Portsmouth and Brighton & Hove so as to encourage use of the new Park and Ride facilities.

- 5.3.22 The demand management measures are targeted on those trips for which alternative modes can be developed, ie. those with a destination in urban areas or at a major traffic generator. As noted earlier, other forms of demand management have been considered and rejected as inappropriate on a mix of traffic and economic (e.g regeneration) grounds.
- 5.3.23 It is this final component that will determine the overall success of the strategy itself. It is essential therefore that any funding commitment is directly linked to the production of a corridor wide implementation plan, directly linking the funding of any new infrastructure to the progressive implementation of these balancing measures, and that these measures are introduced consistently throughout the corridor and neighbouring areas as part of the Regional Transport Strategy.
- 5.3.24 It should be noted that the general field of traffic demand management is likely to continue to evolve through the life time of the strategy. Goods vehicle charging will be implemented over the next few years (as a fiscally neutral measure) and its effects will need to be monitored over time. Should government come forward with a more ambitious programme such as area-wide charging (e.g for the South-East as a whole), these recommended targeted schemes will be need to be reviewed and possibly amended.
- 5.3.25 Figure 5.1 summarises the various elements of the strategy.
- 5.3.26 Chapter 6 provides details of various elements of the strategy.

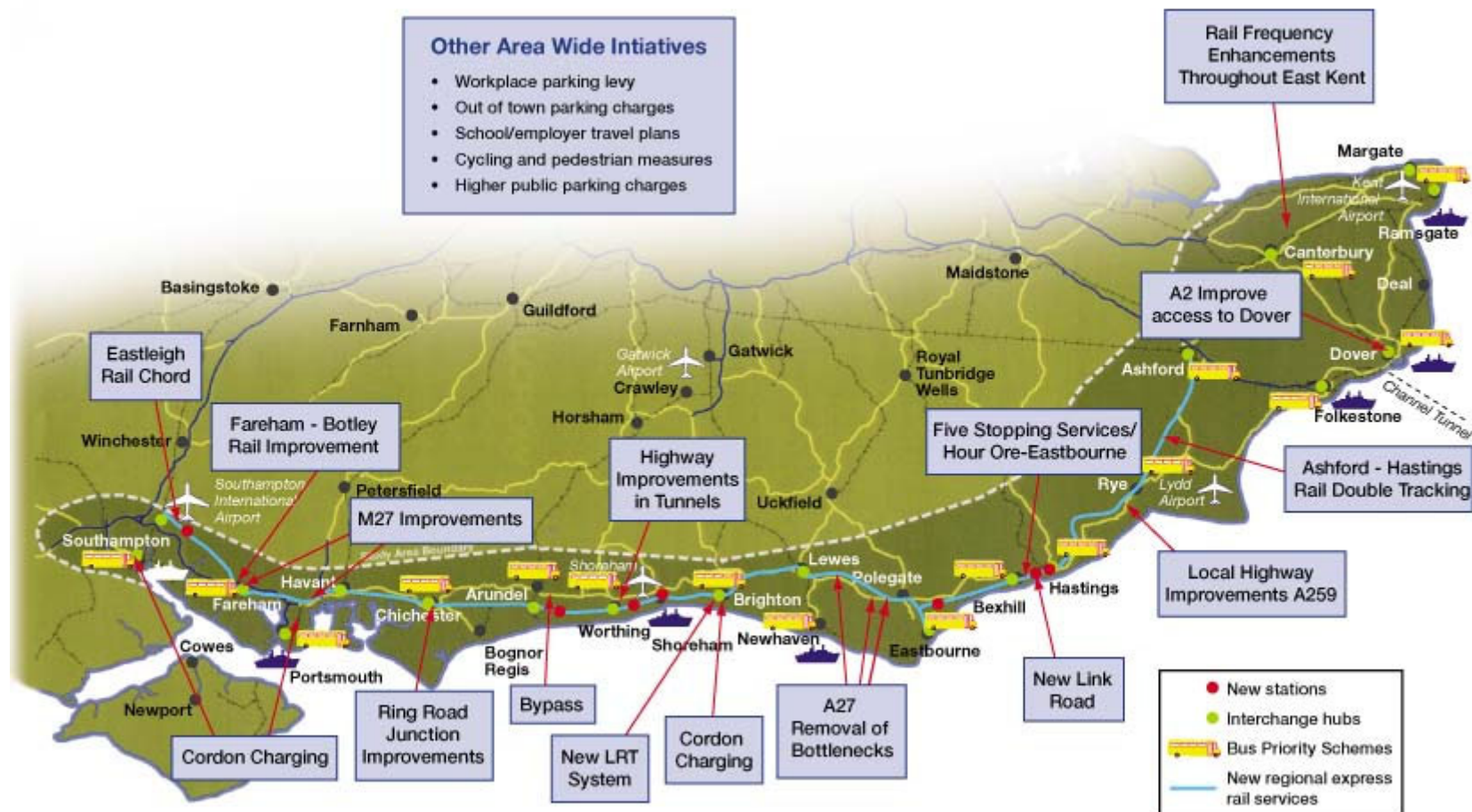


Figure 5.1 Summary of Strategy

6

The Strategy at the Detailed Level

6.1

Introduction

6.1.1

The previous chapter provided an overall summary of the strategy and its components. In this chapter we outline the nature of the elements in more detail and at the local level. Much of this work draws on work undertaken as part of the Strategy Development Plans. The Strategy Development Plans have also drawn on the outcomes of previous studies such as: the M27ITS; the Worthing-Lancing Integrated Transport Study and the Access to Hastings Study. This work is reflected in the Strategy Development Plans, which are separately published with other supporting material.

6.1.2

The chapter starts with an initial discussion on a series of broad issues, such as 'soft measures', the role of rail, bus, freight. These are then followed by area descriptions which highlight key problems and issues, and outline the measures in each area*. The appraisal of the strategy is given in chapter 7 and the delivery of the strategy is outlined in chapter 8.

6.2

Soft Measures

6.2.1

A key element of the strategy across the whole of the corridor is the need to reduce the overall rate of growth in private vehicle trips. The SoCoMMS strategy recognises this by providing support to local public transport, walking and cycling initiatives, as well as support for 'soft' measures, ie. those involving changes to local transport is planned and coordinated amongst various stakeholder groups.

6.2.2

The key recommendations for the SoCoMMS area are outlined below.

##

Safer routes to school- these should be encouraged in many of the towns along the corridor- A variety of initiatives can be pursued locally and the types of measure adopted will be dependent on local circumstances. This approach will require the continuation/ provision of resources to local

* As discussed in the Strategy Development Plans, Highway improvements are principally local in nature and are therefore also described in the latter parts of the chapter in the Strategy Development Plans.

authorities in order to develop, co-ordinate and deliver these improvements.

- £# **Travel awareness education and marketing**- this should be adopted across the study area. This should concentrate on providing information to users as to which services are available in key areas . This will be supplemented by up to date travel information such as at bus stops and rail stations. Improved marketing of the transport system through new and improved ticket systems should be pursued.
- £# **Workplace Travel plans**,- these should be expanded to encompass major employers in the corridor, and for new major developments. Government guidance should be reviewed to include targets and regional guidance strengthened regarding parking standards. Local authorities should set modal targets in congested areas and also use the introduction of workplace parking levies as a means of regulating parking spaces. This approach will require the continuation/ provision of resources to local authorities in order to develop, co-ordinate and deliver these improvements.
- £# **Home working**- this should be promoted nationally, as this would assist the region. This could be undertaken through the introduction of tax allowances for home offices and could form part of Workplace Travel Plans.
- £# **Home Zones** – these should be specified for new housing developments and work undertaken to convert existing residential areas.
- £# **Videoconferencing**, this should be promoted through regional partnerships with local education authorities and health trusts taking a lead in its use for teaching and other purposes. Government departments could also be similarly active in the use of video conferencing.
- £# **Walking and Cycling**- the strategy proposes that locally based pedestrian and cycle improvements should be pursued. These include the completion of the National Cycle network and links to the network, as well as completion of local walking and cycle networks, such as feeder networks to stations, hospitals and town centres.

6.2.3

£2m per annum has been budgeted for the planning and administration of soft measures within the study area. It is expected that this will be focussed on creating new posts in most local authorities within the region to manage the introduction of these measures.

6.2.4 Overall, the impact of soft measures is expected to reduce travel demands by 5% during the day. In the peak periods and in particular locations, greater reductions may be achieved.

6.3

Rail Strategy

6.3.1 The current rail system within the corridor is seen to have a number of positive features which can form building blocks for the future. In particular, the frequency of trains along the Coastway, between Havant and Eastbourne is viewed by some as being reasonable, as is the general density of station provision throughout the corridor. Similarly the introduction of new rolling stock in the corridor is viewed as positive. In addition, the four key rail routes between the south coast and London (at Southampton, Portsmouth, Brighton and Ashford (after the opening of the Channel Tunnel Rail Link) are seen to provide a reasonably adequate basic service.

6.3.2 These positive features are, however, overshadowed by an array of real and perceived shortcomings. These will have to be addressed if the corridor's rail system is to become a first choice travel mode, rather than simply a necessary second best alternative for those who do not have access to a car.

6.3.3 It should be noted however, that the problems illustrated here are only part of the story. If rail is to function as a first choice travel mode, then 'whole journey issues' rather than just rail based journey problems will need to be addressed. Subsequent paragraphs examine these other elements, particularly the quality of the primary station access modes (i.e. walking, cycling and public transport) and the extent to which there is seamless transfer between these modes and the train.

6.3.4 A strategy development plan has been undertaken for the potential for rail on the south coast network. This has sought to identify in more detail the range of improvements that are needed, what the timetable would look like and assess the costs and benefits of the approach. The goal is to enhance the rail system in order to support the general aims of the strategy and complement the other measures, in particular:

- ## to enhance medium/long distance east-west services
- ## to strengthen local services on the East Coastway and in Kent in the short term and in western areas in the longer term
- ## to enhance the general and presentation of the service

The elements included within this approach are:

- ## Presentation of train services
- ## Development of stations and interchanges
- ## New stations and station review
- ## Train service enhancements
- ## Infrastructure investment

6.3.5 In developing the timetable, it is noted that in the short term there are a number of elements being pushed forward by others. These include:

- ## Implementation of schemes in GoVia (South Central) & South West Trains franchise proposals; (these will significantly improve services on the West Coastway);
- ## A new Virgin Voyager timetable for cross-country services in 2002/03;
- ## Full replacement of existing Mark 1 rolling stock by the end of 2004;
- ## The introduction of domestic CTRL services in 2007; and
- ## The introduction of new timetables for Thameslink 2000 and the New Southern Railway in 2008

6.3.6 The elements being proposed by SoCoMMS include:

Presentation of train services:

- ## Better marketing & promotion
- ## Modernisation of rolling stock
- ## Attention to special needs (e.g. bicycles on trains)
- ## Improved quality and reliability

Stations & interchanges:

- ## Improvements to station forecourts, access, short term parking, taxis, buses, interchange, “kiss and ride”, bicycle storage, etc.
- ## Structural improvements to station buildings, platforms, canopies, etc.

New stations & station review:

- ## St Leonards Marina
- ## Glyne Gap
- ## Stone Cross
- ## Shoreham Airport
- ## Littlehampton Parkway

££ Eastleigh MDA - developer financed

Train service enhancements:

- ££ Build on existing structure with new
- Fast inter-urban services
 - High frequency local services

Enhancements - East Kent:

- ££ Increase existing service from 1 to 2 trains per hour in each direction:
- Canterbury West to Ramsgate
 - Dover to Ramsgate
- ££ Increase existing service from 3 to 4 trains per hour in each direction:
- Ramsgate to Margate
- ££ Increase existing service from 2 to 3 trains per hour in each direction
- Faversham to Dover
- ££ Support Connex proposal for an increase from 2 to 4 trains between Dover & Ashford in Oct. 2003
- ££ Signalling improvements
- ££ Review case for a new station at Manston Airport, on the basis of local development plans (not yet agreed)

Enhancements - East Coastway:

- ££ Half-hourly regional express - Ashford – Brighton - Southampton – calling at Ore, Hastings, St.Leonards Warrior Square, Bexhill, Eastbourne and Lewes
- ££ Additional stopping service between Ore and Eastbourne (going on to Gatwick and Victoria)
- ££ Half-hourly local service - Ore/Brighton calling all stations via Eastbourne (in addition to existing Ashford-Brighton stopping service)
- ££ Major infrastructure investment to deliver the service improvements:
- Signalling enhancements
 - Appledore/Ore double tracking
 - Ore reversing facility
 - Provision of additional platform at Eastbourne

Enhancements - West Coastway:

Medium term developments

- ££ Half-hourly regional express - Brighton (Ashford) to Southampton calling, inter alia, Worthing, Barnham, Chichester, Havant and Fareham

- ## Increase from 3 to 4 trains per hour between Brighton and West Worthing
- ## Development of simplified and reliable timetable pattern with all Train Operating Companies
- ## Signalling improvements

Long term developments (around 2020)

- ## Possible extension of SHRT LRT system to Southampton, or increased rail frequency between Portsmouth and Southampton
- ## Construction of Eastleigh Chord
- ## Fareham/Botley double tracking
- ## Services via Southampton Airport between Brighton and Southampton.

6.3.7 The principal output from these proposals will be a new half hourly regional express between Ashford, Brighton and Southampton. This will provide a very attractive public transport alternative to car for long distance trips on the corridor. Hastings will also benefit particularly from the proposed timetable, with three stopping trains per hour, calling all stations between Ore and Eastbourne (one of which goes on to Gatwick and Victoria), plus the two regional express services. Thus, all existing stations between Ore and Bexhill will receive five trains per hour.

6.3.8 Hastings is of particular importance to the rail strategy, as SoCoMMS has been remitted to address a number of rail enhancements proposed within the Hastings Five Point Plan. The five stopping trains per hour proposed between Ore and Bexhill compare favourably with the four per hour put forward in the Five Point Plan. SoCoMMS also endorses the need for new stations at St. Leonards Marina and Glyne Gap. The half hourly regional express service will provide enhanced accessibility both east to Ashford and west to Lewes and Brighton.

6.3.9 SoCoMMS has not endorsed the case for a new Chord at Willingdon. Whilst this will reduce journey times between Hastings and Brighton and beyond, it will result in a reduced service to Eastbourne. Most significantly, the estimated cost (over £30m) does not justify the economic benefits. The likelihood of regeneration benefits have been considered here, but the high cost and modest benefits are not judged to justify the scheme in these terms. It is, however, recommended, that this be monitored and if other regeneration issues emerge or if private sector contributions can be identified (eg: from developers) the case for the Chord could be reviewed.

6.3.10 Both the Regional Express and the enhanced local service through Hastings are regarded as being essential elements of the strategy. Their benefits extend beyond the transport system and include the facilitation of economic regeneration throughout the East Coastway area.

6.3.11 Indicative timetables have been prepared in the Rail Strategy Development Plan. These are based on the best available information for new services such as Thameslink 2000. It is noted that for East Kent, the introduction of domestic services on the Channel Tunnel Rail Link Section 2 (from 2007) will have a significant impact on rail journey times to London. This will significantly enhance accessibility to East Kent which is designated as a Priority area for Economic Regeneration. The potential journey times to London St Pancras could be reduced to

- ## Ashford less than 40 minutes
- ## Folkestone less than 50 minutes
- ## Dover & Canterbury less than 60 minutes
- ## Ramsgate less than 75 minutes
- ## Margate less than 85 minutes

6.3.12 Completion of CTRL will also provide an alternative route for travellers between Hastings (and stations east of Hastings) and North and East London (e.g. Docklands)

6.3.13 The SoCoMMS timetable has been developed without the closure of existing stations. However, there is a need to review the nature of existing stations. There are locations in the corridor where the rationalisation of stations, may increase route capacity and provide faster journey times. More detailed operational analysis by the SRA, TOCS and Railtrack are needed here. In particular, it is recommended that the case for closure of four specific lightly used stations be considered:

- ## Doleham
- ## Three Oaks
- ## Normans Bay
- ## Pevensey Bay

6.3.14 Figure 6.1a illustrates key elements of the proposed rail strategy.

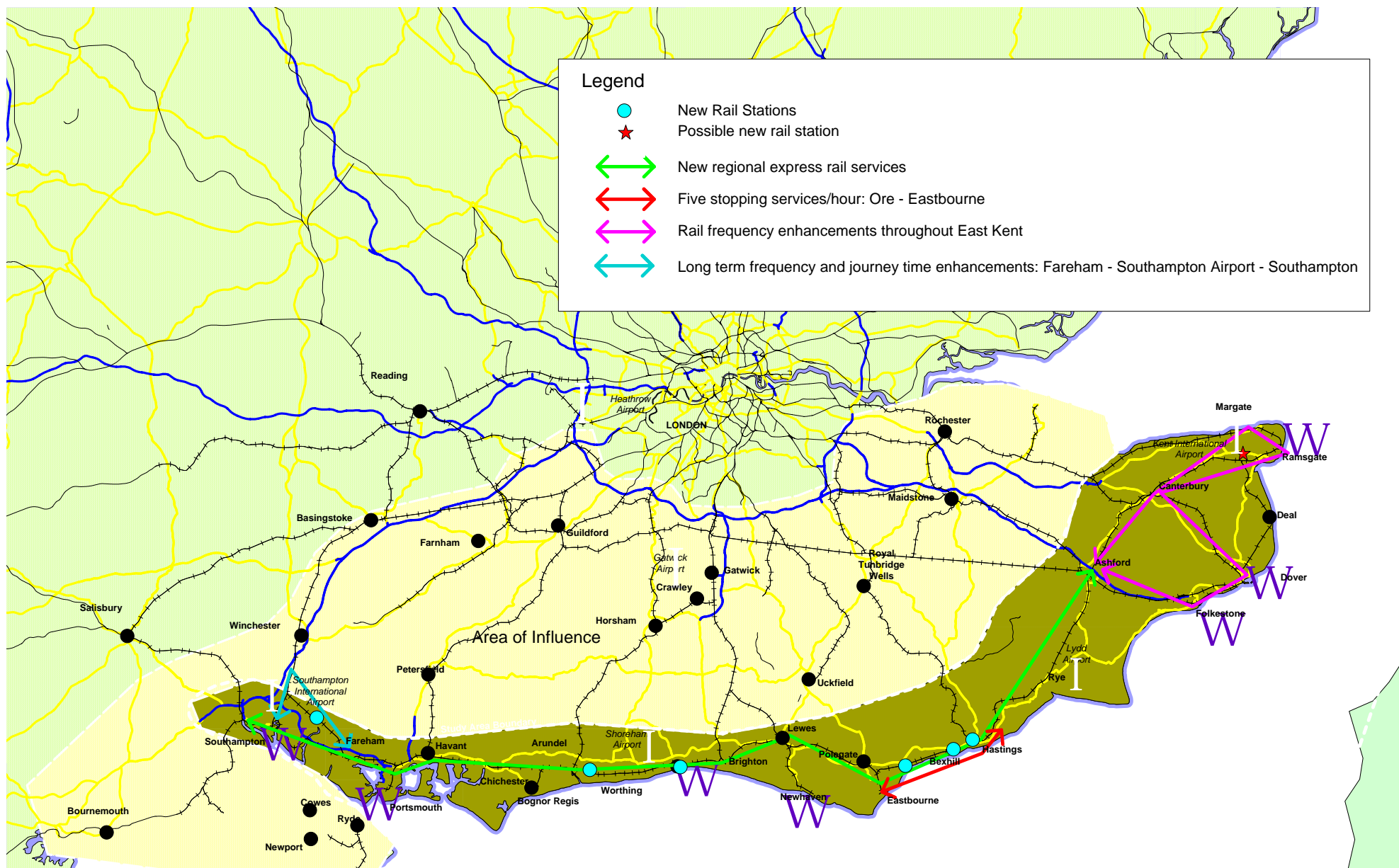


Figure 6.1a: Enhanced rail services and facilities

- 6.3.15 In summary, the strategic implications of the rail strategy development plan are:
- ## Significant enhancement to Public Transport service levels
 - ## Long distance alternative to car, with accessibility benefits
 - ## Creation of several new interchanges
 - ## Sustainable infrastructure
 - ## Facilitation of wider economic benefits.
- 6.3.16 It is recognised that the service frequency enhancements, as proposed by SoCoMMS, will increase the delays that occur at level crossings. The strategy directly addresses the issue of the Beddingham level crossing, and at other locations. Highway improvements will mean that traffic transfers away from the level crossings. However it is likely that at other sites there will be a need for infrastructure improvements or road closures. These are regarded as local issues that need to be addressed on an individual basis and through local planning and highway management process. Significant funding could be required at a number of these sites.
- 6.3.17 Rail proposals are described in more detail in the Rail Strategy Development Plan
- 6.4** ***Bus Strategy***
- 6.4.1 In overall terms there is a general consensus from the consultation that during the working day the bus services within the major south coast towns (e.g. Brighton, Southampton and Ashford) and on a limited number of inter-urban routes provide an adequate, if basic, service. Brighton & Hove and other areas of the corridor have experienced significant growth of 30% over the last 6 years. In addition, there is a perception that, where provided, specialist bus services such as park and ride, community buses and shopper buses are successful. To this end, existing bus services are well perceived in some areas and are experiencing significant growth. The strategy thus aims to build from a number of successes.
- 6.4.2** **Key Problems-** A number of issues were identified during the consultation which the strategy seeks to address:
- ## the lack of service availability in the evenings and at weekends.
 - ## the limited extent to which the bus service penetrates into the community, particularly in more rural areas;
 - ## the perceived high cost of travel;

- ## the general lack of facilities, in terms of passenger comfort, passenger information;
 - ## lack of bus priority schemes;
 - ## public perception is that vehicles are old, dirty and unreliable.
- 6.4.3 Other operational issues that have been raised in connection with bus services relate to staff recruitment problems for bus companies and the lack of north-south services, through the South Downs. It has also been suggested that current competition legislation acts against the interests of integration.
- 6.4.4 It should also be noted that integration is regarded as a key aspect of both the bus and rail elements of SoCoMMS (as opposed to competition between these modes). Significant investment in bus-rail interchanges is included within the rail stations enhancement proposals within the rail strategy.
- 6.4.5 **The Role of Bus** – Two key roles for buses are of primary importance to SoCoMMS:
 - ## Provision of mobility for those groups who do not have access to a car; and
 - ## Provision of a sustainable mode of transport that individuals choose to take, especially in congested areas.
- 6.4.6 The south east is wealthy but there are sectors of society who rely on buses such as in areas of low car ownership and social deprivation. There are pockets of social exclusion in a number of towns across the south coast corridor. Buses are also important for the elderly (the south coast has a higher proportion of the population aged over 60 than the rest of the region) and for the young who do not have access to a car.
- 6.4.7 Bus also has a growing role as an alternative to the car, that people choose to take, to access work, shops, education and leisure. As such bus already plays a greater role than rail in the urban areas and this is reflected in the high mode shares in Brighton & Hove, Southampton and Portsmouth.
- 6.4.8 In the future there is a policy imperative for increased use of bus reflected in the 10 year plan, Quality Bus Partnerships, and the Urban and Rural Bus Challenge.
- 6.4.9 In addition to its local role in towns, bus will be important to feed upgraded rail network and emerging light rail schemes as well as providing park-and-ride

services. In many areas, improvements in bus services are an important precursor to demand management and modal shift towards public transport. Bus can also assist in accommodating future development growth.

6.4.10

A strategy development plan has been undertaken which has sought to identify a number of improvements for local public transport. As part of this plan an analysis of bus best practice has been undertaken within the study. In general, this has referred to existing initiatives within the area. Most of SoCoMMS' recommendations for buses therefore concern expanding existing programs, with proven success, across the area. The detailed elements being proposed within SoCoMMs include:

- ## Improved network planning
- ## Improved service frequencies
- ## Simplified fares, and value for money tickets
- ## Customer care enhancements, e.g. through improved training
- ## Marketing enhancements
- ## Investment in new buses
- ## Bus Priority on highways
- ## Improved passenger waiting areas
- ## Real-time information displays
- ## Traffic regulation and enforcement
- ## Park and Ride

6.4.11

A series of corridors have been identified for improvement. These reflect those:

- ## with high population densities;
- ## suitable road capacity and traffic conditions;
- ## frequent bus services;
- ## potential developments; and
- ## which are poorly served by rail.

6.4.12

These corridors fall within 23 towns in which specific bus priority, traffic management and service enhancements have been proposed. Investment in bus priority measures, in particular, is regarded as an essential aspect of the strategy in order to overcome the growing constraints imposed by traffic congestion and to provide buses with a competitive advantage. Figure 6.1b illustrates these locations.

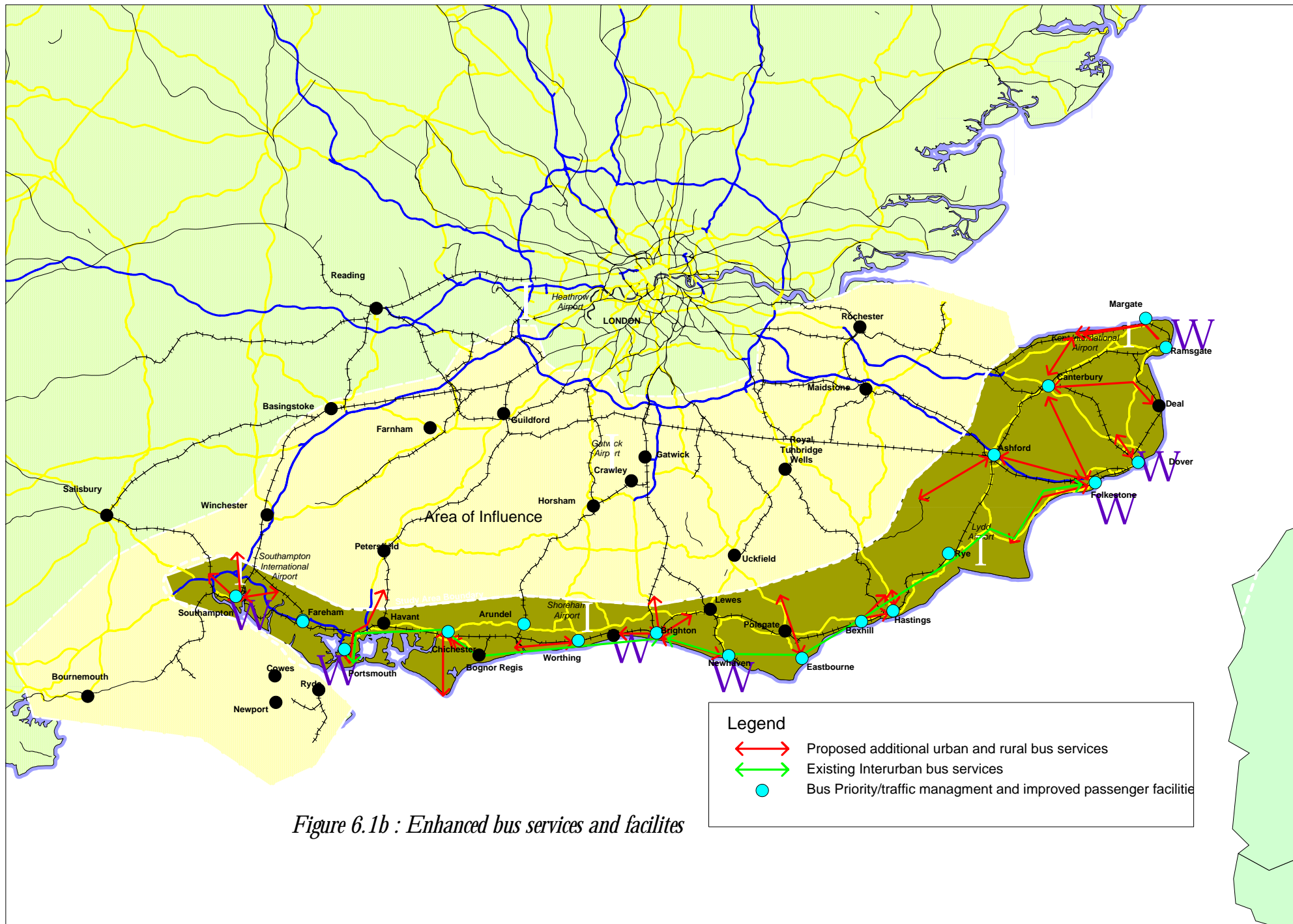


Figure 6.1b : Enhanced bus services and facilities

- 6.4.13 The recommended improvements comprise:
- ## Improvements to waiting facilities;
 - ## Bus priority measures (eg: bus lanes, traffic signal measures, etc);
 - ## Real time information systems;
 - ## New routes and frequency enhancements, along with estimates of additional resource requirements (buses, drivers, etc);
- 6.4.14 The total infrastructure costs are £26m.
- 6.4.15 The benefits from these recommendations include modal transfer from car for local trips and associated decongestion benefits; additional generated passengers; time savings to existing users and increased accessibility to residents of deprived areas. Significantly, many of these benefits can be delivered in the short-term and advancing these proposals should carry a high priority amongst local authorities and operators.
- 6.4.16 The economic NPV of this specified bus strategy is £4.9m, indicating good value for money, though the analysis has been relatively high level and will require more detailed analysis on a route-by-route basis prior to implementation.
- 6.4.17 The proposals generate a small operating loss (an NPV of £6.8m over the life of the strategy) indicating that a additional operating subsidy will be needed in the early years. This is estimated to amount to £1.6m in 2004, but becomes zero by 2020. This increased subsidy is regarded as an efficient public investment, helping to generate increased bus travel and paving the way for full operating cost recovery in later years.
- 6.4.18 Further details of the bus strategy are continued within the Local Public Transport Strategy Development Plan.
- 6.5** ***Freight***
- 6.5.1 The dominant freight flows on the corridor are on a north-south, rather than an east-west axis. Forecasts suggest that this will not change, although this should be subject to regular review.

- 6.5.2 The principal land mode for east-west freight is the road goods vehicle. The Coastway is not a major rail freight route, and it is not envisaged that this will change. SoCoMMs has certainly not identified a case for investment in an east-west rail freight route. This aside, those freight movements which do take place, such as those serving the Dungeness Power Station, should be incorporated within future working timetables.
- 6.5.3 A number of north-south rail freight routes have been identified by the SRA, such as Ashford-Tonbridge-London, CTRL and Southampton-Basingstoke and beyond. These are already in operation or under development.
- 6.5.4 The need to cater for road freight movements, both local and regional, is recognised by the strategy. These are essential to support and develop the local economy. To this end, the various highway schemes will increase accessibility for goods vehicles. The demand management measures and soft measures will also reduce levels of congestion, particularly in peak periods, from which goods vehicles will be a particular beneficiary.
- 6.5.5 The SoCoMMS strategy thus aims to improve highway conditions for essential users, such as freight. A case does not exist for promoting a change of mode, for what are comparatively short hauls. For longer hauls, from the extreme east to west of the study area (eg: Dover to Southampton), the M2-M25-M3 should continue to be the designated route for goods traffic.
- 6.5.6 Freight Quality Partnerships (FQPs) offer the opportunity for local enhancements to the freight transport infrastructure and are regarded as an important means of upgrading facilities in respond to specific needs. A particular merit of FQPs is that they focus on local needs and involve key stakeholders in the development stage, thus increasing the likelihood of funding and delivery. SoCoMMS encourages FQPs as a means of generally upgrading freight facilities through the life of the strategy.
- 6.6** ***Role of the A259 east of Hastings***
- 6.6.1 The A259 provides a link from Ashford to Hastings and beyond. Currently traffic levels are low relative to the rest of the corridor (less than 10,000 vehicles per day across the Marshes). Analysis of roadside interview data shows that, at present, much of the traffic has one or both ends of its journey within the local area.
- 6.6.2 Key issues in this area include:

- £# The A259 at Winchelsea, Rye, Dymchurch and New Romney is too narrow in places and the presence of traffic affects these towns.
- £# The A259 east of Hastings, particularly at Rye and Winchelsea does not have a standard typically associated with a trunk road. While the flows are low there are issues associated with the hill at Winchelsea and the route at Rye.
- £# Private vehicle travel demand between Hastings and the Kent boundary is very small at present, except perhaps during the peak of the holiday season. For this reason there are no significant capacity problems on the A259 route between Hastings and Brenzett.
- £# The road's alignment, both horizontally and vertically, combine to provide slow travel times, together with safety and environmental problems between and within the towns of Winchelsea and Rye.

6.6.3 The study has identified the need for safety and other local highway improvements on the A259 between Hastings and Ashford. These would be designed to improve road safety in this area and to ensure that the existing highway capacity is delivered.

6.6.4 The improvements should include:

- £# Renovation and strengthening of highway shoulders;
- £# Traffic control and traffic management improvements in Winchelsea and Rye;
- £# Pedestrian and cyclist measures, including refuges, guard rails and cycle lanes;
- £# Improved traffic signing, including clear goods vehicle routes;
- £# Local junction improvements, to minimise conflicting movements.

6.6.5 £22 million has been identified for these improvements over the short term.

6.6.6 At present traffic levels, if there were a new route constructed, then transfer from the M25 motorway alone would increase flows across the Romney Marshes by 20%, without taking into account generated traffic or diversions from other routes. There are also environmental considerations. The Romney Marshes are one of the few areas on the South Coast corridor designated as being within a tranquil area by the Countryside Agency. Even if a new route were required, it would be very difficult to engineer within such a sensitive area.

- 6.6.7 The view of the SoCoMMs transport strategy is that if future development at Ashford has the effect of creating new travel demand from Hastings this is best catered for by improved rail services, as included within the strategy. Long distance traffic from Kent westwards should be routed via the motorway network (M2, M25, M3 etc). Nonetheless, at the local level it is recognised that current traffic activity within both Rye and Winchelsea creates safety, environment and operational nuisance – there may therefore be a need to study this further, from these local perspectives. The impact of development in and around Ashford must also be monitored, particularly as the scale and location of this becomes more apparent. This may also require assumptions about highway capacity in this area to be reviewed.
- 6.6.8 It is also recommended that the current Route Management Strategy should examine accident issues along this section with a view to providing improvements.
- 6.7 Port Issues & Short Sea Shipping**
- 6.7.1 A separate study is being undertaken to assess a strategy for ports in the South East of England. However, to understand the needs of the port operators a series of interviews were undertaken specifically for SoCoMMS. These took place with the operators of each of the seven seaports and the Channel Tunnel.
- 6.7.2 Based on the problems identified through discussions with Port operators, the SoCoMMS Strategy is assisting Ports as follows:
- ## Improvements to the access to Southampton Port on the M27 and M271;
 - ## Improvements to the access to Portsmouth Harbour on the M27 between junctions 11 and 12 and through upgrading of the A27 (between M27 and A3(M);
 - ## Improved access to a multi-modal freight terminal at Portsmouth;
 - ## Improvements to the access to Shoreham through highway improvements at Worthing, public transport improvements (LRT) between Shoreham and Brighton. It is noted that there is a separate ‘multi-modal’ type study investigating access to the Harbour.
 - ## Improvements to the port of Newhaven – through highway improvements at Beddingham providing a much improved link to the A23 and the north, also consideration of a Lewes-Uckfield line in the future;
 - ## Improvements to the access to Dover through upgrade of the A2 to dual carriageway;

- ## Improvements to the access to Ramsgate port through completion of East Kent access routes and rail service enhancements. In addition, a general improvement in the accessibility of these ports will support the promotion of short-sea shipping developments within the region.

6.8

Airports

6.8.1

The Government has recently published a consultation paper on the future for aviation in the United Kingdom. The paper reviews the options for providing airport capacity over the next 30 years. The issues addressed by the consultation are:

- ## How much aviation demand should be met;
- ## Where to locate new capacity;
- ## What are the environmental impacts.

6.8.2

The South East Regional Air Services study has examined the issues in relation to airport capacity in the south east. The implications arising from the SERAS work are that none of the 'major' options' being considered directly affect the SoCoMMS area. The key issues for SoCoMMS are:

- ## Gatwick- that there is a legal agreement between British Airports Authority and West Sussex County Council from 1979 which prevents the construction of a new runway until after 2019. Thus the government has stated that it does not intend to overturn this and that options for Gatwick lie within current planning constraints;
- ## Southampton- that capacity could be upgraded to cope with 7mppa, which would require an upgrade of the runway to handle medium sized planes with additional terminal and support facilities. The 7 million passenger per annum (mppa) demand would be met if no additional capacity were provided in the rest of the South East. The forecast use of Southampton within SERAS is 3 mppa.
- ## Manston, Shoreham and Lydd fall within a second tier of airports in the region. SERAS has considered the potential demand and capacity of each airport. They conclude that Manston could have an upper limit of 3 mppa although it is noted that one of the main constraints is it's geographic location compared to the sources of demand. As such a key focus for future transport links would be local access to Thanet Way and the railway network.
- ## At Lydd an upper limit of 125,000 passengers per annum has been assumed. Lydd was also considered to be remote geographically from

sources of demand. Shoreham was assumed to have an upper limit of 500,000 passengers per annum with the key constraint being the length of the airport runway

6.8.3 The SoCoMMS strategy is assisting airports as follows:

- ## At Southampton through the improvement in access to the airport from the M27 motorway (junction and access road) which will assist all modes of transport, the upgrade of the station to provide a major interchange hub, the provision of the Eastleigh chord which will allow access to the airport from the east.
- ## At Shoreham- through the opening of a station and the development of an interchange hub;
- ## At Manston, through the upgrade of the East Kent rail services. Should passenger demands increase substantially at Manston then consideration should be given to park-and-ride (such as from Ramsgate or Hewrne Bay), the provision of a station, or the provision of a rail link into the airport. This may be justified on regeneration grounds.

6.8.4 The SERAS report also introduces the possibility of a new airport at Cliffe in North Kent. It is likely that this will have major implications for the demand-capacity relationship of both railways and highways throughout this area. If this option is taken forward and as more details of the Cliffe proposal become known, a comprehensive review of all transport provision throughout Kent and East Sussex will be required.

6.9

National Park

6.9.1 The links between transport and tourism were discussed in depth at the Polegate local workshop. SEERA are also preparing a draft tourism strategy. A number of factors would be important if tourism is to be encouraged without generating excessive increases in traffic. This is considered to be a particularly relevant issue given the past dependence of the area on tourism and the possible development of the New Forest and South Downs areas as National Parks.

6.9.2 The main points from this discussion are given below:

- ## In the short to medium term there is a need for education both within the tourist industry and for visitors.

- ## The tourist industry needs to disseminate information about bus, train and taxi services to major attractions.
- ## In the short term there needs to be a partnership between public transport operators, local authorities and tourist attractions in order to reduce the impact of car use and pollution.
- ## There is also a need to introduce flexible bus routes and incentives to encourage use of rail, including introduction of lower fares for family groups and facilities to carry cycles.
- ## Proper provision needs to be made to enable wheelchair users to gain easy access to trains.
- ## Safer infrastructure and routes need to be introduced to encourage cycling and walking.

6.9.3 In the future the proposal to create a National Park encompassing the South Downs will have a significant impact on the study area. Depending on the adopted management approach, it could lead to significant increase in traffic activity within the corridor. In addition, however, it will impose much more stringent planning controls, making it increasingly important that any transport solutions are designed to minimise environmental impact.

6.9.4 The upgrade of the A27 corridor, particularly at Arundel and East of Lewes provides the opportunity for traffic to be diverted away from the National Park. For example, the upgrade of the A27 between Lewes and Polegate can reduce flows on the A259 across Beachy Head. Similarly, at the western end of the corridor, improvements at Arundel will divert traffic away from the A272 through Midhurst.

6.9.5 The SoCoMMS strategy can assist the national parks by:

- ## Diverting traffic away from the park onto designated corridors;
- ## Provide improved public transport access to the area through better rail services;
- ## Improve stations, such as at Lewes, Polegate and Arundel which can act as gateways to the park;
- ## Provide better walking, cycle and bus connections;
- ## Provide better information on services.

6.10

North South Routes

6.10.1

Much of the South Coast study has concentrated on the east-west corridors through the study area. However, most of the towns and cities along the south coast also look towards the north for employment opportunities, recreation and business activity. The important centres that interact with the south coast include Winchester, Horsham, Crawley, Gatwick, Tonbridge and London. Good communications with these centres is therefore also important.

6.10.2

In terms of road travel there are six major corridors that generally function well. These being the M3, A3, A23, M20, A2/M2 and A299/M2 corridors. For those south coast towns that lie at the end of these corridors (i.e. Southampton, Portsmouth, Brighton, Ashford, Folkestone, Dover and Thanet) direct road based communication with London is therefore generally good. Elsewhere along the coast, communications to the north are generally poor. Such journeys either require use of unimproved roads such as the A286 (Chichester), A29 (Arundel), A24 (Worthing), A275 (Lewes), A22 (Eastbourne) and A21 (Hastings) or use of the A27 / A259 corridor to access the six primary radials.

6.10.3

In terms of rail there are major corridors to Faversham, Ashford, Brighton, Portsmouth and Southampton. Others tend to have poorer links with the north, such as from Hastings and Arundel.

6.10.4

It is important for the future of the South Coast that the northern links are maintained, and in some locations enhanced. There are crucial infrastructure links being built which will assist the area. These include:

- ## Channel Tunnel Rail Link which will provide fast services from Ashford to St Pancras. The link provides the opportunity to operate domestic services that can also serve Folkestone, Dover, Canterbury and East Kent. This will significantly enhance accessibility in this area;
- ## M2 improvements;
- ## A21 improvements, these are especially important to the regeneration of Hastings.
- ## Brighton Main line- particularly improvements at Gatwick Airport which will increase capacity, reliability on this route;
- ## A24 Horsham- Capel
- ## A3 Hindhead Tunnel.

6.10.5 ***Reopening the Lewes to Uckfield Railway*** – It has been concluded that its primary benefit would be to relieve congestion on the parallel London – Brighton railway line, particularly if the Lewes-Uckfield line were extended to Tunbridge Wells. This particular problem is outside the immediate scope of SoCoMMS and therefore it has not been investigated further. It may nonetheless still warrant further investigation over time and may require consideration in the context of possible new development contained within the ESCC Structure Plan.

6.11 *Safety Issues for RMS to consider*

6.11.1 A Route management Strategy is to be undertaken for the A27/A259 corridor. The purpose of this study is to investigate short term measures that can be applied to assist safety and operation of the corridor in the short term. SoCoMMS has undertaken an analysis of accident black spots and the results are included in the Strategy Development Plans.

6.12 *Demand Management Measures*

The Role of Demand Management

6.12.1 In the development of the SoCoMMS strategy, consideration has been given to the potential role of demand management in the future. The strategic model has been used to assess a range of alternative mechanisms such as increased parking charges, cordon charging for town centres, tolls on the motorway and trunk road network, or a form of congestion charging based on a GPS approach. The background to this work is set against forecast increases in travel demand of 28% to 2016 and 44% to 2030 in the do-minimum scenario.

6.12.2 The roles of charging in the future are :

- €# To control the overall level of traffic growth in future, particularly in relation to the private car;
- €# To encourage modal transfer where there are suitable alternatives available; and
- €# To provide revenue to fund transport improvements.

Parking Demand Management

6.12.3 Currently many local authorities have parking demand strategies. These often seek to regulate the supply and use of spaces by charging and length of stay. These may apply to local authority run public off-street spaces and in some cases, on-street spaces as well as part of an overall parking demand strategy, backed up by suitable

levels of enforcement. Local authorities have sought to increase long stay parking charges, particularly in central areas, as a means of managing demand and freeing up central spaces for short stay users. In some cases, the approach is supplemented by Park-and-ride bus services from peripheral locations. This seeks to control the volume of inbound traffic on the key radials.

The Transport Act 2000

6.12.4 The Transport Act 2000 allows local authorities to implement charging schemes in their area for the purposes of reducing local congestion. The act also allows for the net proceeds (i.e. the revenue less any set up and running costs) of any charging scheme to be hypothecated for 10 years from its implementation in order to be spent on transport in the area. The net proceeds must be spent in support of the local authorities local transport plan, or where more than one authority is promoting the scheme, the money must be spent in support of a coherent transport strategy backed by all these local authorities. The hypothecation of proceeds is currently only guaranteed for schemes brought in within 10 years of the Transport Act 2000. When a scheme is submitted to the Secretary of State for approval it must be accompanied by a spending plan detailing how the proceeds are to be spent over the following 10 years. The options identified within the Transport Act include:

- £# Congestion charging- the focus of the legislation is very much on providing congestion relief at a local level. A local scheme can only include trunk roads if these are required to complement the aims of the local authority scheme.
- £# Workplace Parking Levy- enables local authorities to implement a licensing scheme as a mechanism for collecting a levy on private workplace parking spaces. Under the legislation, the occupier of a premises will be required to apply for a licence to park a stated number of vehicles at or in the vicinity of the workplace for those attending their place of work. This can not be used as a control on the number of car parking spaces by the local authority.

6.12.5 We have sought clarification as to whether it is possible to introduce cordon charges and workplace parking levies in the same area. The response from the DfT is that there is nothing in the Act that says this is not permitted. However,

ministers may be minded against schemes where users may be subject to both charges. Thus it is possible to have a cordon charge to cross a central area with workplace parking levies applying outside the area.

- 6.12.6 One area that is not covered by the legislation is in respect of out-of town retail centre parking spaces. The legislation specifically states that the workplace parking levy does not allow for customer leisure or retail parking. Therefore, if such a policy is pursued it will require further legislation, or co-operation of such centres.

Proposals for Charging HGVs

- 6.12.7 As part of the 2002 budget, the Chancellor announced a new distance-based lorry road-user charge, to be introduced in 2005 or 2006. The aim was to ensure that lorry operators contribute to the costs that they impose irrespective of their nationality. The Government remains committed to ensuring that the UK haulage industry does not pay any more as a result of a new charge and will at the same time introduce offsetting tax reductions for the industry.

- 6.12.8 Information for the South Coast Corridor shows that currently heavy goods vehicles form a small percentage of traffic on the coastal corridor. The impact of charges on the very small proportion of overseas vehicles is likely to be insignificant.

Commission for Integrated Transport

- 6.12.9 The Commission for Integrated Transport produced a report 'Paying for Road Use'. They asked consultants to model different alternatives to current motoring taxes without increasing the overall cost to motorists. The approach is to shift part of the burden from taxation to a system of road user charges with the aim of delivering congestion reduction benefits for a large proportion of road users, without increasing the overall cost we pay to drive.
- 6.12.10 The proposal is to charge routes that are affected by congestion. The CfIT concept is dependent on a nationwide Global Positioning System with smartcard-charged units located in every vehicle. They would be able to detect where and when a vehicle was entering one of our busier roads subjected to part time charging and deduct the appropriate fee.

6.12.11 Overall their work suggests that congestion could be cut by 44%. It is noted that cutting congestion by 44% overall does not mean that that amount of traffic on the network would simply vanish. The results indicate that traffic levels would fall overall by about 5% and speeds would increase on average by about 3%, with greater impacts in areas suffering the worst congestion. The incidence of gridlock would also be expected to reduce significantly and reliability would improve.

SoCoMMS Testing

6.12.12 Within the SoCoMMS strategic model we have tested at 2016:

- ## Tolling motorways (at 6p/km)
- ## Tolling motorways and trunk roads (at 6p/km)
- ## Tolls within the South Downs National Park
- ## Urban Congestion charging in Southampton, Portsmouth and Brighton & Hove (based on a £2 entry charge)
- ## Tolling all links (4p/km)
- ## Increased town centre parking charges based on fee hierarchy for major and minor towns (different levels tested with £5 increase in main towns and £2 in smaller towns);
- ## Applying workplace parking levies in main and minor towns (different levels were tested)
- ## GPS charging with cordon charges and workplace parking levies- this test was used to assess the 'highest combination of charges to assess the impact. The test identified all links in the model with an average hour volume/capacity ratio of 0.5 (assumed to be equivalent to peak period v/c 0.75). A distance based charge was assumed for these links assuming 5.6p/km for motorways, 6.8p/km for trunk roads and 1.6p/km for rural roads.

6.12.13 The results of the tests are outlined below:

6.12.14 Tolling motorways has an adverse impact at the Hampshire and Kent ends of the study area with diversions onto the trunk roads (A2 and A20). Although overall vehicle kilometres in the study area fall by 2%, the redistribution of trips from motorways onto other roads increases safety and environmental impacts.

6.12.15 Larger scale diversions are obtained when both the motorway and trunk road network is tolled. There is a greater reduction in overall vehicle kilometres (4%)

but vehicles also divert to lower standard routes thereby significantly increasing road safety, environmental and congestion problems on these non tolled routes.

- 6.12.16 A toll applied across the whole network in the south east of 4p/km was found to reduce vehicle kilometres by 5%. In this case traffic was seeking to divert onto the shortest distance routes, which were not necessarily the most desirable.
- 6.12.17 Imposition of tolls within the proposed National Park area has the effect of reducing usage of routes within the Park, particularly north south routes, and concentrating traffic on the primary routes (i.e. M3, A3 and A23).
- 6.12.18 Urban area entry tolls, when introduced in isolation, were effective in reducing overall levels of vehicle travel in towns. They did however have the effect of increasing car use on peripheral untolled routes around urban areas (i.e. M27 and the A27 Brighton Bypass).
- 6.12.19 Local tolling strategies have been found to be more effective as they directly impact on short distance trips, such schemes include distance based urban congestion charging schemes and schemes related to trip end charges (i.e. parking charges).
- 6.12.20 The GPS tolls in addition to urban cordon charges and workplace parking levies reduced vehicle kilometres by 6%. The GPS on its own is providing a reduction of 3% in vehicle kilometres. The table below shows the reduction in vehicle kilometres for each of the tests. There is an increase in traffic on rural routes to the north of the corridor, particularly the A272. It is noted that in each of these tests, the reductions in trips occur with an increase in the overall cost of motoring. This is different from the CfIT approach where motoring costs increases are neutral.

Test	Reduction in veh kilometres across study area as a whole				
	Motorways	Trunk Road	Other A Roads	B Road	Overall
Toll Motorways	-35%	-1%	8%	9%	-2%
Toll Motorways and Trunk Roads	-27%	-23%	26%	23%	-4%
Toll all Links	-9%	-6%	-1%	-4%	-5%
Toll National Park	3%	-2%	0%	0%	0%
City Centre Urban Congestion Charges	-1%	0%	0%	0%	0%
Parking Charges	-1%	-1%	-2%	-2%	-1%
Workplace Parking Levies	-2%	-2%	-3%	-3%	-3%
GPS Charging with Urban Cordon Charges & Workplace Parking Levies	-14%	-8%	-2%	2%	-6%

- 6.12.21 The results of the maximum restraint test were examined to assess whether there was a need for infrastructure. On the M27, the use of the demand management is to maintain traffic levels such that wholesale widening of the motorway is not required. In West Sussex, traffic flows on the A27 are some 5 to 10% below 2016 do-minimum levels. However, at Arundel such traffic flows would still be 22% greater than the do-minimum in 2016. Given current flow levels at this location, there would still be a need for improvements. Similarly at Beddingham, traffic flows in the maximum restraint test are forecast to be 9% lower than the do-minimum. However, these traffic levels are still worse than current traffic levels where there are delays. On the Selveston- Wilmington section of the A27 traffic flows are only reduced by 1% compared to the do-minimum.
- 6.12.22 The key role of demand management is in the longer term to 2030. The demand management is used to cap traffic rates of growth at or below 2016 levels. Our testing showed that in the maximum restraint test, there the charge per kilometre would need to be increased by a further 50% in order to reduce 2030 traffic levels below 2016.
- Outcome*
- 6.12.23 Given the relatively short trip lengths within the study area, the SoCoMMS study has chosen locally based urban parking or congestion charging schemes. They are considered to provide a balance between affecting trip levels and the impact of traffic diverting into less suitable areas. The strategy includes:
- ££ a levy on all private workplace parking spaces in core urban areas;
 - ££ a charge on all parking spaces in “out of town” retail parks along the South Coast; and
 - ££ car based cordon charges for entry into the major conurbations of Southampton, Portsmouth and Brighton & Hove so as to encourage use of the new Park and Ride facilities.
- 6.12.24 It should be emphasised that these demand management measures must be implemented in a coordinated fashion across the region (rather than as a series of discrete packages). A consistent approach to their detailed design and delivery is essential to optimising their effectiveness and the minimisation of adverse side effects.

6.12.25 The hypothecation of the funds from these measures within the transport system is also recommended.

6.12.26 As a final point, SoCoMMS' targeted approach to demand management achieves the additional wider goals of social equity (by targeting trips for which there is an efficient, affordable alternative mode) and economic regeneration (eg. not causing widespread abandonment of socially and economically beneficial journeys).

Long-term Issues

6.12.27 Whilst the strategy covers the period to 2030, considerable uncertainty characterises the latter years. It should also be noted that planning for the years following this period must begin at least 10 years in advance.

6.12.28 SoCoMMS recognises the varied policy environment affecting transport and development and has attempted to reflect this in the strategy. This however, is subject to change as new issues and priorities emerge.

6.12.29 The principal recommendation concerning the latter years of the study period and beyond is that demographic trends, the performance of the transport system and the implications of the wider policy environment be monitored regularly. Each has implications for the relevance and suitability of particular measures.

6.12.30 So far as can be judged at this time, longer-term issues may include:

- ## Strong enforcement of land-use and development control policy to concentrate new development in those areas well served by public transport;
- ## A move away from the trend of scale economies in developments (eg: retail, education, health care, etc) at the expense of more and longer trips, towards the local provision of services on a smaller scale;
- ## The growing relevance of demand management measures, at the margin, to restrict private car use;
- ## Technological developments of traffic management systems, vehicle engines and renewable fuel sources;
- ## Technological and institutional developments of rail and bus performance management systems;
- ## Demographic trends, including a possible declining workforce as the population ages;

££ Changing work patterns with possible growth in home working and part-time work.

6.12.31 Whilst recognising, at the margin, the ability of the transport planning system to change aspects of travel behaviour, transport is, primarily, a derived demand. Efficient transport planning must, increasingly, work in tandem with those factors which drive demand rather than their symptoms.

6.13 *Local Area Measures – Strategy Development Plans*

6.13.1 As noted previously, a number of Strategy Development Plans have been developed to provide a more detailed analysis of some of the issues. Some of these have been topic related, covering buses and rail, which have been discussed above. Others cover a particular locality and contain further details on the multi-modal measures put forward.

6.13.2 The Strategy Development Plans have also drawn on the outcomes of various studies such as the M27ITS, the Worthing-Lancing Integrated Transport Study and the Access to Hastings Studies.

6.13.3 It should be noted that in all cases, a significant amount of further development work is required to progress these schemes. Furthermore, as noted above, no decisions have yet been taken on any of the proposals. The following pages summarise the recommendations of these local area plans.

6.14 *South Hampshire SDP*

6.14.1 **Background** The South Hampshire Strategy Development Plan area covers the M27 from Cadnam to Havant. The Strategy Development Plan for South Hampshire builds on work undertaken for the M27 Integrated Transport Strategy. The SoCoMMS work has reviewed the findings of the M27 study and drawn them together into a programme for the area.

6.14.2 **Key Problems and Issues-** The key problems and issues identified within the area include

££ Area is one of high car ownership

££ Key congestion locations include M27 north of Southampton, M3 from its junction with the M27 north, M27/A27 across the Portsmouth peninsular; A32 on Gosport Peninsular and A326 at Marchwood

- £# Flows on the M27 are approaching capacity in peaks, particularly on the sections between Junctions 3 to 7 and 9 to 12. The congestion on these sections is compounded by the local topography.
- £# The M27 motorway intersections are heavily congested in the peak periods.
- £# The section of the A27 between the A2030 and A3(M) is 4 lanes in each direction with heavy traffic flows but suffers from a large amount of weaving between traffic lanes and the presence of slow vehicles.
- £# Journey time reliability is a concern on rail lines and the road network;
- £# The area has the major ports at Southampton and Portsmouth
- £# Poor conditions for pedestrians and cyclists;
- £# Lack of integration between transport operators
- £# Poor interchange facilities at many locations

6.14.3

Strategy Elements- In addition to the strategy wide initiatives related to green travel plans, safer routes to school, the following elements are key recommendations for the area

Local Initiatives

- £# Develop coordinated management of the implementation, operation and maintenance of the transport system. There is a need to build on the current studies and initiatives being pursued;
- £# Develop local cycle network;
- £# Develop local and strategic partnerships to integrate the development of the transport system
- £# Local town centre improvements

Locally based Public Transport Improvements

- £# Bus corridor improvements on A27 Corridor, Portsmouth-Waterlooville, Horndean, Southampton – Totton, Southampton- Chandlers Ford, Southampton- Botley
- £# New railway station at Eastleigh MDA to serve major new development
- £# City based Park and Ride systems (initially these should be bus based but ultimately they should link into new rapid transit systems)

- £# The proposed light rail service currently being developed between Portsmouth and Fareham
- £# Potential extension of LRT to Southampton – or consideration of improved heavy rail services on Hamble line
- £# Provision of local rail services to Chandlers Ford and Hythe.

More Strategic Public Transport Improvements

- £# General rail enhancements
- £# Additional passenger platforms should be provided at Fareham and Havant,
- £# A new rail chord at Eastleigh (around 2020);
- £# The line between Fareham and Botley should be double tracked. These changes will allow east-west trains to serve Southampton Parkway and thus improve access to Southampton Airport. (around 2020);
- £# Though not included in the strategy a case may exist, based on freight for loading gauge enhancements north of Southampton to Basingstoke and beyond.

Access to Southampton

- £# Improvement to M27 junction 5;
- £# Upgrade of Southampton Airport Parkway as interchange hub
- £# Improve local access route to airport

Targeted Road based Improvements

- £# The provision of widening between junctions 3 and 4 for operational and safety reasons
- £# the provision of a climbing lane between junction 11 and 12 for operational and safety reasons
- £# upgrade A27 between M27 and A3(M) to motorway
- £# M271 HOV/Freight lane
- £# Introduction of variable message signs, variable speed limits, CCTV and monitoring system

- £# Junction improvements at junctions 2, 7, 8, 9, 11 and 12 for operational and safety reasons

Promotion of Rail and Sea Based Freight Initiatives

- £# Encourage the use of rail for accessing the ports of Southampton and Portsmouth
- £# If Dibden Bay is to be developed, review elements required for its delivery with primary means of access (for freight) should be by rail.
- £# Portsmouth Intermodal freight terminal
- £# Promotion of freight quality partnerships

Ensuring Balance

- 6.14.4 In the context of providing the overall strategy, there is a need to review the management of travel demands in the future. This should be achieved by:
- £# Increasing long stay public parking charges significantly within the centres of both Southampton and Portsmouth, and to a lesser extent in the other town centres.
 - £# Increasing short stay public parking charges within Southampton and Portsmouth to encourage off-peak modal transfer to public transport and park and ride. In other towns these should also be increased to some extent to encourage public transport usage.
 - £# Introducing a levy on all private workplace parking spaces in the core urban areas within South Hampshire and at all “out of town” retail parks in the area
 - £# Introducing car based cordon charges, for entry into the major conurbations of Southampton and Portsmouth so as to encourage use of the new Park and Ride facilities.
- 6.14.5 These demand management measures should be introduced as part of the overall strategy for the region. Released road space within both Southampton and Portsmouth should be re-allocated to public transport, cycling and pedestrians and revenues generated from the charges should be re-invested in local public transport improvements.
- 6.14.6 The principal elements of the South Hampshire SDP are summarized in figure 6.2.

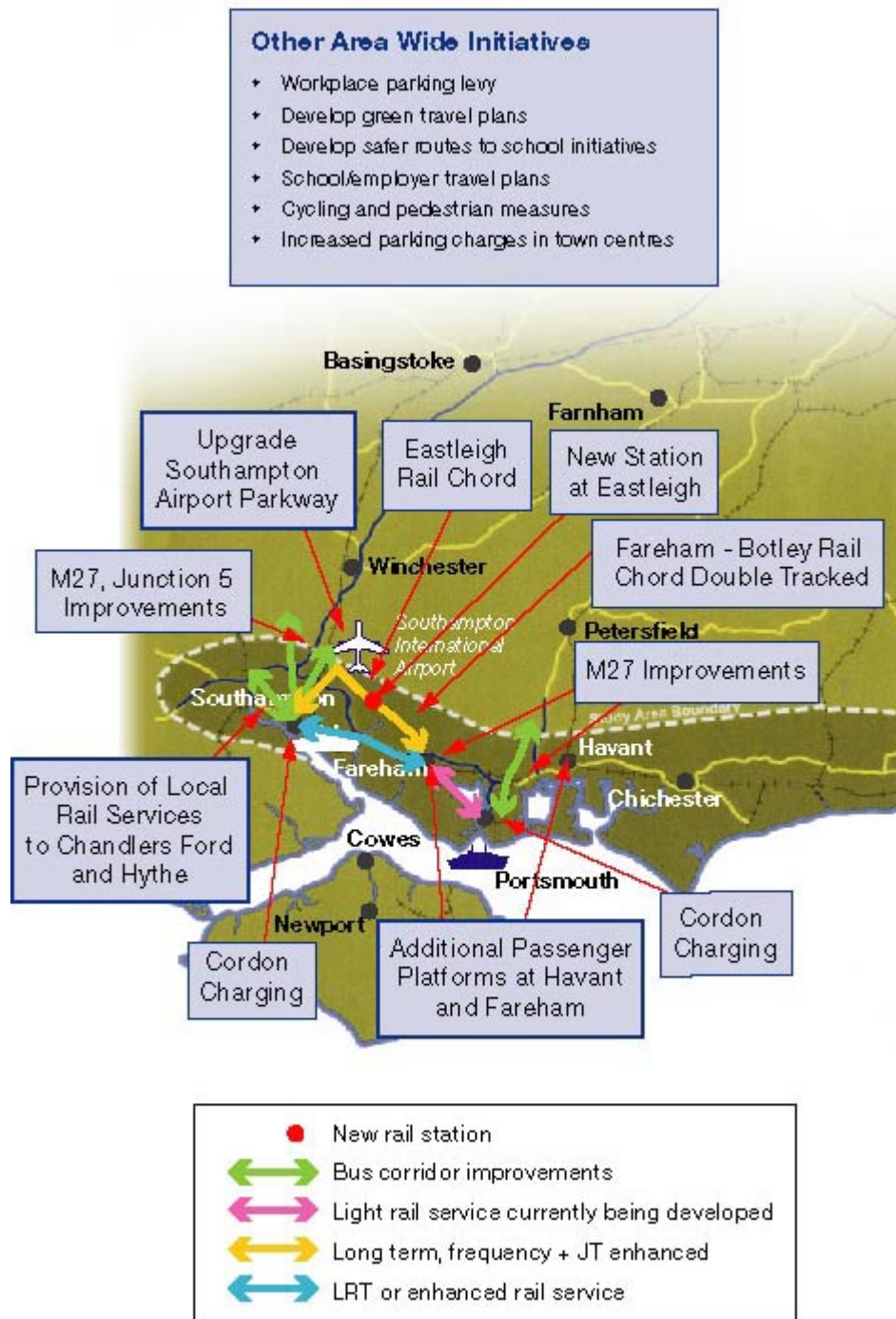


Figure 6.2 *Summary of the Principal Elements of the Strategy in the Western Region of the Study Area*

6.15

6.15.1

Chichester & Environs SDP

Background – The Strategy Development Plan for Chichester examined the future performance of the A27 and the potential for sustainable improvements between the Manhood Peninsula and Chichester

6.15.2

Key Problems- The key problems and issues identified during the study include:

- ## extensive peak period congestion on the A27 Chichester Bypass.
- ## Congestion and accessibility problems from the Manhood Peninsula
- ## Severance as the A27 effectively acts as a barrier between the Manhood Peninsula and Chichester. This affects all users
- ## Railway level crossings give rise to delays for all road users and restrict train speeds.
- ## Safety issues on the Chichester bypass. There are serious problems, in terms of the number of injury accidents occurring at various junctions along the Chichester Bypass.
- ## Reduced bus performance due to congested network

6.15.3

Strategy Plan for the Area -The key recommendations in addition to the area-wide initiatives include:

Locally based Public Transport Improvements

- ## Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends
- ## Bus priority measures on the corridors between Selsey and Chichester, and Bognor Regis and Chichester
- ## Interchange facilities at Chichester should be greatly improved between bus and rail

Targeted Road Based Improvements

- ## Grade separation of Fishbourne roundabout

- ## Flyover at Stockbridge Road junction (or alternative at-grade junction modification)
- ## Close access to/from the A27 Whyke Road junction
- ## Grade separation at Bognor Road roundabout
- ## Closure of side roads at Oving Road
- ## Development of Stockbridge Bypass to improve local accessibility
- ## Review junction performance at nearby Fontwell and Slindon Common roundabouts

6.15.4 In addition, it is likely that further improvements will be required at the eastern end of the by-pass in response to local traffic growth. This should be subject to further study

6.15.5 The principal elements of the Chichester SDP are summarised in figure 6.3.

6.16 Arundel

6.16.1 **Background** – The Arundel bypass was one of the former road schemes that was remitted to SoCoMMS for investigation. The Strategy Development Plan has reviewed the need for a bypass.

6.16.2 **Key Issues-** The key issues in the Arundel area are:

- ## Congestion on the A27 at Arundel gives rise to very heavy traffic in local villages and other areas.
- ## Traffic levels on the single carriageway section through Arundel equivalent to neighbouring dual carriageway;
- ## Most A27 traffic is passing through Arundel
- ## Current flow already in excess of Highways Agency Congestion Reference Flow;
- ## Safety issues on the A27. The accident rate is twice the national average rate for the type of road and four times the national average for dual carriageways.
- ## Severance caused by high traffic flows on A27
- ## Poor accessibility to Littlehampton;

- ## Congestion arising from level crossings, particularly on the north-south routes;
- ## A number issues related to the perceived quality of the rail service including poor infrastructure, lack of integration

6.16.3

Strategy Elements -In developing a strategy for the Arundel area, the following elements should be considered, in addition to the area wide initiatives:

Local Initiatives

- ## New rail station at Littlehampton Parkway
- ## Improved information provision at Arundel, particularly in relation to AONB
- ## Station improvements at Arundel station- particularly to station building and forecourt,
- ## Improve pedestrian access to Arundel station;
- ## Provide additional bus connections from the station to the town centre;
- ## Provide additional bus connections from the station to the AONB.

Targeted Road based Improvements

- ## Arundel bypass, with recommendation that previous preferred route (pink-blue) is taken forward
- ## Modifications to signing, particularly to Ford Industrial Estate
- ## Traffic calming on B3323 through Eastergate, Barnham and Yapton;
- ## Modification of traffic signing for visitors to Arundel;
- ## Improvements to car parks

6.16.4

The principal elements of the Arundel SDP are summarised in figure 6.3.

6.17

Worthing

6.17.1

Background- The Worthing- Lancing Integrated Transport Study investigated the need for short term measures. The Strategy Development Plan for Worthing investigated the longer term issues associated with the area, drawing upon the content of the study, as well as other analysis.

- ## Key Problems- The A27 through Worthing and Lancing carries high traffic flows.

- £# During peak periods a number of drivers rat-run onto residential roads. 25% of traffic within Worthing / Lancing has been identified as being through traffic (i.e. both ends of the journey are outside of Worthing/Lancing).
- £# Impact on the human environment where high traffic levels in the Worthing and Lancing areas bring adverse impacts in terms of noise and air pollution
- £# Safety issues associated with the A27 through Worthing-Lancing
- £# Severance.

6.17.2

Strategy Plan for the Area- A number of proposals from the former Worthing-Lancing study have been endorsed and these are supplemented by additional local public transport measures. These should be implemented in the short term. A major highway scheme is proposed as a medium term solution.

Worthing-Lancing Study recommendations –

- £# Improvements to two key A27 roundabouts and a third junction using traffic signal controls
- £# Use the signal improvements to provide for pedestrians and cyclists.
- £# Traffic calming and environmental management measures on alternative routes.
- £# New service routes and service frequency enhancements on existing bus routes.
- £# Rail and Bus passenger facility enhancements and provision of real time information.
- £# Rail and Bus off-peak and weekend service enhancements.
- £# Provision of taxibus facilities at Worthing and Lancing.
- £# Improvements to station accessibility, especially for bus users, cyclists and pedestrians
- £# Complementary measures to address travel behaviour and encourage a modal shift e.g.
 - Green travel plans/employer travel plans
 - Improved travel information
 - Education programmes

Locally based Public Transport Improvements

- ## Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends.
- ## Interchange facilities at Worthing stations should be greatly improved.
- ## Improved bus priority and waiting facilities (incorporated within local transport SDP).

Targeted Road based Improvements

- ## Road improvement to A27 through Worthing and Lancing in form of tunnel or series of tunnels should be investigated. Whilst this would be a major project, environmental constraints prevent alternative solutions whilst analysis shows the value for money of a tunnel scheme to be good

6.17.3 The principal elements of the Worthing SDP are summarised in figure 6.3.

6.18

Brighton & Hove

6.18.1 **Background-** The purpose of the Brighton & Hove Strategy Development Plan was to review public transport improvements in the context of a major urban area. The plan sought to build upon the existing, successful, bus network.

6.18.2 **Key Issues:**

- ## good, popular, local bus service
- ## constrained geography, with restricted access to city
- ## congested network, exacerbated by seasonal traffic
- ## growing travel demand
- ## limited scope for further highway developments

Strategy Plan for Brighton and Hove

Locally based Public Transport Improvements

- ## Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends
- ## Interchange facilities at railway stations should be greatly improved, particularly at the “hub” stations allowing interchange between local,

- €# City based Park and Ride systems should be introduced on the outskirts of Brighton & Hove - initially these should be bus based but ultimately they will link into new rapid transit systems.
- €# A dedicated public transport system, such as LRT, should be introduced within the Greater Brighton Area, linking the centre with Shoreham, the Marina (or beyond), Falmer and Patcham
- €# The LRT would be viable (economically and with an operating profit) from around 2020, but feasibility and development activities should begin in the short term.

Strategic Public Transport Improvements

- €# Local east-west rail services should be enhanced, particularly the local rail network between Portsmouth and Hastings, centred on Brighton (The Regional Express Service)

Demand Management

- 6.18.3 In the context of providing the overall strategy, there is a need to review the management of travel demands in the future. This could be achieved by:
- €# high long stay public parking charges should be maintained and extended within the centre of Brighton & Hove.
 - €# Maintaining short stay public parking charges within Brighton & Hove at high levels, so as to continue to encourage off-peak modal transfer to public transport and ultimately to park and ride.
 - €# Introducing a levy on all private workplace parking spaces in the core urban areas
 - €# Introducing car based cordon charges for entry into Brighton & Hove so as to further encourage use of the new Park and Ride facilities (medium term).
- 6.18.4 Released road space within Brighton should continue to be re-allocated to public transport, cycling and pedestrians and revenues generated from the charges should be re-invested in local and strategic public transport improvements
- 6.18.5 The principal elements of the Brighton and Hove SDP are summarised in figure 6.3.

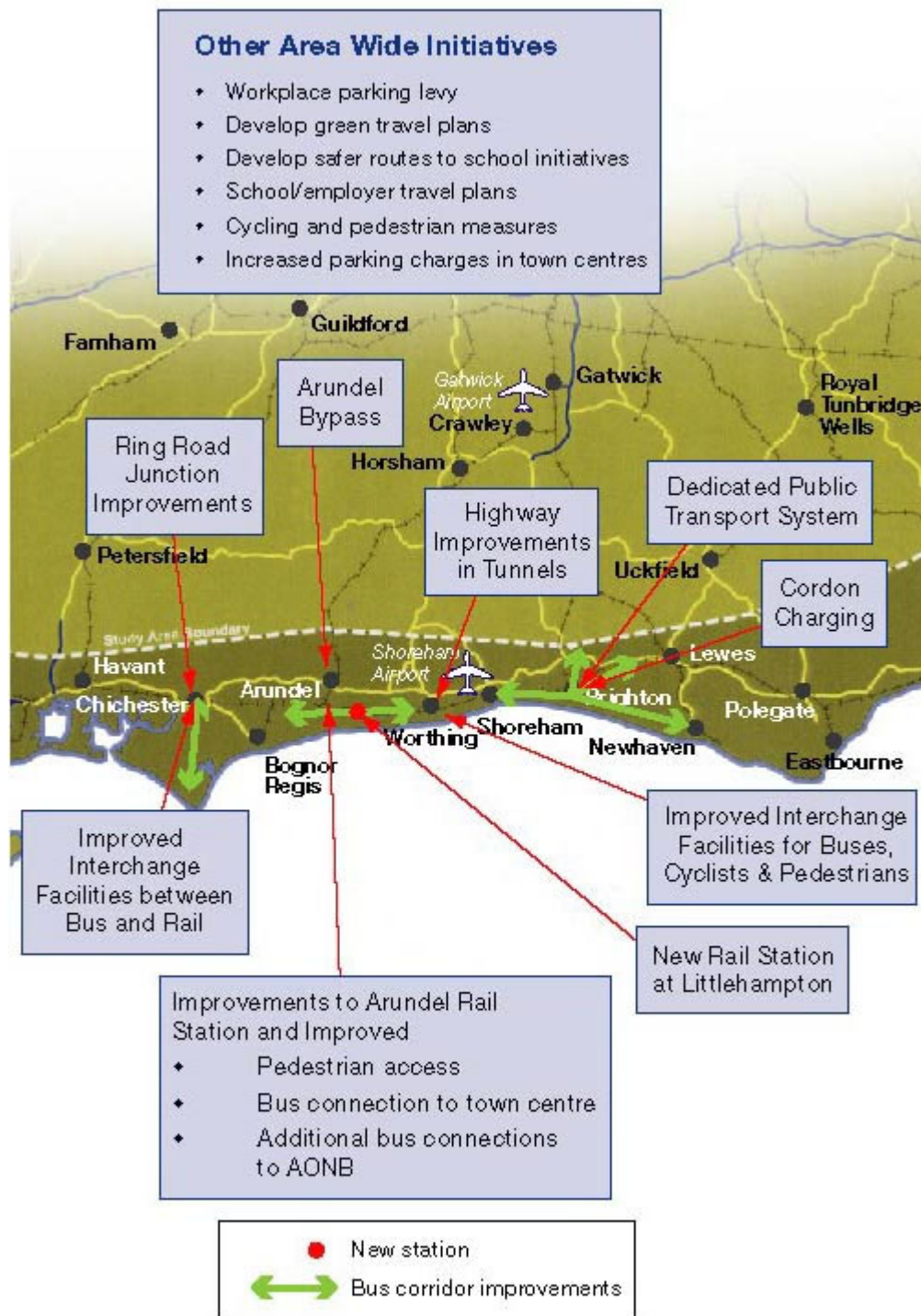


Figure 6.3 *Summary of the Principal Elements of the Strategy in the Central Region of the Study Area*

6.19

6.19.1

East of Lewes

Background - The area East of Lewes includes two highway schemes remitted to SoCoMMS for investigation. These include bypasses at Selmeston and Wilmington. There is also the issue of the level crossing at Beddingham

6.19.2

Key Issues:

- ## The roundabouts on the Lewes bypass cause traffic delays.
- ## The A27 between Lewes and Polegate has a poorer standard than other parts of the corridor and doesn't work well because of the high number of side road junctions.
- ## The existing traffic signals at the A22 / A27 intersection in Polegate give rise to significant traffic delays, particularly for traffic approaching from the west.
- ## The A259, between Newhaven, Seaford and Eastbourne carries heavy volumes of traffic. This road is narrow, passes through an Area of Outstanding Natural Beauty (AONB) and suffers from a high accident rate.
- ## The A27 between Lewes and Polegate has a poor safety record. It acts as a barrier for pedestrians and cyclists, causing severance with the both the villages and towns.
- ## Major delays occur throughout much of the day at Beddington level crossing, which worsen at rail frequencies increase

Strategy Plan for the Area

6.19.3

In developing a strategy for the East of Lewes area, the following elements should be considered, in addition to the area wide initiatives:

Locally based Public Transport Improvements

- ## Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends
- ## New rail station at Stone Cross.
- ## Halisham –Polegate-Eastbourne to become a bus priority corridor with associated bus infrastructure and service enhancements

- ## Enhancements of rambler bus connections between AONB and Lewes/Polegate stations.

6.19.4 Targeted Road based Improvements

- ## Grade separate Beddingham level crossing, with dual carriageway standard link;
- ## Provision of Selmeston bypass
- ## Provision of Wilmington bypass
- ## Associated traffic calming

6.19.5 The principal elements of the East of Lewes SDP are summarised in figure 6.4.

6.20 Bexhill –Hastings

6.20.1 Background- Hastings is a Priority Area for Economic Regeneration and the subject of considerable re-development and renaissance activity. The town suffers from both congestion and access problems. A major by-pass scheme was recently cancelled.

- ## Key Issues Journey times in the Bexhill and Hastings area are unreliable due to traffic congestion.
- ## The A259 between Bexhill and Hastings is of insufficient standard to cater adequately for demand, which results in congestion problems.
- ## In addition, the Hastings and Bexhill areas suffer from seasonal traffic problems.
- ## The Bexhill and Hastings area has a poor urban environment in certain locations due to heavy traffic flows.
- ## Urban areas of Bexhill and Hastings – Child road safety is a major concern. There are significant problems with pedestrian / vehicle conflicts along Hastings seafront.
- ## Economic regeneration is a key local policy issue.
- ## The economic problems of the Bexhill and Hastings area also related to other factors, such as an oversupply of unskilled labour, shortage of available industrial premises and low rental levels which act as a constraint on business expansion. High unemployment, benefit dependency and a low wage economy also contribute to social exclusion and deprivation.

Strategy Plan for the Area

- 6.20.2 In developing a strategy for the Bexhill- Hastings area, the following elements should be considered, in addition to the area wide initiatives:

Locally based Public Transport Improvements

- £# Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends.
- £# Several bus priority schemes have been identified within the Hastings- Bexhill area.
- £# Introduction of Green Transport Plans and Employers Plans;
- £# New rail stations should be introduced at Glyne Gap, West St Leonards and potentially at Wilting Farm.
- £# Interchange facilities at railway stations should be greatly improved.
- £# A frequent rail service (five trains per hour) should be developed, servicing all existing stations between Ore and Bexhill, going on to Eastbourne;

- 6.20.3 The Regional Express (half-hourly) Ashford to Southampton service should be introduced, serving all Hastings Stations.

Targeted Road based Improvements

- £# The Bexhill-Hastings Link Road should be developed
- £# Associated traffic managements in the Wishing Tree area and Guillsman Hill
- £# Consideration of a link to the A21, along Queensway, further informed by local issues
- £# Consideration of improvements on the A21 North of Hastings

- 6.20.4 The principal elements of the Bexhill and Hastings SDP are summarised in figure 6.4.

6.21

East Kent Issues

6.21.1

Background – Several SDPs have covered issues in East Kent and these are summarised here

6.21.2

Key Issues:

- £# The capacity problems at junction 10 of the M20 affect its ability to accommodate any traffic diverted from the A259 as a result of the trunking of the A2070 and the resultant changes in signing, and the prospects for funding improvements to the interchange.
- £# There are problems on the M20 caused by 'Operation Stack' when there are difficulties at the ports and Channel Tunnel.
- £# The intersection of the A256 / A253 at Manston is congested at peak times.
- £# The single carriageway sections of the A28 at Birchington and the A253, south of Manston airport, give rise to congestion

Strategy Plan

6.21.3

In developing a strategy for the East Kent area, the following elements should be considered, in addition to the area wide initiatives

Locally Based Transport Improvements

- £# Quality Bus Partnerships should be promoted so as to secure more frequent and extensive urban and rural bus services, particularly in the evening and at weekends.
- £# Interchange facilities at railway stations should be greatly improved, particularly at the “hub” stations outlined below.

More Strategic Public Transport Improvements

- £# Local east-west rail services should be greatly enhanced, with the local rail network radiating outwards from Ashford so as to provide direct connections to London and Europe via the Channel Tunnel Rail

6.21.4

Increase the frequency of rail services in East Kent.

- £# A new through rail service should be introduced from Ashford, providing much improved links between this part of the study area and the central and western parts of the South Coast Corridor. This will provide direct access from Ashford to Hastings, Lewes, Brighton, Worthing, Littlehampton Parkway, Havant, Fareham, Southampton Parkway and Southampton
- £# Seamless interchange facilities should be developed at Ashford, Canterbury, Dover and Ramsgate, allowing interchange between local, through and London based rail services / local bus services / the cycle and, at non town centre stations, the private car
- £# In addition, there should be significant improvements to all stations within the East Kent area, providing greatly improved accessibility, better information and improved passenger facilities.

Targeted Road based Improvements

- £# Local road improvements should be introduced on the A2, eastern approach to Dover, so as to reduce traffic congestion and environmental nuisance with Dover itself;
- £# Local road safety and environmental improvements should be introduced on the A259 as appropriate.
- £# Improvements to junction 10 on the M20.
- £# Complete East Kent Access improvements (including provision of priority lanes).

Promotion of Rail and Sea Based Freight Initiatives

- £# Use of rail for accessing the existing ports of Folkestone, Dover and Ramsgate should be encouraged. In addition, depending on the future role of Manston Airport, it may additionally warrant a new rail access.
- £# When appropriate, usage of Folkestone, Dover and Ramsgate ports for coastal shipping should be encouraged, particularly for the transportation of bulky goods (building materials, etc).
- £# Promotion of freight quality partnerships.

6.21.5

The principal elements proposed for East Kent are summarised in figure 6.4



Figure 6.4 *Summary of the Principal Elements of the Strategy in the Eastern Region of the Study Area*

7

Appraisal of the Strategy

7.1

Introduction

7.1.1

The aims of SoCoMMS have been to both address current and future problems within the transport network and to recommend an over-arching strategy for the area. The improvement of access to and between regeneration areas and other area of economic activity is also identified as a specific study objective.

7.1.2

Given that objectives and evaluation represent two sides of the same coin, it follows that the appraisal of the strategy should address the extent to which it meets these aims.

7.1.3

The SoCoMMS transport strategy has been appraised in line with the Guidance on the Methodology for Multi-Modal Studies (GOMMMS). There are 4 main parts to the GOMMMS appraisal process, which are:

- ## An Appraisal Summary Table (AST) which gives a summary appraisal against Central Government's five objectives for transport.;
- ## An assessment of the degree to which the local and regional objectives identified would be achieved by the strategy.
- ## An assessment of the degree to which the problems identified would be ameliorated by the strategy, compared to the situation if there was no positive policy intervention.
- ## Supporting analyses of distribution and equity, affordability and financial sustainability and practicality and public acceptability. This will also include the issue of scheme "deliverability".

7.1.4

The AST is intended to be a summary of the appraisal against the Governments' five objectives for transport within which there are a set of associated sub-objectives:

- ## Environment;
- ## Safety;
- ## Economy;
- ## Accessibility; and
- ## Integration.

- 7.1.5 The AST framework also allows a direct assessment of the extent to which the specific study objectives are met.
- 7.1.6 The preferred strategy is designed to provide a balanced way forward, recognising the continuing need to cater for increasing travel demand (both from existing residents and new developments) while at the same time preserving the region's character. It seeks to achieve this through encouraging sustainable travel modes, recognising that there is a need to maintain accessibility by all modes of transport, so as to ensure economic vitality.
- 7.1.7 The following sections consider the performance of the strategy against the various elements of the GOMMMS framework, beginning with the effects on the transport network. A detailed description of the appraisal is given in the separate Strategy Appraisal Report.
- 7.2 *Travel Patterns: Problems and Impacts***
- 7.2.1 The foundations of the strategy lie in reducing congestion, increasing the attractiveness of public transport, walking and cycling, thereby providing a real alternative to the car. This aim is achieved through providing:
- ## selective highway improvements;
 - ## demand management measures;
 - ## much improved facilities for alternative modes;
 - ## increasing public transport service frequencies;
 - ## improving modal interchange; and
 - ## seeking to improve the quality of the traveller's environment at each stage in the journey, thus transforming the 'whole journey' experience.
- 7.2.2 These measures are expected to reduce overall public transport travel times. For example, the rail journey time between Southampton and Ashford (via the Coastway) would be reduced by around one third when compared to today.
- 7.2.3 At the same time, the major traffic bottlenecks will have been addressed and chronic delays reduced. Travel times by road (in 15 years time) are expected to remain similar to those today.
- 7.2.4 Through this combination of increased public transport accessibility, combined with targeted road improvements, the strategy is expected to:

- ## reduce the growth in car trips across the study area from 28% over the next 15 years to 20%;
- ## increase average road speeds in 2016, compared with the Do-Minimum scenario, by six per-cent;
- ## increase the rail mode share from six per-cent to seven per-cent, compared with the Do-Minimum;
- ## increase the bus mode share from six to seven per-cent across the study area;
- ## introduce LRT in Brighton with a mode share on major corridors of 23%;
- ## increase the growth in public transport usage from 30% to 50% by 2016;
- ## increase the proportion of trips with a walk or cycle element (including those also involving a public transport mode) by 15%.

7.2.5 Equally importantly, through increasing car based travel costs within the towns and cities, levels of modal transfer will be highest in the very locations where alternative transport modes are most effective and the adverse impacts of the car are greatest; ie: urban centres. Chapter 6 reported reductions in vehicle kilometres of 4% across the region with the proposed parking restraint measures.

7.2.6 The strategy will also significantly reduce current problems of personal safety and poor public transport accessibility, providing significant benefits for existing users, amongst whom are many of the most socially excluded groups within our society.

7.2.7 The results of the cost benefit analysis, below, quantify the magnitude of the strategy's impact on congestion and other network problems. In short, the strategy has addressed the identified and projected problems and developed an integrated set of efficient solutions.

7.3 *Environment*

7.3.1 With or without the preferred strategy, traffic activity is set to increase considerably over the next 15 and 30 years with a consequent worsening in the human environment and in road safety (albeit that technological improvements in car design will mitigate some of these effects, as in the case of local air pollution).

7.3.2 The preferred strategy does nonetheless offer two significant benefits over the Do-Minimum situation. Firstly, by reducing overall car usage growth, future environmental and road safety problems will be reduced. Secondly, the strategy concentrates the traffic growth in areas where it can best be accommodated (i.e. on the Motorways and Trunk Roads).

- 7.3.3 In terms of the human environment, problems adjacent to the M27 Motorway and the A27 Trunk Road will be higher than in the Do-Minimum situation. Away from these roads however, traffic activity will be lower. This will result in environmental benefits within the South Downs National Park and within the coastal towns.
- 7.3.4 On the negative side the strategy requires the construction of several new sections of highway as well as railway enhancements, new stations, park and ride sites and bus priority measures. These in themselves will impact on the physical environment. The challenge will be to provide them in such a way as to minimise this. It is likely therefore that there will need to be a commitment to paying a construction cost premium, so as to protect the environment. This is illustrated by the recommendations for a tunnel-based solution to traffic problems around Worthing.
- 7.3.5 The appraisal of environmental impacts has been a significant aspect of SoCoMMS and the Appraisal Summary Report should be consulted for details of this. It should be recognised that a number of the highway schemes result in a significant negative environmental impact, especially in the Landscape and Biodiversity categories. The general outcome of the environmental assessment against the principal appraisal categories is summarised below (in all cases, comparisons are against the 2016 Do-Minimum scenario):
- ## Noise: additional 129 traffic zones experience benefit; additional 1,200 of population experience dis-benefit;
 - ## Air pollution: net reduction in carbon dioxide, nitrogen oxides and particulates;
 - ## Landscape: 'large negative' impact (three schemes: Hastings, Arundel, Beddingham, receiving 'large negative' score; no scheme recording a positive score);
 - ## Townscape: 'large negative' impact (one scheme, Hastings, receiving a 'large negative' score; seven schemes receiving a positive score);
 - ## Heritage: 'large negative' impact: (one scheme, Arundel, receiving a 'large negative' score; no scheme receiving a positive score);
 - ## Biodiversity: 'serious adverse' impact (one scheme, Hastings, receiving a 'serious adverse' score; no scheme receiving a positive score);
 - ## Water: 'significant negative' impact;
 - ## Journey Ambience: 'large beneficial' impact;
 - ## Physical fitness: 'beneficial' impact.

- 7.3.6 There may be opportunities to improve the physical environment associated with the proposed schemes. For example, reduction in traffic along certain roads may improve the townscape and landscape. In addition new sections of road that require updated drainage systems, are likely to improve the existing permanent discharges. Measures such as Sustainable Urban Drainage Systems (SUDS) can be promoted where possible, which ensure that treatment for pollutants and surface water run off meet the highest standards.
- 7.3.7 The Government's Ten Year Plan for Transport recognises the importance of high standards of environmental mitigation for new transport provision, for example, through incorporation of high standards of design. Opportunities for habitat creation, and integration with the landscape, townscape and heritage features of the environment, is possible through sensitive and appropriate design.
- 7.3.8 Throughout the appraisal process there has been continuous communication with the statutory environmental bodies, who have been given access to the detailed work that has been undertaken and opportunities to comment. It is expected that further consultation with statutory bodies will contribute to the ongoing development of the schemes.
- 7.3.9 As can be seen, environmental impacts of the strategy when compared against the Do-Minimum scenario involve a mix of positive and negative effects, development of the strategy has ensured that the most serious categories of negative impact have been avoided in each case. This, together with the other significant categories of benefits, has led SoCoMMS to recommend that all of the proposed schemes be included within the strategy.
- 7.4 *Safety***
- 7.4.1 The package of road improvements in the SoCoMMS Strategy, coupled with reduced growth in travel demand, result in a forecast reduction in accidents of approximately 9,750 over the 30 year evaluation period, compared to the Do Minimum scenario. The number of fatal casualties are estimated to fall by approximately 230, while the overall Net Present Value is in the region of £300M. Accident values are expressed in 1998 prices, discounted to 1998.
- 7.4.2 A sub objective of the Safety objective is Security. The provision of CCTV, help points, and improved lighting at all stations across the study area will help to

improve personal security for all passengers that use these interchanges, therefore the strategy is appraised as having a beneficial affect on security.

7.5

Economy

Cost Benefit Analysis

- 7.5.1 The strategy has been evaluated using the standard Department for Transport (DfT) software for the multi-modal studies (TUBA). This calculates the economic impact of changes in travel time, operating costs, maintenance costs and construction costs, taking into account all aspects of the strategy, including the demand management measures.
- 7.5.2 It can be seen that the strategy performs well in economic terms and hence represents good value for money. Each significant individual element or package within the strategy also achieves a positive NPV, indicating that each item contributes towards the viability of the whole program. It should be noted that the benefits from the strategy as a whole exceed the sum of these individual components, as many synergies exist between schemes.
- 7.5.3
- | | | |
|--------------------|-----------------------|---------|
| Overall Assessment | User Benefits: NPV | £1715M |
| | Private Providers NPV | £-129M |
| | Public Providers NPV | £1964M |
| | Other Government NPV | -£1688M |
| | Strategy NPV | £1862M |
| | Strategy B:C ratio | 2.8 |
- 7.5.4 This positive NPV indicates the success of the strategy at addressing problems within the road and rail networks. It also indicates the extent of the wider social and economic benefits likely to arise from the strategy. The time and resource cost savings resulting from the measures will increase the general efficiency of the region, making it more attractive for investors and creating scope for additional social, recreational and business activities.

Wider Economic Impacts

- 7.5.5 The SoCoMMS strategy is considered to generate considerable opportunities for wider economic benefits. As such, it fulfils one of the additional objectives for the study.
- 7.5.6 Wider benefits are likely to arise from two areas:
- ## Through the distributional effects of the strategy, for instance, the various transport and accessibility improvements in PAERs, such as Hastings;
 - ## By facilitating developments and regeneration initiatives that, in the absence of transport improvements, would not take place.
- 7.5.7 In both cases, it could be argued that many of the wider benefits are already captured by the results of the cost benefit analysis. This is likely to be true, in part; however, the policy agenda for the SoCoMMS area puts great emphasis on the need to regenerate specific urban areas. This indicates, in economic terms, a willingness to pay exists for benefits in these areas over and above that for equivalent unit benefits elsewhere in the economy.
- 7.5.8 The analysis of the accessibility impacts of the strategy, summarised below, clearly demonstrates that coastal towns and large areas of East Kent, which are designated PAERs, experience particular benefits from the strategy. Hence, the economic impacts tend to be focussed in those areas upon which economic policy is targeted.
- 7.5.9 The relationship between transport and development, whilst widely accepted, is more difficult to demonstrate analytically. The traffic model includes those developments (housing, commercial, retail, etc) currently proposed and illustrates the ability of the strategy to cater for these. Wider economic benefits will be derived from additional developments being facilitated by the strategy.
- 7.5.10 The extent to which this is likely is, to a large extent, a matter of opinion. It should, of course, be reiterated that the SoCoMMS strategy, as well as encouraging regeneration also aims to prevent development that is unsustainable and not conducive to an efficient transport and land-use system, eg: some out-of-town developments. The following points can, however, be made in this respect:

- £# The rail service enhancements significantly improve journey times between town centres throughout the corridor, reinforcing the attractiveness of central, sustainable development sites within urban areas;
- £# Most highway measures target local congestion bottlenecks on the approaches to town centres, again increasing the relative attractiveness of urban centres as development sites for businesses;
- £# Specific urban measures, such as the Brighton LRT and Hastings Link Road, combined with the proposals for extensive bus priority schemes, will further reinforce the attractiveness of urban centres as attractive business environments;
- £# The demand management measures will confer significant benefits on essential business traffic, including goods and delivery vehicles, by reducing congestion to manageable levels.

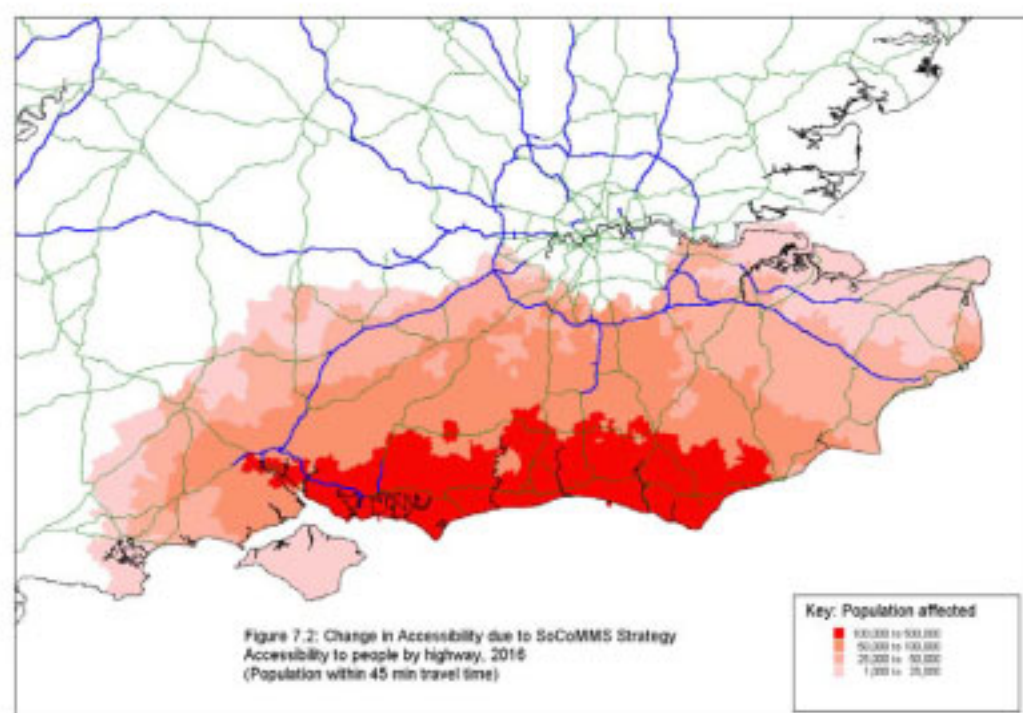
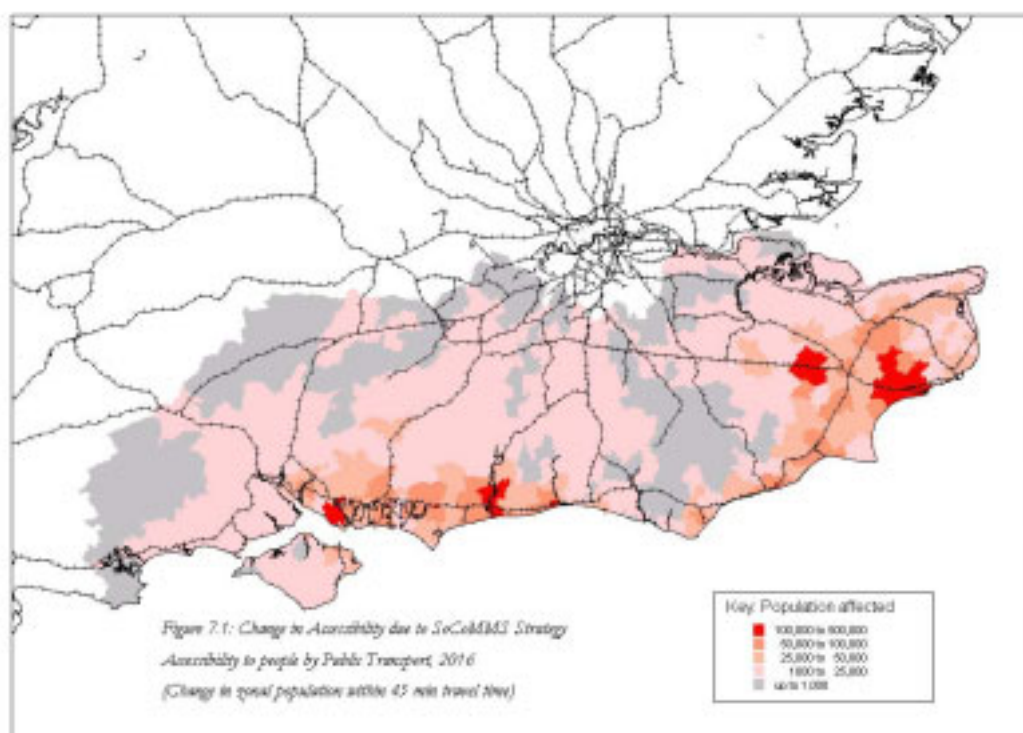
7.5.11 In summary, many SoCoMMS measures are targeted to facilitate wider economic benefits, particularly by improving the attractiveness of urban centres (many of which are PAERs) and reducing the costs of travelling to and within such areas. This accords with the local policy agenda whilst the accessibility analysis demonstrates that the benefits from the strategy tend to be focussed within those areas for which regeneration is an important aim.

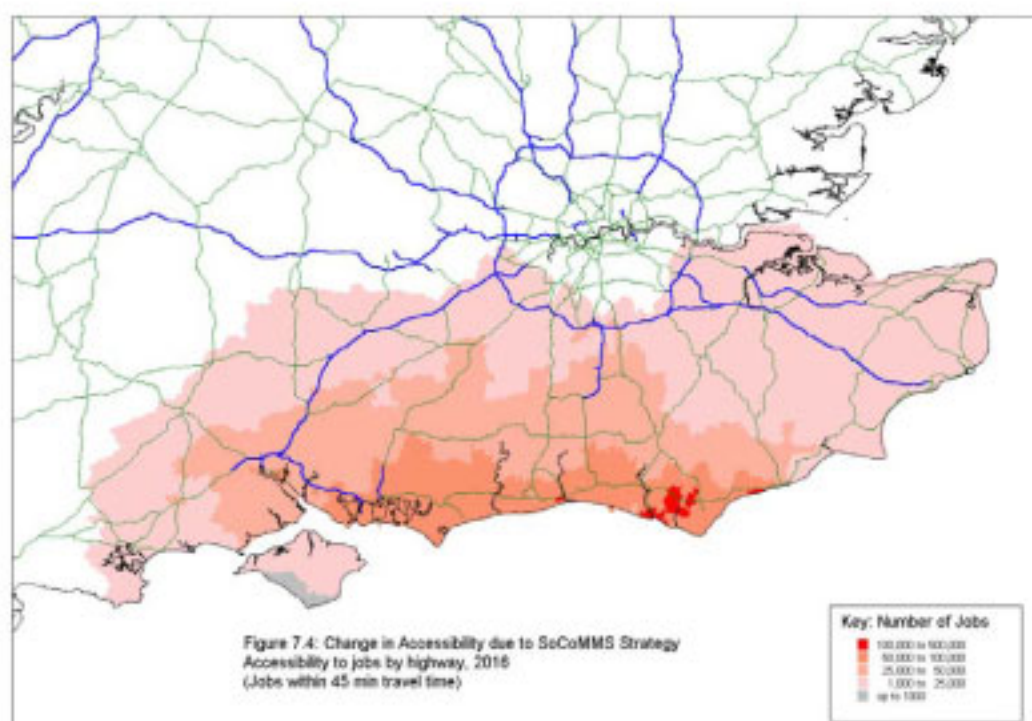
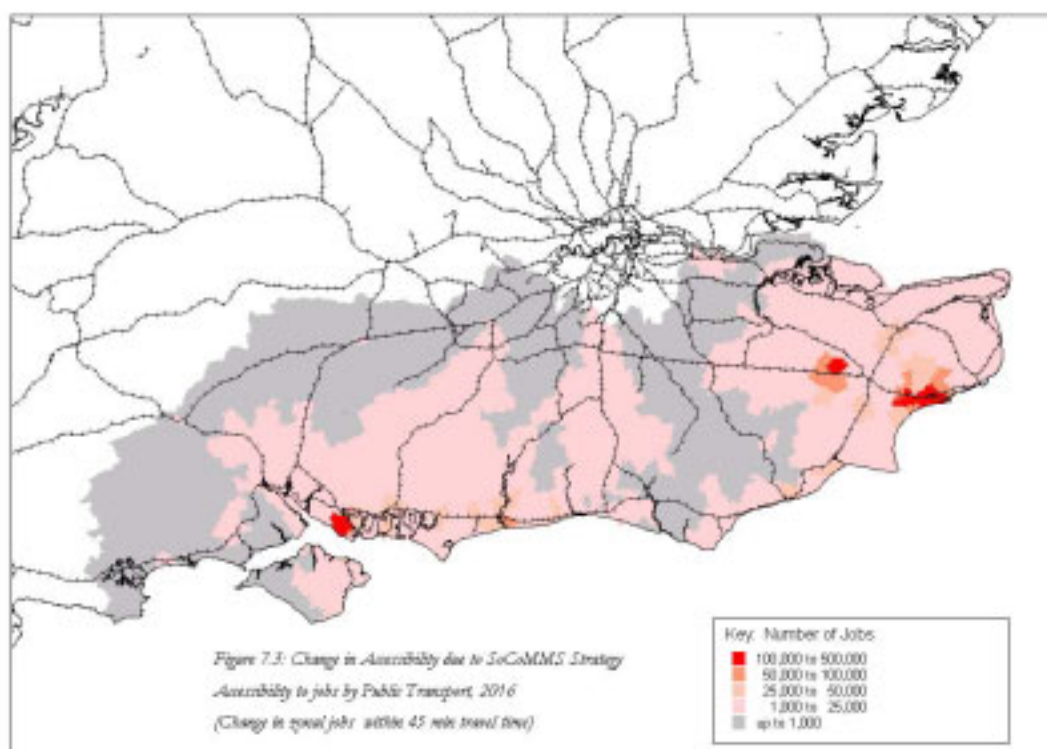
7.5.12 Reliability is also a sub- objective of the Economy objective and reflects the strategy's impact on the objective to improve journey time reliability for transport users by road and rail. Improvements to the transport networks that are part of the SoCoMMS strategy will have a beneficial effect on reliability as they enhance capacity and improve journey time reliability for road users while improved rail infrastructure and rolling stock will improve reliability for rail users.

7.6 *Accessibility*

7.6.1 As part of the strategic modelling an Accessibility Model has been developed which estimates changes in transport accessibility resulting from the implementation of the Preferred Strategy. This is measured in terms of how many jobs are considered to be within 45 minutes travel time. Furthermore, accessibility is calculated by the use of deterrence functions which weight the importance of jobs by location. This means that a higher weight is placed on local jobs, and less weight on jobs which have a higher travel time.

7.6.2 Figures 7.1 to 7.4 summarise the results of the accessibility analysis as it affects regional economic performance.





- 7.6.3 The accessibility analysis illustrates the significant improvements conferred by the strategy, in particular, in addressing those aspects of accessibility that are poor in the Do-Minimum scenario.
- 7.6.4 Access to people and jobs are significantly improved by the strategy. Moreover, the eastern part of the study area, characterised by poor public transport accessibility, gains significantly from the proposed rail and bus enhancements. The central part of the region, characterised by poor highway accessibility, also gains significantly from the proposed road enhancements.
- 7.6.5 PAERS benefit considerably from the proposals. For example, Hastings is shown to benefit from improved public and private access to population and employment (see Hastings SDP). They will benefit further from the proposed bus schemes which, due to their local nature, are not fully captured by the strategic model. The bus measures will also have a significant impact on social exclusion, which is particularly sensitive to bus improvements.
- 7.6.6 The SoCoMMMS strategy has a beneficial impact on the Option Value sub-objective. The introduction of new rail stations, LRT stations and new bus services provide strong beneficial effects at the local level.
- 7.6.7 The introduction of new stations and improved bus services will have a beneficial affect on the access to the transport system sub objective.
- 7.6.8 The SoCoMMS strategy provides relief from existing severance in the urban areas of Arundel, Chichester, Wilmington, Worthing and Selveston.
- 7.7 Integration**
- 7.7.1 The integration objective identified within GOMMMS determines to what extent the strategy reflects the Government's integrated transport policy. More specifically this means integration with other transport modes; land used planning so that transport and planning work together to support more sustainable travel, and integration with policies for education, social exclusion, and health as well as other transport related policies. Three sub objectives are considered, namely: transport interchange; land use policy; and Other Government policies.
- 7.7.2 Through the upgrading of existing interchanges, improved information and access for all travellers, introduction of new stations and Park and Ride measures

contribute to providing an integrated transport system and a seamless journey. Therefore the SoCoMMS strategy has a beneficial effect on the transport interchange sub-objective.

7.7.3 This SoCoMMS strategy performs well against the National, Regional and Local Levels. In particular, the balance between parallel measures to change travel demand (such as those relating to land use planning), the improvement of public transport alternatives to the car, measures to curb car usage and support for the slow modes, results in a favourable score for this strategy across all levels of the appraisal.

7.7.4 The SoCoMMS Strategy is consistent with other Government policies relating to access to employment opportunity; reducing road accidents; promoting urban regeneration and promoting slow modes.

7.8 *Assessment against local and regional policies*

7.8.1 The policy objectives that have been highlighted from consideration of the Regional Planning Guidance and Local Transport Plans are:

- ## to promote urban renaissance
- ## to promote rural development
- ## to minimise the need to travel
- ## to promote slow modes
- ## to improve Public Transport
- ## to improve freight (develop sustainable freight transport systems)
- ## to protect the environment
- ## to improve safety
- ## to promote the regional economy
- ## to improve accessibility (including social inclusion)

7.8.2 As suggested by GOMMMS the above policy objectives all lie within the framework provided by the Governments objectives as set out in the AST.

7.8.3 From the above policy objectives further sub-objectives have been highlighted as shown in Table 7.5. These sub-objectives, taken from local and regional plans, are in the consultants view the most relevant to the study.

- 7.8.4 The performance of the SoCoMMS strategy has been measured against the sub-objectives by defined indicators as seen in Table 7.5. These indicators were chosen as they were seen to be a balance of relevance and practicality.
- 7.8.5 Where it is sensible to do so the same indicators are used for assessing the performance against local and regional objectives as those used to measure impacts in the Assessment Summary Table. This mainly occurs with Environmental and Safety objectives. The strategy has also been assessed against the key policy objectives with a score of positive (J), neutral (0), and negative (x)
- 7.8.6 The strong performance of the strategy in the field of “urban renaissance” is of particular importance, as this is a key local policy issue amongst most regional, county and local authorities. The strategy supports this key policy area in a number of ways, including:
- ## Significant accessibility enhancements across the region;
 - ## Significant levels of infrastructure investment;
 - ## Strong sustainability ethos to support general improvement to the quality of the human environment;
 - ## Reinforcement of the position of regional hubs, which have been identified by the Regional Assembly as key to the development of the area.
- 7.8.7 Achieving balance between higher levels of mobility and conserving the natural assets which under-pin the regions attractiveness to locals, visitors and investors.

Table 7.5 - Local and Regional Objectives Appraisal

Objective	Sub- Objective	Impact of Strategy	Remarks
Promote Urban Renaissance	Promote development in Urban Areas	J	Improved accessibility to urban areas by private car, road based public transport, rail and slow modes
	Invest in PAERs	J	Investment in improved transport infrastructure and services in the PAERs of Southampton, Portsmouth, Hastings, the Sussex and East Kent coastal towns
	Improve quality of urban environment	J	Improved walking and cycling in the urban environment and reducing congestion in the urban areas
	Renew urban infrastructure	J	Reinforces existing settlement patterns and regional economic hubs
	Increase employment in region	J	Improved accessibility throughout the study area to areas of employment
Promote Rural Development	Support sustainable communities	J	Reinforces existing settlement patterns
	Improve access to social & economic activities	J	Improved accessibility to employment and population
	Protect the rural character	J	Transfer of trips from rural roads on to the A27 thereby reducing environmental and safety problems in the rural areas
	Encourage new economic activities in rural areas	0	
Minimise need to travel	Reduce dependency on cars	J	A 3% reduction in the number of vehicle miles
	Encourage close proximity between development & PT	J	Improved public transport accessibility in PAERs
Promote slow modes	Improve cycle facilities	J	Investment in cycle facilities
	Improve pedestrian mobility	J	Investment in pedestrian facilities
Improve Public Transport	Improve PT integration infrastructure	J	The upgrading of existing interchanges, improved information and access for all travellers, introduction of new stations and Park and Ride measures contribute to providing an integrated transport system and a seamless journey.
	Improve Rail service	J	Increased frequency and reliability in rail service along the South Coast, improved infrastructure ie stations
	Improve bus services	J	Increased frequency and reliability in bus services along the South Coast, improved infrastructure ie stations and bus priority
	Improve PT support services (eg information)	J	The upgrading of existing interchanges, improved information and access for all travellers, introduction of new stations and Park and Ride measures contribute to providing an integrated transport system and a seamless journey.

Table 7.5 - Local and Regional Objectives Appraisal (Contd.)

Objective	Sub- Objective	Impact of Strategy	Remarks
Improve Freight (Develop sustainable freight transport systems)	Increase proportion of freight by rail or sea	0	The strategy promotes the use of freight by rail and sea.
	Reduce impact of road freight	J	The introduction of road infrastructure improvements will create a transfer of road freight away from roads that are environmentally sensitive
Protect the Environment	Promote transport modes & projects with minimum Environmental impact	J	The strategy promotes slow modes which is a positive impact new infrastructure is introduced with minimum impact on the environment There is a positive impact on air quality throughout the study area Infrastructure improvements means that there is a transfer of vehicles from environmentally sensitive roads, however proposed infrastructure improvements do take place on sensitive habitats A neutral-slight negative impact on the majority of the study area with a number of areas experiencing a beneficial impact. However a slight negative impact has been identified in Hastings due to townscape benefits within parts of Bexhill and Hastings. The strategy is dependant on enforcement of current land use and development policies Infrastructure improvements means that there is a transfer of vehicles from environmentally sensitive roads, however proposed infrastructure improvements do affect the landscape
	Enhance air quality	J	
	Protect sensitive habitats	0	
	Enhance quality of urban environment	0	
	Constrain green field development	0	
Improve Safety	Preserve landscape	0	There are significant accident savings associated with reduced highway demand and new highway infrastructure.
	Reduce transport related accidents	J	
Promote the Regional Economy	Promote tourism	J	Improved accessibility to areas of tourism via private and public transport
	Increase regional prosperity	J	The strategy NPV of £1841M indicates increased user benefits and therefore a positive economic impact on the regional prosperity
	Broaden economic base	J	Improved accessibility by private and public transport throughout the study area to areas of employment and markets
	Promote local industries	J	Improved accessibility by private and public transport throughout the study area at local level
	Support growth of Ashford as regional centre	J	Improved rail links to Hastings and the Kent Coast towns
Improve Accessibility	Maintain level of service of strategic highway network	J	Reduction in congestion compared to the future do minimum throughout the study area
	Improve access to air/sea ports	J	Improved accessibility by private and public transport throughout the study area
	Rail congestion	J	New infrastructure will increase the capacity of the rail network
	Improve facilities for mobility impaired	J	All improvements will adhere to the guidelines set out for disabled access
	Promote social inclusion	J	Investment in public transport services will improve accessibility for socially excluded groups

7.9

7.9.1

General Comments on Assessment of SoCoMMS Strategy

The SoCoMMS Strategy is intended to be consistent with other Government policies relating to access to employment opportunity; reducing road accidents; promoting urban regeneration and promoting slow modes.

Worksheet 8.4 : Integration : Other Government Policies

Reference Sources:	Cabinet Office – Social Exclusion objectives; DTI objectives; DCMS – Planning and Accessibility: A Good Practice Guide; HM Treasury Objectives: Department of Health – Saving Lives: Our Healthier Nation; Department for Education and Skills – Employment Action Plan
Assessment Score:	J - Positive – generally supportive of other government policies
Qualitative Comments:	Consistent with other Government policies relating to access to employment opportunity, reducing road accidents, promoting urban regeneration and promoting slow modes.

7.9.2

In July 2000 the Government published the 10 Year Plan for Transport which, set down eight Public Service Agreement targets. These are outlined below:

- £# To reduce congestion on the inter-urban network and in large urban areas in England below current levels by 2010
- £# To increase rail use in Great Britain from 2000 levels by 50% by 2010
- £# To increase bus use in England from 2000 levels by 50% by 2010
- £# To double light rail use in England by 2010 from 2000 levels
- £# To cut journey times on London Underground services by increasing capacity and reducing delays
- £# To improve air quality by meeting the National Air Quality Strategy targets
- £# To reduce green house gas emissions by 12.5% from 1990 levels and move towards a 20% in carbon dioxide emissions by 2010
- £# To reduce the numbers of people killed or seriously injured in Great Britain in road accidents by 40% by 2010 and the number of children killed or seriously injured by 50% compared with the average for 1994-98.

7.9.3

The outcomes of the multi-modal studies are a key contribution to meeting many of these targets. Although the time frame of SoCoMMS is longer than that of the 10 year plan, a qualitative appraisal can be undertaken in relation to how the strategy meets these objectives. As can be seen in Table 7.6, the strategy performs well against the applicable objectives. The strategy contributes towards these specific targets and must be supported by other local measures including development controls. The strategy has been assessed against the objectives with a score of positive (J), neutral (0), and negative (x).

Table 7.6 Strategy Assessment against the Department for Transport's Public Sector Agreement (PSA) Targets

Objective	Impact of Strategy	Remarks
to reduce congestion	J	With the introduction of demand management schemes and soft measures the strategy will reduce congestion in the urban areas. The road infrastructure improvement contribute to the reduction of congestion on the inter-urban network.
to increase rail use	J	The introduction in improved service frequency, new rolling stock and investment in stations rail use along the south coast will bring about an increase passenger kilometres.
to increase bus use	J	The introduction of improved service frequency, bus priority and investment in passenger waiting facilities will bring about an increase in bus use throughout the study area.
to double light rail use	J	The introduction of light rail infrastructure in South Hampshire and Brighton will result in the increase of the number of passenger journeys in the study area
to cut journey times on the underground	0	
to improve air quality	J	The promotion of slow modes, the introduction of demand management schemes and improved public transport services will serve to improve the Air Quality of the study area as a whole
to reduce the number of people killed or seriously injured in Great Britain in road accidents	J	Investment in an improved road network will bring about a reduction in road accidents within the study area. Soft measures, which promote walking and cycling, travel awareness schemes and safer routes to schools will contribute to reducing the levels of pedestrian and cycling accidents in Great Britain
to reduce green house gases	J	Demand management schemes, improved public transport and soft measure will contribute to the reduction in private vehicle road based trips and therefore a reduction in the level of green house gases

7.10

Appraisal Summary Table

- 7.10.1 The Appraisal Summary Table (AST) is the final summary of the GOMMMS process, designed to illustrate the key aspects of the appraisal on a single sheet. The impacts of the strategy are summarised in the AST table 7.7.
- 7.10.2 The AST illustrates the balance which the strategy is designed to achieve, together with its specific costs and benefits. There is no final all inclusive score for the appraisal and in practice, decision-makers must weigh the various costs and benefits in deciding whether to proceed with the strategy.
- 7.10.3 In the consultants judgement, the benefits represent a significant level of enhancement to a wide variety of stakeholders, whilst costs and dis-benefits have been minimised to an acceptable and achievable level.

7.11

Public acceptability

- 7.11.1 The study has involved an extensive process of public consultation, including three rounds of focus groups with stakeholders, a series of public exhibitions across the corridor and a public acceptability questionnaire. The consultation process was coordinated within a media campaign designed to ensure that awareness of the study was maximised through press, television and radio exposure.
- 7.11.2 Details of the consultation methods and results are available in the Public Consultation Technical Reports.
- 7.11.3 Over 2,500 people visited the SoCoMMS exhibitions, held in locations throughout the study area. Feedback from attendees, along with results from the formal focus groups contributed to the refinement of the strategy.
- 7.11.4 Public acceptability was tested through a random telephone survey of households across the study area. Respondents were given details of the strategy (in advance of the questions) and asked their opinion on its likely performance. Over 70% of those questioned expressed agreement with the strategy (either 'slight' or 'strong' agreement).
- 7.11.5 The principal area of disagreement from respondees concerned the pricing proposals for parking and congestion charging.

Figure 7.7 Appraisal Summary Table

Core Strategy			Problems	Present Value Cost To Government £510M															
OBJECTIVE	SUB- OBJECTIVE	QUALITATIVE IMPACTS	QUANTITATIVE MEASURE	ASSESSMENT															
ENVIRONMENT	Noise	In 15th year: 193 zones “losers”, 322 zones “winners”. The winners are largely associated with road infrastructure improvements and the losers are largely associated with increased rail services	Change in estimated population annoyed in 15 th year with Strategy compared with present Do-minimum: +10028	Change in estimated population annoyed in 15 th year with Strategy compared with future Do-minimum: +1226															
	Local Air Quality	Overall, no zones with AQMA are worsened by the strategy (for both Nitrogen Dioxide and PM10). Two zones with AQMA are potentially improved by the strategy for Nitrogen Dioxide. However all AQMA are outside of the study area.	NO2: 445 zones “winners” NO2: 64 zones “losers” NO2: 35 zones no change PM10: 442 zones “winners” PM10: 67 zone no “losers” PM10: 35 zones “no change”	Emissions estimate NO2: -3,113,286 Emissions estimate PM10: - 33257															
	Greenhouse Gases	A net reduction is predicted for the majority of zones		Reduction of 137,742 tonnes of CO2 for 2016 (-2%) against future do-minimum															
	Landscape	Due to limited new road and rail infrastructure schemes the strategy will have a neutral-slight negative impact on the majority of the study area. However large negative impacts have been identified in certain parts of the study area including Arundel, Lewes, Selmeston and Hastings	<table><tr><td>Impact of Strategy on Resource</td><td>Slight -ve</td><td>Moderate -ve</td><td>Large -ve</td></tr><tr><td>National e.g. AONB and National Park</td><td></td><td></td><td>1 on AONB</td></tr><tr><td>Regional e.g. Special Landscape Area and Area of Great Landscape Value</td><td>1 on Ancient Woodland</td><td>1 on Ancient Woodland</td><td>-</td></tr></table>	Impact of Strategy on Resource	Slight -ve	Moderate -ve	Large -ve	National e.g. AONB and National Park			1 on AONB	Regional e.g. Special Landscape Area and Area of Great Landscape Value	1 on Ancient Woodland	1 on Ancient Woodland	-	Large Negative Impact			
	Impact of Strategy on Resource	Slight -ve	Moderate -ve	Large -ve															
	National e.g. AONB and National Park			1 on AONB															
	Regional e.g. Special Landscape Area and Area of Great Landscape Value	1 on Ancient Woodland	1 on Ancient Woodland	-															
	Townscape	A neutral-slight negative impact on the majority of the study area with a number of areas experiencing a beneficial impact. However a slight negative impact has been identified in Hastings due to townscape benefits within parts of Bexhill and Hastings.	Multiplicity of features do not lend themselves well to a matrix.	Moderate Negative Impact															
	Heritage of Historic Resources	There will be a neutral-slight negative impact on the majority of the study area. However a large negative impact has been identified on the historic environment in Arundel.	<table><tr><td>Resource</td><td>Number of Resources</td></tr><tr><td>Scheduled Ancient Monuments</td><td>At least 4</td></tr><tr><td>Listed Buildings</td><td>At least 38</td></tr><tr><td>Historic Parks and Gardens</td><td>8</td></tr><tr><td>County and Local Archaeological Sites e.g. SMR and Local Plan Designations</td><td>8</td></tr><tr><td>Conservation Areas</td><td>1</td></tr></table>	Resource	Number of Resources	Scheduled Ancient Monuments	At least 4	Listed Buildings	At least 38	Historic Parks and Gardens	8	County and Local Archaeological Sites e.g. SMR and Local Plan Designations	8	Conservation Areas	1	Large Negative Impact			
Resource	Number of Resources																		
Scheduled Ancient Monuments	At least 4																		
Listed Buildings	At least 38																		
Historic Parks and Gardens	8																		
County and Local Archaeological Sites e.g. SMR and Local Plan Designations	8																		
Conservation Areas	1																		
Biodiversity	There will be a neutral-slight negative impact on the majority of the study area. However, a serious adverse impact on biodiversity has been identified along the route of the proposed Hastings-Bexhill Link Road.	<table><tr><td>Impact Resource</td><td>Minor -ve</td><td>Significant -ve</td><td>Serious -ve</td></tr><tr><td>Natural e.g. SSSI, NNR</td><td>7 on SSSIs</td><td></td><td>2 on SSSIs</td></tr><tr><td>Regional e.g. CWS, SINC</td><td>13 on SINC and 1 on Ancient Woodland</td><td>1 on Ancient Woodland and 1 on SINC</td><td></td></tr><tr><td>Local Plan Designations</td><td>2 on Woodland Protection Areas</td><td></td><td></td></tr></table>	Impact Resource	Minor -ve	Significant -ve	Serious -ve	Natural e.g. SSSI, NNR	7 on SSSIs		2 on SSSIs	Regional e.g. CWS, SINC	13 on SINC and 1 on Ancient Woodland	1 on Ancient Woodland and 1 on SINC		Local Plan Designations	2 on Woodland Protection Areas			Large Negative Impact
Impact Resource	Minor -ve	Significant -ve	Serious -ve																
Natural e.g. SSSI, NNR	7 on SSSIs		2 on SSSIs																
Regional e.g. CWS, SINC	13 on SINC and 1 on Ancient Woodland	1 on Ancient Woodland and 1 on SINC																	
Local Plan Designations	2 on Woodland Protection Areas																		
Water Environment	The balance of new schemes and upgrades suggests that on a regional scale the overall impact is generally low. However one scheme (the Worthing Tunnel), which passes through a regionally important groundwater resource with little scope for mitigation, has in itself a major impact and is sufficient (by accumulation of all local measures) to rate the impact of the core strategy as significant		Significant negative impact																
Physical Fitness	Measures to improve cycling and walking facilities are likely to bring about an increase in walking and cycling and therefore improve physical fitness. At a strategic level it is unclear what changes in the number of cyclists and pedestrians will occur.		Beneficial Impact																
Journey Ambience	Traveller care is significantly improved under the strategy by the improvements to rolling stock, facilities at stations, and public transport access to stations. New and improved roads will also reduce traveller stress as will reduced access times to stations.		Large Beneficial Impact																
SAFETY	Accidents	Significant accident savings associated with reduced highway demand and new highway infrastructure.	Savings: Fatal 226 Serious 1638 Slight 13,525	PVB 298.3															
	Security	The provision of CCTV, help points, and improved lighting at all stations across the study area will help to improve personal security for all passengers that use these interchanges		Large Beneficial Impact															
ECONOMY	Transport Economic Efficiency			User Benefits: NPV £1409M Private Providers NPV£-129M Public Providers NPV£2192M Other Government NP£1637M															
	Reliability	Improvements to the transport networks will enhance capacity and improve journey time reliability for road users. Proposals for improved rail infrastructure and rolling stock will improve reliability for rail users.		Moderate Beneficial Impact															
	Wider Economic Impacts			Beneficial															
ACCESSIBILITY	Option Values	New rail stations provide strong beneficial effects at the local level for each station as does the introduction of two Light Rail Transit systems. The combined effect will provide overall area wide opportunities within the study area.		Large Beneficial Impact															
	Severance	Provides relief from existing severance for those in Arundel, Chichester, Wilmington, Worthing and Selmeston		Slight positive impact															
	Access to the Transport System	Positive impacts are associated with the introduction of new stations and improving bus services		Large Beneficial Impact															
INTEGRATION	Transport Interchange	The upgrading of existing interchanges, improved information and access for all travellers, introduction of new stations and Park and Ride measures contribute to providing an integrated transport system and a seamless journey.		Large Beneficial Impact															
	Land-Use Policy	Performs well against national and regional guidance as well as LTP's and Structure Plans		Beneficial Impact															
	Other Government Policies	Consistent with other Government policies relating to access to employment opportunity, reducing road accidents, promoting urban regeneration and promoting slow modes.		Beneficial Impact															

8 Delivery of the Strategy

8.1 *Implementation*

8.1.1 The Multi Modal Studies (MMSs) such as SoCoMMS are key actions in the Government's integrated approach to transport and important instruments in implementing its Ten Year Plan³. In delivering the SoCoMMS strategy, there are a number of organisations involved, including:

- ## The Government;
- ## South East England Regional Assembly
- ## South East England Development Agency;
- ## Highways Agency;
- ## Strategic Rail Authority;
- ## Railtrack;
- ## Train Operating Companies
- ## Bus operators;
- ## Local authorities;
- ## Other transport agencies and operators.

8.1.2 The SoCoMMS findings and recommendations will be passed over formally to the South East Regional Assembly on completion of this study. This will allow SEERA to further develop the South East Regional Transport Strategy, which is currently in a draft status. The recommendations and findings will also be presented to local authorities, other statutory agencies responsible for transport, and other interested groups.

8.1.3 A key concern highlighted through public consultation was in regard to delivery of the strategy and the integration between delivery agents. There are clearly a number of players involved in the delivery of the strategy and for effective delivery, a partnership between organisations needs to be established

8.1.4 For this partnership approach to work there needs to be:

- ## a clear policy and plans of action;

³ Transport 2010 The 10 Year Plan paragraphs 4.1 – 4.3.

- ## adequate resources;
- ## sufficient powers for implementation;
- ## a strong sense of common purpose and
- ## close co-ordination between the individual implementation agencies.

- 8.1.5 If adopted in its complete form the SoCoMMS strategy may provide the first of these partnership appraisals . In order for the respective transport agencies to plan for their implementation of the strategy however this general pledge should be developed into an indicative phased budget for main components of the strategy for the next ten year period. This could take the form of five-year tranches indicating how much is planned to be made available for each component in each period. Where expenditure is to be funded through borrowing or PPPs this should be taken into account along with any incomes from parking levy and congestion charging schemes .
- 8.1.6 GOSE working alongside The Regional Assembly, through the Regional Transport Strategy can provide an overall co-ordination of delivery. However, it is noted that at present SEERA do not have the powers or resources to ensure that the measures are carried out according to programmes.
- 8.1.7 The Highways Agency and the Strategic Rail Authority/ Railtrack will be responsible for implementing most of the road and rail infrastructure schemes in the area. Local Authorities will play a key role in the delivery of the local elements, particularly through the Local Transport Plan system. Local transport operators will be responsible for the provision of service enhancements. Each organisation has its own planning, programming and budgeting proposals into which the SoCoMMS strategy would have to be integrated.
- 8.1.8 The SoCoMMS strategy has sought to provide a balanced approach across all modes. The strategy is the sum of its parts and it is not considered to be desirable for elements to be 'cherry-picked' for inclusion while other elements are not brought forward. In this regard, the need for co-operation between bodies across the area is paramount.
- 8.1.9 It is considered that existing institutional structures are sufficient to progress the development and delivery of individual elements of the strategy. The principal outstanding issue with regard to SoCoMMS is the coordination of related aspects of the strategy to ensure that integration exists across modes, geographical boundaries and timescales.

8.1.10 In order to deliver the integrated strategy, it is proposed that a series of Joint Transport Panels are established. These would be based on informal co-operation between organisations with sub-areas. The areas could be:

- ## South Hampshire;
- ## West Sussex
- ## East Sussex; and
- ## East Kent.

8.1.11 Within each area it is proposed that a Joint Transport Panel is established comprising officers from each of the county and unitary local authorities, representatives from district authorities (to provide input into planning issues), GOSE, Highways Agency, SRA, SEERA and transport operators. The Panel should meet on a regular cycle to co-ordinate:

- ## Policy approach;
- ## Implementation, and
- ## Monitoring of resource expenditure and impact of measures.

8.1.12 These Panels would be responsible for speeding up the design process; overseeing and coordinating progress through the statutory procedures; and ensuring coordination of different projects and services within the strategy amongst different agencies and authorities. A degree of flexibility will be required in their scope and brief, given the diversity of schemes with which they would deal.

8.2 *Additional Powers for Implementing the Strategy*

8.2.1 There are two areas where additional powers are needed to implement the Strategy successfully. The first is to allow local authorities, either individually or jointly to ensure that comprehensive bus services which are fully integrated with rail, light rail and other transport policies to be procured. It is important that this should be within a competitive regime so as to obtain best value for money and this could be done either by a process of route tendering or area franchising.

8.2.2 Each of these have their advantages and disadvantages and the powers should allow for the most appropriate to be chosen for the area in question. As a safeguard it could be required that the Secretary of State has the right to consider and approve or disapprove procurement schemes proposed by local authorities.

- 8.2.3 There is the issue of transition from the existing service arrangements to a better integrated regime that will need consideration as existing business values may be affected. It may be necessary to go beyond the arrangements involved with Quality Bus Contracts and this will need considering in formulating new legislation.
- 8.2.4 The second area where new powers are needed is in respect of Private Non-Residential (PNR) parking. Local authorities should be able to regulate the amount and key aspects of operation (e.g. opening and closing hours) of PNR parking in their areas. They should also be able to levy charges in respect of these spaces and use the proceeds to help fund transport scheme in their areas. Such powers would not be dissimilar than those already available for Workplace Parking and, in some respects, would be easier to implement in avoiding the need to distinguish between different parking spaces and what types of visitors use them.
- 8.2.5 It is envisaged that all demand management measures could be implemented under existing arrangements.

8.3 *Monitoring*

- 8.3.1 It is important for the delivery and effectiveness of the strategy to be monitored. Such processes have been established by local authorities in respect of the Local Transport Plans. The monitoring needs to review:

- ## Progress on the planning and delivery of elements;
- ## Expenditure on scheme elements;
- ## Impacts of the strategy on selected indicators (e.g. traffic levels, mode share, air quality indicators, safety).

- 8.3.2 The quality of monitoring activities is also important and it is suggested that Best Value techniques currently being introduced by various authorities be applied in this respect.

8.4 *Phasing*

- 8.4.1 The phasing of the delivery of the strategy has been developed based on a series of principles:

- ## That the lead time for implementation is realistic;

- €# That measures providing better value for money are delivered at an earlier stage of strategy implementation;
- €# That dependencies between organisations and schemes are taken into account;
- €# Expenditure is spread over time.

- 8.4.2 The need for transport improvements has been highlighted through the consultation work and the strategy testing. There are some initiatives, particularly in respect of local measures which can be introduced quickly. These will bring substantial benefits with little capital cost. The programme for these should commence quickly.
- 8.4.3 The road schemes on the corridor will need to go through the statutory planning procedures. Each will need to have orders prepared, further public consultation and a potential public inquiry before construction. We have assumed that traditional public funding methods are used for the road schemes, although future detailed analysis may identify a role for DBFO methods.
- 8.4.4 The highway schemes could be packed into an A27/A259 DBFO venture. This may allow earlier delivery without creating too great a call on public sector capital funds.
- 8.4.5 Rail schemes are anticipated to follow current SRA and Railtrack/Network Rail procedures for development, design and commissioning. Some may require Transport and Works Act consent, though this is not yet clear. The LRT proposals are assumed to be implemented as PFI schemes, with public grant or subsidy supplementing the operating surplus to cover the funding gap for capital works.
- 8.4.6 Figure 8.1 summarises the proposed phasing for the various measures within the strategy. It should be noted that this relates to the period in which schemes are expected to open. The figure also summarises the proposed delivery agent and capital costs.

Scheme	Capital Cost (£m)	Timing -scheme opening				
		2003-2007	2008-2012	2013-2017	2018-2022	2023-2032
Highway						
Chichester Bypass - Junctions	35.4					
A29/A27 Junction	4					
Fontwell roundabout						
Slindon Common roundabout						
Arundel Bypass	27					
Bypass						
Worthing-Lancing Improvement	275					
Tunnel						
Lewes-Beddingham	22.7					
East of Beddingham	42.2					
Selmeston bypass						
Wilmington bypass						
Bexhill -Hastings	24					
Link Road						
Lyddon-Dover	24.6					
M27	117					
Designation A27 to M27 w of Havant						
Junction to 3 to 4 widening						
Junction 11-12 widening						
Junction 5 improvements						
Other junction improvements						
VMS Signs on M27						
Local Safety/Enhancements Measures	22					
RAIL SCHEMES	108.5					
Station enhancements						
New stations						
Kent lines investment & service upgrades						
Coastway East investment & upgrades						
Coastway West investment and upgrades						
Coastway Express Service						
Eastleigh Chord; S.Hants capacity upgrade						
Re-assessment of Willingdon chord						
Re-assessment of Lewes-Tonbridge Wells						
LIGHT RAPID TRANSIT	283					
S.Hants Stage 2: Fareham-Soton (not included in cost)						
Brighton LRT						
BUS SCHEMES	26					
Bus priority infrastructure and services						
PERSUASIVE AND GP MEASURES	98.7					
Marketing, pricing and management						
Green/employer/school/etc travel plans						
Pedestrian/cycle priority measures						
Parking : town centres						
Parking : Workplace, PNR and employee						
Town centre congestion charging						
Park and Ride						

Key

Partial opening

Complete opening

Figure 8.1 – Summary of Scheme Capital Costs and Timing

8.5

Strategy Costs and Funding

8.5.1

The indicative costs for the strategy are subject to updating as further detailed design is undertaken by the respective delivery agents. The capital cost of implementing the strategy in the SoCoMMS corridor is £1.1Bn This comprises:

- ££ £594m of strategic highways investment (of which £275m is allocated to Worthing-Lancing improvement);
- ££ £99m investment in local highways, public transport and persuasive measures;
- ££ £283m investment in LRT (does not include extension to Southampton);
- ££ £26m investment in bus measures;
- ££ £108.5m investment in rail.

8.5.2

It is noted that the strategy is reliant on the completion of measures outside of the corridor. These include:

- ££ Completion of Channel Tunnel Rail Link;
- ££ Delivery of north-south measures on the Brighton main line and Arun Valley line as part of South Central franchise and the completion of Thameslink 2000;
- ££ Completion of A21 highway improvements.

8.5.3

The potential sources of funding for improvements are:

- ££ Highways Agency- Targetted Programme of Improvements;
- ££ Strategic Rail Authority;
- ££ Operating revenue (eg: for a portion of rail schemes)
- ££ Interregional funds (for PAERs) including EU grants
- ££ Local Transport Plan Settlements
- ££ RPP funds
- ££ Developer contributions and Section 106 agreements;
- ££ DBFO, PPP mechanisms
- ££ Funds from congestion charges, parking levies.

8.5.4

Table 8.2 summarises potential funding sources.

Table 8.2 – Suggested Funding Sources

Scheme Category	Delivery Agency	Initial Source of Finance	Long-term Funding
Highway Schemes	Highways Agency	Government	75% demand management revenues; 25% government
Rail station enhancements	SRA	TOCs	TOCs
New Stations	SRA	SRA	50% local authority 50% SRA grant (RPP) or 100% developer finance
Rail rolling stock	TOC	TOC	SRA/TOC
Rail infrastructure	SRA	SRA	SRA/TOC
Bus services	Bus operators/quality partnerships	County Councils	County Councils & operator revenue
Bus infrastructure	Local authorities	Local authorities	Local authorities
Local Transport Initiatives	Local authorities	Local authorities	Local authorities
Demand management measures	Local authorities	Local authorities	Self funding
Light Rapid Transit	Local authorities	Government	Government grant with contribution from operating surplus

- 8.5.5 In addition to these capital costs, the strategy will incur additional operating costs, some of which will be covered by revenues, but some of which will require additional subsidy, at least in the early years. Annual operating costs requiring public support in Year 15, the mid-point of the strategy are estimated to be:
- £# Local transport measures: £2m
 - £# Demand management measures: £32m
 - £# Highway maintenance: £22m
 - £# Bus: £0.2m (down from £1.6m in Year 5, due to revenue growth)
 - £# Rail: £2m (down from £4.1m in Year 5, due to revenue growth)
- 8.5.6 The Brighton LRT system, programmed for introduction in 2020, is estimated to cover its operating costs.
- 8.5.7 As noted below, the revenues from demand management measures in Year 15 will be around £132m pa, allowing all of these operating costs to be covered and generating a surplus of around £75m towards capital costs and their finance charges.
- 8.5.8 The Rail Passenger Partnership Scheme (RPP) could prove a viable means of funding some of the proposed station enhancements, including new stations. In all cases, a strong regional development case exists for the schemes, which should qualify them for this form of funding.
- 8.5.9 EU structural funds could also be available for some of the proposed improvements in Hastings. Hastings qualifies for Structural Fund support and both the proposed rail and highway improvements within the town could be put forward for either European Social Fund or European Regional Development Fund support. In both cases, the funds will contribute 45-50% of finance, with the remainder being provided domestically.
- 8.5.10 There is an issue with respect of revenue support for public transport services. At present the available funds are insufficient to secure a public transport network that offer an acceptable alternative for most car journeys. A clear recommendation of this study is for an increase in revenue funding for local rail and bus services. In time, levels of cost recovery will increase and subsidy levels decline, however, an early pump-priming increase in support will be needed to support the strategy.

- 8.5.11 In terms of the strategy as a whole, the additional bus revenue support is relatively low, starting at around £1.5m p.a. and reducing to zero by 2020. This represents around an additional 15% of the current public support for buses on the corridor in the early years. An economic case exists for such an increase along with a strong social case, in terms of reduced levels of social exclusion and local accessibility.
- 8.5.12 Rail follows a similar trend, requiring an additional £4m of funding (operating subsidy) in early years, declining to £2m by 2020. This represents a relatively small increase in current levels of subsidy for rail in the region (though because the study area covers a small part of several franchises, it is not possible to accurately compare this increase with existing levels of support for rail).
- 8.5.13 The proposed demand management measures will be generative and can thus be viewed as contributing towards the funding of the strategy. It is estimated that the workplace parking levy will generate of the order £40-100m p.a. net income, depending on the year in question, at minimal implementation and administration costs. The congestion charging proposal for South Hants and Brighton will generate around £30m p.a. of net income, with annual operating costs of around £30m p.a.
- 8.5.14 In theory, this combined annual average net income of around £100m would cover the £25m of additional public transport operating costs (bus and rail) and contribute a further £75m towards capital costs of schemes. Over the 30-year period covered by the strategy, total revenues from parking and congestion charges will total £2.8Bn. Assuming current costs of capital and 30-year pay-back periods, the surplus would be sufficient to finance in the region of £6-800m of capital schemes (eg: through a DBFO or similar program).
- 8.5.15 It is likely that revenues from demand management measures will not have ramped-up to significant levels (in excess of £50m net income) until 2010. This will be after much of the capital expenditure on highway schemes is required (though not the largest scheme at Worthing). Hence, government will need to fund works in the first instance, or implement a DBFO type programme.
- 8.5.16 In order to secure public support for the pricing measures, the hypothecation of revenues within the transport sector is strongly recommended throughout the life of this strategy.

8.5.17

In summary, the strategy as a whole presents an attractive proposition for affordability and financial sustainability. It requires comparatively low annual operating subsidies and, in the long term, demonstrates a good potential for the financing and recovery of capital costs.

9 Recommendations

- 9.1.1 The study has identified and investigated congestion, safety and environmental problems of transport along the south coast between Southampton and Thanet. A series of measures have been proposed aimed at resolving these problems and improving access within the corridor. Regeneration, and the need to facilitate this and promote economic activity in general have been key aspects of the study.
- 9.1.2 The study has considered the strategic role of the transport systems (road, rail and sea borne) in this corridor and made recommendations for an over-arching strategy, together with associated implementation plans to address the transport problems along the corridor. This reflects local, regional, national and international objectives.
- 9.1.3 An important aspect of the recommended strategy is that it represents a balanced set of inter-dependent measures. It is not designed to 'pick-and-mix' and removal of one set of proposals will jeopardise the wider benefits from the remainder. This reflects the incremental approach to the development of the strategy and the complexity of the issues faced across the corridor.
- 9.1.4 The leading recommendation is therefore that, so far as is possible, the strategy be implemented as a coherent package of measures as described here. Specific, scheme or service, recommendations are made below. Suggestions are also made as to which schemes receive priority over the next five years.

Highways

- 9.1.5 In order to address a series of bottlenecks at various points within the corridor, predominantly along the M27/A27, a series of highway improvement measures are recommended. These are additionally designed to increase accessibility within the corridor and support regeneration and economic development. The recommendations are as follows:

Chichester Bypass: A series of improvements be implemented, including grade separation of a number of junctions, accompanied by local traffic management and bus priority measures within the vicinity;

- ## **A29/A27 junction:** improvements be conducted at the Fontwell and Slindon Common roundabouts;
- ## **Arundel Bypass:** a new bypass be constructed around Arundel;
- ## **Worthing-Lancing:** a scheme be implemented to by-pass the current stretch of the A27, possibly comprising short tunnel sections with accompanying traffic management and public transport measures;
- ## **Lewes-Beddingham:** the existing level crossing be replaced with a flyover to reduce queues and facilitate a higher rail frequency;
- ## **East of Beddingham:** a mix of on and off-line improvements be implemented at Selmeston and Wilmington to provide increased highway capacity;
- ## **Bexhill-Hastings:** a new link road be constructed to increase capacity and relieve congestion to the west of Hastings;
- ## **Lyddon-Dover:** capacity improvements be implemented on the final stretch of the A2;
- ## **M27:** a mix of improvement measures be implemented, including widening and junction enhancements;
- ## **Local safety measures:** a number of specific recommendations are made for measures to enhance road safety, including several sites between Hastings and Ashford.

9.1.6 It is proposed that priority be given to delivering the schemes at Beddingham and Hastings, along with some of the M27 schemes and all local safety measures within the next five years

Railways

9.1.7 A variety of rail improvements are proposed to enhance the general quality of service, improve the frequency of local services and, most significantly, provide a new express service along the corridor:

- ## **East Kent:** deliver infrastructure enhancements to allow increased frequency of local services between Margate, Ramsgate, Canterbury, Dover, Folkstone and Ashford;
- ## **East Coastway:** deliver a number of infrastructure enhancements to permit increased frequencies, including a high frequency service between Ore, Hastings and Eastbourne;

- ## **West Coastway:** deliver minor short-term infrastructure enhancements, followed by the construction of a chord at Eastleigh and associated capacity enhancements in the longer term;
- ## **Coastway Express:** introduce a new half-hourly express service between Ashford, Brighton and Southampton; double track the remaining section between Ashford and Hastings to permit this;
- ## **Station enhancements:** undertake a major programme of station renovation and enhancements across the corridor in order to transform the waiting and interchange facilities;

9.1.8 **New stations:** introduce six new stations on the corridor, linked to regeneration, development or parkway initiatives. In addition, suggestions are made that a complete re-casting of the Coastway timetable be undertaken in order to optimise the operations of the five TOCs concerned.

9.1.9 It is proposed that priority be given to station enhancements and to partial introduction of timetable enhancements on the Coastway and in Kent.

Light Rapid Transit

- ## An extension to the SHRT LRT should be considered, serving Fareham and Southampton, to be implemented around 2020; alternatively heavy rail services should be enhanced on the same route.
- ## A new LRT system is recommended for Brighton, serving major arterial routes in the town, Hove and Shoreham, also to be implemented around 2020.

Bus and Local Transport

9.1.10 Bus and local transport measures are a key element of the strategy, both in increasing accessibility and promoting traffic reduction measures. All of these proposals should be implemented within the next five years. These involve:

- ## A series of recommendations for bus priority and other measures are made for specific corridors and urban areas; furthermore, public funding for improved bus services be increased.
- ## A number of recommendations, based on best practice within the study area, are made for local transport improvements, including employee travel plans, school travel plans, walking and cycling.

Demand Management

9.1.11 The strategy recognises the need to restrain some vehicular trips over the course of the next 30 years in order to promote the sustainability objectives. These are as follows:

- ## Increased parking charges in town centres;
- ## Workplace parking charges for employees – in selected towns, with appropriate public transport enhancements;
- ## Urban congestion charging in Brighton and Southampton-Portsmouth – in the longer term, again, under-pinned by public transport improvements;
- ## Park and Ride – an increased number of sites at various locations throughout the corridor, in association with highway, bus and rail enhancements.

9.1.11 Finally, it should be noted that many of the problems and policy issues addressed by SoCoMMS have causes and implications well beyond the boundaries of the transport system. Issues such as urban regeneration, sustainable development, quality of the environment and traffic generation are affected by a wide range of factors, beyond those addressed by this study alone. These factors include planning and development control policy, regional investment incentives, along with wider issues such as fiscal policy and the approach to health care and education provision. Many of the existing policies covering these aspects are compatible with the balanced transport strategy put forward by SoCoMMS. The recommendations of SoCoMMS should be viewed as part of a wider package of initiatives, dependent, in part on the successful implementation of such broader policies.