

Local Public Transport Strategy  
Development Plan  
South Coast Corridor Multi-Modal Study  
Prepared for  
**Government Office for the South East**  
July 2002

**Halcrow Group Limited**

In association with:

Accent

Chris Blandford Associates

DTZ Pidea

Baxter Eadie Ltd

Sustainable Futures

Camargue – PR media Consultants

Transportation Research Group, University of  
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# South Coast Corridor Multi Modal Study Local Public Transport Strategy Development Plan

## Contents Amendment Record

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*Appendix A: Bus Best Practice*

# **1 Introduction**

# 1 Introduction

## 1.1 *Background to the Strategy Development Plan*

1.1.1 The South Coast Corridor Multi Modal study (SoCoMMS) is being undertaken on behalf of the Government Office for the South East (GOSE). The study has developed a transport strategy for the South Coast between Southampton and Thanet. This in turn will be an important element of the Regional Transport Strategy being developed by the South East Regional.

1.1.2 The development of the transport strategy has made use of a strategic transport model, which has been specifically developed for SoCoMMS. The model represents an average hour between 0700 and 1900 and includes highway and rail network definitions. Travel forecasts have been developed for 2016 and 2030 and a range of transport measures have been tested, either in isolation or in combination.

1.1.3 The transport strategy that has emerged includes a range of 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.

1.1.4 In order to provide further detail on the elements of the strategy, a series of Strategy Development Plans are being prepared. These include:

- South Hampshire;
- Chichester;
- Arundel;
- Worthing;
- Brighton and Hove;
- East of Lewes;
- Bexhill-Hastings; and
- Local public transport.

*1.1.5*

The purpose of the strategy development plans is to investigate the performance of multi-modal measures at the local level. The plans will provide a feedback to the strategy development process by confirming the inclusion of key measures. The plans will provide greater detail on the measures and their appraisal.

## **2 Road Based Public Transport**

## 2 Road Based Public Transport

### 2.1

#### ***Introduction***

#### 2.1.1

This strategy development plan provides some detail on the measures that are proposed to improve bus services in the study area. This work draws on best practice that has been introduced by local authorities and bus operators – principally at the Brighton and Hove Bus and Coach Company. This is described in Appendix A. This report describes the current role of buses in the study area, current problems and how bus services will develop in support of the overall multi-modal strategy. The improvements that could be made to enhance services and infrastructure are outlined. The broad costs and revenues of these improvements have been derived and the effectiveness and economic benefits calculated.

### 2.2

#### ***Current Role of Buses***

#### 2.2.1

The south east of England is generally perceived as being a relatively wealthy area, however there are sectors of society that rely on bus services. Alongside affluent areas there are pockets of social deprivation, where there are a combination of low incomes, unemployment and low educational achievement - these people need access to jobs, education and healthcare, and are often dependant on bus services to do this. Similarly, there are also areas of relative low car ownership, for example in East Kent (Margate, Dover, Folkestone and Dover) and in Brighton, Portsmouth and Southampton.

#### 2.2.2

A high proportion of the residents, particularly along the south coast, are retired, and who, later in life, find they are unable use a car, come to rely on public transport to get around. Areas identified with these types of demographics include Margate, Ashford, Worthing, and Bognor Regis.

#### 2.2.3

Other significant bus users are students and the young, who need buses to get to school and college and for social activities.

#### 2.2.4

Although rail grabs all the news headlines, buses actually handle more trips in the urban areas. In the SoCoMMS corridor, rail is important for trips to London, but also has a local role for journeys between settlements along the south coast. Overall, bus trips account for 6% of all motorised journeys, but in Southampton, Portsmouth and Brighton the modal shares are higher at 15%, 11% and 20%,

respectively. However, these are larger urban areas, more densely populated and therefore easier for buses to serve.

- 2.2.5 Within the SoCoMMS corridor there are three types of bus services: rural, inter-urban and local urban services. Sometimes one bus route performs all functions, for example route 700, which has a half hourly frequency.
- 2.2.6 Rural services are difficult to maintain and require subsidy to operate where patronage is low. In more remote areas services can operate only once a week
- 2.2.7 Inter-urban services, typically operating hourly or every two hours, are important for linking south coast towns especially for those people not living near a railway station, or those areas where rail does not reach.
- 2.2.8 Local urban bus services, which operate at higher combined frequency on some corridors, are the mainstay of areas like Brighton or Southampton. They are generally commercially operated – but, as noted above, interurban services can also “double up” as urban services.

### 2.3 ***Problems with Bus Services***

- 2.3.1 It has been difficult to protect buses from traffic congestion, and where there are bus lanes, more enforcement is required. Buses, which are affected by traffic congestion, cost the operators money and deter passengers from using the service. This leads to the familiar “cycle of decline”. Without intervention, as operating costs rise, services are cut back, leading to further losses of passengers and service cut-backs.
- 2.3.2 In the past, de-regulated services have not been well perceived by passengers - higher fares, poor integration between operators, lack of passenger information and reduced off peak services have all contributed to a decline in patronage. The public has a poor perception of buses, feeling them to be unreliable, uncomfortable, slow and dirty, and also relatively expensive in terms of single fares.
- 2.3.3 Currently many operators (especially in the south east) have had difficulty recruiting drivers and this has led to service cut backs or at least held back expansion plans. Bus companies are in competition with other employers of unskilled workers. However, recent pay awards within the bus industry appear to have stemmed the tide.

## 2.4

### ***Positive Features***

#### 2.4.1

Buses services can be easily expanded to meet increased demand or serve new markets. Compared to rail or light rail they offer “instant” solutions. We have assumed many of the measures proposed could be up and running by 2004. Furthermore, the demand management proposals, which are to be phased in as part of the SoCoMMS strategy, will need the additional public transport capacity that only buses can provide quickly.

#### 2.4.2

In the SoCoMMS area, Brighton and Hove already are showing the way. They have increased patronage by 5% each year by various “best practice” measures, although in a fairly buoyant market. Operators in other areas, such as Stagecoach are also making similar improvements. The key ingredients to best practice are:

- simplified route system, including “turn up and go frequencies” and route branding;
- simplified fare structures and attractive ticketing offers;
- better passenger infrastructure and bus priority through Quality Bus Partnerships;
- better passenger information, marketing and complaints procedures;
- low floor vehicles and vehicle location systems with real time passenger information.

#### 2.4.3

Good bus services are also good for local employers - they enable them to draw workers from a wider catchment area - important where there are difficulties recruiting locally. However, buses work best in the denser urban areas, not in low density areas and out of town developments.

## 2.5

### ***The Role for Buses in the SoCoMMS Strategy***

#### 2.5.1

The government’s 10 year plan highlighted the need to transform bus services and subsequent papers were issued on converting “the workhorse to a thoroughbred”. Other initiatives have included Quality Bus Partnerships - a voluntary arrangement between local authority (LA) and bus operator, where the LA provides the infrastructure and the operator improved bus services and vehicles.

- 2.5.2 Funding has been provided by urban and rural bus challenges for “special projects and initiatives” (although some would argue that just more funding is required anyway for bus services).
- 2.5.3 In the SoCoMMS corridor it will be important for buses to feed and make the most of (expensive) rail upgrades, the emerging light rail projects and park and ride schemes.
- 2.5.4 In addition, the SoCoMMS strategy calls for cordon charging and work place levies for private cars - this will require additional public transport capacity - by rail and bus. It will be better to provide the additional services before the demand management measures are put in place and this can only realistically be provided by bus.
- 2.5.5 Overall population is forecast to grow by 9% (to 2016) - this will mean additional journeys to work and school and buses should play a leading role in offering a sustainable alternative to the car in meeting this demand.
- 2.5.6 School buses also play an important role. Parents have the freedom to choose any school and this has increased traffic levels during the morning peak period, with many parents opting to take children to school by car. Any proposals to encourage more use of school bus services would reduce these traffic levels. Initiatives such as safer routes to school and travel plans help, but financial inducements or concessions for school children to travel by bus would reduce traffic levels and help to foster a culture of using the bus for leisure trips. This may even extend beyond the point where car ownership for young people begins to be an option.
- 2.5.7 Other suggestions which could help reduce school related traffic include:
- Review of the 1944 Education Act, which prescribes minimum distances over which children qualify for free travel to school;
  - Stagger school day times within Districts to allow better utilization of bus fleets and reduce peak traffic levels.
- 2.5.8 We have examined how bus best practice (as being implemented in Brighton) could be applied across the corridor. Some of these initiatives will be a commercial decision (such as simplified fare scales and metro style bus

frequencies) - but other measures, such as bus priority measures, will need external funding.

- 2.5.9 We have also examined light rail and a bus priority alternative for Brighton (dealt with separately).
- 2.5.10 Our approach has been to look at all 23 towns within the corridor, calculate population growths and estimate current and future levels of public transport expenditure (based on 2000/2001 rates per capita). The proposals have assumed:
- improved passenger infrastructure, principally at bus stops;
  - traffic management and bus priority measures; and
  - automatic vehicle locations and real time information.
- 2.5.11 These constitute the “hard” elements of bus best practice, the other “soft” elements indicated in paragraph 2.4.2 will be for the operator to introduce.
- 2.5.12 We have looked at the effect of more stringent parking controls, work place levies and congestion charging in each area in terms of suppressed trips. It has been assumed that a proportion of these trips would re-assign to buses, depending on the phasing and strength of the measures. The town centre parking controls are assumed to be implemented by 2004, the workplace, private non-residential parking and employee parking levies by 2010 and the congestion charging by 2015. The numbers of car users transferring from car to other modes has already been calculated in the SoCoMMS transport model; those transferring to rail are included in the model, but the numbers transferring to bus have been calculated separately.
- 2.5.13 In more detail, we have identified about 26 routes across the corridor, mostly where services could be increased in frequency. The additional operating costs have been calculated based on current DfT operating costs. The principal locations of upgraded or new routes are indicated in figure 2.1. Table 2.1 summarises the measures within each corridor and town.
- 2.5.14 The extent and location of proposed additional bus services and infrastructure have been allocated at a strategic level. Each area and town would need to have more detailed analysis to assess the appropriate level of investment. Similarly, bus route network planning is best undertaken by the bus operator, in consultation

with the local authority. Nevertheless, table 2.1 indicates the magnitude of the measures required to support the overall transport strategy.

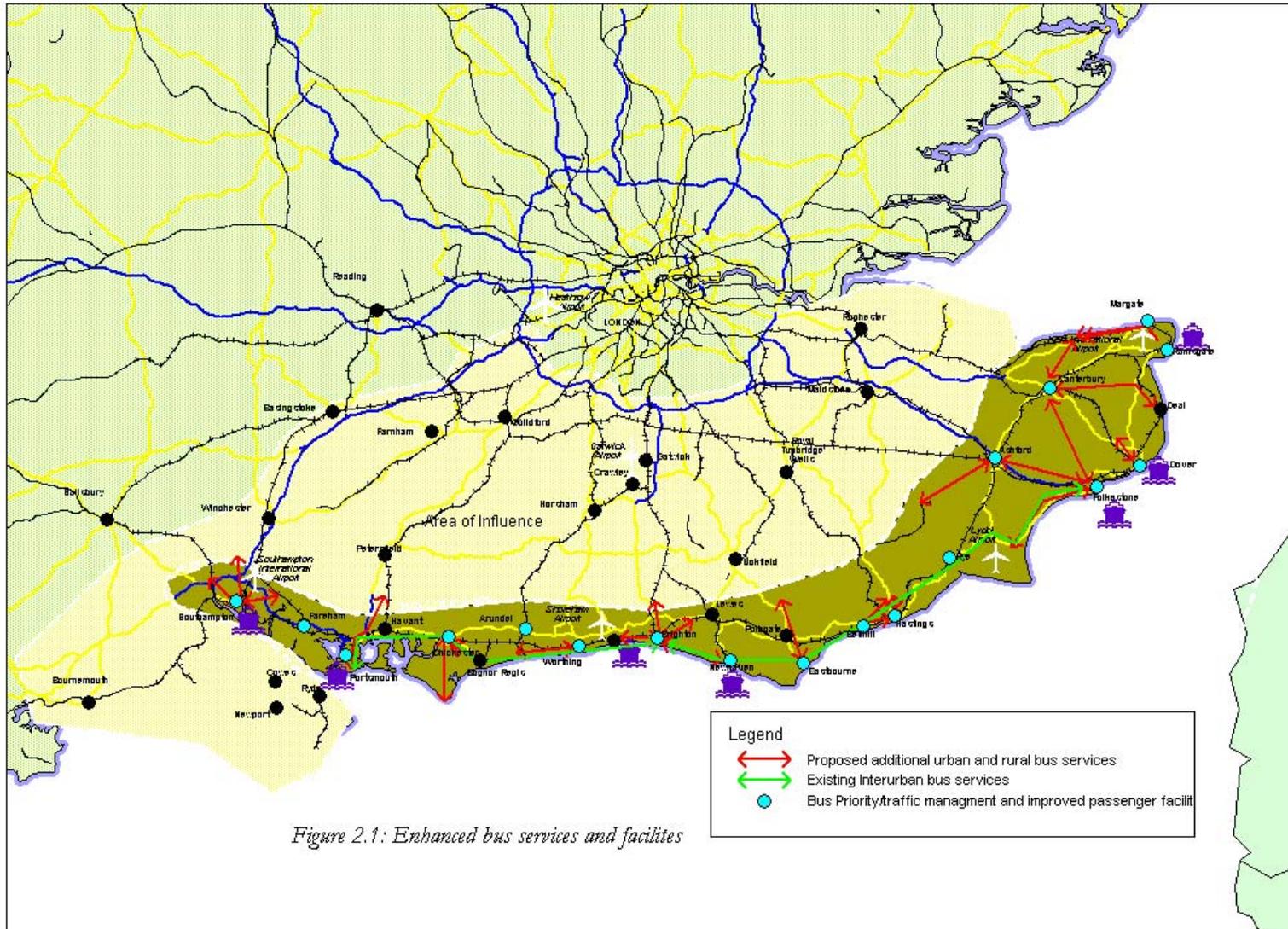


Figure 2.1: Enhanced bus services and facilities

Table 2.1: Summary of Bus Measures			
	Town	Principal Corridor/bus route	Proposal/comments
1	Thanet	Ramsgate-Birchington Herne Bay - Manston	New bus services, bus priority and passenger facility measures in Thanet towns
2	Canterbury	Whitstable - Herne Bay – Canterbury Deal - Sandwich –Canterbury Folkestone - Canterbury	New bus services, bus priority and passenger facility measures in Canterbury
3	Dover	Dover – Whitfield	New bus service, bus priority and passenger facility measures in Dover
4	Ashford	Romney Marsh Road - Canterbury Road Ashford - Tenterden	Upgraded and new services, bus priority and passenger facilities in Ashford
5	Folkestone	Romney - Folkestone –Ashford Local to town centre services	New and upgraded bus services, bus priority and passenger facilities in Folkestone
6	Rye	Rye - Tenterden	New bus service, traffic managements and passenger facility measures in Rye
7	Hastings	London Road -The Ridge	New and upgraded bus services, bus priority and passenger facilities in Hastings
8	Bexhill	Bexhill Road – Hastings Bexhill Link Road - Hastings	New bus services, bus priority and passenger facilities in Bexhill
9	Eastbourne	Eastbourne - Hailsham	New bus services, bus priority and passenger facilities in Eastbourne
10	Lewes	Eastbourne - Lewes - Stoke Cross	New bus service, bus priority and passenger facilities in Lewes
11	Brighton	Brighton – Portslade Brighton – Falmer Brighton - Patcham	New bus services, additional bus priority and passenger facilities in Brighton
12	Shoreham	Shoreham - Brighton - Newhaven	New bus service, traffic management and passenger facilities in Shoreham
13	Worthing	Worthing - Littlehampton	New bus service, bus priority and passenger facilities in Worthing
14	Arundel	Arundel - Chichester	New bus service, traffic management and passenger facilities in Arundel
15	Chichister	Chichester – Selsea	New bus service, traffic management and passenger facilities in Chichester
16	Fareham	Fareham – Gosport	New bus service, bus priority and passenger facilities in Fareham
17	Portsmouth	Purbrook-Waterlooville-Horndean	New bus service, expanded bus priority and passenger facilities in Portsmouth
18	Southampton	Southampton – Botley Southampton – Nursling Southampton - Chandlers Ford	New bus services, expanded bus priority and passenger facilities in Southampton

### **3 Bus Costs – Infrastructure and Operating Costs**

## 3 Bus Costs – Infrastructure and Operating Costs

### 3.1 *Infrastructure Costs*

3.1.1 One of the key methods of achieving a switch from car to bus will be to improve bus travel time and reliability – this is in addition to a number of other measures, such as improvement to frequencies, simplified timings and fares, information and modern buses. Principally, reducing delays to buses means protecting them from delays either by bus priority measures or other traffic management measures that enable bus journey times to be shorter than car journey times – for example by queue relocation, bus gates or selective vehicle detection at traffic lights.

3.1.2 Because it has not been possible to review every town in the corridor, the bus priority measures are assumed to be implemented on a proportion of the bus route network in each town. A very limited amount of road widening to accommodate bus priority measures has also been assumed – but generally the measures would comprise “standard” bus lanes. In practice, the measures adopted could be a combination of traffic management measures and bus lanes.

3.1.3 The costs of these proposals have been estimated for each town, and are assumed to have been implemented by 2004. These are indicative figures and will vary according to how much funding has already been committed to schemes and the practicality of the measures. For example, in historic towns and cities there are unlikely to be extensive systems of bus lanes, but sympathetic traffic management measures may be appropriate. With the exception of the previous comments, in general terms, traffic management measures have been assumed to be introduced to 5% of the bus route kilometres in any specific town. As noted, in practice the actual measures might be traffic management, bus gates, selective vehicle detection or other measures designed to protect buses from congestion, however by assuming unit costs, an estimate of costs for each town has been made.

3.1.4 Also assumed in the infrastructure costs are passenger facilities (bus stop, shelters, pavement treatments and Kassel kerbs) and real time information. This latter would comprise equipment for the bus and bus stops. The total infrastructure costs are estimated at £26mn.

### 3.2

#### ***Operating Costs***

#### 3.2.1

The estimated level of annual support (supported plus concessionary fares) for bus services in the SoCoMMS corridor is estimated at £13.3mn per annum. This is based on the TAS Bus Industry Monitor values for 2000/2001.<sup>1</sup> This figure has been calculated from published figures for Southampton, Portsmouth and Brighton, but estimated for those parts of Kent, East and West Sussex, and Hampshire that are within the SoCoMMS corridor.

#### 3.2.2

The concessionary fare element, for the retired is estimated at £4.3mn per annum. Schools services and other transport subsidies, such as taxicard schemes, mobility buses are not included in these figures. It is worth noting that there is a considerable administration cost – this is estimated at about 10%, in addition to the support cost.

#### 3.2.3

The additional operating costs (including depreciation) required to run additional services to meet the additional passenger demand, from suppressed trips as a result of demand management measures and generated trips would be £4.6mn in 2004.

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<sup>1</sup> Bus Monitor 2001 – Volume 2. TAS Publication and Events Ltd 2001.

## **4 Traffic Assumptions**

## 4 Traffic Assumptions

### 4.1

#### *Approach*

#### 4.1.1

The approach adopted has been to estimate the benefits of introducing additional bus services in each of the SoCoMMS corridor towns. This has been undertaken from two directions. The first has been by reviewing what additional bus services might be usefully be introduced to fill gaps in the network or increase service provision. The second approach has been to look at the numbers and locations of suppressed car trips that the transport model indicated would result from the overall transport strategy, as a result of demand management measures. It has been assumed that 50% of those car trips deterred from using their cars, because of congestion charging, would want to make the trip by bus – those that would divert to the improved rail services are already assigned to this mode in the transport model. In the case of Portsmouth, Fareham and Southampton (South Hants area), only 25% of suppressed trips are assumed to be captured by bus as the model already includes the SHRT light rail trips.

#### 4.1.2

On the passenger demand side, the numbers of suppressed trips can be allocated to each town from the transport model for the peak period. These figures have been calculated for 2004 and to 2010, when the full range of demand management measures is expected to be in place. In addition, assumptions have been made about new or “generated” bus passengers, who previously did not make a trip. These are assumed to be an additional 10% of the suppressed trips (5% in the South Hants area). Finally, assumptions have also been made concerning the general future growth in the bus market. In Brighton, 5% pa passenger growth has been achieved recently by introducing best practice measures. In this study, more modest growth of 3% per annum has been assumed.

#### 4.1.3

The additional capacity required to transport these passengers has also been calculated for the peak period, both for the first year of implementation. Although any detailed bus service planning would be undertaken by the bus operator and local authority, the additional numbers of peak period buses required has been allocated to each town and area to accommodate the extra bus capacity required. In order to maintain a reasonable level of service on the bus network, an additional peak period bus has been assumed for each additional 30 passengers. In practice there will be some spare capacity on existing services, and the bus priority measures will in themselves save bus resources.

4.1.4 Bus operating costs have then been calculated on the basis of assumed bus frequency, route length and gross operating costs per km, taken from DfT sources (£0.955/ km. including depreciation costs).

4.2 ***Effectiveness of the Strategy***

4.2.1 It is difficult to estimate the modal shift to bus based on the measures, but we know that Brighton has increased patronage year on year by 5%. However, Brighton is probably not typical of the corridor – there is strong growth in the economy and it already enjoys a high public transport modal share.

4.2.2 Experience from Telford and Wrekin, which is a unitary authority implementing some quite radical planning and public transport measures, has witnessed bus patronage up by 36% in year 1 with 17% of new passengers coming from cars.

4.2.3 The proposals for buses are part of a strategy of measures that could be introduced as soon as 2004, complementing other measures to upgrade public transport, such as improvements to existing stations. They would be an early part of the overall strategy, which could be delivered, with a tightening of restrictions on town centre parking, especially by commuters, and travel plans. Travel plans would be developed for schools, hospitals and large employers in order to reduce the use of private cars – it is essential, therefore, to ensure that better bus services are in place first (as well as measures to improve the quality of infrastructure for walking and cycling).

4.2.4 The effectiveness of the proposals are assessed below.

## **5 Scheme Benefits**

## 5 Scheme Benefits

### 5.1 *Approach*

5.1.1 The methodology used to assess the viability or otherwise of the proposed public transport enhancement schemes has been based on the methodology developed by the UK Department of Transport concerning Guidance on the Methodology for Multi Modal Studies (GOMMS).

5.1.2 In the economic appraisal, benefits to users of the enhanced bus system, in terms of travel time and vehicle operating cost savings, accrue and form part of the overall social cost benefit analysis. In addition, due to reduced traffic on the road network, existing road users benefit from congestion relief which allows higher road vehicle speeds. The financial appraisal includes an assessment of the increase in fare revenue following the introduction of improved bus services in the corridor.

5.1.3 The comparison of costs, benefits and revenues incurred or received in different years are brought to a common base for appraisal by discounting to a present day value. The Treasury's current preferred discount rate is 6% pa. In calculating total benefits and revenue a 20 year operation life has been assumed. Finally, the price base year assumed in the analysis is 1998, as well as being the base year for discounting.

### 5.2 *Calculation of Benefits*

5.2.1 The following groups of travellers may be affected by improvements in bus services:

- Road users who, following the bus improvements and town centre parking and cordon charging, switch to bus and gain time and user cost savings (Users).
- Other road users who benefit from less congestion following the switch of some travellers to public transport (Non Users).
- Induced trips based on increased passenger demand following the improved bus service.

5.2.2 The benefits and costs to each of these groups following the implementation of the strategy are detailed below.

### 5.3 ***User Benefits***

5.3.1 User benefits include time and vehicle operating cost savings resulting from a switch from car to bus. The quantification of each of these benefits is described below.

5.3.2 Journey time savings accruing to new bus users will be determined by a comparison of relative journey times in the do-nothing and do-something cases. This compares journey times in the do-nothing case based on a car trip to a do-something case bus trip. The do-nothing car speed is assumed to be 10 km/h and the do-something bus speed is assumed to be 20km/h.

5.3.3 The valuation of the perceived journey time benefit is the product of the number of minutes saved per journey and the perceived value of time. The value of time per vehicle hour was derived following the principles and assumptions described in the Transport Economics Note published by the Department for Transport. Combining assumptions concerning the perceived cost of travel and vehicle occupancies (1.54 per car and 25 per bus); the value of time per vehicle is calculated as follows:

- Car - £0.923 per vehicle hour
- Bus - £11.394 per vehicle hour

5.3.4 GDP/head is forecast to increase at 2.0% pa. Therefore, the value of time is forecast grow by the same amount per year for the entire evaluation period.

5.3.5 Savings in operating costs will accrue to new bus users. The introduction of improved public transport means a saving of the do-nothing VOC will occur. These benefits have been included in the analysis. The quantification of vehicle operating costs for different vehicle types at different running speeds were derived using the principles and assumptions described in the Transport Economics Note, published by the Department of Transport.

5.4 ***Non User Benefits***

5.4.1 The reduction of traffic on the road network means those travellers who do not change mode can potentially take advantage of a more reliable and efficient journeys due to a reduction in congestion levels. The benefits attributable to congestion relief were derived applying recent research by Newberry<sup>2</sup> which estimated the value of congestion relief benefits to be £2.07 pence per passenger kilometre (1998 prices) saved. Thus the total congestion saving was derived by the product of the unit value quoted above and the net reduction in car vehicle kilometres.

5.5 ***Induced Traffic Benefits***

5.5.1 Benefits to induced traffic were calculated using consumer surplus theory, where a reduction in transport costs resulting from the project would lead to additional trips being undertaken. In the analysis an additional 10% of trips transferring from car to bus are assumed to be induced. The benefits arising to this traffic has been quantified in the orthodox manner applying the 'rule of a half' to the transport cost saving resulting from the bus scheme.

5.6 ***Revenues***

5.6.1 Revenues are the product of patronage and fares. The fare level assumed in the analysis is £1 per trip for the majority of study areas. The impact of these assumptions is assessed in the financial appraisal.

5.7 ***Appraisal Results***

5.7.1 The economic appraisal results for the whole corridor are summarised in Table 5.1. The results indicate a small positive Net Present Value (NPV) of £4.9mn for the whole corridor. The financial assessment, summarised in Table 5.2, indicates that the scheme would not cover its operating costs and a subsidy of £6.8mn would be required (based on a 20 year evaluation period). If the appraisal period is extended to 2032 (the Strategy appraisal period), the present value of the financial subsidy requirement is estimated to be £5.9mn. With a longer appraisal period the required level of subsidy is lower due to the higher fare revenues forecast for the later years of the project. The financial NPV including the capital costs of the scheme for an appraisal period up to 2032, is estimated to be £-24.2mn.

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<sup>2</sup> Reforming Road Taxation, David Newberry, Cambridge University, 1995, Commissioned for the Automobile Association

Item	Present Value (£mn)
Capital costs	18.35
Opex costs	37.33
User benefits	53.77
Induced benefits	0.70
Decongestion benefits	6.10
<b>NPV</b>	<b>4.89</b>

*Table 5.1: Economic Appraisal Summary*

Item	Present Value (£mn)
Revenue	30.56
Opex costs	37.33
<b>NPV</b>	<b>-6.77</b>

*Table 5.2: Financial Assessment Summary*

5.7.2

Despite the positive economic returns, the scheme NPV is relatively small. However, the results of the economic appraisal shown above represent the optimised bus solution. Additional scenarios were assessed postulating both higher and lower service levels and infrastructure improvements. In the case of a scheme with a reduced level of infrastructure improvements, the project benefits are adequate to justify the capital expenditure. Likewise, with a more expensive set of improvements, project benefits are insufficient to justify the increased investment costs.

5.7.3

The financial appraisal allows an assessment of the likely annual subsidy requirement. These are summarised at a different point in the appraisal period in Table 5.3. In the early years of the scheme, operating costs outweigh fare revenue and a subsidy will be required. Over time, the level of subsidy declines as higher passenger levels generate additional fare revenue. The scheme break-even year is forecast to be 2019. It should be noted that these estimates exclude the existing subsidy provided for concessionary fares.

Item	Operating surplus/ deficit (£mn)
2004	-1.64
2010	-1.06
2018	-0.16
2020	0.16

**Table 5.3: Scheme Subsidy Assessment**

5.7.4

In summary, the proposed bus improvements are justifiable in economic terms. The analysis indicates that the increased level of service proposed in the corridor will necessitate a small increased level of subsidy to support it financially. This support will be most needed in the early years of the scheme, before fare revenues have grown sufficiently to outweigh the annual operating costs. It should be noted that the analysis is relatively conservative in nature given that the traffic modelling on which the assessment is based, does not allow for local trips. This would impact on ridership and subsequent fare revenues and to a lesser extent scheme operating costs. Inclusion of these trips would be likely to improve both the economic and financial case for the proposed improvements.

## **6 Implementation**

## 6 Implementation

### 6.1 *Buses*

6.1.1 It has been assumed that the infrastructure measures and service network upgrades could be introduced quickly – by 2004. About 46 additional buses per hour are estimated to be required in the peak hour – this may equate to more buses to fulfil a peak vehicle requirement, depending on the route lengths, but generally it is assumed that this is equivalent to increasing fleet size by about 5% - there being an estimated 1,000 buses operating in the SoCoMMS corridor.

6.1.2 It should be noted that modern buses are being introduced in the SoCoMMS area, this can be as part of a Quality Bus Partnership (QBP). It is important that low floor buses are introduced (and appropriate modifications made to infrastructure) as soon as possible. Low floor buses are very popular with the mobility impaired and carers with young children, who are able to wheel buggies directly onto the bus.

6.1.3 In practice, operators usually phase the replacement of their bus fleets over time. This obviously spreads capital costs and means that a disproportionate section of the fleet does not have to be replaced all at once. However, to make an impact on particular routes, possibly with associated branding and publicity, it is better to introduce new vehicles. As noted above the mechanism for this exists within the QBP.

### 6.2 *Infrastructure*

6.2.1 The extent and phasing of the introduction of traffic management, bus priority and passenger facility measures within the SoCoMMS corridor depends on a number of issues. The first issue concerns schemes and measures that are already in the pipeline and, possibly, some schemes that were previously proposed but could not be justified. The latter would need to be reviewed in the light of the overall SoCoMMS strategy. The second issue would be the extent to which local authorities could design, process and evaluate individual schemes. The third issue concerns funding, which would presumably be routed via local transport plans.

### 6.3 *Legislation*

6.3.1 One particular issue that would need to be addressed would be the issue of increasing frequencies within the present de-regulated environment. Currently, an

operator can be invited to increase services by a local authority without putting the route out to tender, but only within strict financial limits. Under present legislation a doubling of frequency, say from hourly to half hourly, on a specific route could result in alternate operators providing the service. Such a case exists between Brighton and Tonbridge Wells, where three operators share the route, each charging a different fare. This may not be reasonable from a passengers' or operators point of view and a review of legislation in this area, including the wider implications of the Competition Act (i.e. for Integratton) could be helpful.

6.4

#### ***Quality Partnerships***

6.4.1

QBP's have been referred to on several occasions. These are an ideal vehicle for delivery of the mix of service and infrastructure proposals put forward here. The proposed bus strategy attempts to maximise investment up to the point where costs exceed economic benefits. Local Authority Leadership is considered essential in establishing QBP's, in particular, in funding and implementing bus priority measures to give operators confidence to invest in the service improvements.

6.4.2

A number of specific actions are required by the various institutions involved:

- Department for Transport to increase operating support available within the SoCoMMS region, administered by Counties;
- Local authorities to program increased capital investment on priority schemes;
- Operators to invest in around 50 additional vehicles, drivers etc.
- Local authorities and operators to deliver enhancements within QBP's.

## **A1 Appendix A: Bus Best Practice**

# Appendix A: Bus Best Practice

## *A1.1*

### *A1.1.1*

#### ***Introduction***

Brighton and Hove are one of the largest unitary local authorities in the South East with a population of over 250,000. It has a comprehensive and award winning network and an upward trend in bus usage. The Brighton and Hove Bus and Coach Company has achieved a six-year cumulative passenger growth figure of 30%. This report will look in more detail at the initiatives that have been introduced that have contributed to these growth figures. It will then go on to suggest how these initiatives can be introduced elsewhere in the study area.

## *A1.2*

### *A1.2.1*

#### ***Bus Quality Partnership***

Bus Quality Partnerships are defined as “ agreements (either formal or informal) between one or more local authorities and one or more bus operators, for measures to be taken up by more than one party to enhance (mainly commercial) bus services. In a defined area, to meet the strategic objectives of the partners”.

### *A1.2.2*

In Brighton and Hove the Bus Quality Partnership is an informal agreement, whereby the partners have sought to improve those areas of the bus network which they are able to influence and are best placed to improve. Each party provides the following.

Brighton and Hove Council provides:

- bus priority on highways;
- improved passenger waiting areas;
- real-time information displays;
- traffic regulation enforcement; and
- park and ride.

Brighton and Hove Bus and Coach Company provides:

- improved service frequencies;
- investment in new buses;
- value for money fares and tickets;
- enthusiastic staff and customer care; and

- an effective sales message.

*A1.2.3* Both the local authority and the bus company recognise that part of the success of bus operations in the Brighton and Hove area is attributable to the informal partnership that they have set up.

### ***A1.3 Local Authority Improvements***

#### *Bus Priority on Highways*

*A1.3.1* Buses are particularly vulnerable to adverse effects of urban traffic congestion, and one of the main reasons cited by non-users for not using bus services is their unreliability. There are various ways that bus reliability can be improved. Brighton and Hove Council has introduced bus lanes in the Brighton and Hove area to provide priority for buses. A section of Western Road by the Churchill shopping centre has been set aside for bus and taxi use only.

*A1.3.2* The local authority and the Brighton and Hove Bus and Coach Company have together invested in a Siemens system that provides satellite controlled automatic vehicle detection, bus priority at traffic lights, together with location systems and real time information at bus stops. With this system bus operators will also be able to provide on-bus real-time information.

*A1.3.3* Using this system the bus operator can be aware at all times of the location of the bus services and whether they are running late, it is possible to give those buses running late greater priority at traffic signals. Through this system the bus company can manage the timing of the buses and avoid the “the three buses at one time” phenomenon.

#### *Real time information displays*

*A1.3.4* With the Siemens system the local authority is able to provide real – time information at bus stops. Passengers are then aware of how long they have to wait, which reduces the uncertainty of the bus journey.

#### *Improved passenger waiting areas*

*A1.3.5* Within the Brighton and Hove area, investment in bus shelters has also been seen to be important. Bus stops within the urban area have been built with Kasell Kerbs to deter drivers using bus stop areas as parking areas for “popping in” to shops.

*A1.3.6* The bus interchange outside the Brighton Mainline Station has been refurbished to provide improved pedestrian facilities for passengers leaving the station and bus stops.

*A1.3.7* It is also the local authority's role to provide timetable information at the bus stops.

*Traffic Regulations and Enforcement*

*A1.3.8* To improve the reliability of bus services it is important that there is enforcement of bus lanes, and that parking regulations are upheld. With the decriminalisation of parking there are now over 70 wardens on the streets of Brighton and Hove.

*A1.3.9* Other infrastructure improvements that Brighton and Hove Bus and Coach Company have highlighted, is the usage of appropriate signing to identify bus lanes. At present the current signs for bus only streets are not as effective as no entry signs (with bus exemptions).

***A1.4*** ***Bus Operator***

*Improved Service Frequency*

*A1.4.1* The Brighton and Hove Bus Company stress the importance of introducing a frequent service where customers can "turn up and go". The majority of potential users believe that a level of frequency of at least once every 10 minutes is needed to secure their custom. The benefits of this type of service are in reduced waiting times and the simplicity of the service timetable which make it easier for infrequent and non-users to understand the service.

*A1.4.2* The Brighton and Hove Bus Company have set themselves a target of 80% of services running every 10 minutes, or better, by Spring 2003.

*Investment in new buses*

*A1.4.3* High importance is placed on the quality of the vehicles that are used. Of the 230 buses that are owned by the bus company, 120 are low-floor and 130 are double deck buses. The latest technology is also being utilised with CCTV cameras being introduced and low emission fuel vehicles.

*A1.4.4* Since the introduction of low-floor buses the company has seen increased bus usage by parents with buggies and young children. The CCTV initiatives have received positive responses from passengers in relation to safety and is used to control the behaviour of young people on the buses.

*A1.4.5* There is continuous investment being undertaken in new buses, with around 18-20 new buses being purchased a year. The bus company is committed to maintain its vehicle replacement policy to the extent of £2.5 million per year. Work

undertaken by TAS identified that 53% of potential bus users see buses that are old or in poor condition as a barrier to them using buses.

Value for money fares and tickets

- A1.4.6* A simple fare structure where passengers feel that they are getting value for money is considered by the Brighton and Hove Bus Company to be an important contributor to increasing bus patronage.
- A1.4.7* The company has introduced a £1 flat fare that can be used from Shoreham to Newhaven. Although there were disbenefits for passengers who took short trips, this has been more than outweighed by the benefits.
- A1.4.8* The main benefit that has been derived from this system is that the company has overcome the lack of awareness of the fare structure. One of the main barriers to infrequent and non users is that they perceive the bus product as difficult to understand. The simplicity of a £1 flat fare means that the fare structure is easy to understand.
- A1.4.9* Other fare structures have also been introduced, these initiatives simplify the bus product, but also create “value for money”. Customers can buy a one day ticket for unlimited journeys in the central area for £2.20 or unlimited journey anywhere for £2.60. Both of which can be bought on the bus or in advance. Surveys of customers have revealed that they feel that they are getting “value for money” when they buy these SAVER tickets. Other SAVER tickets can be bought weekly, monthly, three monthly or annually.
- A1.4.10* Other fare structures that have been introduced by the company relate to special deals for juniors and students. Children between 5 and 16 can apply for a free bus ID pass which is valid until July 31<sup>st</sup> after their 16<sup>th</sup> birthday it therefore covers their whole academic career. With an ID pass children pay a 30p flat fare however if they are accompanied by an adult they only pay 10p, this initiative is to encourage parents to travel.
- A1.4.11* The Brighton and Hove Bus Company sees the importance of maintaining their younger passengers and have therefore initiated other schemes to retain them as customers. The company sends out a letter to all those who are sixteen informing them that for £20 they can retain the ID pass for another 2 years. The company gets a 50 % positive response. When they reach their eighteenth birthday they are then offered the 3 month pass at 50% of the normal price. These types of

initiatives are effective in keeping young people on buses, at a time when they could become car drivers.

*Enthusiastic Staff*

*A1.4.12* Brighton and Hove Bus and Coach Company, have invested in driver training and internal communications. Drivers undergo an initial training period followed by refresher courses and defensive training.

*A1.4.13* As the workforce is generally unsupervised the company uses mystery shopper tests and customer feedback to ensure that a high level of service is maintained.

*Effective Sales Message*

*A1.4.14* The Brighton and Hove Bus Company is providing an effective sales message via a number of tools. Two of its major tools for promoting its services are the “Bus Times” magazine and the “On Route” magazine.

*A1.4.15* In order to promote the comprehensive nature of the services that are being run in Brighton and Hove the bus company publishes a “Bus Times” magazine. This magazine provides a listing of all services in the area including Stagecoach services. It also provides an index of all the places that are served. There is a timetable for each service and a map of the route, information is also given as to whether the buses are low-floor. This magazine informs people of the fare structure, and where they can buy their tickets.

*A1.4.16* The “On Route” magazine promotes the services that are provided by the Brighton and Hove Bus Company. It does this with articles that look at places to go to in the area and events that will be on, with details on how to get there by bus. Other articles feature people who travel by bus thereby presenting third party endorsement. There are also features on staff which provide the human face of the company. This magazine is also used to launch the “name of the game” an initiative whereby buses are named after celebrities from Brighton’s hall of fame so far buses have been named after Norman Cook and Chris Eubank. Also less known public figures are used. These type of initiatives present a human touch, and an association with the community. A competition is also run which provides the company with a database of current travellers. 30,000 magazines are distributed twice a year on the buses.

*A1.4.17* As well as the two magazines mentioned above the Brighton and Hove Company also produces a “pocket bus times” which is another free guide to bus services in

the Brighton and Hove area and is a leaflet folded up to a 1/3 of A4. This leaflet has a quick reference guide for bus times and has four bus maps, which cover: the Brighton area, central Brighton, Rottingdean, and Shoreham. The leaflet is also used as a marketing tool in that it identifies places of interest such as the local museums, sporting venues, shopping and hospitals, and then explains how they can be reached by bus. The leaflet includes a welcome in French, Dutch, German and Spanish and explains the British customs for bus use. There are contact details presented and details of the One Stop Travel Shop.

- A1.4.18* One page leaflets of 1/3 of A4 are also used to encourage the use of bus services. The company undertakes targeted leaflet drops so that residents are provided with information that relates to where they live. These leaflets emphasis the £1 flat fare and the frequency of the service, it provides a contact number, the website address, a route map and information on the discounts available.
- A1.4.19* The Brighton and Hove Bus Company also provides information for the public at their “1 Stop Travel” shop which is located in central Brighton and is open 7 days a week during the summer. Customers can also get information from the internet and by telephone 7 days a week. The phone lines are open form 7.30am to 6.00pm Monday to Friday and from 9.00am to 4.00pm on the weekends and bank holidays.
- A1.4.20* To promote the frequent services, the company has introduced a Metro logo. The services are referred to as “Lines”, of which there are five. A schematic map similar to that used for the underground in London has been produced showing all five lines. These initiatives reinforce the “turn up and go” nature of the services and simplifies the understanding of the routes.
- A1.4.21* The company is promoting a philosophy that it is there to serve the customers, emphasis is placed on undertaking a role in the community. The company is represented in the local business groups and partnerships. The bus company also has a lot of coverage in the local press.
- A1.4.22* All customer complaints are responded to the same day that they are received by the Managing Director himself. All complaints are monitored, by route, if there are three complaints for one issue then the circumstances will be looked into in more detail. In the past this has meant, initiatives have been introduced or bus routes changes. For example there were numerous complaints for one of the routes, the

route was slightly changed and given one bus driver. With the new continuity of service the issues were overcome.

## ***A1.5***

### ***Conclusions***

#### *A1.5.1*

The analysis of the bus best practice that is undertaken in Brighton and Hove, has shown that initiatives implemented by the Local Authority and the Bus operator have both contributed to the success of the bus network in Brighton and Hove. It is understood that many of these initiatives are already being undertaken by other authorities and bus operators in the study area.

#### *A1.5.2*

The Bus Best Practice can be used as a guideline for suggested improvements in bus services along the corridor. Those aspects of the Bus Best Practice that can be directly affected by the strategy are:

- bus priority and traffic management measures that improve bus performance;
- improved passenger waiting areas; and
- real time information (on-vehicle and at bus stops).

#### *A1.5.3*

The implementation of these measures through out the study is considered in more detail in the Local Public Transport Strategy Plan. Other aspects of the Bus Best Practice are indirectly affected by the strategy proposals and recommendations, these are:

- increased frequencies; and
- investment in new buses.

#### *A1.5.4*

The Local Public Transport Strategy suggests that subsidy will increase, which will improve these features of the bus product.

#### *A1.5.5*

There are aspects outlined in the Bus Best Practice that are in the control of the operator and which as such can not be directly affected by the strategy, these are:

- value for money fares and tickets (integrated ticketing);
- enthusiastic staff; and
- an effective sales message.

*A1.5.6*

The Local Public Transport Strategy endorses these initiatives and suggests they should be introduced at an area wide level.