

Having described the context within which this LTP is set, it is important to set out the challenges and opportunities that exist and which have to be taken into account when formulating both the longer and shorter-term transport strategies for the City and surrounding sub-region. Some of the challenges are not issues of current concern to the City, but they are anticipated to become so during the period of this LTP. It is also the case that many of the challenges also represent opportunities, either to achieve direct improvements to the transport network or to review the ways in which the network is used.

## CHALLENGES

### 3.1 DEMOGRAPHIC, SOCIAL AND ECONOMIC TRENDS

#### 3.1.1 Demographic Changes

From a total City population of 221,200 (2004 figure), 35,700 are under the age of fifteen, 154,600 are aged between fifteen and sixty-four and 30,900 are over sixty-five.

Provisional forecasts suggest an overall population increase of 3% by 2010, but this figure may well be affected by the emerging proposals of the South East Plan. The largest proportional increases are expected in the 60-65 age group, where numbers are forecast to rise by 30% and in the 85+ age group where a 20% increase is forecast.

Population change will be concentrated in the central areas of the City, reflecting the main housing developments that are anticipated during that period, and the Bargate Ward (which covers most of the City Centre) is forecast to experience a population growth of around 5,400, representing a 55% growth over the period to 2010.

Reflecting the City's position as a leading centre of education in the south, students make up a significant proportion of the overall population. In 2001, the Census showed that some 25,700 students were living in the City, and the combined total of students at the University of Southampton and at Southampton Solent University is currently around 30,000. Each year, some 6,000 of these students enter the labour market, with about 30% of them staying within the Southampton area to seek career opportunities.

According to the 2001 Census, around 193,000 (89%) of the City's population identified themselves as White British; the largest non-white group in the City was Indian, making up 2.17% of the population. In November 2004, some 4,000 of residents were registered disabled, representing some 1.8% of the total population. The figure for people claiming Disability Living Allowance is 8,700 (3.9%).

One of the key issues that faces the country as a whole (and is clearly reflected in the

analysis for Southampton) is that of an increasingly ageing population. By 2007, the number of people in the UK who are over retirement age will exceed the number of people under the age of 16. This has major implications for many areas of policy, including transport.

For older people, transport provides an essential link to friends, family, the wider community, services, activities, and opportunities that support active ageing and maintain independence. In its 2004 report *'Older People: Independence and Well-being'*, the Audit Commission identified 'getting about' as one of the key factors affecting older people's well-being and independence. Other factors, whilst important in their own right, mainly depend on mobility. Enjoying full citizenship and being able to contribute to community and society is most often dependent on the ability to get about.

Meeting the aspirations for older people requires a different approach to planning and investment. Rather than planning systems that cater for transporting large numbers of people, there is a need for a concern about the individual and how their needs might be met. It requires the adoption of a strong customer focus and the development and support of a wide variety of provision and widespread flexibility to meet needs.

The development of a transport system that meets older people's needs would:

- Contribute to their health and well-being and enable them to remain active
- Tackle social exclusion and enable them to make a fuller contribution within their communities
- Support their independence and improve their quality of life
- Contribute towards traffic reduction, environmental and congestion objectives

### 3.1.2 Social Trends

Deprivation is a general term for the condition experienced by people who lack the education, health, environment and work that are considered customary in modern Britain. It goes beyond poverty, although clearly the two are related. The Office of the Deputy Prime Minister (ODPM) publishes an Index of Multiple Deprivation (IMD) in an attempt to capture the range of issues that combine to make people deprived.

According to the IMD 2004, Southampton is ranked 96th of 354 local authorities in England (where one represents the most deprived). Comparisons in the south of England show Brighton and Hove to be ranked 83, Thanet 85 and Portsmouth 88.

IMD 2004 uses Super Output Areas (SOA's) as the basic geographic unit for assessment. Each of these contains some 1500 people and there are some 32,500 SOA's in England, of which Southampton has 146.

Nine of the City's SOA's fall within the top 10% most deprived overall in England, although on the Education, Skills and Training domain, Southampton has 25 of its SOA's falling within the top 10% most deprived.

Levels of child poverty in the City are a concern. The IMD identifies that 19 of Southampton's SOA's fall into the 10% of areas in England with the worst child poverty. In one SOA in Bargate Ward, over 75% of children live in poverty.

The IMD also examines older people living in poverty, where the City has the three worst SOA's in the whole of the South East. These three areas fall into the Bargate and Bevois Wards.

Around 17,100 households in the City receive Housing Benefit and about 17,800 receive Council Tax Benefit. In both cases, this represents nearly 20% of all households in the City, which is well above the England average of 14%.

In terms of Income Support, the City as a whole has a take-up rate that is only marginally above the national average of 6.4 %, but this figure masks significant variations between Wards; Bitterne has a take-up rate of 14.2% and Redbridge 10.8%, whilst Bassett is only 2.2%. The number of people claiming Incapacity Benefit now stands at 8,200, having risen by 9% between 2000 – 2003.

Compared to other areas, the City is healthier in terms of mortality due to accidents, stroke, and breast cancer. It is comparatively unhealthier in terms of mortality due to coronary heart disease, circulatory diseases and lung cancer for people under 75.

Two major surveys carried out in 2004 showed that about one-third of the people sampled claimed to have been the victims of or affected by crime, although this figure rose to 50% in some of the Priority Neighbourhoods of the City. In the Priority Neighbourhoods, 63% of the young people interviewed claimed to have been the victim of bullying, making it the most mentioned crime.

### 3.1.3 Economic Trends

Over recent years, the City's economic performance has broadly reflected the national economy, with a period of slow but steady growth. Following a period of below average growth from 1995 – 2001 relative to the rest of England, the South East region and Portsmouth, the most recent data clearly shows that the City's economy is now growing faster than surrounding areas. For the period 2001 - 2003, output per head in Southampton was higher than both the South East region and Portsmouth. Gross Added Value per head in the City in 2003 was £18,237, compared to £17,631 for the South East region and £18,163 in Portsmouth.

However, the number of businesses in Southampton is growing more slowly than the region or comparable areas. The total number of VAT registered businesses in the City grew by only 5.6% between 1994 and 2004, compared to 18.6% across the South East and 25% in Portsmouth.

In 2004, there were around 117,000 people employed by companies in Southampton. Increasingly, these are employed in the service sector, as manufacturing employment in the City has halved over the last two decades and forecasts suggest this trend is likely to continue. This decrease has, however, been more than offset by growth in retail, hotels and restaurants, recreation and sporting sectors, and growth in public sector employment, especially in health and education.

Over the medium to longer term, a number of major property developments are expected to contribute significantly to the local economy by providing new employment opportunities. However, these gains may be offset by losses arising from the refusal of planning consent for expansion of the Port at Dibden Bay. The extent to which this may affect employment at the Port and in related activities is difficult to assess, but an independent report for the City Council suggested that there could be up to 700 job losses (direct and indirect) over a period of eight to ten years as a result.

The availability of employment-generating land is a concern. Southampton now accounts for only one per cent of the total supply of industrial land in the South Hampshire sub-region, and there is only around nineteen months worth of office sites available for the next five years (assuming demand continues at the same rate as in



recent years) The shortage of high quality vacant office stock is leading to high rental values in the City and this, in turn, increases the attractiveness of out-of-town business parks.

The proportion of the City's workforce claiming Jobseekers Allowance is at historically low levels. In December 2005, the figure was 2.1%, which is higher than the South East at 1.5%, but lower than the national figure of 2.4%. However, other indicators suggest there is possible 'hidden unemployment' in the City.

Economic activity rates in Southampton are amongst the lowest in the South East; in the City, 77.2% of the working age population are economically active, compared to 82.1% in the South East and 81.9% in urban South Hampshire. This low level of economic activity may be partly explained by the rising number of people on Incapacity Benefit and other health-related benefits mentioned earlier. Together, these figures suggest there may be several thousand people in the City who could be brought into work given the right support, skills and confidence.

Average annual income in Southampton is about £22,200, which is lower than both national (£25,000) and regional (£27,900) levels. This may be due, in part, to the type of employment that City residents have. According to the 2001 Census, City residents are less likely to be in managerial, professional or associate professional occupations, with greater numbers likely to be in sales/customer service and elementary occupations.

In terms of educational attainment, the proportion of City pupils achieving five or more A-C grades at GCSE is currently 46.8% which, whilst an improvement on previous years, is still well below the national average of 55.7%.

Participation rates in further and higher education are lower than the national average. About 72% of Southampton's 16 and 17 year olds are involved in education and training, compared to 78% nationally. The proportion of 18 year olds entering full-time undergraduate courses is about half the national average.

Workforce skills are also a concern. Whilst over the City as a whole, the proportion of people with no qualifications is around the national average of 28%, in Bitterne and Redbridge Wards, this figure rises to over 40%. The 2003 National Employer Skills Survey suggested that about one in four employers in the City region experience skills gaps, i.e. where their current workforce does not have sufficient skills to do their jobs proficiently.

## **3.2 ECONOMIC ISSUES**

### **3.2.1 The Port of Southampton**

The Port of Southampton is one of the key drivers of the economy of the western part of the South Hampshire sub-region. It is identified as an International Gateway in the Regional Transport Strategy (RTS) primarily in recognition of its role as one of the UK's primary points of freight import / export, although it is also the UK's premier cruise port.

To enable it to fulfil these roles effectively, it is essential that it has the highest quality linkages to the national transport networks: road, rail and air. The scale of business handled by the Port provides the evidence to support this requirement. During 2005, it handled some 38m tonnes of cargo and some 750,000 vehicles were moved through it, of which two-thirds were for export.

Map 2: The Port and its general layout



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Southampton has the second largest container terminal in the UK with an annual capacity of 1.95million teu containers and during 2004, it handled 1.44million teu's. UK container demand is expected to grow at a rate of 5-6% per annum, but Associated British Ports (ABP) who own the port believe that the potential exists to increase port capacity over time to 3.5million teu's through smart growth of the existing facilities, meaning that it should be able to accommodate this anticipated level of growth for a number of years.

During 2004, there were some 200 calls by major cruise ships, a figure that rose to 237 in 2005, with 250 booked to call during 2006. 702,000 passengers passed through the port in 2005 and ABP expect this business to grow by a further 50% in the next three years. Southampton can justifiably claim to be the cruise capital of the UK with a 62% market share.

The port supports some 12,000 jobs directly, with somewhere between 18,000 – 25,000 jobs indirectly dependent upon it. Its contribution to the local economy is estimated to be in the region of £2.0bn per annum.

Whilst the freight and container business broadly runs at a steady level throughout the year, the arrival and departure (often within a 12 hour period) of a major cruise liner is the equivalent of a major event in terms of its impact on the City's road network. It is not unusual for 1,500-2,000 people to disembark and a similar number to embark during that time period, most of them arriving in the City from much further afield. This creates particular pressures because of the location of the Port accesses in relation to the City's strategic road network.

In recent times, close liaison between the Council and the Port operator (ABP) has resulted in the commissioning of new variable message signing (VMS) directing passengers to the appropriate cruise terminal (there are currently three within the Port), but as the cruise industry continues to expand, and as freight volumes (particularly containers) also maintain their growth, it is vital that access to the Port is enhanced to ensure its continued economic success. Map 2 shows the general arrangements of the Port and Dock Gates.

### 3.2.2 Freight

Freight plays a vital role in the economic life of the City. Many jobs are directly dependent on freight handling and distribution, so that facilitating ease of freight movement is a significant transport objective.

Both road and rail have an important part to play in achieving this; the Port has good rail links to both the eastern and western docks, with two Freightliner terminals serving the container port. Road access is via the Primary Network Route from the M3 by way of the M271 and A33, with a secondary approach via the A33 Avenue/Bassett Avenue route. There is direct access to the container port at Dock Gate 20 from the Millbrook roundabout, with access to the Western Docks at Dock Gate 10 and the Eastern Docks at Dock Gate 4.

Whilst there are good rail linkages in place at present, the continuing advances in international cargo shipment mean that there is an increasing use of the new international standard 9'6" containers. These currently represent 35% of all containers and this figure continues to rise. However, the use of these larger units creates difficulties in moving large numbers by rail as the route north from Southampton to Oxford and the West Midlands can only accommodate them in special well wagons. The Regional Transport Strategy (RTS) recognises this as a problem, and gauge enhancement on the route to enable these larger containers to be carried on standard

rail wagons is included in the RTS as a priority scheme (albeit one that is not funded at present)

The proportion of containers carried by rail has dropped from 35 – 27% over the past three years with all of this loss being 9'6" units, the proportion of smaller containers going by rail having actually increased.

Good road connections to the port are vital, particularly to Dock Gates 4 and 20 (see Map 2) The road access to the Eastern Docks (Dock Gate 4) is less than ideal, especially to and from the north via the A33 Marsh Lane/Terminus Terrace route and to and from the west via the A33 Platform Road Town Quay route. Heavy traffic is required to negotiate two large gyratory systems, one around a park and the other through a residential area, with consequent adverse environmental impacts. Although the strategic approach to the Port continues to be via the M27/M271/A33 route, the Bassett Avenue route remains an important alternative that needs to be available, especially to provide access to the Eastern Docks through Dock Gate 4.

At a more local level, freight is also an issue, but more in terms of the disruptive impact that deliveries can have on traffic flow, coupled with an increase in the use of larger delivery vehicles making multi-drop runs. These can cause significant problems in district and local centres as deliveries through the fronts of stores lead to HGV's being parked in positions that impair traffic flow resulting in general congestion and consequent delays to public transport.

### **3.2.3 City, Town and District Centres**

The City Centre is a major regional retail destination drawing in visitors from a wide area (recent surveys have ranked it as seventh in the country) and one of the key challenges is to ensure that its popularity and attractiveness continues. This means that the current strategy of making the City Centre a more pedestrian friendly area will need to be continued and that the policy of preferential allocation of road space to public transport should be extended wherever possible.

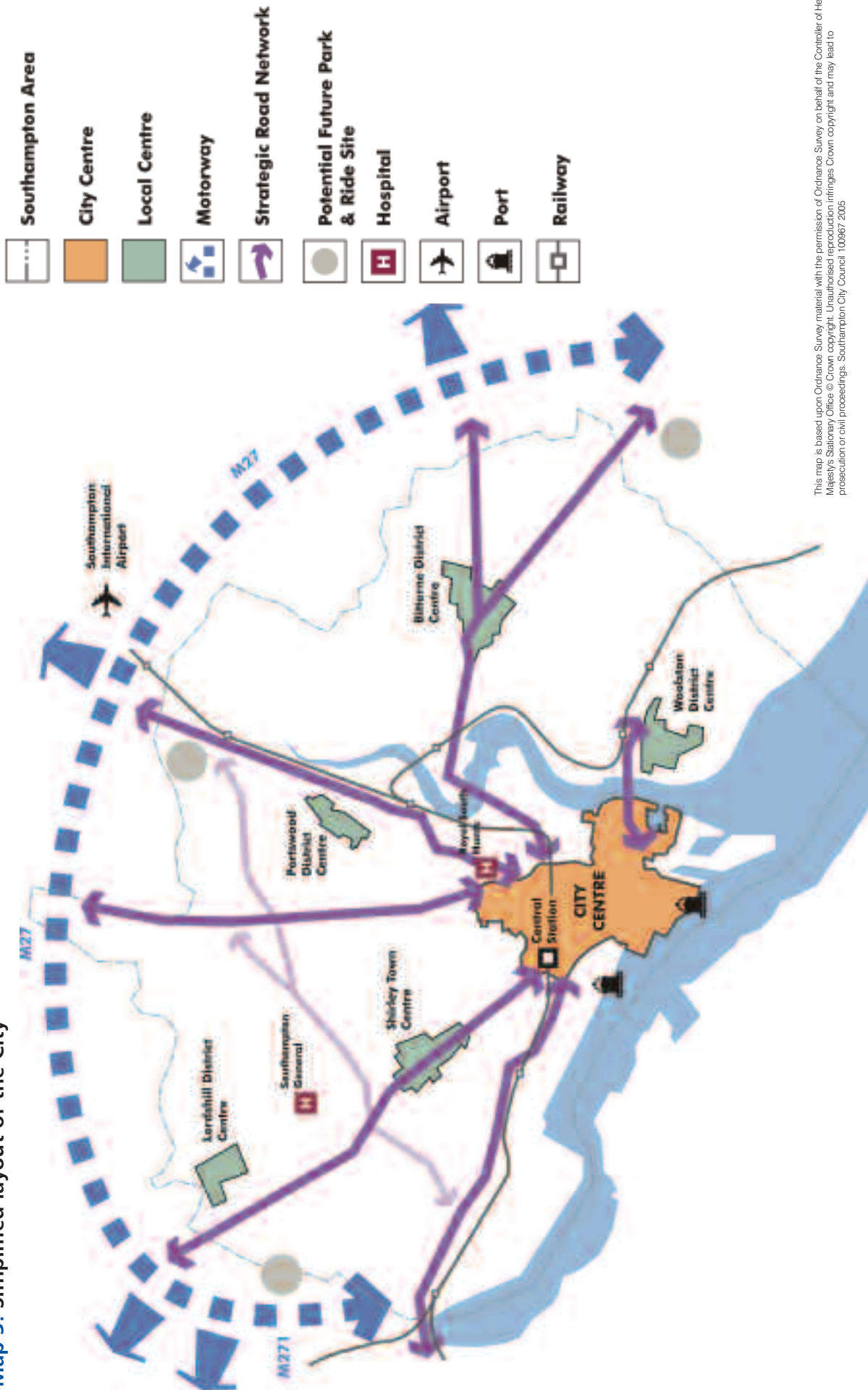
In view of its concentration of services and facilities, the district centre at Shirley has recently been re-designated as a Town Centre and there are four other district centres in the City (at Portswood, Bitterne, Woolston and Lordshill) Map 3 shows their locations. Town and district centres tend to fulfil a more local function providing facilities and services for local residents and acting as complementary to the City Centre (rather than being in competition with it). To enable them to continue to fulfil that function, it is important to maintain and enhance their viability by improving their accessibility, especially for sustainable travel modes. This means that good quality, safe and convenient pedestrian and cycle routes to the centres need to be provided and that frequent public transport services should link with surrounding areas.

It needs to be recognised that nearly all of the major town and district centres in the City are located astride important traffic routes and that, as a consequence, there will inevitably be a balance to be struck between maximising accessibility to (and enhancing the environment of) the particular centre, and catering for reasonable through traffic, especially bus services.

## **3.3 DEVELOPMENT PRESSURES**

The biggest challenge facing the City over the coming years is how to accommodate new economic and residential development. As already outlined in section 2.5.2, the South East Plan envisages some 80,000 new residential units being provided in the

Map 3: Simplified layout of the City



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South Hampshire sub-region by 2026, underpinned by an economic growth rate of between 3 – 3.5% per annum.

Around 50,000 of these units are likely to result from increased urban density, with up to a maximum of 16,300 within the City. These will generate further demands on an already-stretched urban road network. The other 30,000 will need to be provided on greenfield sites across the sub-region and in many ways, it is this latter group that provides the biggest transport challenge.

The greenfield sites are likely to be Strategic Development Areas (SDA's) of between 5,000 – 10,000 units each, and even though the policy will be to make the new communities as sustainable as possible, it is inevitable that they will generate significant new travel demand, much of it on the sub-region's strategic transport network.

Reflecting the Regional Transport Strategy (RTS), the roles of Portsmouth and Southampton as 'centres of gravity' for the sub-region are expected to continue, so that travel demand (for both leisure and employment purposes) between the new settlements and the two cities can be expected to grow in direct proportion to the growth of the new settlements. This implies development of the existing transport networks centred on the two cities, rather than the creation of new networks running between them (reflecting the 'Hubs and Spokes' model in the RTS). This is shown in diagrammatic form on Map 4.

One of the proposed SDA's is likely to be sited to the north-east of the City in the Hedge End area and this will be within the catchment area for which the City is the centre of gravity. The location of this SDA is potentially problematic in that there is no direct route into the City from the area; the principal routes will be via the eastern and northern approaches.

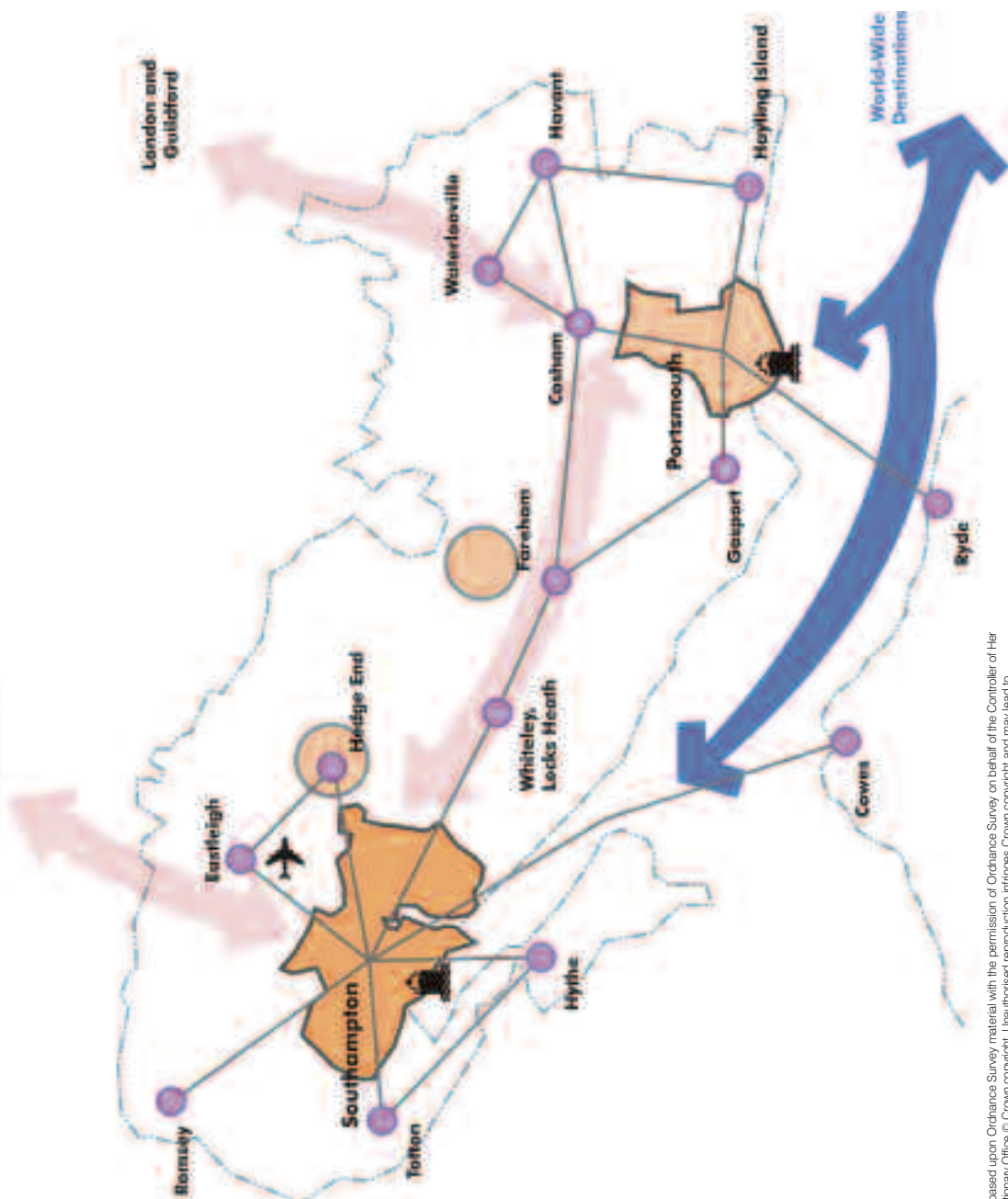
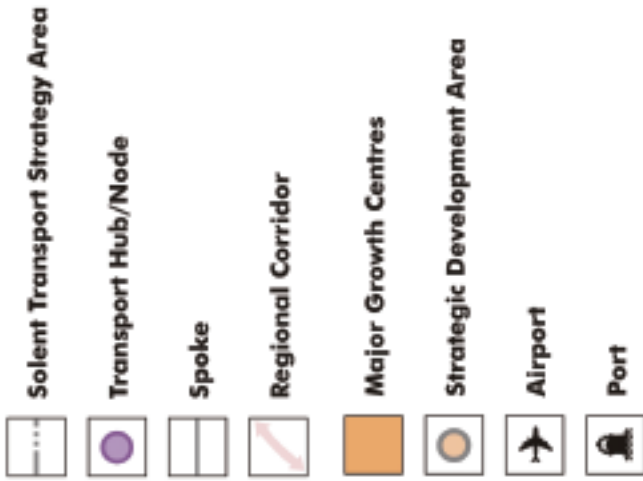
This creates a two-fold challenge for the City – how to accommodate the additional travel demand created by the growth within its own boundaries and how to achieve this at the same time as catering for the demands created by developments outside the city boundary.

Commercial development in the City will also bring its own challenges. Over the period of this LTP, the amount of retail and office accommodation in the City is expected to increase significantly as major developments at Ocean Village, Mayflower Plaza and West Quay Phase 3 are likely to come on stream. The West Quay Phase 3 development includes a new state-of-the-art multi-purpose arena accommodating up to 10,000 people, creating potential new pressures on the evening and late-night transport networks in particular.

Northern Above Bar will develop as a cultural quarter for the City including a substantial residential element, and Woolston Riverside will be a major mixed-use development in a location that presents particular transport challenges because of its proximity to the waterfront and location at the extremities of the City's transport networks.

In addition, the amount of hotel accommodation in the City is also expected to continue to increase in response to the continuing expansion of the cruise industry as outlined in section 3.2.1, and to the increased level of 'event capacity' within the City and the immediate sub-region. This implies more visitors to the City and hence the potential for greater volumes of traffic.

**Map 4: Solent Area – Transport Hubs and spokes**



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## 3.4 TRANSPORT ISSUES

### 3.4.1 Traffic Growth and Congestion

In spite of efforts to uncouple the linkage, traffic growth is an immediate by-product of economic and housing growth and, in a City where the opportunities to expand the capacity of the existing road network are minimal, the inevitable end result is a greater incidence of congestion.

Nationally, traffic continues to grow at a rate of about 2% per annum, and more vehicles are now on the road than ever before, some 31.8 million. In spite of this, annual surveys carried out by the City have shown that overall traffic flow levels in Southampton have remained virtually unchanged over the past ten years, although peak periods are starting to become extended and the distribution of the traffic shows that some roads are now under more pressure than previously, whilst others show marked reductions. The latest Value For Money (VFM) Profiles produced by the Audit Commission also show that, in comparison with other similar unitary authorities in England, traffic flows are in the lowest quartile using the measure of vehicle kilometres (for all motor vehicles)

The development challenges outlined in the previous section can, however, only exacerbate the situation by generating more demand and increasing the pressure on key routes into and out of the City, leading to the likelihood of increased congestion on those routes, especially during (extended) peak periods.

This congestion has other unwanted effects as well as the general economic cost of the delays caused. The biggest is the effect it has on the reliability of public transport and, with that already an issue in determining its attractiveness as an alternative to the car, effective means are needed to address the problem.

A key transport objective for the City will be to ensure that it is getting the most effective use out of the existing network, as well as adapting it over time to accommodate the pressures resulting from future developments in both the City and the sub-region. In this respect, the opportunities presented by the 2004 Traffic Management Act (see section 3.11.1) will form a key element of future strategy.

Road traffic is also a major source of air pollution in built-up areas, with points of congestion frequently being associated with high concentrations of nitrogen dioxide (amongst other compounds) and with the City being in the position of having declared six Air Quality Management Areas (AQMA's), all of them located around known congestion locations, this creates a further imperative to address the situation.

### 3.4.2 Two-way commuting

Linked to the previous issue, one of the more recent phenomena is the growth of out-commuting from the City. As a sub-regional centre, the City has long been a major employment destination, with the associated in-commuting that inevitably results. However, as much of the traditional employment base has declined, large brownfield sites have been freed-up, many of them in the areas around the City Centre and, in accordance with planning policy, these have generally been re-developed for housing, much of it in high quality blocks of flats. The result has been higher density living, with many of the new properties being purchased by young professional people who are increasingly mobile (both in transport and employment terms).

Often, these new City Centre residents have jobs outside the City and hence a new peak-period travel demand is created, but in this case, it is City residents travelling out

of the City, rather than non-residents travelling in. This can cause particular difficulties because of the geography of the City, as there is no way that the sub-region's strategic road network can be accessed from the City Centre without utilising a significant proportion of the City's strategic road network, (see Map 6) thus generating demand (and potential congestion) in both directions during peak periods.

In the period between the 1991 and 2001 censuses, the extent of out-commuting increased, from 23,000 people per day to 44,000 per day, with the City electoral ward showing the second highest average travel-to-work distance being the Bargate Ward (which covers the City Centre) thus confirming the proposition. During the same period, the level of in-commuting showed a much smaller increase from 41,000 to 47,000.

### 3.4.3 Public Transport

This change in commuting patterns might have had less impact on the road network if it had not been accompanied by a period of decline in public transport. Whilst in transport terms, it is often difficult to separate cause and effect, it is clear in retrospect that the late 1980's and much of the 1990's were a period when public transport (certainly outside London) ceased to be an attractive means of travel for many people.

The 'bus wars' in the period that followed deregulation (although they did not occur in the City) created an image of low quality vehicles running to unreliable timetables, with operators seemingly more interested in competing amongst themselves than in providing a service to the customer.

There was minimal investment in new vehicles and this, coupled with widespread withdrawal by operators of services that were considered to be non-commercial, led many people to abandon their reliance on buses and turn to other means of transport, more often than not, the private car.

This decline was not confined solely to the bus industry. Prior to privatisation, British Rail had under-invested in new trains to the extent that many of the passenger trains serving the sub-region were approaching 30 years old by the mid-1990's. The service pattern of trains serving the City (and the range of destinations) was also broadly unchanged from that of the previous 20 years.

Station maintenance standards had also declined and at minor stations (in particular) facilities had often been reduced to little more than a bare minimum.

Against this background, it is unsurprising that public transport became viewed as the transport of last resort, rather than the transport of choice. Although rail has managed to regain much of the lost ground in more recent years in terms of passenger numbers carried, bus services are only now starting to stem the decline, as service reliability continues to be an issue, vehicle quality is only slowly improving and some fares are not perceived as value for money. The decline has seen total passenger journeys by bus in the City fall from 20.7million in 2000 to 18.9million in 2004, and although this level still represents 83 journeys/head/year, the general trend remains negative.

Even the improvement shown by the rail network has its roots in longer distance travel, with the train operators themselves frequently expressing the view that rail is best at moving large numbers of people over long distances.

The City suffers from the lack of a central focus for bus operations. City Centre stops

are dispersed and there is no consistent pattern of service to key attractors, such as West Quay. This is partly due to the road layout within the City Centre, in particular the lack of east-west links across the centre, which forces operators to run their services generally one side of the centre or the other, rather than serving both. It is also partly due to the existence of a substantial difference in ground levels between the Old Town and the reclaimed land to the west.

Developments in recent years have had the effect of moving the 'centre of gravity' of the City Centre to the west as the centre has become less linear in form. With the focus of in-City services being located to the east of the centre, this has increased the physical separation of bus operations from the main retail area, with a consequent loss of convenient interchange.

Although it is a main station handling over five million passengers every year, Central Station does not present the image of a point of arrival to a major City. Its location also causes difficulties resulting from the lack of satisfactory interchange facilities that can be achieved. The position of the main entrance means that it is not possible to provide a segregated pedestrian link to the numerous bus services that pass the site and passengers are forced to cross a car park and a busy and awkwardly-arranged road junction to access the main stops. Significant improvement can only be achieved from a major re-modelling of the whole of the station site; this would also enable better pedestrian links to the City Centre and West Quay to be provided

This then is the challenge that exists; the great majority of trips in the City are likely to be relatively short in distance and duration and these are the ones where currently the private car is perceived to offer the best option, and yet these are the very ones where public transport, especially the bus, needs to present a viable and more attractive alternative than at present if a sustainable and efficient network is to be provided for the future.

#### **3.4.4 Non-car ownership**

In spite of the general growth in car ownership, there remains a significant proportion of the City's population who do not have access to a car and it is vital that they are not disadvantaged by transport policies. The 2001 census showed that just under 30% of people in the City do not have access to a car, with significant concentrations within the eleven Priority Neighbourhoods of the City.

Many of the non-car owners are either older people or those experiencing economic or health problems, and it thus vitally important to ensure that the transport network functions in a manner which assists their mobility and provides access to facilities, so that they are not excluded from participation in the life of the City.

There is, however, a growing proportion of the population who are, by choice, not car owners. Many of these are younger people living in the newer residential accommodation around the City Centre where they are close to most of the main facilities offered by the City and also to the principal public transport networks.

This core of new residents offers an opportunity to attract a critical mass of a new breed of public transport users who are users by choice and not by necessity. This implies that there needs to be a quality offer in place to ensure that these new users are retained and not persuaded to revert to the private car.



### 3.4.5 Road Safety

This is a challenging area of activity for the Council. The City was one of the first authorities to adopt a data-led approach to Accident Investigation and Prevention (AIP) work. This approach resulted in a dramatic 67% reduction in KSI casualties across the City being achieved between the early 1980's and the year 2000 (down from an average figure of 325 casualties per year to 108 in 2000).

However, one of the effects of being amongst the first to adopt this approach has been that, although this resulted in significant over-achievement against the original year 2000 target, it has subsequently proved much more difficult to obtain the additional reduction necessary to achieve the target of a further 40% reduction in overall KSI's by 2010. At present, the City is not on track to achieve this reduction, although it is on target to achieve the 50% reduction in child KSI's by 2010 and the original 2010 target for the reduction in slight injury casualties has already been achieved (and it is thus intended to set a new, more stretching target).

One issue that has been examined in detail as part of the investigative process is the possible link between areas of deprivation and injury accident casualties, but a thorough analysis of the most recent injury accident statistics has failed to show any correlation between the two. However, this analysis also revealed that previous years' investment in road safety schemes had been very much skewed towards areas of deprivation, albeit without being explicitly targeted as such (the deprivation indicators not being available at that time). In retrospect, this occurred because of the adoption of the data-led approach to prioritising investment.

This approach had identified that some of the worst safety records in the City, especially those which had high proportions of accidents involving vulnerable road users, were on the main roads through large areas of predominantly public sector housing, and these are the areas of the City where the deprivation indicators tend to be at their highest. There had also been substantial investment in traffic calming schemes in the inner city housing areas where the indicators are also higher than the City average.

## 3.5 HIGHWAY MAINTENANCE

One of the other main challenges is in keeping the highway infrastructure maintained to a level that ensures reasonable facility and safety for users, and provides a high quality of street scene for local residents. Maintenance policies and practices also need to deliver value for money in an area of activity that has historically tended to be



under-funded. An analysis carried out in 2003 indicated that the value of maintenance allocations in the City had reduced in real terms by some 70% in the preceding ten-year period.

The latest Value for Money (VFM) Profiles produced by the Audit Commission provide confirmation of the under investment, as the City is shown as being at significantly less than the median level in terms of maintenance expenditure compared to similar unitary authorities. This has manifested itself in highway condition indicators that are worse than average, an aging street lighting stock, and street furniture that is inconsistent in style and often poorly maintained.

The quality and perceptions of the local environment are significantly affected by the quality of the street scene, which forms a large proportion of the public realm in many areas of the City. Improvement to the street scene will lead directly to improved perceptions of environmental quality, and hence investment in highway maintenance can be expected (and should be targeted) to deliver wider outcomes than simply those of the maintenance itself.

The growth of a 'compensation culture' in recent years, coupled with this (entirely reasonable) aspiration of residents and users for a good standard of appearance, cleanliness and repair, means that effective inspection strategies need to be in place, backed up by robust and justifiable policies. Works then need to be prioritised based upon an agreed set of factors that recognise the differing functions of the various parts of the network.

The challenge will be to maximise the benefits from the maintenance investment by working with other disciplines to provide this 'whole street' approach wherever practicable and by linking maintenance funding with other funding sources to generate added value to schemes.

### **3.6 ENVIRONMENTAL TRENDS**

After signing the Nottingham Declaration in 2001, the City Council adopted a Climate Change and Air Quality Strategy in 2004 to support the national agenda. This joint strategy, which considers the significant relationship between climate change and air quality, is believed to be the first of its kind in the UK. Greenhouse gas emissions from all sectors have been quantified and a target set to reduce them (a 20% reduction by 2010). The strategy highlights how the City will be prepared to take the appropriate actions and bear the necessary costs of future impacts by incorporating the risks into long term decision making.

The City is already making a contribution to reducing greenhouse gas emissions through its energy efficiency, solar, geothermal and combined heat and power projects which will reduce the City's carbon dioxide emissions by 90,000 tonnes per year.

Trends in air quality, as measured by the three permanent monitoring stations in the City, indicate a steady fall in the levels of carbon monoxide, sulphur dioxide, lead and benzene over the past decade. However, levels of nitrogen dioxide and fine dust particulates (PM10) have not fallen so noticeably and there are clear links between levels of these pollutants and weather conditions. The result has been that the City has had to declare six Air Quality Management Areas (AQMA's) all of them due to excessive levels of nitrogen dioxide resulting from traffic emissions. This is described in more detail in the Air Quality Action Plan at Appendix 3.

Although vehicles are becoming cleaner with the widespread introduction of catalytic converters, this trend appears to be counteracted by the general growth in car ownership and use, and by traffic-generating developments in the City and the surrounding area.

The Scoping Report produced as part of the Strategic Environmental Assessment (SEA) also identified that the City lies in the Solent Zone of Industrial Pollution Sources (ZIPS), as defined by the Environment Agency, due to the presence of a petrochemical plant, incinerators and a power station at Fawley, Marchwood and Hamble. In spite of this, the City is currently expected to meet National Air Quality Standards and Objectives for all pollutants except nitrogen dioxide.

The other significant environmental issue for the City is sea level rise, generated by climate change. With substantial areas of the City being low-lying, any significant rise in sea level has the potential to create large-scale damage and render whole areas uninhabitable, unless major (and costly) sea defence works are put in place as part of a wider coastal defence strategy.

### **3.7 FUNDING**

This leads directly to perhaps the biggest challenge of all – the need to secure sufficient funding to enable the other challenges to be addressed. The programmes outlined later in chapter 6 have been formulated to reflect the anticipated levels of funding from the LTP, but it is recognised that the LTP is not going to generate all of the funding required to implement the full list of measures necessary to respond to the challenges faced by the City, and the identification and provision of other sources of funding forms a key part of the overall strategy.

All possible sources of funding will be investigated, with particular reference to those that have become available more recently, or are expected to become available over the next few years. In this respect, the potential opportunities provided by the Prudential Borrowing Code, the Private Finance Initiative (PFI) and the forthcoming Transport Innovation Fund will be examined in detail.

## **OPPORTUNITIES**

Many of the challenges outlined in the previous section also represent opportunities and these, together with others that are anticipated to arise during the course of this LTP, are considered in the following section.

### **3.8 DEVELOPMENT RELATED**

Whilst accommodating the new development represents a major challenge, it also represents probably the greatest opportunity. With development expected to take place both within and outside the City, there are likely to be significant opportunities to obtain major development gain directly associated with growth areas. This gain can be expected to yield important benefits, both to help accommodate the new

development and to enhance existing transport provision.

Investment in new infrastructure should, however, only be considered after strategies to reduce the travel demand generated by the development, and then to maximise the efficiency of the existing network, have been fully implemented. The new infrastructure should also endeavour to lock-in the benefits that are gained from these interventions.

The investment will need to be targeted in the first instance towards the provision of infrastructure and services that directly address the demands created by the new development(s) but at the same time, every opportunity to address existing transport deficits will be pursued.

Development gain is potentially a major source of funding to supplement LTP and revenue funding, particularly with regard to infrastructure requirements, where anticipated LTP allocations are unlikely to be sufficient to allow schemes to be funded from those sources alone. In this respect, the Council's Supplementary Planning Guidance on Planning Obligations will enable contributions to be obtained for a wider range of interventions over a wider area than has previously been the case.

### **3.9 ECONOMY RELATED**

#### **3.9.1 Freight**

The opportunities related to freight are perhaps less than in some other topic areas. The major infrastructure deficits to be addressed are those related to the strategic movement of freight to and from the Port, i.e. the gauge enhancement of the rail route to the West Midlands and improvement of the road access to Dock Gate 4. These improvements are essential if the Port is to fulfil its role as an International Gateway as outlined in the Regional Transport Strategy (RTS).

Although it is not an issue that can be funded through the LTP, the rail gauge enhancement is critical to the continued economic success of the Port. It is included in the RTS as a regional priority and was a published commitment of the Strategic Rail Authority, prior to that organisation being disbanded. In view of its importance to the South East region as a whole, the project has now been taken up by SEEDA (the South East of England Development Agency) and a project team, led by them and also including the West Midlands Development Agency, has been formed from all of the major stakeholders to promote the scheme and bring it to fruition.

It is intended to bring forward the Dock Gate 4 access improvements during the period of this LTP because of the potential opportunity to supplement funding from the LTP with developer contributions, and this in turn will provide the opportunity to obtain other benefits from the scheme, e.g. improved bus priority on the approach to the Itchen Bridge and environmental enhancements around Queens Park.

During the period covered by this LTP, there will also be a need to improve facilities around Millbrook Roundabout at the entrance to Dock Gate 20 (the main entry point for the container port) which is likely to be associated with development of the site immediately adjacent to the roundabout, from which a significant contribution would be sought.



### 3.10 SUSTAINABLE TRANSPORT

#### 3.10.1 Public Transport

Further investment in, and support for, public transport must be viewed as the best option for the longer term to provide both the most realistic and the most cost-effective solution to the problems of increased commuting, traffic growth and congestion. It is clear, however, that within the current regulatory framework, real improvements to public transport provision (especially bus services) can only result from a partnership approach.

Affordable, reliable and good quality public transport provision is essential to meet the needs of the significant proportion of the population (almost 30%) who have no access to a car, many of whom are amongst the most likely to rely entirely on public transport for their mobility.

##### 3.10.1.1 Buses

In a densely built-up area such as Southampton, the public transport network that delivers the best value for money solution for the longer term is certain to be centred on bus travel. The bus is flexible, able to respond readily to changes in residential and employment patterns, and is relatively low-cost in terms of investment. It can make significant contributions to increasing accessibility and (particularly with the advent of new generation engine technology) to improving air quality. Improvements to the bus network will therefore provide benefits across the range of transport policies.

Improvements will require a two-pronged strategy: investment in new vehicles, improvements to reliability and commitment to customer care by the operators, and better priority for buses, improved provision of facilities at stops and increased support for non-commercial services by local authorities. An effective partnership between the Council and the City's operators is thus vital if the maximum possible benefits are to be obtained, and the existing framework Quality Partnership between the Council and the operators provides the opportunity for this to happen.

Reliability is perhaps the key issue, and the initiative to promote Punctuality Improvement Partnerships (PIP), intended to address the topic and improve service punctuality, represents another opportunity to achieve results.

Other innovations in the public transport field that could increase the attractiveness of public transport include the expansion of integrated ticketing, the rollout of smartcards and the introduction of specially-tailored services to meet specific needs (e.g. taxi-buses, demand responsive services).

The continuing development of the City Centre as a major retail destination

increasingly requires that there should be an identifiable focus for bus services and, given the situation (resulting from the road layout) that services will have to continue to serve one side of the centre or the other, there needs to be one on either side. The development of Vincent's Walk (with direct access to the Above Bar Pedestrian Precinct) would address the situation on the east side, but an exciting opportunity may also arise to examine the scope for developing a new facility on the west side in Castle Way, near to West Quay. The whole question of bus routes through the City Centre is an area that needs to be reviewed over the next few years as the Area Action Plan (AAP) for the City Centre is developed.

The proposal for a new Strategic Development Area (SDA) to the north-east of the City in the Hedge End area could provide the catalyst for the introduction of Park and Ride on both the north and east approach corridors, although it will be important to ensure that the services are integrated with the other scheduled bus services in the City. It may prove possible to introduce some limited stop services in parallel that serve key locations and district centres.

As part of the development of the public transport policies at section 5.5.3.2.4 and the Bus Strategy at Annex C, the Council asked MVA Consultancy to review their original 1999 Public Transport Study that informed the public transport policies in LTP1. A summary of that review is shown at Annex B.

### **3.10.1.2 Rail**

Rail is more likely to offer benefits at the sub-regional level, but the City has eight stations within its boundary and these represent a grossly under-utilised asset. The possibility exists to make better use of them, and improvements to their 'visibility' and accessibility form part of the public transport strategy. The part they might play in improving accessibility for some of the residential areas around the periphery of the City also needs to be investigated; for instance, could a feeder taxi-bus service into one or more of the suburban stations provide an alternative where cost-effective bus service provision to the City Centre is impossible to achieve?

It may also be possible over time to identify the possible use of some stations to support some form of Park and Rail; at present, this type of operation is used at the weekends and on Bank Holidays from Southampton Airport Parkway station into the City Centre, utilising capacity that is normally fully occupied by commuters on weekdays.

The need for a comprehensive re-modelling of the Central Station was outlined in section 3.4.3, but as well as creating a new high quality point of arrival in the City Centre, the scheme would provide the opportunity to create a major transport interchange, with better linkage between bus and rail services.

### **3.10.1.3 Taxis and Private Hire**

Taxis and private hire vehicles form an important part of the public transport network. They offer a greater degree of flexibility than it is possible to achieve with scheduled bus services and they provide a service at times when other forms of public transport are unlikely to be operating because it is not commercially viable.

There is considerable potential for taxis to play a greater role in the future by providing transport for the significant proportion of residents without access to a private car, through providing for the expanding night-time economy, or as part of an integrated approach to addressing issues of poor accessibility (e.g. taxi-bus schemes).



### 3.10.2 Active Travel

One of the more innovative approaches taken by this LTP is the introduction of an Active Travel Plan (see Appendix 2). This initiative pulls together the walking and cycling elements of the LTP and links them to the wider health agenda by using them to provide opportunities for people to gain their daily exercise budget as part of their normal daily travel routine.

This approach should result in clear benefits to a number of policy areas, especially those relating to health and the environment, as well as transport. The development of the policy in partnership with bodies such as the local Primary Care Trust and Sport England will provide important opportunities to link programmes of those groups together to deliver better health as well as increased transport choice to City residents.

### 3.10.3 Travel Planning

The Council is already working with many workplaces and schools to create travel plans. Travel Planning has a key role to play in the field of reducing overall travel demand; school travel planning aims to increase the modal share of walking and cycling as means to travel to school (with consequent health and educational benefits, as well as improving conditions around schools) and workplace travel planning addresses peak period congestion by encouraging the use of multi-occupancy car travel, as well as reviewing working practices such as working hours and home working. Increasingly, travel plans are sought as part of new planning consents for both residential and commercial developments because of the contribution they can make towards traffic reduction.

It is the view of the DfT that 'soft' measures such as this can help to reduce overall travel demand by as much as 20%, and there are clear linkages to the Active Travel Plan outlined in the previous section. The potential contribution of travel planning to the achievement of congestion, accessibility and air quality targets is thus considerable. The other opportunity provided by travel plans is that, wherever practicable, any new infrastructure provided should be multi-functional and target as many objectives as possible, e.g. a new length of footway could serve as part of both a walk-to-school route and a walk-to-work route.

The Council has recently adopted a Staff Travel Plan covering the whole of its workforce. This will lead to the development of a number of site-specific plans that are intended to reduce the number of single-occupancy car journeys to the Council's various workplaces. The Council has also been instrumental in the establishment of two major geographical groupings of employers in the City to pool travel plan activities and share knowledge, and the opportunity exists to expand these to cover greater numbers of workplaces.

Some significant travel plans already exist in the City as a result of work done in recent years. These include the St. Mary's Football Stadium plan (where a 32,000 capacity stadium with no associated car parking was built in an edge-of-centre location), the University of Southampton (where a complete bus network linking all main campuses and residential sites has been put in place) and Southampton General Hospital (where a doubled level of activity in recent years has not led to noticeable worsening of conditions for local residents).

### **3.11 NETWORK MANAGEMENT**

#### **3.11.1 Traffic Management Act 2004**

The 2004 Traffic Management Act places a new duty on local transport authorities (LTAs) to facilitate the movement of road traffic within their areas. It also requires LTAs to appoint a Traffic Manager whose remit will be to ensure that this duty is fulfilled and to take a lead role in advising how roadworks should be approached and programmed. The Traffic Manager will also be required to take an overview of the traffic impacts of the whole range of the Council's activities and instruct accordingly.

This new duty, the Network Management Duty, is established by Part 2 of the Act and it requires the Council (as the LTA) to manage the City's road network with a view to achieving, so far as may be reasonably practicable, having regard to its other obligations, policies and objectives, the following objectives:

- a) securing the expeditious movement of traffic on the City's road network; and
- b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority.

The Act specifically states that the term 'traffic' includes pedestrians, so the duty requires the Council to consider the movement of all road users: pedestrians and cyclists, as well as motorised vehicles, whether engaged in the transport of people or goods.

'Expeditious movement of traffic' implies a network that is working efficiently without unnecessary delay to those using it, but the qualification of 'reasonable practicability' means that the duty is placed alongside other considerations for the Council and does not take precedence. Thus, for example, securing the expeditious movement of vehicles should not be at the expense of road safety objectives, but nevertheless, the duty reflects the importance placed on making the best use of existing road space for the benefit of all road users.

The Act provides a significant opportunity to assist bus operations within the City, by exercising more controls over the time and duration of roadworks, and by reviewing the whole network to establish whether the current arrangement of traffic orders is sufficient for the demands now being placed on it (and whether or not it provides enough assistance to bus operations).

The Act also provides an opportunity for the Council to enforce a new range of decriminalised motoring offences that could prove invaluable in addressing obstructive parking that impairs traffic flow and causes congestion.

The Council has established a new organisational structure to reflect the requirements of the Act. It brings together the activities of New Roads and Street Works Act (NRSWA), traffic systems, roadworks co-ordination and highways inspections under a new Network Manager post. This structure is expected to enable the potential network management benefits arising from the Act to be fully realised, leading to more efficient use of the network, with a consequent reduction in congestion.

### 3.11.2 Highway Maintenance

In early 2004, the City Council agreed to allocate a significantly increased level of funding (some £18.5m) to highway maintenance over the next five-year period. This was, in large part, a response to the highways gap inspection of late 2002, one of the main findings of which was that the service had suffered from under-investment for a considerable period. This funding will run until 2008 - 2009, meaning that the last three years will overlap this LTP.

The new funding (from Prudential Borrowing) is being used to deliver significant improvement to the condition of the non-principal road network, as well as a major programme of replacement of old street lighting columns. A sizeable proportion is also being allocated to more general improvement of the street scene. However, this will only achieve improvement of 25% of the highway asset.

The existence of this new funding does however provide an opportunity to link other LTP funded schemes to it to maximise the added value of the expenditure. The opportunity also exists to review the way in which maintenance schemes have traditionally been prioritised, moving away from an entirely ratings-based approach (i.e. a purely worst-first approach, regardless of any other considerations) to a system that takes into account a wider range of factors, such as level of service provided by the road or footway, community safety benefits, claims record, etc. This is closer to an asset management approach than has been the case previously, and the need to develop a full Transport Asset Management Plan (TAMP) has been identified as a result of the investigations into how additional funding might be obtained from 2008-2009 onwards.

As part of the new approach to street scene improvement, the Council has embarked on a number of ambitious pilot projects to reduce street clutter. These projects involve the removal of redundant signs and street furniture, the rationalisation of those signs that need to remain (including placing street nameplates on buildings wherever possible) re-assessment of the need for pedestrian guardrailing and assembly of essential streetscene features (such as lighting, post boxes, telephone boxes, cycle stands, etc) into organised clutter areas, leaving unobstructed routes for pedestrians.

## 3.12 ENVIRONMENTAL IMPROVEMENT

### 3.12.1 Environmental Improvement and Strategic Environmental Assessment (SEA)

The Scoping Report for the SEA identified a number of areas where the LTP could provide an opportunity to achieve improvements to the local environment. As already outlined in section 3.6, the City is committed to reducing its carbon dioxide emissions as part of a Climate Change and Air Quality Strategy; given that road transport is estimated to contribute almost a quarter (24.2%) of all CO<sub>2</sub> emissions in the City, strategies that seek to reduce traffic levels can be expected to lead to a reduction in this, thereby directly helping to achieve the overall target.

The Scoping Report also considered biodiversity and landscape issues. It noted that the City has eight UK Biodiversity Action Plan (BAP) habitats and that, nationally, these continue to be lost as a result of the provision of transport infrastructure. The report explained that landscape proposals for transport schemes should reflect BAP habitats characteristic of the local area to help promote biodiversity. There is a particular opportunity with regard to the provision of some of the City's cycle and pedestrian routes as these frequently are sited off-road through natural areas, and hence sensitive landscaping can prove beneficial to habitat retention and creation.

With regard to landscape, the report outlined how urban landscape features can be lost to transport infrastructure and how the urban character of areas may be detrimentally affected by existing and proposed transport facilities. It noted that, within the City, there are several areas recognised for their landscape value in the Local Plan and that two of these are directly related to transport: the A33 route from the M3 to the City Centre, and the Rail Corridors (where the City already has an adopted strategy for their improvement) Any proposals to improve these would thus create a significant opportunity to realise some enhancements as part of the five-year programme.

The Scoping Report also noted that there is currently no information available on nuisance noise complaints related to transport in the City, although as part of the National Ambient Noise Strategy, a road traffic noise map of the City will be produced.

With the City having recently declared six AQMA's, the opportunity arises to apply some form of control(s) to the affected areas. All of the declarations are due to traffic emissions and are located at major intersections or on major routes into the City. The Air Quality Action Plan at Appendix 3 shows the locations of the six areas and sets out the overarching strategy within which detailed local plans for the six areas will be developed. A summary of the SEA, the process employed and the main findings and recommendations is shown at Annex A.

### **3.13 IMPROVED DELIVERY**

#### **3.13.1 Partnership Working**

Section 3.10.1 outlined the need for effective partnership working to help deliver quality public transport, but the potential outcomes from working with other agencies extend far beyond that.

Transport is not an end in itself: it supports the achievement of other objectives and, as such, the strong likelihood is that other agencies and groups will increasingly be involved in the development of schemes and initiatives. It is important to recognise that the contribution these other bodies can make to the eventual product is often substantial and that working together can deliver greatly enhanced outcomes.

It is thus one of the underlying values of the City's LTP that the City will explore all opportunities to work in partnership with other agencies to ensure the provision of the best transport network for the City.

#### **3.13.2 Transport Innovation Fund (TIF)**

This is potentially the biggest source of funding for transport measures in the longer term.

It is clear that the funds will be targeted towards schemes that embrace harder edged demand management measures such as road user charging, workplace parking levy or innovative parking controls, in that order of priority, and DfT have indicated that they are particularly looking for packages of schemes which combine effective demand management with better public transport, especially bus service improvement. The development of Park and Ride might come within the latter category, but only if linked to a major element of charging.

It is broadly agreed that the strategic choice for road users is between service levels which continually deteriorate (since we cannot build our way out of congestion) and

new ways of paying for road use, or, at least, that new ways of paying for road use offer the best prospect for delivering significant changes in behaviour and consequent improved service levels.

There is also an emphasis in the TIF scheme on supporting innovative mechanisms which raise new funds locally, and on schemes that are beneficial to national productivity, especially those that improve access to ports and airports.

Given the need to exploit all opportunities to raise new funds, the intention to accelerate local economic growth and the national significance of the Port of Southampton, it is possible that some of the schemes that the City would want to progress over the course of this LTP may be suitable for consideration for funding from TIF.

The fund comes into being during 2008-2009 and by 2011-2012 is projected to be running at a level of around £2bn per annum. This gives time for the larger strategic proposals to be developed fully and robust bids submitted, and the timescales involved with TIF are such that they would probably match the required implementation timescales for the major schemes. Bids will be made by PUSH/Solent Transport for pump-priming money from the fund to develop schemes over the next three years and also to investigate the options for the development of Solent Transport as an organisation .

