

6. Tackling Congestion

Reducing the levels of congestion remains a fundamental objective in this Plan. This not only look at addressing congestion related problems currently being experienced in Southend but at managing expected traffic growth in the future. The latter is essential in ensuring future aspirations for the Borough are realised, especially plans for regeneration and intensification of the urban area.

Southend already experiences significant delays on many sections of its key routes. Without intervention, overall traffic levels on local highway network during the morning peak hour are forecast to grow by over 20% by 2011 and 35% by 2016. As a result, peak hour traffic conditions will deteriorate significantly with journey times on strategic routes expected to increase by between 50% and 75% by 2011, and doubling by 2016.

It is clear that the strategy for reducing congestion has synergies with the transport measures and policies identified to deliver other shared priorities, namely accessibility, safer roads, better air quality and quality of life. Improvement in terms of accessibility and safety will make alternatives to the car more attractive, and similarly reducing traffic levels and congestion will likely reduce numbers of accidents and impacts on air quality.

An Overview to Achieving the Shared Priority

The LTP strategy will help deliver improved and more reliable journey times for all road users and seek to redress the balance of the transport system by making non-car modes a far more attractive alternative to the car for many trips.

The strategy is based on managing the existing network, as well as reinforcing and strengthening measures and policies aimed at influencing people's travel behaviour and ultimately promoting sensible travel choices. It is also supplemented by carefully planned and effective infrastructure improvements and public transport provision to both alleviate congestion in key areas and reduce the likely future causes of congestion, implied by the planned intensification of the existing urban area and regeneration areas and general background traffic growth.

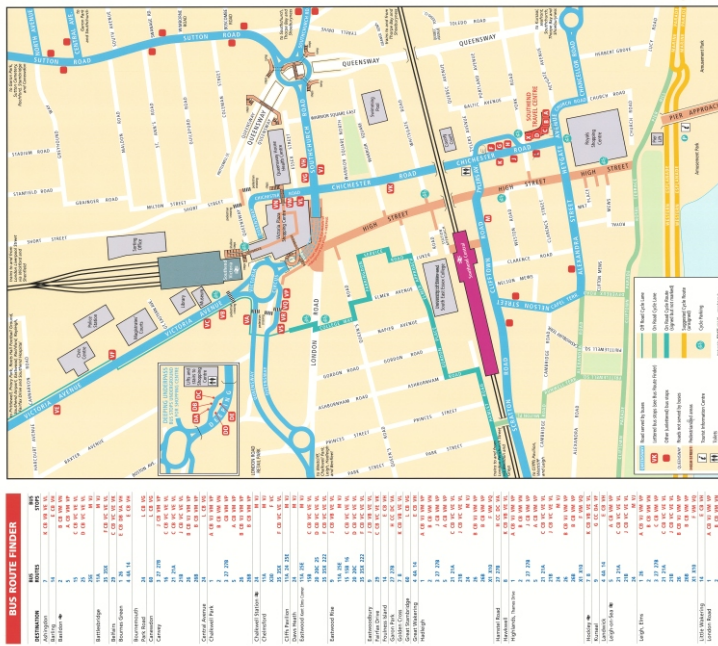
Making better use of the existing infrastructure and services is key to delivering reduced congestion. This has led to bringing forward the production of the "Smarter Choices Strategy"¹⁴, which sets out an integrated programme to give better information and opportunities aimed at helping people to reduce their car use while enhancing the attractiveness of the alternatives.

As part of the Network Management Duty, a review of the provision of Intelligent Transport Systems has identified relatively low cost improvements to the equipment updated during the first LTP period and will be taken forward over this Plan period. For example, the spend profile for 2006/7 includes the extension of SCOOT along Victoria Avenue to link up the traffic signal junctions which will lead to a reduction in congestion.

It is also recognised how important efficient parking management is in controlling demand. The recent review of parking charges in the Borough for the budget year 2006/7 will lead to an increase of up to 30% for car park usage from 1st April. This now predominantly favours short stay (and ramps up in half-hour increments instead of hourly) and acts as a real incentive to use public transport for trips into and out of the Town. This brings the town into line with neighbouring

¹⁴ The Smarter Choices Strategy is an LTP2 supporting document

Bus Destination Finder



Bus services in Southend



HOW OFTEN THEY RUN

Bus Route	Places Served	Monday - Saturday	Sunday
21C	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
21A	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
21B	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
21	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
22	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
23	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
24	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
25	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
26	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
27	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
28	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
29	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
30	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
31	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
32	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
33	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
34	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
35	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
36	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
37	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
38	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
39	Southend-on-Sea - Leigh-on-Sea	hourly	hourly
40	Southend-on-Sea - Leigh-on-Sea	hourly	hourly

traveline public transport info 0870 608 2 608

Southend Cycle Map



Chelmsford and Colchester and supports the investment in the Town in terms of the new Travel Centre and proposed improvements at Victoria and Central railway stations. A review of on street parking in the Town Centre Controlled Parking Zone has also led to an extension of enforcement into weekends.

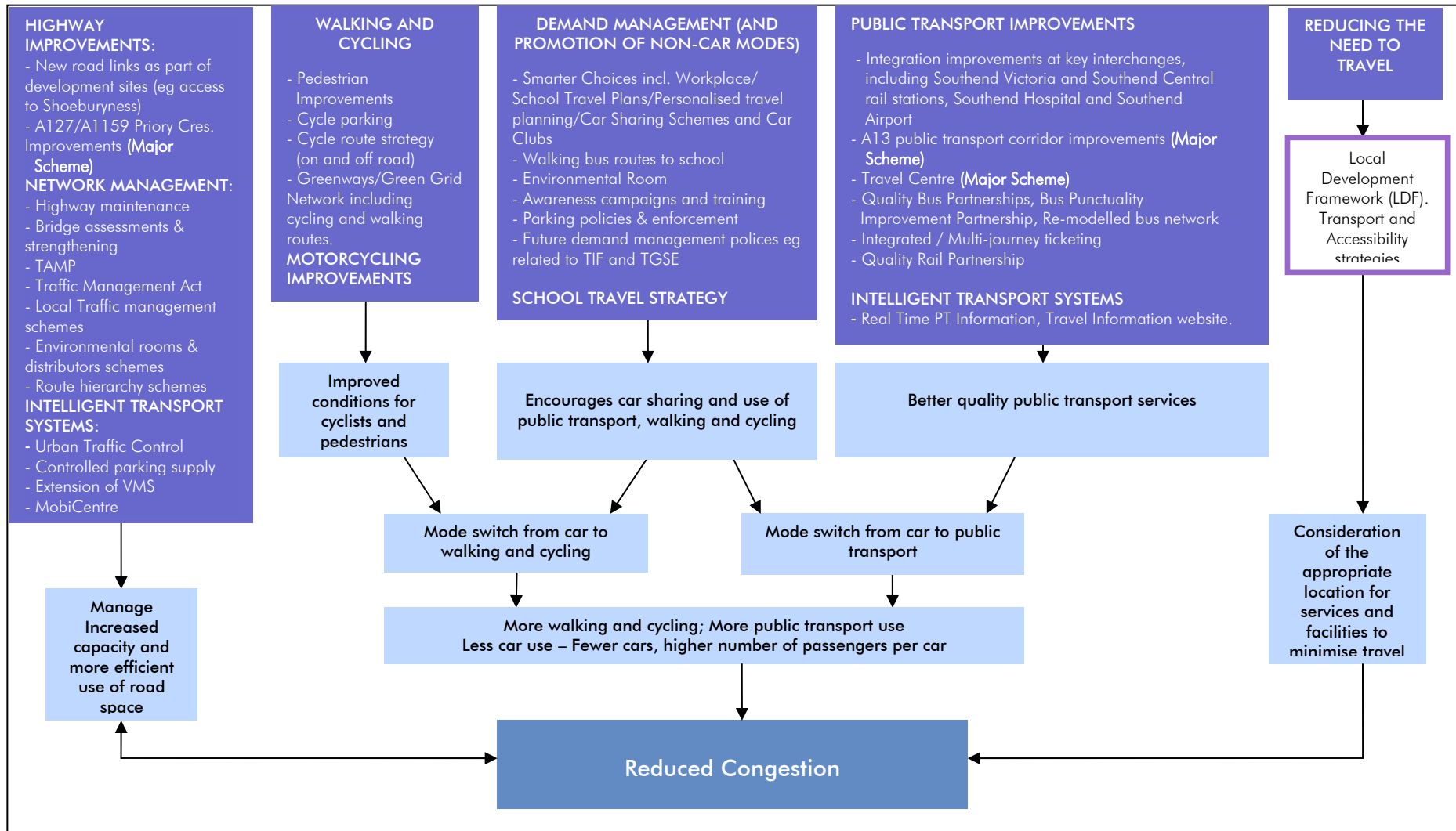
To further boost the demand management policies relating to parking, the Council is now committing an initial £260k to restructure the nature and provision of the parking stock in the Town Centre. The payment process is also being investigated with the potential to deter arrival and leaving in peak hours and provide incentives for “park and bus” linkages. Innovative measures to harness the car park facilities and revenue to encourage greater use of rail and the new Travel Centre may be explored as part of a future TIF bid.

Figure 6.1 presents a broad overview of the congestion reducing strategy, identifying the broad strategy elements, how each of these elements interact and achieve the shared priority. In broad terms the strategy aims to redress congestion issues through the following policies and schemes as set out in this chapter:-

- Network Management
 - Traffic Management Act 2004
 - Route Hierarchy
 - Environmental Routes and Distributors
 - Transport Asset Management Plans
 - Highway and Bridge Maintenance and Strengthening
- Demand Management and Parking Policy
 - Smarter Choices and Travel Planning
 - School Travel
 - Parking Policies and Enforcement
- Intelligent Transport Systems
- Passenger Transport
- Walking and Cycling
- Motorcycling
- Freight Transport
- Major Scheme

The focus for the above will be on policies that deliver real demand management such as parking controls, development maximum parking standards, and network management by defining appropriate routes and constraining traffic growth and removing vehicular access in sensitive and critical areas where priority must be given to public transport on the basis of efficiency and reliability.

Figure 6.1 Tackling Congestion: Cause Effect Diagram



Since 2000, traffic flows on the A127 have grown by 6%, and on the A13 by 4%. The main factors contributing to this growth include:

- The high level of work related trips, in particular the level of in-commuting and out-commuting.
 - in the region of 19,500 trips are made each day from areas outside the borough by people who work in Southend;
 - over 26,000 employees who reside in Southend commute to work outside the borough;
 - approximately 41,700 of Southend's residents travel by car to their workplaces within the borough.
- The proportion of work trips to Southend being made by car (i.e. either as a driver or a passenger) has increased by 6% (to 66%) between 1991 and 2001;
- Despite a 4% reduction in household size, levels of car ownership per household has increased by over 13% between 1991 and 2001, leading to an addition of at least 10,500 cars in Southend;
- The level of single occupancy vehicles remains high at 85% in AM peak;
- A high level short distance trips, that is 20% less than 1 mile and 50% less than 2miles;
- A high proportion of journeys to school are made by car significantly contributing to local problems, particularly in the AM peak. Around 43% of primary school pupils and over 32% of secondary school pupils travelled to school by car in 2003.

Network Management

The Network Management Duty (Part 2 of the Traffic Management Act 2004) places a duty this Authority to manage the road network with a view to achieving the following objectives

- securing the expeditious movement of traffic on the authority's network;
- facilitating the expeditious movement of traffic on road networks for which another is the traffic authority

The role of network management also extends to:

- managing existing travel demands and the likely future causes of congestion, implied by the planned intensification of the existing urban area and regeneration areas and general background traffic growth;
- manage road space and make decisions about "trade-offs" between competing policy demands;
- co-ordination of work on the network and setting up joint working arrangements;
- facilitating the definition of the route hierarchy;
- ensuring safe and convenient journeys;
- wider issues such as achieving value for money, environmental assessments, Disability Discrimination Act and linking with planning legislation such as the LDF;
- monitoring and evaluation of the effectiveness of various processes

Maintaining the highway network is a core element of the transport strategy for tackling congestion and also assists the delivery of safer roads. In essence the strategy seeks to:

- manage the network to ensure efficient movement for all road users;
- identify and address the needs and problems relating to all road users;
- work with neighbouring authorities to ensure a compatible and integrated approach;

- identify transport interventions and policies to tackle the root causes of local congestion in Southend, including enforcement;
- manage the impact of introducing schemes that are expected to cause disruption to the normal flow of traffic; and
- monitor the performance of measures and policies in terms of their effectiveness in tackling congestion and managing traffic.

In order to help deliver these aims, the network management strategy comprises:

- a whole authority approach to include the activities of all Departments, eg Special Events and Waste Management – the reorganisation of the Council’s Traffic and Transportation functions, under the Traffic Manager, will ensure that there is closer integration of traffic and parking management with works and maintenance on the highway. This extends across the Council, through the appointment of a senior officer to this role;
- working with partners and stakeholders as part of a wider consultation programme eg. the “Southend Consultation Panel” was established in early Summer 2005 and the results of the initial questionnaire have now been received which demonstrate that reducing congestion is a priority (with over 60% of consultees responding that this should be a priority). The police, bus operators, the public, the Integrated Transport Partnership and Essex County Council are already involved in joint working through regular meeting and discussion forums;
- management of utilities work to reduce delay - – this is carried out under the existing NRSWA requirements, with the Traffic Manager appointed in a co-ordinating function;
- improving efficiency through traffic management controls and Intelligent Transport Systems;
- defining a route hierarchy with defined modal priorities; and
- managing the transport infrastructure through efficient Asset Management and highway and bridge management processes;

Traffic Management Act 2004

The Council fully recognises its network management duties under the Traffic Management Act 2004 and the Traffic Manager’s role has been included in a senior officer’s responsibilities. Currently Part 1 and Part 2 of the Act have been enabled with particular significance given to the Network Management Duty within the context of LTP2.

The Traffic Manager oversees the management of the road network which builds on the current practice of the management and maintenance of the highway, and develops and supports this Plan. This provides for better co-ordination for road users through the proactive management of the road network.

To achieve this the Council has put in place the mechanisms to deliver the implemented sections of the Act and to prepare to deliver the subsequent sections when enacted.

➤ Route Hierarchy & Parking – identifying and managing different road types:-

- reinforce and support the highway distributors and environmental routes strategy, including a review of current traffic regulation orders on the distributor routes to reduce congestion. The route hierarchy policy is set out below;
- ensure that the different road types inform the planning of maintenance work and new construction, particularly in terms of hours of working, alternative routes, planned events and managing of incidents this is already in place;
- review parking enforcement levels and traffic regulation orders to ensure effective and efficient movement of traffic on main roads without detriment to safety;

- build on the success of decriminalised parking enforcement and consider taking over enforcement of further parking offences and moving traffic offences from the Police;
- consider the needs for pedestrians and cyclists to ensure that the network management duty extends to all users and contributes to the delivery of targets.

➤ **Intelligent Transport Systems – making best use of technology**

- extend bus telematics and priority systems for passenger transport;
- extend the existing urban traffic control (SCOOT) on main routes and exploring the extension of the functions of CCTV and automatic number plate reading (ANPR) facilities;
- further develop the car park guidance system and variable message signing;
- implement a control centre to monitor and manage the network;
- take account of, and adopt where relevant, DfT policies including “ITS – the policy framework for the roads sector” and the “New Resource in Transport” pack

➤ **Information & Procedures**

- monitor the road network including journey time information and the use of ITIS information as part of the future congestion monitoring requirements. CCTV and UTC/SCOOT information is already being used to develop a congestion reduction strategy and identify areas where regular congestion occurs especially for the main routes into and out of the Borough eg. A13 and A127 as part of the joint Route Management Strategy with Essex and Thurrock. This will permit regular reviews and consider changes/trends over time;
- use the information to direct the planning and management of any necessary improvements.
- further develop the existing exchange of information and traffic management aspects jointly with Essex County Council and the Police;
- improve communications with other departments of the Council and external partners to raise the profile of managing the best use of transport resources;
- replace the existing street works management computer system with a GIS map based system available on the web, this is currently being procured;
- review and develop procedures for improved co-ordination of street works between the highway authority, utilities and other bodies, and consider a street works permit system;
- provide better information and travel information to road users and the community this links very closely with the Smarter Choices Strategy.

In 2003:

- Delays on the A127 during the morning peak between Cuckoo Corner and the borough boundary accounted for 44% of total journey time in eastbound direction and 34% westbound. In the PM peak, delay time accounts for 55% of the total travel time eastbound and 43% westbound, resulting in average speeds of around 15.5 mph and 18 mph respectively.
- Similarly along the A13, where in the morning around 1,000 vehicles travel eastbound towards the town centre with just over 800 westbound. Under these circumstances 43% of the journey time in the eastbound direction is delay and 32% in the westbound direction.
- The A1159 is also prone to long journey times and high levels of delay, especially in the westbound direction in the AM time period, where it accounts for 74% of the journey time. This is primarily the result of the poor performance of the Cuckoo Corner junction and the lack of capacity on the westbound approach along Priory Crescent.

'Cityspace' i-points



Route Hierarchy

The Route hierarchy as shown in **Figure 5.5** and **Table 5.4** is an integral part of the local transport strategy. It will enable the most efficient use of the existing road network and assist in achieving its key objectives of reduced congestion, environmental enhancement and road safety improvement. The route hierarchy classifies the roads in the Borough in accordance with their function, importance, needs, priorities and actual use in accordance with the transport strategy. Account has also been taken of the “Code of Practice for Highway Maintenance Management” (CPHMM) and the role of the hierarchy forming the foundation for a coherent, consistent and auditable maintenance strategy. In addition, specific policies and objectives have been developed as part of the Network Management Duty for different roads in order to deal efficiently with the all traffic on the network. For example, Primary and Secondary Route classifications ensure that they are considered as “route sensitive” in terms of the various activities that have the potential to cause disruption to vehicular traffic. Special conditions apply such as hours of road work and minimum width restrictions.

The Carriageway hierarchy has also been developed with regard to traffic flows and is set out below:-

The A127 and the A1159 are Strategic Primary Routes, which serve inter-urban traffic movements including freight transport and carry high volumes. Both routes form part of the Route Management Strategy developed jointly between Southend, Essex County Council and Thurrock.

Primary Distributor Routes form the main links to primary routes and serve main scheduled bus service and coaches. Access to pedestrians and cyclists is permitted. There are a number of routes including the A13, which fall into this category.

Secondary Distributor Routes distribute traffic between residential, industrial and principal business districts. They link the primary road network to residential areas with a speed restriction of 30 mph and allow access to pedestrians and cyclists.

Local Distributor Routes located in residential areas and form the link between secondary distributors and residential roads.

The rest of roads are classified as Roads within Environmental Rooms and they link dwellings and their associated parking areas and common space to distributors. Such routes form the largest part of the local road network within the Borough.

In addition, initiative such as home zones, shared space and 20mph zones will be developed further together with a review of speed limits of 20 mph or less in appropriate areas. Walking and cycling will take priority over other modes of travel to improve accessibility and encourage greater use of these modes. The use of private cars will be managed using traffic calming features and restricted to access only. This will also be actively promoted in terms of new developments following the latest guidelines.

A footway hierarchy has been developed for Category 1a, 1 and 2 routes (prestige walking zones and primary and secondary walking routes respectively) based upon functionality and scale of use. This has identified footways in and to shopping and business areas, popular tourist areas, railway stations, and schools and libraries. A cycle route hierarchy is currently being developed in accordance with Table 3 of the CPHMM.

This is linked to the walking strategy to ensure that pedestrian routes are maintained and that the quality of the public realm and streetscene is maintained.

➤ Emergency Vehicles

The Council will also consider the needs of emergency vehicles (as well as waste collection and other service vehicles) when examining a range of traffic management measures to support the designation of the route hierarchy, and in particular the size and location of traffic calming and speed management measures. The Council will continue to work with the emergency services to not only ensure a compatible route hierarchy strategy but also to identify opportunities to provide priority at controlled junctions for emergency vehicles and hence improve response times, particularly in relation to ambulance stations.

Environmental Rooms & Distributors

Figure 5.4 shows the concept of Environmental Rooms and Distributors that was set out in the first LTP. The Route Hierarchy overlays the distributors and provides the focus for the Network Management Duty and is complimentary to the requirement in the Traffic Management Act to:-

“secure the expeditious movement of traffic on the authority’s road network”

This includes the need to consider the movement of all road users including pedestrians and cyclists. The need to identify mode priority is vital in this process.

Improvements to the highway network will focus on the need to reduce congestion on the distributor roads, and may vary depending upon the mode priority. For example, the A13 passenger transport corridor seeks to give priority to public transport which may result in some increased congestion on adjoining routes, but provides for more free-flowing traffic on the primary distributor route. Reducing congestion on the distributors will deter cross-room journeys and reduce through traffic. Coupled with the use of complementary traffic calming measures in the adjacent rooms will improve this further.

Conditions can be further improved along the distributors through parking policies and enforcement that recognise the strategic nature of the routes which enables the free flow of traffic along key corridors. Congestion reduction in the rooms requires complementary policies to tackle parking problems at traffic generators such as health centres and schools and will often take the form of soft measures encouraging alternatives to the car.

Transport Asset Management Plans

Routine highway inspection and responsive maintenance; cyclic maintenance; and planned resurfacing/renewal are currently undertaken balancing available resources with highway asset inventory information, condition survey data, intervention criteria, and treatment policies.

The Council holds a number of highway asset inventory and data bases for this purpose each to differing degrees of accuracy and detail. A number of these are held on GIS data bases and in turn these can be used by superimposing high resolution aerial photography (which covers the whole Borough and is regularly updated) to assist in the management of the highway and transport assets, and the design, organisation and costing of the work programmes.

The Council proposes to:

- Assess the current inventories, against asset management planning good practice and developing guidance, to test their scope and robustness of data with the aim of producing a pragmatic inventory, database and transport asset management plan for the Borough by April 2007;
- Run the above review in parallel with the proposed replacement of the Council’s computerised street works management system which will take on board the proposed

introduction of street permits under the Traffic Management Act 2004 and will be compatible with the Council's GIS system;

- Undertake a Benchmark Highway Infrastructure asset valuation" by April 2007 based on available information and calculate in-year changes in subsequent years;
- Review current policies and practice of highway inspection and responsive repair, cyclic maintenance, and planned maintenance repair with the reviewed inventories to identify any performance gaps and confirm value for money processes and, where appropriate, whole life planning - by April 2008.

A workshop was held in May 2005 in order to develop an implementation plan for the introduction of an asset management approach for the management of the highway infrastructure. It was agreed that a Highway Asset Management Plan should be developed as part of this process with the first draft completed by December 2006. Following this workshop, a detailed gap analysis is being carried out to compare current asset management practice and policies in the Council with established best practice. The gaps identified will be prioritised to ensure efficient use of resources and align with the implementation plan.

The gap analysis will cover different elements of highway asset management, namely data collection and management, integration of systems, goals, policies and objectives, development and reporting of levels of service, long term planning and continuous improvement. The gap analysis is expected to be complete by April 2006 and will ensure that the highway maintenance policies implemented and the levels of service adopted align with Council shared priorities, and in particular safety and accessibility / quality of life. This is currently being developed alongside the Asset Management Plan for Essex County Council.

Highway Maintenance

Highway and footway provision and condition has a particular influence on the shared priorities, i.e. congestion and accessibility (by encouraging walking and providing better facilities for disadvantaged groups) and quality of life (by impacting on the street scene).

In the light of the current understanding of the condition of the highway, the assessed backlog of maintenance, and the indicative levels of funding for highway maintenance via the LTP process (approximately £1M per annum), it can only realistically be assumed that, at best, the network will be held in its current condition overall over the LTP2 period.

Experience from LTP1, in developing and implementing new integrated transport schemes, is being built upon to ensure future maintenance aspects and costs are appropriately considered in the design of such schemes. Also, as in LTP1, integrated transport schemes, any major schemes, regeneration projects and third party funding streams, will all be considered for their potential to add value to the condition of, and level of service of, the highway and the street environment.

➤ Exceptional Maintenance Schemes:-

Two major areas of particular concern are likely to result in bids for exceptional maintenance funding as part of the Delivery Report process.

- The A127 primary route into/from the Borough is being studied with respect to movement and condition problems. 8km of the road is affected by defects which trigger BVPI 223 (rutting, texture, profile and cracking) which represents nearly 60% of this road. This is broken down as follows: 25% cracking, 28% rutting, 27% texture and 13% profile.
- Belton Way, Leigh-on-Sea is being studied with respect to impact on the highway structure from movement of the surrounding clay slopes at this location. Despite major resurfacing works undertaken to re-profile the carriageway in 1970 and the 1980's the road still presents a very poor ride quality. In the summer of 2004 a large patching operation was undertaken near to the junction with Castle Drive to such an extent that 150mm had to be

made up where vehicles were tracking. Other faults include crazing and longitudinal cracking as a result of the instability of the embankment.

Discussions are ongoing with Go-East in advance of any submission and any advice will be taken into account.

Bridge Maintenance and Strengthening

The Bridge Maintenance and Strengthening policy takes account of the network management duty to secure “the expeditious movement of traffic” on the network and making best use of the existing infrastructure. The programme of bridge management, inspection and maintenance follows the route hierarchy principle with the strengthening schemes being prioritised and programmed on the basis of a “risk ranking” taking into account the probability and consequences of failure. The policy has largely focused on strengthening the bridges on the “distributor” routes, which carry the greatest traffic flows to ensure that traffic is not re-allocated to unsuitable routes within the network.

The policy has the following objectives:-

- to ensure that the bridge stock is safe and fit for its purpose as part of the transport network of the Borough and in accordance with national policies and standards;
- that best economic use is made of the past investment in the bridge resource;
- that the bridge stock is capable of playing its part in the improvement of the economic life and environmental well being of the town and its residents;
- to ensure the bridge stock is maintained to a standard that retains existing character, where appropriate;
- to minimise the disruption and inconvenience to road users caused by bridge closures or restrictions.

To achieve these objectives the Council has implemented the following policies:-

- inspection and assessment and, where necessary, monitoring of identified individual structures within the existing stock in accordance with defined programmes;
- establishing base data for continuous monitoring of Bridge Condition Indicators (BCI's) linked to inspections;
- maintenance of a database of bridge information;
- maintenance of existing structures to extend their service life for the maximum economic term within available resources;
- strengthening of weak bridges and highway structures to increase their load carrying capacity;
- reconstruction of critical structures which become unfit for purpose or uneconomic to maintain;
- monitoring of weak bridges if they are structurally suitable and if introduction of restrictions would have significant repercussions on the local area;
- management to ensure promotion of designated routes for heavy vehicles in accordance with the established route hierarchy for public transport, and access for heavy traffic to industrial and commercial areas avoiding conflict as far as possible with areas inappropriate for such traffic such as those of amenity, residential, leisure or general pedestrian attraction;
- in the case of bridges of known limited capacity, determination and implementation or protection strategies by consideration or routing, width and weight restrictions and other traffic management measures, or structural methods.

➤ Bridge Management

Management of the Highway Structures stock follows the recommendations of Management of Highway Structures – a Code of Practice by the UK Bridges Board and Roads Liaison Group.

The Code contains 80 recommendations to enhance the management of highway structures. The Code recognises that it will not be possible to action all of these recommendations simultaneously. Consequently, the Code has divided the recommendations into three milestones as follows:

Milestone One is intended broadly to include the adoption of processes necessary to provide highway structures that are safe to use, inspect and maintain. The target date for this milestone is March 2006.

Milestone Two encompasses Milestone One and is also intended broadly to include the adoption of additional processes necessary to provide highway structures that are fit for purpose and meet Government requirements. Milestone Two represents an interim step on the progression towards Milestone Three. The target date for this milestone is March 2007.

Milestone Three encompasses Milestones One and Two and additionally requires the adoption of processes necessary to deliver the agreed Levels of Service (and Performance Targets) at minimum whole life costs, and to align with current and emerging Government policy objectives. This represents the full implementation of Good Management Practice, including an Asset Management Plan as set out in the Code. The target date for this milestone is March 2008 to March 2010.

➤ **Measuring Performance**

Performance measurement will be adopted, embracing the measures identified in the document 'Performance Measurement of Highway Structures'. This document has been issued as a Trial Application Document for comments and is programmed for Full Implementation from March 2006. The document introduces four Performance Indicators:

- Condition
- Availability
- Reliability
- Structures Workbank

➤ **Programme for Bridge Maintenance and Strengthening**

The LTP2 programme for completing the appropriate strengthening of all bridges requiring treatment has been developed to the year 2010/11 at an estimated cost, in the 5 year period of the second LTP, of £3.5m, which is broadly in line with the indicative allocation for this period. However, this is subject to ongoing investigation and will be finalised and presented in the Delivery Report in July 2006 as this also excludes structure at Queensway and Warners Bridge.

The targets and progress to date are shown in the table:

SBC MAINTAINED										
	01/ 02	02/ 03	03/ 04	04/ 05	05/ 06	06/ 07	07/ 08	08/ 09	09/ 10	10/ 11
Target no. to be strengthened (cumulative)	2	7	9	12	20	24	28	29	38	42
Actual no of bridges strengthened at year end	2	9	10	12	21					
NETWORK RAIL MAINTAINED										
	01/ 02	02/ 03	03/ 04	04/ 05	05/ 06	06/ 07	07/ 08	08/ 09	09/ 10	10/ 11
Target no. to be strengthened (cumulative)	0	0	0	1	1	4	6	8	9	9
Actual no of bridges strengthened at year end	0	0	0	0	2					
Note: Interim strengthening/[protection measures only for Network Rail maintained structures										

However to improve the condition of the bridge stock from 'Poor' to 'Good', it is estimated that Rehabilitation & Refurbishment (capital) funding in the region of £65k per annum will be required. This totals £325k over the five year period.

In order to achieve progress on the strengthening programme, all capital funding throughout the first LTP period has been expended on assessment and strengthening work. However, capital maintenance needs are now beginning to appear from the inspection programme.

➤ Bridge Strengthening Partnership

In view of the need for wide ranging types of work on strengthening a large number of structures and in order to maintain progress and avoid the cost of repeated tendering, a contract was let in 2002 to engage a contractor on a term partnership basis. The original two-year term was extended to four years, expiring in March 2006 and the scope extended to include routine maintenance works.

- The advantages of this system are:-
- Saving cost and time of tendering
- Early Contractor Involvement
- Non confrontational relationship
- Fixed working relationships and goodwill from all parties

The contract has been very successful in making progress with the strengthening programme and excellent relationships between the Contractor, the Council's Consultant and Council staff have been established and permitted rapid progress with schemes. At the same time, Early Contractor Involvement has provided excellent opportunities for ensuring optimum delivery and Value Engineering.

The original contract expires in March 2006. It has been re-tendered and again let to the incumbent Contractor on a three year term extendable to five years to cover the full term of LTP2.

➤ **Exceptional Maintenance Schemes:-**

As all funding for the foreseeable future is earmarked for strengthening and maintenance, any major refurbishments will be the subject of Exceptional Maintenance bids. The most significant projects are the structural rehabilitation of the Queensway grade separated interchange and Warners Bridge, which is a special case.

▪ **Queensway**

The Queensway interchange with Southchurch Road comprises two curved bridge decks, diaphragm wall retaining structures on the approaches, a footbridge and three subways. Subject to a full study, work identified to date includes:

- replacement of expansion joints
- replacement of bearings
- modification of abutments to carry out new bearings and allow future maintenance access
- deck waterproofing
- repair of cracks in retaining walls
- installation of back of retaining wall drainage.

This work will involve jacking the bridge from temporary supports and extensive traffic management. The cost of this scheme will be well in excess of the annual Bridge Strengthening budget.

▪ **Warners Bridge**

Warners Bridge is a Network Rail (NR) structure which not only suffers from some severe structural defects but is also heavily constrained in load-carrying capacity, width and alignment. The liability for strengthening to 40t lies with NR. The Council may propose that reconstruction of this bridge in a new position and alignment would prove a better solution and facilitate better transport links to Southend Airport. The bridge is located on the Borough's boundary with Essex County Council, who also favour a realignment, and the funding required by the Council will depend on the willingness of the County Council and Network Rail to contribute to the scheme. This scheme may involve the need to bid for additional funds.

Discussions are ongoing with Go-East in advance of any submission and any advice will be taken into account.

Demand Management & Parking Policy

"Smarter Choices" and Travel Planning

Changing travel attitudes and promoting sensible travel choices is a key element of the strategy in terms of achieving reductions in car dependency and usage, and hence traffic levels. Smarter Choices initiatives, incorporating travel planning, have very strong synergies with other elements of the transport strategy (for example passenger transport, walking, cycling, parking policy) and contribute to the delivery of the other shared priorities. In particular, the strategy identifies a number of elements that could be instrumental in changing attitudes to work and school related travel.

The Smarter Choices Strategy (SCS) is now completed and published as an LTP2 supporting document. In the following text references shown in brackets relate to the SCS section headings where additional related information can be found.

The promotion of “Smarter Choices” is seen as a very important part of the congestion reduction priority. It is clear that with the reduced planning guideline announcement a greater focus will need to be made on soft measures and demand management to create a shift in travel patterns. This will:-

- build on the successes of both workplace and school travel plans that the Council already has in place;
- utilise key staff and expertise in these areas;
- harness the strong support from the public, schools and businesses to ensure that the programme of work put forward in the strategy can commence without delay;
- learn from the “sustainable towns” demonstration project in Peterborough that has influenced the creation of the strategy.

The Council has created a new branding “move easy” to promote sensible and environmental sustainable travel choices, and provide travel information for non-car modes (SCS section 5). During the first LTP the Council implemented and/or agreed a total of ten travel plans with major employers in the town with a corresponding 13,000 active employees. The Council will continue and indeed accelerate the promotion of company travel plans with other major employers and land-uses in and around the town centre. Recent improvements to the Southend Business TravelWise Toolkit include the Template Travel Plan Framework document, which is provided to all new TravelWise members as guidance on how to develop and maintain their travel plans. The Council will also be encouraging membership to TravelWise through organised events, direct and targeted marketing, regular newsletters and multi-media awareness. It is important that effective travel plans are secured through the planning processes for new and extended developments as well as applications for changes in land-use.

The Council currently maintains travel plan and car share activity databases for Southend to provide a simple record of details relating to all travel plans required as part of Section 106 agreements. It is important firstly that this database is well maintained in the future, and secondly examines ways to extend it to monitor progress of all travel plans, in particular details of modal shares of work trips and the results of future travel surveys. The potential also exists to identify and encourage organisations with similar challenges to form a Travel Plan Forum to enable experiences and guidance on best practice to be shared.

It is important that the Council seeks to maintain its own Travel Plan in order to demonstrate to other local employers in Southend that they are “**leading by example**”. In this way it is more likely that other organisations will indicate their willingness to participate in travel planning initiatives.

School Travel Plans (STP) are developed through the Council's Safer Journeys to School (SJ2S) Programme. Typically STP outcomes may include a mixture of 'hard', e.g. road safety engineering measures, and 'soft' measures, e.g. publicity and promotion of sustainable travel modes. With 75% coverage of 'approved' STPs in April 2005, Southend-on-Sea Borough Council has the highest percentage of schools taking part in travel planning compared to all other local authorities in England.

During the period of LTP1 successful implementation of 'hard' measures, including 20 mph zones outside schools, school warning signs, formal crossing points and a complete review of all School Crossing Patrol sites was completed. Whilst there is still a demand for further investment in engineering measures around schools, during the period of LTP2, greater emphasis is now required on 'soft' measures, in order to 'lock in' the benefit of the recent capital expenditure. The smarter choices strategy affords the opportunity to build upon existing programmes of 'soft measures' (see SCS section 6).

In particular, the Smarter Choices strategy will seek to deliver the following education, training, publicity and marketing initiatives aimed at reducing car use on school journeys:

- personalised travel planning for children and families transferring from primary to secondary school, including the publication of suitable maps and other resources;
- travel training for bus and train use;
- 'Park and Stride' promotion, linked to voluntary 'car free' zones around schools;
- 'Walk to School Week', 'Bike to School Week', 'Green Transport Week' and other similar national promotional activities, including the distribution of related resources;
- incentive schemes for pupils, parents and schools promoted by the SJ2S mascot, 'Ziggy the Cat';
- personal safety training, where security issues are considered to be a barrier to sustainable travel

Personalised travel planning involves the provision of tailored, targeted travel information to individuals or households which informs people of their choices and encourages them to alter their travel patterns and behaviour for a range of journeys (see SCS section 7). Research has shown that personalised travel planning benefits the individuals as well as reducing car use.

The Council seeks to support this with a strong marketing and promotion campaign covering all non-car modes of travel, which will require further consideration to be given to a number of initiatives to influence peoples travel choices (see SCS sections 8 & 9), namely:

- the extension of the real time passenger information system currently operating in the town centre and along the A13;
- high quality passenger timetable information and route maps which are accessible to all;
- high quality marketing of rail services;
- integrated ticketing and/or multi journey ticketing;
- the introduction of a regular and continual branded multi-media travel awareness campaign to promote sensible and environmental sustainable travel choices, and provide travel and tourist information for non-car modes. This would comprise campaigns through a number of mediums including posters (roadside and on buses); leaflets; local newspapers and radio; awareness events and through the internet.

Car sharing schemes aim to encourage individuals to share private vehicles for particular journeys and hence reduce the number of private cars on the road. Many schemes are open to all and are accessed via internet based sites, though others involve initiatives confined to members of particular organisations often with combined websites with more explicit management. As part of a joint TGSE funded project, Southend, Thurrock and Essex Authorities have set up a regional car share scheme, which was launched as part of Green Transport Week and Bike Week in June 2005(www.thamesgatewaycarshare.com). This has obvious synergies with Travel Awareness and should assist in promoting alternate modes of transport within Southend.

Car Clubs is another initiative that the Council have made progress in developing (see SCS section 11). Under such a scheme, members would have access to a car in their neighbourhood to make journeys for which a car is essential, whilst discouraging excessive or unnecessary use.

International research suggests that around 9% of the population might be attracted to car clubs, rising to as high as 38% in certain areas. Data of car club memberships in the UK suggests that the experience of city based car clubs is similar to elsewhere (DfT 2004). Additional studies indicate that members who give up their car on joining a car club are able to reduce their car mileage by 60% to 70%.

A Car Club for Southend is being progressed in association with a travel plan initiative currently being pursued for a residential complex of flats through a section 106 agreement. The Car Club will be implemented when the building is complete, initially providing for 4 vehicles for use. Following this pilot scheme the Council will examine opportunities to extend it to other residential developments and ultimately across the Borough. Analysis using a local forecasting tool indicates that traffic growth during peak travel times by 2011 could be reduced by 5% across the Borough with the effective implementation of travel plans and promotion of smarter choices. The model suggests that smarter choices will have greatest affect on a number of local urban areas that are well served by public transport and have good cycle and walk links. These would include reductions in car trips to and from Victoria (-9%), trips to Milton (-9%) and trips from Kursaal (-8%). As a result of this transfer from car there would be some improvement in terms of congestion across the Southend's highway network, with a 6% reduction in both highway demand and subsequent delay. The forecasting tool also indicates that increases of 2% in the number of walk trips and 18% in cycle trips could be expected during peak travel times with appropriate priority given to delivering Smarter Choices initiatives.

Clearly the success of travel planning and travel awareness in Southend could be further improved if developed in conjunction with complementary traffic restraint and/or improvements of alternative modes (i.e. passenger transport, walk and cycle, and potentially park & ride).

School Travel

The Safer Journeys to School (SJ2S) programme was first established in the Borough in 1999/00, to address the problems that have developed through increased car usage on school journeys. Its aim is to enable children and families to choose sustainable and health promoting modes of transport for school travel. Key objectives of the initiative are to reduce congestion by making walking, cycling and public transport more accessible and desirable, and to reduce child road casualties; other benefits may also accrue including healthier and sustainable communities, improved environment and fewer greenhouse gas emissions. Since its inception, the SJ2S programme has grown enormously, with the vast majority of schools in the Borough now taking part in the initiative in some way. Elements of the programme, most notably the Walking Bus, are now commonplace in Southend and receive a high level of recognition, understanding and support from the general public; it is believed that Southend-on-Sea Borough has the largest number of Walking Buses in the country (although no central register is available to provide confirmation of this).

Children, as a transport user group, have a vital role to play in shaping future travel patterns; sustainable travel habits learned at an early age may influence travel decisions in later life. The main barriers to sustainable travel include: road safety concerns; personal safety concerns; the increasing distances between home and school; and lack of suitable public transport alternatives. To be effective in reducing congestion in the town, the SJ2S programme needs to continue to actively address these issues.

➤ The SJ2S Strategy

The SJ2S programme is currently directed by the Interim SJ2S Strategy. This strategy has been developed through: a review of the original strategy including progress to date; consideration of national 'best practice'; a review of current Government guidance; some benchmarking activity with other local authorities; and discussion with partners and key stakeholders.

At a Road Safety Partnership consultation held in May 2005, agreement in principle was reached about the future direction for the SJ2S programme and key aspirations for 2006-2011. However, it is anticipated that the interim strategy will be reviewed in 2007 following the collection of DfES

school census data on school journey mode share. The following text summarises the interim strategy.

➤ **School Travel Plans**

In Southend, the principal method of tackling the problems associated with school travel is the development and implementation of effective School Travel Plans (STP) through school-based working parties. A STP brings together a package of measures for improving the journeys to and from school. The measures might include, for example, curriculum work, promotion of sustainable travel modes, changes to school policies, and highway safety engineering. STPs include a target to reduce car use on school journeys and also a commitment to monitor and review the success of the Plan, usually through an annual travel survey. Southend-on-Sea Borough Council aims to work with all schools in the borough, including special and private schools.

➤ **'Travelling To School' Initiative**

The 'Travelling to School' initiative, launched in 2003, sets out the Government's views on how best to change the way children travel to school. Through this initiative, the Government has provided funding for School Travel Advisors (STA) within all local authorities. In addition, capital grants have been awarded to schools with STPs that meet Government criteria; during financial years 2003/04 and 2004/05 combined, Southend schools received £314,349 in capital grants. In Southend, the STA funding allocation (currently £18,000 per year) has been used by the Council to part-fund a team of specialist consultants who work with the Borough's schools.

➤ **Examples of Achievements in Reducing Congestion**

Some examples of 'best practice' at Southend schools are as follows:

At St George's Catholic Primary School the introduction of a STP, a puffin crossing and Walking Buses have brought about a shift away from car use towards walking. Between 2001 and 2005 car use decreased from 83% to 61%, and walking increased from 13% to 38%.

At the West Leigh Schools, a pilot project under the SJ2S initiative, there has been a steady reduction in car use, from 48% in 2000 to 45% in 2005, with a corresponding increase in walking. The package of measures implemented through the schools' joint STP includes Walking Buses, a 20 mph speed limit, some personal safety training and an annual 'health week'.

At Chalkwell Hall Schools, the implementation of their joint STP, including Walking Buses and a new puffin crossing on a key pedestrian route, has brought about a steady increase in walking to school. In 2000, car use was recorded at 37%; this reduced to 36% in 2003 and to 29% in 2005. Correspondingly, walking has increased from 61% to 68% over the same period.

➤ **Delivering the SJ2S Programme - Priorities for LTP2**

The LTP2 programme of work will build upon the successful work carried out in LTP1. The programme priorities are identified below, and are divided into local and Boroughwide actions; each action is designed to contribute towards reducing congestion, as well as other shared priorities. In addition, links with other projects and programmes will be exploited where benefits can be accrued for reducing congestion around schools.

Local action will ensure that existing and future STPs succeed in their aims of reducing car usage and improving road safety, through effective implementation of a range of 'soft' and 'hard' measures.

Typically, 'soft' measures will include: personalised travel planning; travel training; car sharing; curriculum work focussing on travel choice, road safety and personal safety; changes to school

policies to support the STP; voluntary 'car free' zones around schools; incentive schemes for sustainable travel; use of theatre-in-education and mascot Ziggy the Cat; publicity and promotion of local initiatives; walking bus; walking buddy scheme; and enforcement of waiting restrictions. These measures will be integrated with the Council's 'Smarter Choices' programme.

Typically, 'hard'(infrastructure) measures will include: 20 mph zones; pedestrian and cyclist facilities; passenger transport facilities; cycle shelters; new school entrances where existing ones do not cater well for access by sustainable modes; 'park and stride' facilities linked to public car parks; and Traffic Regulation Orders to restrict waiting or stopping near schools. These measures will be supported by the Council's Network Management and Road Safety policies to encourage speed reduction and improved environment.

Boroughwide action, delivered to/for all schools as appropriate, regardless of their STP status, will ensure 'best value' is achieved through economies of scale on issues that are of particular importance in the Borough. Boroughwide action will include: a review of all public car parks and their potential use as 'park and stride' sites; Walk to School Week and similar awareness-raising campaigns, plus media liaison and other promotional activities; 'mainstreaming' school travel planning work by making better links with the curriculum, school & LEA policies, the five outcomes of Every Child Matters, the Healthy Schools Project, health promotion activities and new OFSTED opportunities; introducing a local school travel accreditation scheme; reviewing Home to School transport, in light of the Schools White Paper – High Standards, Better Schools for All, and passenger transport provision in order to maximise opportunities to increase usage; working with the LEA in advance of the Education and Inspections Bill; the implementation of a STP database for monitoring purposes; the promotion of sponsorship opportunities; the celebration of schools' successes; linking with the Local Development Framework and other council policies to ensure joined-up thinking; seeking developer contributions where appropriate; and consideration of possible changes to the nature of parking enforcement brought about by the introduction of the Traffic Management Act.

Links to associated capital projects and other programmes of work will be made to ensure that congestion reduction opportunities are realised where possible, for example: road safety (ETP) programme, in particular the cycling and pedestrian skills training in schools, plus young driver education; accident remedial works programme, in particular those schemes that will aid sustainable transport by vulnerable child road users; 'environmental rooms' programme, in particular where schools will benefit from traffic calming as a means to promote sustainable travel; walking and cycling programme, in particular the Prittle Brook Greenway links to school programme; and Rights of Way improvements linked to popular school routes. Links to maintenance, regeneration projects and accessibility planning will also be fundamental to delivering congestion reduction in a coordinated fashion across the Borough. Of particular relevance to the SJ2S programme will be the review of transport provision required to support the new 14-19 education strategy, as part of the Accessibility Strategy.

➤ **Management of the SJ2S programme**

Partnership working, adopted during course of LTP1, is on-going including extensive liaison with schools, parents, pupils, Governors, businesses, the LEA, Essex Police, transport providers, the Primary Care Trust and many other interested groups. This approach has proved to be successful to date and will continue to be a cornerstone of the SJ2S strategy. Particular strengths of the partnership approach are the excellent working relationship that has developed with the Southend School Governors' Association (SSGA), and the enthusiastic support shown by schools.

To date, schools benefiting from comprehensive capital works ('hard' measures) carried out under the SJ2S programme have been recommended to the Southend-on-Sea Borough Council by the

SSGA’s SJ2S Working Party, based on criteria relating to road safety, potential for modal shift and enthusiasm of the school; this method of prioritisation continues into LTP2. All schools are encouraged to participate in ‘soft’ measures, through their travel plans and boroughwide action.

➤ **Indicators and targets**

Nationally, over the past twenty years, the proportion of children travelling to school by car has almost doubled, yet many children live close enough to walk or cycle. Many factors have influenced this trend, with the most important being parents’ fears for their children’s road safety and personal safety. Other significant factors include: parental school preference, leading to longer distances travelled to school and higher levels of second car ownership.

To provide focus, and measure the contribution of the SJ2S programme to the shared priorities (congestion, accessibility, safety, air quality and quality of life), two main indicators have been identified; the proportion of schools with effective STPs and mode share on school journeys. These are discussed below.

With 75% coverage of ‘approved’ STPs in April 2005, Southend-on-Sea Borough Council has the highest percentage of schools taking part in travel planning compared to all other local authorities in England. The DfES/DfT “Travelling to School Project Board” have strongly indicated that they wish to see a target of 100% by 2010/11, however notwithstanding excellent progress so far, it is unlikely that 100% of all local schools will be covered by an approved travel plan within this timescale. This is based on the fact that a small number of private schools remain difficult to forge successful links with. It is estimated that of the 63 schools in the Borough (including special and independent schools), 60 will be covered by approved STPs by the end of the financial year 2010/11, representing 95%.

Sample surveys undertaken at Southend schools indicate that currently 43% of primary children travel to school by car and 32% of secondary children travel to school by car. Based on these figures, it would appear that the previously rising national trend of car use on school journeys may have been halted in the Southend area. Taking into consideration the fact that surveys combine data from all schools, not just those with travel plans, this is a very positive result. The table below summarises the three main surveys conducted during LTP1.

Performance Indicator	2000/01	2003/04	2004/05
% of children travelling to primary school by sustainable transport (% by car)	57% (43% by car)	55% (45% by car)	57% (43% by car)
% of children travelling to secondary school by sustainable transport (% by car)	71 (29% by car)	68 (32% by car)	68 (32% by car)

Until school census data is available in 2007, an interim mode share target has been set of maintaining the current mode share on journeys to school. It is predicted that, without intervention, traffic levels on the local highway network during the morning peak, are forecast to grow by over 20% by 2011, therefore, set within this context the target is appropriate and, based on experience to date, will be challenging.

Following the collection of DfES school census data the interim SJ2S strategy including mode share target will be reviewed and, if appropriate revised, subject to further consultation with key stakeholders.

Parking Policies & Enforcement

Parking policy is a powerful tool, not only to address congestion problems but also to help guide the development of transport in Southend in a sustainable way. In particular it has an important role in:

- promoting sensible travel choices by encouraging greater use of alternatives to the car especially for commuter trips;
- managing the impact of future new and expanding developments; and
- maintaining the vitality and viability of the town centre.

In Southend car ownership and usage has increased over recent years and hence demand for parking space has grown, especially within the town centre and at other key generators and attractors such as railway stations, hospitals, schools, colleges and areas of employment. This puts pressure on parking availability, and ultimately has an impact on adjacent roads and residential areas as motorists seek alternative locations to park. This subsequently creates problems in terms of safety and inconvenience for both local residents and other road users, a problem further compounded by indiscriminate illegal parking.

The proposed interventions and policies collectively known as traffic restraint measures are aimed at influencing travel choices, and hence managing traffic demand and its impact on people and the environment. Based on a review of available measures, parking policy appears to be the most effective, flexible and achievable means of applying traffic restraint and control in Southend. Parking policy also has very strong synergies with other elements of the strategy, primarily travel planning and public transport initiatives.

➤ Managing Parking Provision

A key element of the parking strategy is the management of parking demand by controlling the number of public car parking spaces (by duration) and the fee imposed. This can be achieved in a number of ways and the strategy recognises the importance of flexibility in controlling the provision of spaces and charges so that the level of use can be tailored to different circumstances.

At present there are just under 9,200 public car parking spaces across the Borough operated by the Council, located in three multi-storey car parks as well as in surface car parks and controlled parking zones. There are also approximately 1,800 privately owned public car parking spaces in the town. In addition, there are a large number of private non-residential (PNR) car parking spaces within the town centre, provided mainly by companies for employee use.

The intensity of use may need to be tightened or relaxed depending on the overall need to manage traffic entering the town centre and upon issues such as the economic vitality of the town and availability of public transport alternatives (namely bus and park & ride) at any moment in time.

However these control measures do need to be rigorously applied to ensure the problems associated with traffic growth and car dependency are addressed. The following policies have been identified as part of the transport strategy:

- A review of the number of off-street spaces in the town centre, and in particular long stay spaces. This will be phased in conjunction with the implementation of the transport strategy (e.g. improved bus facilities or provision of any park & ride facilities such that the overall number of off-street spaces (town centre plus P&R) remains broadly equivalent to that provided at present;

- A shift in balance from long-stay to short-stay public off-street parking provision in the town centre, therefore continuing to support shopping and visitor needs. Similarly this should be introduced in line with the park & ride facilities; and
- An annual review of public on- and off- street parking charges as a means of managing demand and use of the network and facilities.

➤ **Private Retail Parking**

Private retail parking forms an important part of the overall parking stock in Southend, particularly with the major retail outlets both in the town centre and in other areas of the urban area. The Council aims to work closely with the private operators to ensure that private and public parking charges are harmonised to avoid any price competition between the two parties. In addition to providing better control on the use of retail car parks, retailers need to improve enforcement to minimise invasive commuter and long stay parking.

Planning guidance now seeks to provide reduced levels of off-street parking, replacing the maximum levels that were provided in the past. Travel Plans are now used which seek to ensure that more people have opportunities to travel to and from the development on foot, by cycle or by public transport. For retail development this usually means that the Travel Plan is aimed mostly at staff.

➤ **Influencing Private Non Residential (PNR) Parking**

The Council has little control over existing PNR parking provision. However, through the development control process the Council does control the maximum number of spaces provided to ensure levels of parking related to future new and expanded developments are set to appropriate levels and are sustainable in transport terms. In some recent cases this has been set in parallel with Section 106 agreements on the potential introduction of on-street controlled parking zones around the development to assist in achieving the associated travel plan aspirations and reducing the impact on on-street parking activity. This will be developed further. As public transport accessibility and accessibility by other modes of transport are improved, it could be appropriate to introduce stricter parking standards, where Regional Guidance suggests 70% of PPG13 standards.

Travel planning also has an important role in rationalising the availability and usage of work based PNR. Whilst it may not be desirable to reduce existing PNR provision, travel plans can be designed to allocate provision primarily to those who do not have suitable alternatives to the car for journey to work trips, those with medical needs, those who need their vehicles for work and car sharing.

The Council has adopted the maximum vehicle parking standards as set down in the EPOA document as Supplementary Planning Guidance and applies these standards to all new development proposals. The Council has been successful in delivering high density development with parking at a level of 1 space per dwelling or less within highly accessible urban areas, such as the town centre, and in a couple of instances has approved schemes with no off-street parking in the interests of promoting use of means of transport other than the private motor car. In other areas of the Borough, a maximum of 1.5 vehicle spaces per dwelling is generally applied to new residential development and such proposals are also required to make adequate provision for cyclists and pedestrians.

➤ **Parking Associated with Private Development**

Where developers choose to provide reduced levels of off-street parking it is expected that they will contribute financially towards the encouragement of travel associated with their development by more sustainable modes. The contributions could be used to improve pedestrian routes, cycle infrastructure and/or bus infrastructure. Funding from this source has the benefit of providing more sustainable land use where it would otherwise have been used for parking. It is in the developer's

interest therefore to provide funding for travel improvements as outlined above in lieu of off-street parking and there is a gain for the town through the improved facilities for all users, not only those associated with the development.

Larger developments, both residential and commercial are also expected to provide Travel Plans through S106 Agreements that seek to encourage travel by sustainable modes. The Travel Plans are monitored to judge the success of the scheme and adapted where-ever appropriate. Travel plans can also be used to provide additional discouragement where a Travel Plan is failing, for example where there is greater on-street parking than was originally anticipated.

➤ **Controlled Parking Zones**

As pressure on parking supply increases motorists will seek to park on the nearest available streets, often causing problems of inconvenience and safety for residents and other road users. There is a Controlled Parking Zone (CPZ) around Southend Town Centre and Seafront which offers pay and display parking bays, with concessionary permits for residents to share these bays. Consultations have been undertaken on extending CPZs to other areas in the Borough (e.g. in Leigh and around the Hospital) as well as extending the existing Town Centre Zone, but these did not receive local approval and so are not being pursued. The Council will revisit the need for CPZs within the LTP2 period in order to assist in meeting some of the requirements of the transport strategy and the aspirations of residents.

➤ **Decriminalised Parking Enforcement**

From September 2001, the Council successfully took over the responsibility for enforcing parking, loading and waiting restrictions in the Borough from Essex Police. The Council works with its contractor to provide a team of parking attendants to patrol and enforce the on-street parking regulations and the Council's car parks. Patrols are undertaken on foot and also by mobile attendants using mopeds, in particular within the outlying areas of the Borough and in response to particular issues. The Council seeks to improve on this to further reduce the numbers of violations, thereby reducing the impact of indiscriminate illegal parking on congestion and safety on local residents, schools and businesses, cyclists, pedestrians, buses and traffic flow in general. Reviews of parking attendant patrols will continue and will seek to complement the various elements of transport strategy

➤ **Town Centre Car Parks**

Southend town centre has a high proportion of car journeys of 2 miles or less, which may reflect the availability of affordable car parking. An analysis of car park usage indicates that at any one time the maximum utilisation of car parking capacity across the town centre is generally around 70%, though this increases to nearly 80% in August, with the inevitable peak at in the Christmas period. A number of the current car parks in Southend Town Centre (both multi-storey and surface) are on potential redevelopment sites and the Council is developing briefs and proposals to develop a number of these areas as part of the regeneration of the town centre. This redevelopment will need careful co-ordination to ensure adequate parking facilities are retained at any one time and the Council, in seeking development, wishes to retain, and not increase, the overall number of parking spaces available.

Further Demand Management and Road Pricing Schemes

In a similar manner to the majority of local authorities in the UK, it is not anticipated that Southend would introduce any road pricing or workplace parking levy in isolation. To do so would significantly disadvantage the town in terms of economic and commercial development in respect of neighbouring authorities. There are no core, historic or sensitive local districts that would immediately benefit from more intense demand management advocated by recent guidance.

The TIF work currently underway in terms of the regional/TGSE context will be developed further to ensure that the benefits to the regional economy and business activities can be demonstrated. Southend is working jointly with Essex and Thurrock on taking forward the TGSE Business Plan for Transport and demand management features strongly within this. Both Southend and Essex submitted TIF bids in October 2005.

A proposal for TIF for Southend, within TGSE would be expected to be assessed within the category of "group of towns or cities in an area or region, where the innovation is a scheme covering more than one centre"

Intelligent Transport Systems (ITS)

The provision of an Intelligent Transport Systems (ITS) is an essential element in the integration of the transport strategy. Comprising a wide range of measures, (for example real time passenger information, car parking variable message signing, urban traffic control) ITS is a powerful instrument for addressing issues relating not only to tackling congestion, but delivering accessibility and safer roads.

The intelligent transport system in Southend currently has three core elements that will be used to help alleviate congestion problems across the Borough:

- An urban traffic control (UTC) system (SCOOT based);
- A real time public transport information (RTPTI) system (TRIPS based); and
- A car park guidance system (CPGS).

The UTC-SCOOT system provides integrated traffic signal control to 20 junctions in the Borough. A further 23 junctions and pedestrian crossings are connected to the UTC system for fault management with 7 of these junctions operating a green wave facility for a fire station based in Leigh on Sea.

52 junctions and pedestrian crossings are remotely monitored for operational and system faults by a remote monitoring system. Within the last five years all the signal controlled junctions have been upgraded to the latest available systems. It is intended in the next five years to provide SCOOT control at the remaining junctions connected to the UTC system and incorporating intelligent Bus priority.

The junctions now have the necessary communication facilities and modern controllers in place to enable a low cost implementation of SCOOT and bus priority. This will achieve reduction in congestion and improvements for passenger transport. Making better use of the infrastructure now in place is key to the delivery of reduced congestion and taking forward further progress in terms of ITS is an LTP priority.

The RTPTI-TRIPS system, operated in conjunction with Essex CC, provides bus arrival information across the whole of Essex including Southend. Within the Borough this includes RTPTI at 34 locations covering 28 services, and 112 buses with Global Positioning System (GPS) installed to provide real time positional or Automatic Vehicle Location (AVL) information. 11 junctions are installed with intelligent bus priority units providing priority at traffic signal junctions for late running buses. The reliability improvements and increased bus patronage has been well documented in previous Annual Progress Reports with an increase of 10% in bus passenger journeys reported along the A13 London Road.

The car park guidance system (CPGS) provides information to motorists on the availability of car parking spaces for sixteen short, medium and long stay car parks through 29 variable message signs (VMS) across the town.

As required by Traffic Management Act 2004, Southend the Council as the local traffic authority (LTA) has a statutory duty to ensure the expeditious movement of traffic having due regard to its practicality, its other responsibilities and the activity of other LTAs, the Highways Agency and the police. The LTA is also required to:

- appoint a Traffic Manager;
- develop processes to identify and deal with the causes of traffic congestion and disruption;
- determine specific policies and objectives for different roads in the network; and
- implement monitoring to assess effectiveness.

There are a number of areas in Southend which are not yet fully operated within the existing coverage of the UTC-SCOOT system or subject to integrated operation. This restricts the extent of overall optimised traffic control that can be effected throughout the Borough. The integration of existing intelligent transport systems in conjunction with an increase in the provision of timely accurate and relevant transport related information to travellers are key priorities for Southend BC through the implementation of this local transport plan. To this end the Council seeks to:

- implement COMET in Southend in collaboration with Essex County Council; and
- develop an integrated transport control and traveller information mobility centre (or Mobicentre).

COMET is the architectural hub of a modern traffic control centre. It can provide a range of co-ordination facilities allowing operators to control and monitor an urban network across a range of systems whilst delivering meaningful, timely and accurate information to the travelling public. The COMET system has been introduced within Essex County Council as an integral element of the Essex Traffic Control Centre linking the UTC-SCOOT, ANPR, Incident Detection, Driver VMS and car park guidance systems. The Council are liaising with Essex County Council to develop plans to extend the system to cover Southend which will be jointly monitored by Southend and Essex operatives. It is envisaged that each authority will be responsible for the implementation of control and information strategies in their own areas but would automatically inform the other authority of the change, in order that a co-ordinated response can be implemented for the network as a whole. The shared use of the COMET system will enable this co-ordination with the minimum additional infrastructure and associated costs.



Through COMET the Council will also be able to effectively manage and monitor all the ITS related assets across the Borough. The location, operational status and history of all assets can easily be retrieved by and presented to operators helping to maximise the operational efficiency of the transport network.

Together COMET, the SCOOT UTC system and the TRIPS real time public transport information system will form the core of the Southend Mobicentre. This will be the hub for the implementation and monitoring of the integrated transport network management control and information dissemination strategies for Southend.

Following recent enhancement to its' UTC-SCOOT systems, the Council already has in place the ASTRID (Automatic SCOOT Traffic Information Database) and INGRID (Integrated Incident Detection) software packages. Developed by the Transport Research Laboratory these are designed improve the UTC systems efficiency to monitor, detect and respond to changing traffic conditions, and hence its' ability minimise delays as networks become heavily congested.

The existing network of automatic number plate recognition (ANPR) is currently used solely for Police enforcement purposes. A variant of the ANPR technology will be introduced across the Borough focusing initially on the primary road network (i.e. the A13 and A127 corridors near the Borough boundary) to provide an accurate mechanism for monitoring journey times thereby providing a meaningful measure of the performance of the local highway network. ANPR data can also be used to provide information on traffic flows across the area covered.

Passenger Transport

During the plan period of the first LTP there has been an increase in patronage for bus and rail transport. With regards to bus travel this increase was largely attributable to the implementation of the first two phases of the A13 Public Transport Corridor scheme. This was achieved through quality infrastructure, improved pavements in some areas and better quality passenger transport information. This led to a 10% increase on passenger journeys made along the A13 corridor between 2002/03 and 2004/05.

Bus and Rail Transport

A key element in achieving the shared priority of tackling congestion will be to increase the attractiveness of bus and rail services. To this end the public transport strategy focuses on three main areas for improvement; the standard of bus services; improved integration; and widening the travel choices for all, particularly the disabled and socially excluded. The first LTP Major Scheme has provided a core element of the passenger transport service for Southend, with implementation of the new travel centre together with priority links along the A13, to the seafront, to the airport and to the hospital. This will be complemented with improved bus/pedestrian interchange facilities (particularly at Southend Victoria and Southend Central railway stations) and travel information including RTPI. In 2006/7 further work will be undertaken to extend the travel information kiosks in Southend and two have been purchased for use at the Travel Centre and Victoria Station. The final phase of the A13 Passenger Transport Corridor will also be completed, extending the improvements to the Borough Boundary to link with the Essex County Council proposals

Improving Bus Operations

The Council are seeking to remodel the bus service network to ensure greater accessibility to all across the Borough. This will involve the definition of a core network of regular (at least ten minute headways) services along key routes during peak travel times. In addition, the level of service beyond peak travel times including evening and Sundays will also be reviewed. The proposed core and secondary network routes are shown in **Figure 5.6**.

It will also be important to improve passenger interchanges between bus and rail services and between different bus services, particularly at major intersection along key bus corridors.

As part of the public transport strategy the Council is also seeking to widen travel choices for all. This would be achieved through a combination of enhancing conventional bus services and the

role of flexible and demand responsive transport to address certain areas of social exclusion. This may involve blurring the edges between community and conventional public transport services and help fill the gaps within the existing public transport network.

The strategy will place particular emphasis on targeting journey to work and journey to school trips, an area where the implementation of effective travel planning will be key. In this respect the Council will work with both the bus and rail operators as well as the university to introduce on-site bus and rail RTPI systems.

School transport provision will take account of the Schools White Paper "Higher Standards, Better Schools for All" and the promotion of greater accessibility to education. Clear links with the Smarter Choices Strategy and the Accessibility Strategy have been made to ensure that public transport provision, promotion and accessibility are considered a priority. This is further supported in the Strategic Environmental Assessment (SEA).

Concessionary Fares

The Chancellor announced in the Budget on 16th March 2005 that free off-peak concessionary travel will be introduced on local bus services in England for people aged 60 and over and also disabled people, this taking effect from 1st April 2006, resulting in each Travel Concession Authority required to provide free off-peak travel on registered local bus services within its area.

The most significant element of costs for the concessionary fares scheme is 'Fares Foregone' - which is calculated from the average fare for all trips and types of ticket multiplied by the number of concessionary trips. The average fare paid in Southend is not significantly different to the average for the whole of the Essex area scheme. Consequently the 'Fares Foregone' under a Southend only scheme would be similar to those for involvement in the Essex Area scheme.

Therefore the Council will continue to support the Essex area scheme and would expect to see an increase of up to 5% in bus patronage figures over the life of LTP2.

Improving Bus Punctuality and Reliability

Under tackling congestion the passenger transport strategy will also be looking to alleviate the impact of congestion on the operation of bus services throughout the Borough. This will be achieved through infrastructure improvements and bus priority at junctions to ensure minimum delay for bus passengers and hence reliable services for all.

The Council will set up a Bus Punctuality Improvement Partnership to bring a co-ordinated approach to monitoring and improving punctuality, although operators have a responsibility to ensure that their timetables reflect operating conditions. This Partnership approach will demonstrate a common commitment to achieving a higher standard of service for the customer, and will entail:

- genuine co-operative working between the bus operators and the Council;
- the application of the findings of punctuality monitoring together with any other relevant data to identify initiatives to improve the operations of bus services;
- jointly agreeing targets for improvements;
- a common understanding of the confidentiality of any commercially sensitive information, and an agreed framework within which such information may be used by any of the partners;
- an agreement detailing the extent to which such information may be reported on by others parties.

The Bus Punctuality Improvement Plan will form the basis of a partnership agreement between the Council and the local bus operators in order to ensure a joint commitment to improving and maintaining a reliable and punctual bus services in the future.

Quality Bus Partnerships (QBPs)

The Transport Act 2000 gave new powers to Local Authorities to promote bus use through Quality Partnerships, either voluntary or statutory, and in some cases Quality Contracts. In April 2003 the Borough Council introduced an umbrella voluntary QBP with Arriva Southend, First Essex Buses and Stephenson's of Essex, and will be continuing the working relationships with the bus operators that exist with the introduction of route specific QBPs.

The Council will move to Statutory Partnerships if the voluntary partnerships are deemed to have not delivered the improvements expected to services from the bus operators.

If the statutory partnership approach has demonstrably failed to deliver improvements then the Council will introduce Quality Bus Contracts, this approach will be examined if it is seen as the only realistic way of implementing policies set out in the bus strategy.

Rail Travel

There are two railway lines that serve Borough, the Southend Victoria to London Liverpool Street line operated by One, and the Shoeburyness to London Fenchurch Street line operated by c2c. Both train operating company's are owned by National Express Group. Within the Borough there are nine surface railway stations, seven on the c2c line and two on the One line. This means that a large proportion of the town's population live within one mile of a station.

In terms of rail transport, the Council will continue to work with the Train Operating Companies (TOCs), the Department for Transport and Network Rail to ensure that improvements for rail users are co-ordinated with other elements of the transport strategy for Southend. To this end the Council aims to continue work to better integrate rail with other transport modes (in particular bus and walk) and promote the use of rail through travel awareness schemes and travel planning. In particular the Council will continue its involvement in delivering improvement for rail travellers in a number of areas:

- maintaining the quality rail partnership (QRP);
- improved signing to stations;
- improving integration at key interchange sites;
- improve public transport access to the stations, including bus and taxi;
- improving walk and cycle access to stations;
- improving information within stations regarding connections with other modes of travel (including bus services, taxis services and car parks);
- co-ordinate with the Borough Council's Public Transport Information Strategy
- effective communication systems
- work in partnership with TOCs to obtain and maintain secure station status, along with car parks to obtain and maintain secure car park status (provisions include CCTV, lighting, help points, staffed stations).

Recent investment and commitments in the local railways by TOCs and the Borough Council through Local Transport Plan funding include: -

- new Pedestrian facilities, Cycle stands and CCTV at Prittlewell Station
- new crossing, Interchange and CCTV facilities at Westcliff Station
- improved bus waiting facilities at Shoeburyness Station

However, notwithstanding recent investments in improving local railway stations across Southend, a recent audit carried out on behalf of the Council identified a number of outstanding deficiencies in

accommodation and access at stations with interchange sites. A rolling programme of improvements will be identified for implementation throughout LTP2 to include improvements at a number of stations, subject to TOC's, Network Rail, DfT and developer contributions. The programme is flexible and will be carried out when contributions are made available:

- **Prittlewell Station** (New Transport Interchange as part of the site redevelopment; Upgraded linkages to Station Entrance; Improved Signage);
- **Southend Victoria** (New Transport Interchange; Improved signage; Upgrade linkages to the Plaza Shopping Centre and future new developments in the local area; RTPI displays both inside and outside of Station); (currently the subject of consultation through the SustAccess European funded project)
- **Shoeburyness** (Upgrade Transport Interchange; New Transport linkages subject to New Ranges contributions; RPTI signs both inside and outside of Station);
- **Thorpe Bay** (Look for CCTV coverage outside; Improve rail/bus information; Provision of cycle stands);
- **Southend East** C2c has recently completed a £425,00 improvement scheme at Southend East station. The work has included level access to the London-bound platform, new toilets with baby changing facilities, a refurbished waiting room with CCTV and extended and improved station CCTV. This is further evidence of partnership working with the objective of improving facilities at local stations, the Council is considering further cycle parking and better access to this station across the local roads
- **Southend Central** (Covered and Secure cycle provision; Improve linkage between North and South side and the college and university site; Better signage to town centre/ other transport facilities; Interchange facility on Station Forecourt), on the north side of the station an improved access ramp is proposed linked with the proposals to "pedestrians" Luker Road/Station Approach as part of the new University development. The train operating company, c2c, intend to invest a further £300k on the station facilities in 2006/7;
- **Chalkwell Station** (Disabled access on the southside; CCTV; Increased cycle rack provision);
- **Leigh Station** (Refurbishment of the bus interchange; CCTV; Quality lighting).

Given the financial constraints noted in Section 4, to achieve a step change in public transport provision and patronage will require a concerted effort from all parties and a strong partnership approach comprising the Council together with the bus and rail operators which is already in place.

Walking and Cycling

Making walking and cycling safer and more attractive is a key aim of the transport strategy, and in particular its contribution to tackling congestion (as well as improving accessibility, and improving quality of life). To this end the strategy aims to encourage greater use of these modes and hence contribute to reducing the reliance on the private car for many trips.

In developing plans for Southend, the Council is committed to providing appropriate facilities aimed at encouraging pedestrian and cycle movement across the Borough by making the main urban area and the town centre more permeable by walk and cycle modes, and integrating streets and links with open spaces including the Seafront. In particular the Council supports the development of the Green Grid Strategy (as produced under the Thames Gateway South Essex strategy) which identifies a number of "Greenways" which are corridors offering a pleasant environment for walkers and cyclists between green open spaces and urban centres. In Southend, Prittle Brook has Greenway designation whilst the Seafront is a core part of the Green Grid network. Working alongside the neighbouring authorities of Rochford and Castle Point is key to developing a coherent strategy. The connections are cross-boundary and joint plans reflect this

Walking

The LTP2 recognises that walking is most attractive for short trips often as a short link in a longer journey. Physical and psychological barriers can deter people from walking, including poorly maintained footways, lack of convenient and safe crossing points, intimidation by traffic volume, speed and road danger and personal security fears.

The LTP1 delivered a series of successful projects aimed at addressing these barriers by improving both the quality and safety of the walking environment in order to facilitate more short trips on foot. These include:

- the Walking Bus; the introduction of two walking buses and a puffin crossing at St George's Catholic Primary School increased walking by 25% and reduced car use by 22% between 2000 and 2005.
- crossing Facilities; Installation of 31 new controlled pedestrian crossings between July 2000 to June 2005.
- Environmental Rooms and 20mph zones; ongoing programme of implementation in the Milton, Victoria and Westborough Environmental Rooms.
- pedestrian accident rate improvements; Pedestrian accidents have decreased by 24% and those involving children under 16 years by 39% since 2002.
- Victoria Station SustAccess; This European funded project aims to redress severance caused by Queensway to allow better access on foot from the Station to the town centre.
- Prittle Brook Greenway; consultation and design along the entire length of the route is at an advanced stage Construction work commenced during 2005 on the section within Belfairs Park

In order to build on this progress, the Council has developed a separate Walking Strategy which sets out a vision to create a quality environment in which walking is the preferred mode of transport for trips under 2 km is. Above all, the Walking Strategy aims to create a more 'permeable' street environment to encourage and facilitate journeys on foot.

The draft Walking Strategy will be finalised in 2006/07 after consultation with key stakeholders and interested partners. The main delivery vehicle for the Walking Strategy will be through the LTP2 main programme, supported by funding from developer contributions and the EU SustAccess project. The Walking Strategy sets an action plan around the six key objectives to:

- Objective 1: Create Streets for People
- Objective 2: Improving the Walking Environment
- Objective 3: Improving Pedestrian Safety
- Objective 4: Improving Integration with Public Transport
- Objective 5: Utilising the Planning Process
- Objective 6: Promoting and Marketing Walking

To deliver the Walking Strategy the LTP2 will therefore seek to:

- provide safe and convenient walking corridors that link key origins and destinations within the town centre, connecting car parks, employment, shopping areas, travel interchanges, education centres and major leisure centres.
- implement a programme of crossing facilities to facilitate movement across distributors between environmental rooms and walking corridors. This will address issues of severance between residential areas as typified by the environmental room layout. Crossings will include provision of new facilities such as puffins and toucans and where appropriate upgrading of existing facilities to these standards.

- continue to promote schemes within the Environmental Rooms programme that promote a true shared use of streets between motorised and walking traffic
- prioritise footway maintenance on core walking corridors and interchanges. This links with the “route hierarchy” proposals and the development of a footway hierarchy and categorisation
- ensure accessibility for all (including disabled and mobility impaired)
- linking with the ROWIP to prioritise maintenance and improvements of the PROW network
- through links with the road safety strategy, deliver casualty reduction schemes at locations where pedestrian accidents cluster, and child pedestrian skills training (see sections 4 & 11 of the Road Safety Strategy)
- improve personal security across Southend particularly beyond daylight hours where pedestrian areas and links must be carefully planned, with adequate pavements, consider suitable lighting and CCTV coverage
- improve health and fitness of the community through greater levels of physical activity afforded by increased walking
- using land use planning streetscape guidance together and the LDF to secure infrastructure improvements and developer contributions as part of new developments.

Cycling

In October 2004 the English Regions Cycle Development Team (ERCDT) made a second assessment of cycling in Southend, achieving an improved score when measured against the Governments objectives for cycling. This noted all the progress that has been made to date in the LTP1 in creating conditions conducive to cycling:

- reduction in cycle casualties: Total pedal cycle casualties have fallen by 41% between 2000 and 2005
- increase in cycling; the modal share of cycle trips to the town centre have more than doubled from 1.3% in 2000 to 2.8% in 2004
- Child Cycle Training; Between 2000 and 2004 the number of children receiving cycle training has more than doubled from 523 to 1306
- completion of Cycle Routes; the Pier Hill to Central Station cycle route has been completed whilst significant progress has been made in upgrading the A127 cycle tracks
- Prittle Brook Greenway; designs have been completed for the urban section cycle track from Victoria Avenue to Eastwood Road and work commenced on the Belfairs Park cycle path
- Cycle Parking; additional cycle parking provision has increased the number of cyclists using designated parking spaces by 83% since 2000
- Marketing and Promotion; including commuter challenge, cycle helmet promotion and production of the first Southend Cycle Map 2005.

The Council are committed to addressing the need for cycling in line with the recommendations made by ERCDT. This is reflected in the Interim Cycling Strategy which will be finalised in 2006-07 in conjunction with key partners and stakeholders,

The flat topography and compact, dense urban nature of Southend make it physically well suited to cycling. Furthermore, 50% of all trips in Southend are less than two miles, and 46% of all trips to work in Southend are less than; distances ideally suited to cycling. To realise this potential the cycling strategy sets the Vision:

“to make Southend a place where people of all ages, abilities and cultures have the incentive, confidence and facilities to cycle conveniently and in safety whenever it suits them.”

The cycling strategy for Southend has three core elements which are linked together:

- provision of quality infrastructure to provide a safe and convenient environment for cycling
- educating and training both children and adults on how to cycle safely, confidently and enjoyably;
- raising awareness and marketing the benefits that cycling has to offer.

The Cycling Strategy sets an action plan for achieving the vision for cycling, framed around six objectives which will be delivered through the LTP2.

Objective 1: Completing prioritised sections of the Southend Cycle Network within the LTP2 strategy, including the implementation of the National Cycle Network (Route 16) the regional Sustrans Routes (53 and 54) and the Local Cycle Network (Figure 5.7). The Cycle Network was reviewed in 2004 and the best value routes which could achieve the greatest increases in cycling prioritised into an implementation programme. This will be taken forward within the five year funding allocation for cycling. Measures that build on the strengths of the existing network and work already underway will form the basis of this.

At the conceptual level the cycle network seeks to provide a safe and convenient cycle environment along key routes into and through the town centre and connecting to local centres and employment, education, health, retail and leisure centres. This links with the accessibility strategy and the use of "Accession". The provision of cycle infrastructure follows the design 'hierarchy of needs' as recommended by LTN 1/04 where every effort is made to improve traffic conditions on the highway network (by reducing flows and speeds, and improving junction design) before providing dedicated cycle facilities on or off-road.

The cost of infrastructure required to build the 130km of 13 local cycle routes would be in the order of £4.4 million. Developer contributions secured through effective use of the LDF and tariffs could potentially be used to fund significant parts of the network beyond the remit of LTP2. The importance of national and regional routes is recognised in the support by SUSTRANS and the ODPM in terms of both seafront route (NCN16) and Prittle Brook Greenway. However, it is acknowledged, given the orders of cost, that provision of all routes is a long term objective that cannot be fully funded by LTP2.

Objective 2: Improving Cycle Safety and Access will be considered as part of the holistic approach to the design and implementation of all schemes whether within environmental rooms or on the distributor road network. Cycle audit will be amongst a range of audit processes used to ensure that cycling issues integrate with those of other users. Training will also be provided for Council Officers involved in the design of highways infrastructure on the needs of cyclists and how to design for them. As part of the safety engineering programme (see section 15 of the Road Safety Strategy), the Council will consider accident remedial interventions such as cycleways, cycle-bypasses, contra-flow cycle lanes and advanced stop lines at traffic signals.

Objective 3: Increasing Cycle parking provision will continue in Southend, targeted at key destinations eg. schools, workplaces, shopping centres and transport interchanges. Secure, internal cycle parking for residential developments will be secured through planning agreements. This will be linked with the 'Cycle Watch' scheme to reduce the theft of pedal cycles in Southend;

Objective 4: Cycle Training. The Council will continue to support cycle training as a priority (see section 11 of the Road Safety Strategy), especially for children, and encourage continued cycling by all as part of an active life. Child cycle training has been very successful in Southend and the Council will seek to formulate a training programme for adults;

Objective 5: Promoting Cycling and its Status. The provision of cycle-friendly infrastructure alone is not sufficient to generate an increase in levels of cycling. Targeted marketing techniques are very

important, including individualised marketing to selected households; distribution of the Southend Cycle map, information fact sheets; awareness raising events and promotion through travel plans. Demand management measures are important in making sustainable forms of transport including cycling more attractive options. Awareness-raising initiatives of cycling alternatives will be essential when such schemes are implemented.

Close ties with all integrated transport policy areas including such as the TravelWise initiative, the Safer Journeys to School projects and the Smarter Choices Programme will seek to promote cycling. Links with the Primary Care Trust policies will ensure that opportunities are taken to promote cycling for health benefits.

Objective 6: Improve Co-ordination and Partnership. A “sustainable transport” forum will be developed out of the existing Cycling and Walking Group to informally seek the views of cyclists and other users (such as those with an interest in mobility or special needs) on scheme design details.

The monitoring of levels of cycling and the impact of new measures is under review. Such monitoring will enable the impact of measures to be accurately assessed, and any changes in the overall level of cycling to be identified.

Motorcycling (Powered Two Wheelers)

Powered Two Wheelers (PTWs) offer a more sustainable mode of travel to the car and hence can make a contribution to reducing congestion across the Borough. However, there are limitations to their use, for example, motorcycles are certainly not suitable for all users, for families with children, and for carrying heavy loads. Despite being a more sustainable mode in terms of congestion and network efficiency there are obvious disadvantages with PTWs being a more vulnerable mode, often resulting in personal injury accidents with higher severity casualties (see section 15.4 of the Road Safety Strategy).

However there are ways to make PTWs a more attractive, convenient and importantly a more safe alternative to the car for some of the travelling public than it currently is. In this respect the Council will:

- include within the parking strategy provision for more secure free parking for PTWs in both on-street and off-street parking areas. Private owners and developers will be encouraged to provide adequate provision for PTW parking in new and future developments;
- continue the commitment to making Southend’s roads safer for all users including motorcyclists. PTWs are a vulnerable mode and the Council recognises the need for training and awareness campaigns to ensure motorcyclists are fully aware of personal safety issues (see section 11 of the Road Safety Strategy);
- ensure safe road conditions through well maintained infrastructure including surface treatment, road safety audits on new schemes, and traffic management to reduce speeds.

Freight Transport

During LTP1 discussions with Railtrack, the rail operators, and the Freight Transport Association (FTA) revealed that there were limited opportunities in Southend for transferring freight traffic from road to rail in a way that was economically viable. In meeting this view a number of factors were considered; the location of key freight generators adjacent to the strategic highway network (i.e. the A127 and A1159); access to potential rail freight facilities would be difficult due to dense population of the urban area; type of freight generated not necessarily suitable for rail freight transportation; business catering from local customer needs with daily deliveries.

However, future development opportunities in Shoeburyness does offer the potential for access by rail for freight traffic, though this would be largely dependent on the economic viability to any potential operator. The site is served by 21 kilometres of operational railway line currently used for maintenance works. This will be safeguarded during LTP2 for consideration as a potential freight line as proposals for the redevelopment of the area evolve.

Consequently, the key aim is to improve the performance of the strategic highway network, and in doing so facilitate the movement of heavy goods vehicles (HGVs) to and from the local area on suitable roads. Congestion of the main highway network, in particular the A127, continues to have implications for the efficient and reliable movement of goods and materials, as well as other employer business trips. The Council recognises that the integrated approach of the LTP presents opportunities to reduce congestion as well as providing better information for road freight hauliers so they can service the local communities efficiently.

The designation of strategic and local freight routes will be supplemented by an effective signing strategy to encourage the use of appropriate routes for HGV traffic. This will be extended to direct HGVs to designated servicing areas in different parts of the town centre and other centres within the Borough. The Council has already made progress in this respect through the redesignation of the route hierarchy across the Borough.

The impact of goods vehicles on unsuitable roads will be further ameliorated through the availability of better information for road hauliers, for example; lorry route maps (which could be distributed locally or through the FTA or Road Haulier Association); signage specifically for goods traffic. The lorry route mapping could also show locations of suitable lorry parking and service areas.

As part of the Environmental Routes strategy the Council will introduce traffic management to deter, and if necessary ban HGV traffic from using certain parts of the local highway network, and hence reduce the environmental intrusion on non-suitable roads. Typically this would include width and weight restrictions with complementary signing.

Within the town centre the impact of HGVs will be controlled through waiting and loading restrictions, managing where and when HGVs can stop in the town centre. This should be considered at locations where parked HGVs impede the normal flow of other vehicles, in particular along non distributor roads especially in the vicinity of small supermarkets.

As part of developing the above initiatives the Council will seek to establish a Freight Quality Partnership. The key aims of the FQP currently include identifying designated routes for freight traffic throughout the Borough. Within the context of Southend this will include:

- establishing a strategic freight routes along the A127; and
- local freight routes to serve the town centre and other urban centres in the Borough.

The LTP1 Major Scheme and Future Transport Strategies

The LTP1 Major Scheme was accepted in full by Government in the allocation letter in December 2000, and it included a commitment to provide the full estimated cost of a total of £14.5m for the development and implementation of the Scheme over the plan period to 2006.

The accepted Major Scheme consists of three inter-related elements, namely:-

- **element 1** – Bus Passenger Transport Corridor on the A13, London Road (between Queensway and the Borough Boundary);

- **element 2** – a new Travel Centre (on the site of the old Central Bus Station) to improve bus journey times and reliability and increase passenger numbers as part of a wider initiative to improve key strategic interchange sites and achieve town centre enhancement and regeneration;
- **element 3** - improving accessibility on the A127/A1159 freight corridor by improvements at Priory Crescent and the Cuckoo Corner Junction.

The remaining £1.5m of the £14.5m held back by DfT in 2005/6 has been allocated in 2006/7 to the elements 1 and 2 to achieve further passenger transport improvements in the Town Centre and along the A13 Passenger Transport Corridor completion. This is set out further in Section 12.

The impact of the first Major Scheme in reducing congestion has been evidenced by the significant increase in patronage along the A13 Passenger Transport Corridor of 10%. The completion of the new Travel Centre in Spring 2006, will signal a strong commitment by the Council to update and improve passenger transport facilities at the hub of the bus network. Linked with improvements planned at Victoria Station (part funded by EU Interreg iiiib support) is the expansion of passenger information in the form of comprehensive timetable displays and electronic journey planners. This has been linked to the Smarter Choices Strategy which will co-ordinate the promotion of travel choice and personal travel planning with the investment in new infrastructure. By focussing on the Town Centre as an area of development and growth it is envisaged that more journeys will be made to the centre by public transport (as evidenced in the relevant target)

The A127/A1159 Priory Crescent and Cuckoo Corner Improvement has been fully designed and the associated Compulsory Purchase and Side Road Orders were tested at Public Inquiry. The Inspector reported 'I am content that the scheme would be consistent with national, regional and local policies. I would particularly highlight the Thames Gateway initiative to provide jobs and homes to the East of Southend for which the Scheme would seem to me to provide essential transport infrastructure.'

The Secretary of State has accepted the Inspectors' conclusions and recommendations and is satisfied that "even with a cost increase as suggested in post enquiry correspondence, the economically strong case for the Council's scheme, as concluded by the Inspector, would not be significantly undermined that it would bring into question the economics of the scheme....".

The proposals for taking forward future transport strategies as part of the TGSE growth area are documented earlier in this Plan. However, some analytical work has been completed that show the benefits of the package of Major Scheme proposals that have been put forward as part of the Regional Prioritisation exercise. The analysis supports the decision to take forward planning work during the LTP2 period in support of justification for the future transport strategies and schemes as part of the integration within the wider TGSE strategy. The work demonstrates reductions in congestion, traffic growth, increased bus mode share and an enhancement to the Smarter Choices element by the provision of better public transport alternatives. Other key additional benefits would also be delivered through the public transport improvements within the town centre (particularly ITS) to help improve the reliability of bus services. Improved cycling conditions and cycle routes would also encourage the greater use of cycling for work/school and leisure related trips.

Delivering Other Local Priorities

The measures identified for Tackling Congestion will also contribute to Southend's local objectives relating to quality of life, regeneration, an efficient transport system, community awareness and improving the highway.

Achieving a Better Quality of Life

Measures which encourage use of sustainable modes, reduce car use, and reduce the amount of queuing traffic will have a positive impact on noise and climate change. The use of Intelligent Transport Systems such as SCOOT and Variable Message Signing (VMS) will significantly reduce the proportion of vehicle emissions created by queuing or circulating traffic. The combined effects of tackling congestion and improved vehicle technology with regards emissions will improve air quality in and around Southend. Forecasts indicate that NO_x levels shall reduce by around 40% and PM10 emissions by 60% relative to current levels. However, improvements in vehicle technology do not have such a marked impact on CO₂ emissions and therefore levels of CO₂ are more reliant on changes in traffic levels. On this basis forecast show that CO₂ levels will remain static despite the changes in traffic levels.

The quality of public spaces and streetscapes:-

These will be improved through the Network Management and Traffic Management strategies which will cater for the needs of all road users and the Highway Maintenance/Asset Management strategies which will maintain the condition of roads and footways, and take the opportunity to enhance the streetscape where possible. Initiatives within the environmental rooms will seek to redress the balance of access to and use of public space for non-motorised users. The Council is committed to improving the environment of Southend through architecture and urban design. Consideration of high quality street design should form an integral part of all transport schemes and is key to delivering a successful project, improving the image of the town and the wider regeneration of an area. The following sets out particular areas of focus to improve the Streetscape and the Public Realm

➤ Design Guidelines,

It is vital that the relationship between traffic, people and places is comprehensively assessed and that the relationship between traffic engineering and urban design is set out in a set of clear guidelines.

➤ Streetscape Design Guide

As part of this commitment, the Council is planning to produce, early in the LPT2 period, a Streetscape Design Guide to accompany the Design and Townscape Guide (which will be adopted as Supplementary Planning Guidance to the emerging Local Development Framework in the Summer of 2006). This document will bring a consistent high quality approach to all streetworks and will include the following guidelines that will:-

Achieve a consistency of design by identifying key routes and spaces for special attention and use of appropriate materials and design standards;

- Ensure that sensitive solutions are put forward for historic areas;
- Consider the materials and furniture chosen for important areas of public realm and character;
- Ensure that the Streetscape Design Guide is used to inform all traffic engineering projects so that appropriate traffic calming and landscaping options are chosen by integrating quality urban design and traffic engineering into the one project and a consistent high quality approach is achieved across the Borough;
- Maintenance issues are considered at the same time, as part of the Asset Management plan and whole-life costs are taken into account;
- Ensure that the appropriate skills i.e. landscape architects, ecologists and Leisure Services (who maintain the street verges and trees) etc. are applied to all schemes to ensure that soft landscaping and the retention of existing features contributes to the overall appearance and aesthetics of the project. All schemes will be developed to ensure that the

natural environment is protected and enhanced as much as possible in accordance with the objectives of the LTP Strategic Environmental Assessment.

➤ **Traffic Engineering and Road Safety Toolkit**

A Traffic Engineering and Road Safety toolkit is also being developed to ensure that the principles of the Streetscape Design Guide are applied to all projects and that the best solution for each situation is chosen. The toolkit will comprise a set of design and engineering standards to be used in guiding both engineers and planners (at Local Authority, Consultant and Developer level) and members of the public and elected members. The impact of signage on local distinctiveness and landscape will be considered.

➤ **Public Realm**

In addition the Council's Head of Design will be involved in the design of all significant LTP2 projects to ensure a high standard of urban design across the Borough and especially on key projects. This will be taken forward by the setting up of a working group to ensure that consideration of the "Public Realm" is included in all development frameworks and transport schemes. Sympathetic design and compatibility of infrastructure with local townscape design character and the setting of cultural heritage will be promoted.

➤ **Maintenance**

Through the detailed scheme design process, a "value engineering", maintenance and streetscape audit process will be implemented to ensure that the guidance is fully implemented. This will consider the advantages and disadvantages of scheme proposals and will take forward current thinking in terms of improving traffic behaviour and safety through quality urban design. This will build upon the success of schemes such as Hamlet Court Road, where integration between transport and streetscene objectives has been successfully achieved. This is consistent with reducing the maintenance and revenue implications of schemes, yet at the same time ensuring the project is not detrimental to the street or area in which it is placed. Through the Local Development Framework process (Planning Obligations DPD) it may be a consideration that commuted maintenance payments should apply to support the maintenance of adopted roads where quality street furniture and paving has been used. Maintenance proposals and new construction work will work together to include the desire to re-use, wherever possible, re-cycled construction materials, reconstituted kerbs and paving, surfacing material and the setting of a % target for the re-use of such materials. The Asset Management Plan will also support this.

- proposed Policy KP2 of the draft Core Strategy DPD will require development to include appropriate measures in design, layout, operation and materials to achieve:
- a reduction in the use of resources, including the use of, and ease of collection of, renewable and recycled resources;
- a reduction in flood risk and potential pollution impacts of development, particularly through 'sustainable drainage' systems;
- enhancement to the ecological and amenity value of the environment where appropriate.

These principles also apply to this LTP2.

These principles are in accordance with the "Code of Practice for Highways Maintenance" (July 2005:UK Roads Board publication), particularly the application of Appendix K, which contains maintainability and sustainability checklists. These will be applied to both LTP2 funded and Developer led projects to ensure that through adoption of the Highway, public realm improvements and their future maintenance implications are documented and set out in appropriate planning and developer agreements.

Healthy Communities

Healthy communities and the environment will be promoted and protected through travel awareness initiatives and other measures:-

- cycle training for adults and children, improvements to the cycling and walking network, and the creation of Greenway corridors between green spaces and urban centres.
- strong links will be continued with the Primary Care Trust Annual Public Health report, which during 2006/7 will focus on child obesity;
- tree planting along cycle and walking routes will address landscape and biodiversity issues, as well creating a pleasant environment which promotes use of these modes;
- the Council's Biodiversity Action Plan will provide a reference point for scheme design. Close working between the Technical and Environmental Services Department and Leisure and Amenity Services has already led to agreed mitigation measures for the LTP1 Major Scheme and a £35k investment in soft landscaping and planting for the Prittle Brook Greenway;
- specialist advice will be taken on schemes of a sensitive nature to ensure that the needs of biodiversity are included in the final design. Habitat creation and compensation must also be included where negative effects are unavoidable;
- the use of Sustainable Urban Drainage Systems (SUDS), stormwater treatment and groundwater protection will also be advocated;
- noise reduction through the use of low noise surfacing, reduced vehicle speeds and noise attenuation wherever possible.

Community safety, personal security and crime

This will be addressed through the creation of wide pavements and improvements to lighting and CCTV coverage, across the urban area and in the town centre. The impact on Quality of Life may be greatest in the Environmental Rooms, where the road hierarchy, traffic management and other supporting measures will create quiet, safe environments where the impacts of traffic (noise and climate change) are minimised, walking and cycling are encouraged, and careful choice of street furniture accompanied by improved lighting and CCTV encourages a greater feeling of personal safety. Integration of the Environmental Rooms concept into the emerging Local Development Framework will ensure the quality of life in environmental rooms is appropriately protected and enhanced.

Regeneration for Southend

Creating an efficient transport system which reduces congestion and ensures key regeneration areas (e.g. Town Centre and Central Area, the Seafront, Shoeburyness, other Strategic Employment Areas, and Southend Airport) can be accessed by alternative modes, will help promote and support sustainable growth. Workplace travel plans, personalised travel planning, car sharing and car clubs will help ensure that new development is accessed in a sustainable manner.

Achieving an Efficient Transport System

Transport and Accessibility policies within the Local Development Framework ensure land-use and transport planning are integrated.

Raising Community Awareness

School travel plans, workplace travel plans, personalised travel planning, car share schemes and car clubs, travel awareness campaigns and a travel information website, will all help to raise community awareness about the effects of continued traffic growth and the benefits and availability of alternative transport modes. Improvements to public transport, walking and cycling provision will also raise awareness about the benefits of these modes.

Improving the Highway

Effective maintenance procedures that achieve value for money solutions whilst improving the streetscape in order to address quality of life and urban renaissance objectives, will be addressed through the Highway Maintenance and Bridge Assessments & Strengthening strategies and the Traffic Asset Management Plans.

Making Best Use

With the exception of the existing Major Scheme, there will be limited potential for significant investment in new infrastructure during LTP2. Whereas traditional solutions to tackling congestion have largely concentrated on capital investment to improve road capacity, the focus for LTP2 will be to ensure best use is made of existing infrastructure.

Investment, therefore, will be prioritised to those measures which can deliver the greatest benefits (monetised and non-monetised) at the least expense to the taxpayer. Examples of such measures include:

- enhancing bus stops by installing new shelters and providing raised borders both helps to make bus services more attractive at minimum capital investment and improve accessibility to services for the mobility impaired;
- providing quality transport information which is accessible to all improves awareness of existing services and is essential for achieving “smarter choices” objectives;
- improving existing, and providing new, interchanges between bus and rail services, which helps to improve public connections, reduce journey times and improve the attractiveness of public transport over the private car; and
- assessing the existing bus network to identify locations which could better be served or frequencies increased to improve potential for mode transfer

Tackling Congestion Indicators and Targets

Indicators and targets for monitoring delivery of the Tackling Congestion shared priority are identified in Section 11.

The headline target is:

- reduce average vehicle delay (seconds lost per veh-km) on strategic roads (A127, A1159, A13) during a typical AM peak hour, by 9% in 2010/11, compared with a Do Nothing scenario (i.e. from 12.34 seconds lost per veh-km in the Do Minimum scenario to 11.26 seconds lost per veh-km; compared with 4.4 seconds in 2003/04).

The target assumes congestion will increase between 2003/04 and 2010/11 (based on analysis undertaken using the STAT model. This reflects the significant amount of new development and intensification of the existing urban area which the Local Development Framework provides for: 5000 additional jobs and 2750 additional houses by 2011. Without the LTP strategy, the increase would be almost three-fold.

Supporting targets, which will help monitor and explain progress in delivering the headline target include:

- halting the decline in bus patronage, and increasing the proportion of trips made to the town centre by bus, from 18% to 20%;
- increasing cycle use by 5%;
- maintaining the current mode share for travel to school (with 43% of primary school pupils and 32% of secondary school pupils using non-car modes); and
- ensuring 20% of cars on key routes to the town centres have more than one occupant in the AM peak.

