STEVENAGE
URBAN TRANSPORT PLAN

September 2010

Volume 1 - Main report

Hertfordshire Highways
www.hertsdirect.org/highways

Hertfordshire

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Glossary of Terms

AAP - Area Action Plan
BSF - Building Schools for the Future
DfT - Department for Transport
DMRB - Design Manual for Roads and Bridges
EEDA - East of England Development Agency
EoEP - East of England Plan
HCC - Hertfordshire County Council
ITB - Influencing Travel Behaviour
LAA - Local Area Agreements
LDF - Local Development Framework
LTP - Local Transport Plan
MSBC - Major Scheme Business case
NHATP - North Hertfordshire Area Transport Plan
NHDC - North Hertfordshire District Council
PCU – Passenger Carrying Unit
RES - Regional Economic Strategy
RSS - Regional Spatial Strategy
SBC - Stevenage Borough Council
SHUM - Stevenage and Hitchin Urban Transport Plan Model
SNAP - Stevenage and North Herts Area Action Plan
TA - Transport Assessment
TP - Travel Plan
UTP - Urban Transport Plan
WSG - Wider Stakeholder Group
SHLAA- Strategic Housing Land Availability Assessment

Introduction

1 Introduction

1.1 Introduction

This plan sets out the proposed transport improvements for Stevenage for the next 15– 20 years. It is designed to meet local needs whilst also delivering the County Council's overall transport targets and objectives as set out in the Local Transport Plan 2006/07 – 2010/11. The plan has been adopted by Hertfordshire County Council in its role as transport authority, but has been developed in conjunction with the Stevenage Borough Council and North Hertfordshire District Council and other local agencies, and through public consultation.

Although the plan period is up to 2031, it is acknowledged that any future changes to local circumstances or countywide transport policies may require periodic reviews. This document, as well as the Local Transport Plan and Urban Transport Plans (UTP's) for other towns in Hertfordshire, is also available on the County Council's website at www.hertsdirect.org/ltp.

Hertfordshire County Council (HCC) in joint partnership working with Stevenage Borough Council (SBC) and North Herts District Council (NHDC) has appointed AECOM (formally Faber Maunsell) to undertake the development of the Urban Transport Plan (UTP) for Stevenage. The intention of the UTP is to develop a range of schemes that will prepare the town for the potential growth as set out by the requirements of the Regional Spatial Strategy until 2021, although consideration will also need to be made up to 2031. The UTP will seek to develop a list of deliverables for all modes of travel that takes into consideration a whole range of relevant issues. As part of this exercise we have also developed a transport model to identify the issues and test relevant mitigation strategies to accommodate the growth in a sustainable and manageable way.

1.1 Structure of the Document

This document is presented in a number of volumes to ensure that the UTP is presented in a readable form but also contains all of the relevant information to justify the measures proposed. Alongside this there is also a requirement to include the necessary documentation to ensure that traffic model is demonstrated to be robust as this underpins much of the UTP.

The UTP is therefore structured as follows:

- **Main UTP document** – This is presented in the remainder of this report and outlines the outcomes in the form of proposed schemes and measures that will prepare the town for the future growth.
- **Appendix Volume 1** – This presents the technical explanation and justification for the proposals that have been included within the UTP. Each proposal that has been considered is explained and justification given for its inclusion or exclusion from the UTP.
- **Appendix Volume 2** – This is the reporting of outcomes from the Stakeholder Consultation. The Stakeholder Consultation has been used to inform the development of the UTP.

- **Appendix Volume 3** – This includes a number of traffic modelling documents that are required to demonstrate the approach that was taken and the validation of the model against base year conditions. This includes a Local Model Validation Report, Data Collection Report and Forecasting Note.

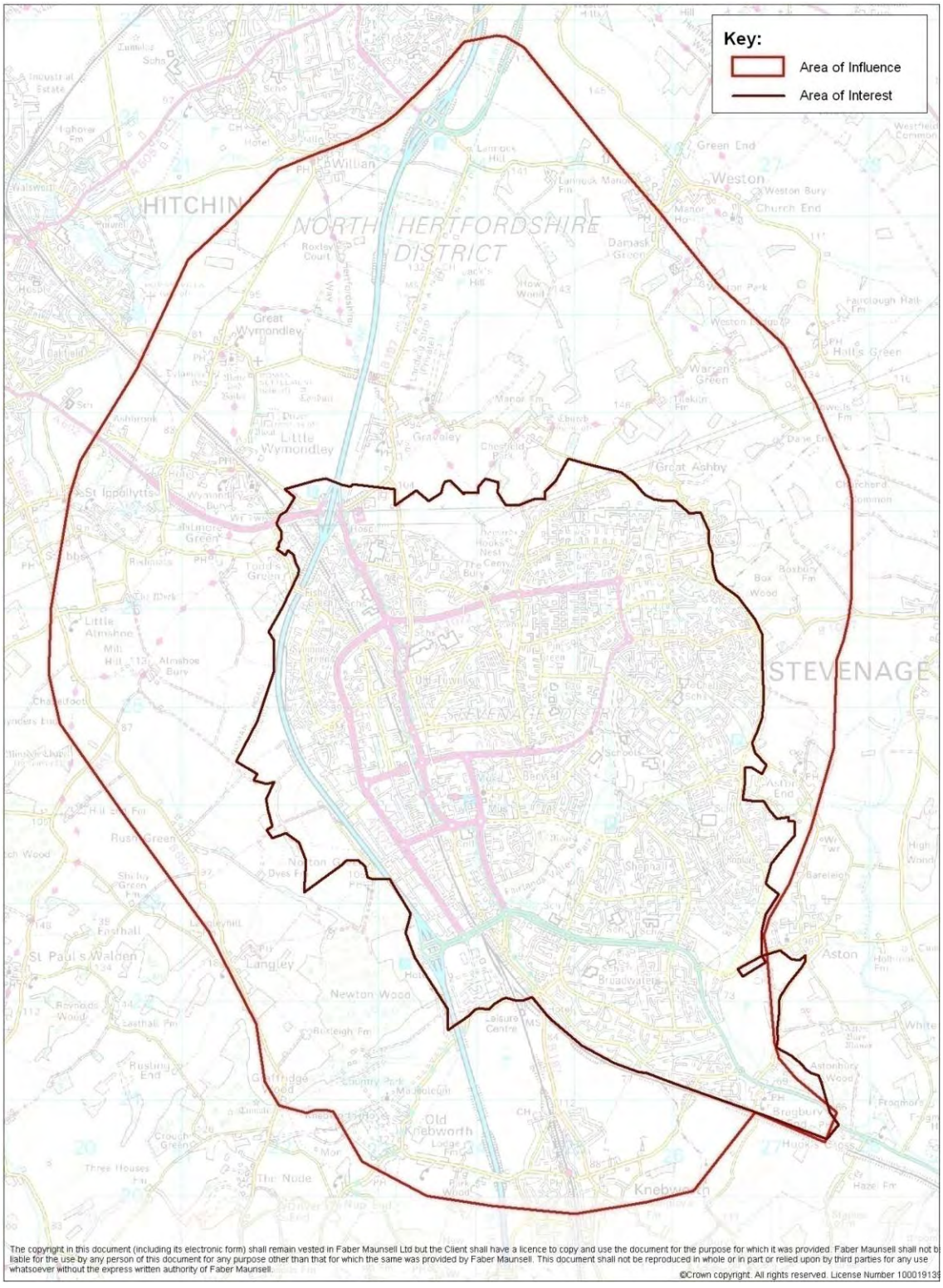
Background to the UTP Area

2 Background to the UTP Area

2.1 Background to the UTP Area

The area covered by this UTP is shown in **Figure 2.1**

Figure 2.1 – UTP Study Area

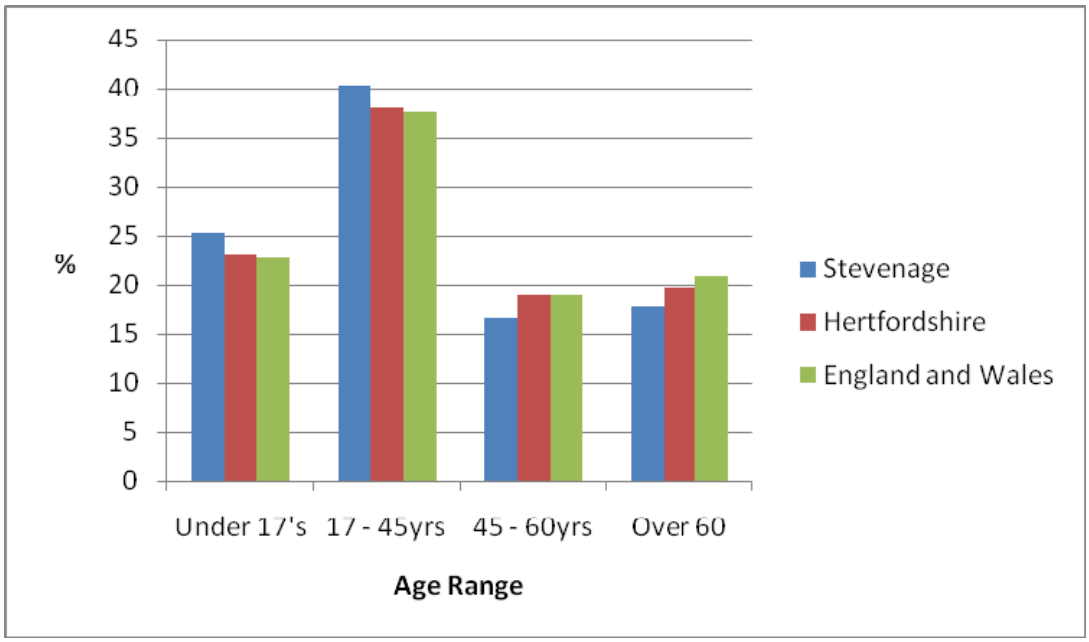


The area of interest that the UTP is focused on covers the extent of the Borough Boundary and urban area. There is also an Area of Influence that is considered within the UTP, and whilst measures may not be specifically developed for this area, the activity and movements that take place here do have an influence on the study area. The Area of Influence is also representative of the extent of the study area for the traffic model that has been developed to support the UTP. The village of Aston was not included within the Area of Influence although it has been included in the traffic modelling to ensure any impacts of UTP schemes are considered in this area. Although not shown on the diagram, the model also extends out to cover the Hitchin urban area in detail and also some of the surrounding villages.

2.1.1 *Population*

The most up to date population figures for Stevenage show a resident population of 80,973 in a total of 33,286 households (2001 Census). Compared to Hertfordshire and England and Wales averages Stevenage has a younger age profile with a higher percentage of under 17's (25.2%). This is 2% greater than the Hertfordshire average (23.2%) and 2.5% more than the England and Wales average (22.7%). This trend continues further up the age range with higher percentages in all age groups up to 45. Conversely the older age groups are underrepresented with only 17.8% of over 60's compared with 19.7% and 20.9% respectively for Hertfordshire and England and Wales averages. This is illustrated in **Figure 2.2** below

Figure 2.2 – Demographic Profile



It has however been noted that the proportion of residents over the age of 60 is expected to grow significantly in the future, with this age group projected to be over 20% of Stevenage's population by 2021 (SBC: Population Forecasts 2005).

2.1.2 *Mode Share*

A series of TravelWise cordons have been set up by Hertfordshire County Council to monitor travel behaviour and identify trends in changing travel behaviour. There are 7 TravelWise Cordon sites around the town centre which are located on the main routes into the town centre and monitor the changes in travel patterns at these locations over a series of years. The surveys are only based on one mornings travel and have been run every 3 years from 1997. During this period between 84%-86% of AM peak journeys in the town centre are made by car and only around 11%-12% by bus. Walking and cycling use has gradually declined since 1997 but motorcycle mode share has increased. It is important to note that walking and cycling trips may have been underestimated as a number of the road corridors that were monitored have parallel cycle/ walk ways which were not counted. The results of these TravelWise surveys are shown below.

Table 2.1 – Change in Overall Mode Share TravelWise Cordon Surveys[1]

Year	% by car	% by bus	% on foot	% by bike	% by motorbike	Car Occupancy
1997	85.3	10.9	2.0	1.4	0.4	1.24
2000	85.2	12.2	1.2	0.8	0.6	1.22
2003	86.4	11.2	1.4	0.8	0.5	1.21
2006	84.7	12.1	1.6	1.0	0.6	1.22

These results do not necessarily identify any particular trends other than those outlined above. They do however demonstrate that there is a heavy reliance on the car for trips entering and leaving the town.

2.1.3 *Road Network*

The A1(M) motorway is the most popular route in Stevenage Borough with approximately 5,020 vehicles travelling along it in both directions in the AM peak and approximately 6,450 in the PM peak. The A1(M) stretches over 400 miles from London to Edinburgh, and roughly follows the path of the Great North Road. The other major road connecting Stevenage to the surrounding area is the A602 providing an east/ west link from the town to the A10 and Hertford and Ware to the southeast and Hitchin to the northwest. The road network in Stevenage is planned highway infrastructure; the main roads are primarily made up of dual carriageway standard routes with segregated cycleways and footways. Key intersections are mostly roundabouts, typically with subway provision for cyclists and pedestrians.

There are also 13 car parks, shown in **Figure 2.3** below, within the town centre which are all Council managed sites. Currently 3 of these are short stay car parks and 10 of them are long stay. Planning permission has also been granted to convert the Station Car Park (north) in to a 770 space multi-storey car park, but will remain long stay. A significant amount of parking is also provided as part of the Tesco development to the north-west of the town centre.

[1] Stevenage Draft Data Report (HCC, 2008)

Figure 2.3 – Location of Car Parks in Stevenage Town Centre (council managed)

2.1.4 *Public Transport*

2.1.4.1 Rail

Stevenage station is located close to the town centre with access by foot over a footbridge from the east (town centre) or along the segregated cycleway from the north and south. The station can be accessed by the majority of residents of Stevenage within a 30 minute walk with most of the town centre within a 5 minute walk. The station can also be accessed directly by car and bus with a number of car parking spaces to south of the station.

The station is located to the west of the town and is on the London King's Cross to Cambridge line for local services and East Coast Mainline for more greater national coverage. The table below outlines the rail services and their frequency from Stevenage Rail station.

Table 2.2 – Rail Service Frequency from Stevenage[2]

Key Destinations	AM Peak 0700-1000	Interpeak 1000-1600	PM Peak 1600-1900	Sat Av.	Sun Av.
Kings Cross	10 min	15 min	14 min	15 min	15 min
Moorgate	35 min	60 min	30 min	n/a	n/a
Letchworth	20min	19 min	16 min	30 min	30 min
Cambridge	28 min	30 min	27 min	30 min	30 min
Peterborough	30 min	30 min	26 min	30 min	1 hour
Newcastle	Varies between 30 mins and 1.5 hrs				

This service frequency information illustrates how accessible many destinations, particularly London, are from Stevenage. With a 10 minute frequency to London in the morning peak period along with a journey time that ranges from 23 min to 37 min means it is a very commutable journey. The census data indicates a 4.9% mode share for rail trips by Stevenage residents with 11% of commuters using this as their main mode of travel. Fewer rail commuters travel in to Stevenage with just over 5%.

The total number of entries and exits annually at all stations within the UK is recorded by the Office of Rail Regulation. This has shown the following results for the last 4 years.

Table 2.3 – Station Usage at Stevenage[3]

Year	Station Entries	Stations Exits	Total	Percentage change from previous year
2007/08	2,101,130	2,105,288	4,206,418	6%
2006/07	1,988,327	1,979,706	3,968,033	11%
2005/06	1,771535	1,767,517	3,539,052	1%
2004/05	1,748,776	1,747,019	3,495,795	-

This shows that the usage of the station has increased year on year for the last 4 years.

2.1.4.2 Bus

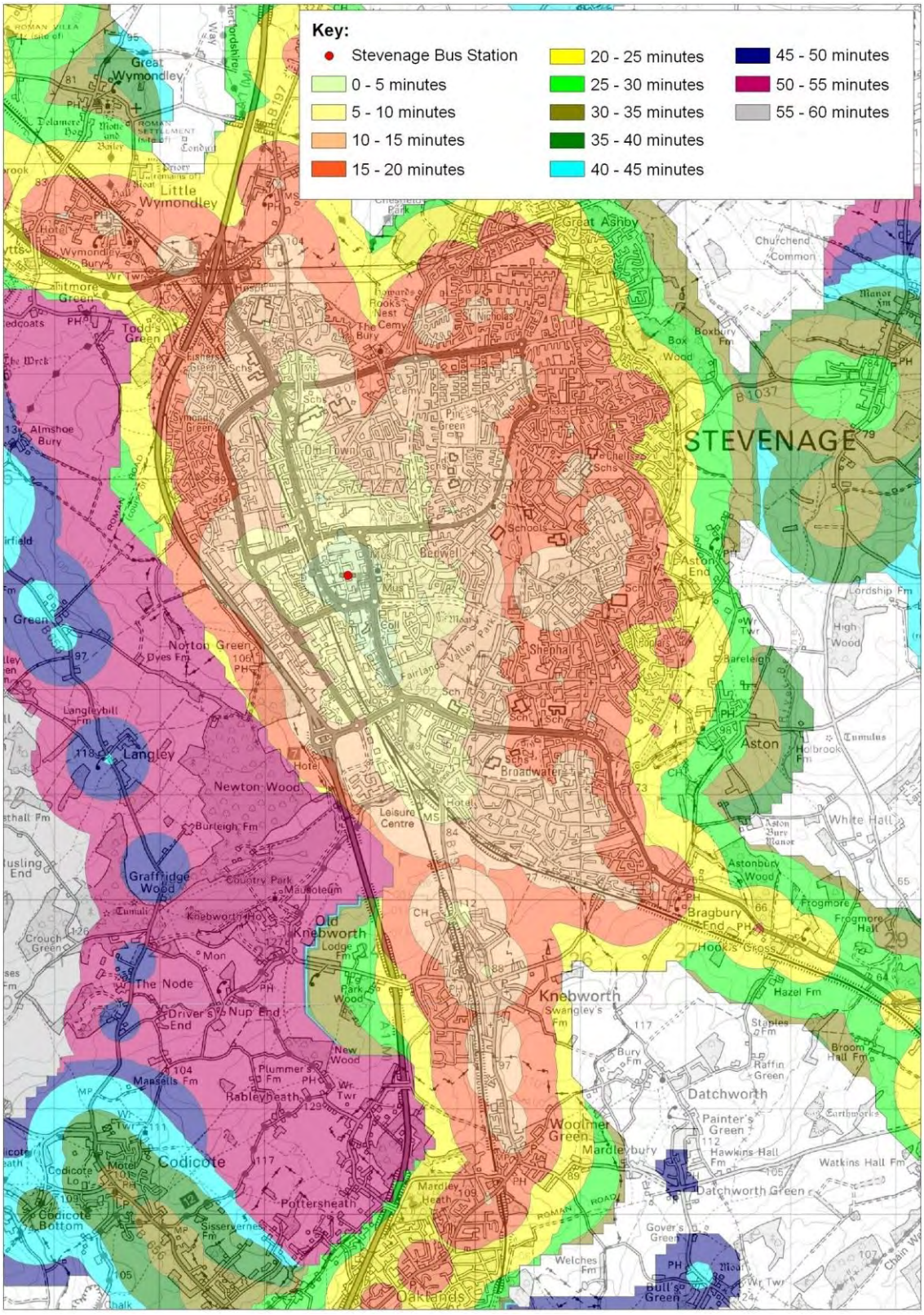
There is a comprehensive network of bus services within the town which offer a good level of frequency across the network. The bus network is shown in **Figure 2.7.**

Analysis of the 2001 census data shows that only 2.2% of people working in Stevenage travel to work on the bus. This proportion increases for those people living and working in the town, but only 2.4% of those working in the town but residing elsewhere travelled to work in Stevenage by bus.

[2] Stevenage Draft Data Report (HCC, 2008)
[3] http://www.rail-reg.gov.uk/server/show/nav.1529

The accession analysis in **Figure 2.4** below shows the areas in which people can access the centre of Stevenage (bus station) by bus in the morning peak. These analyses includes the walk and wait time that would be involved with getting a bus to the current Stevenage Bus Station, and assumes that no-on would walk further than 500m to access a bus stop.

Figure 2.4 – Accession Analysis of access to the town centre in the AM Peak



2.1.5 *Walking*

There are a total of 13 street level pedestrian crossings within Stevenage which are supplemented by an extensive network (circa 40km) of segregated cycle and footways around the network which include underpasses. There are also a number of other footbridges around the town to connect some key nodal points, most notably across Fairlands Way and Lytton Way to the north and west of the town centre respectively.

A series of TravelWise cordons have been set up by Hertfordshire County Council to monitor travel behaviour and identify trends in changing travel behaviour. There are 7 TravelWise Cordon sites around the town centre which are located on the main routes into the town centre. This does not necessarily pick up all cycling and walking movements as they are focused on the highway but does give an indication of the number of pedestrians travelling along these routes. The survey was undertaken in the AM peak period (0700 – 0900) and shows there were 334 inbound trips and 203 outbound trips (2006 data year).

In addition to this the 2001 census journey to work information showed that 8.6% of working Stevenage residents walked to work. This rises to 13.8% for those people who lived and worked locally within the town. The rest of Hertfordshire has an average of 9.56% of people walking to work. This therefore demonstrates that although Stevenage has a lower proportion of residents that walk to work than the rest of Hertfordshire, the number of people who live and work in Stevenage who choose to walk is higher.

In addition to the analysis contained within the census journey to work of those people who walk to work there is some further information contained within the 2005 County Travel Survey. This survey included 84 survey responses with a destination in Stevenage which were walk trips. **Table 2.4** below shows the journey purposes of those walking trips and shows that the largest proportion of trips (excluding from the return leg home) were shopping based trips. This indicates that there is already a big demand for walking in Stevenage which could be further exploited to encourage people to travel in more sustainable ways.

Table 2.4 – Journey Purpose of Walk Trips[4]

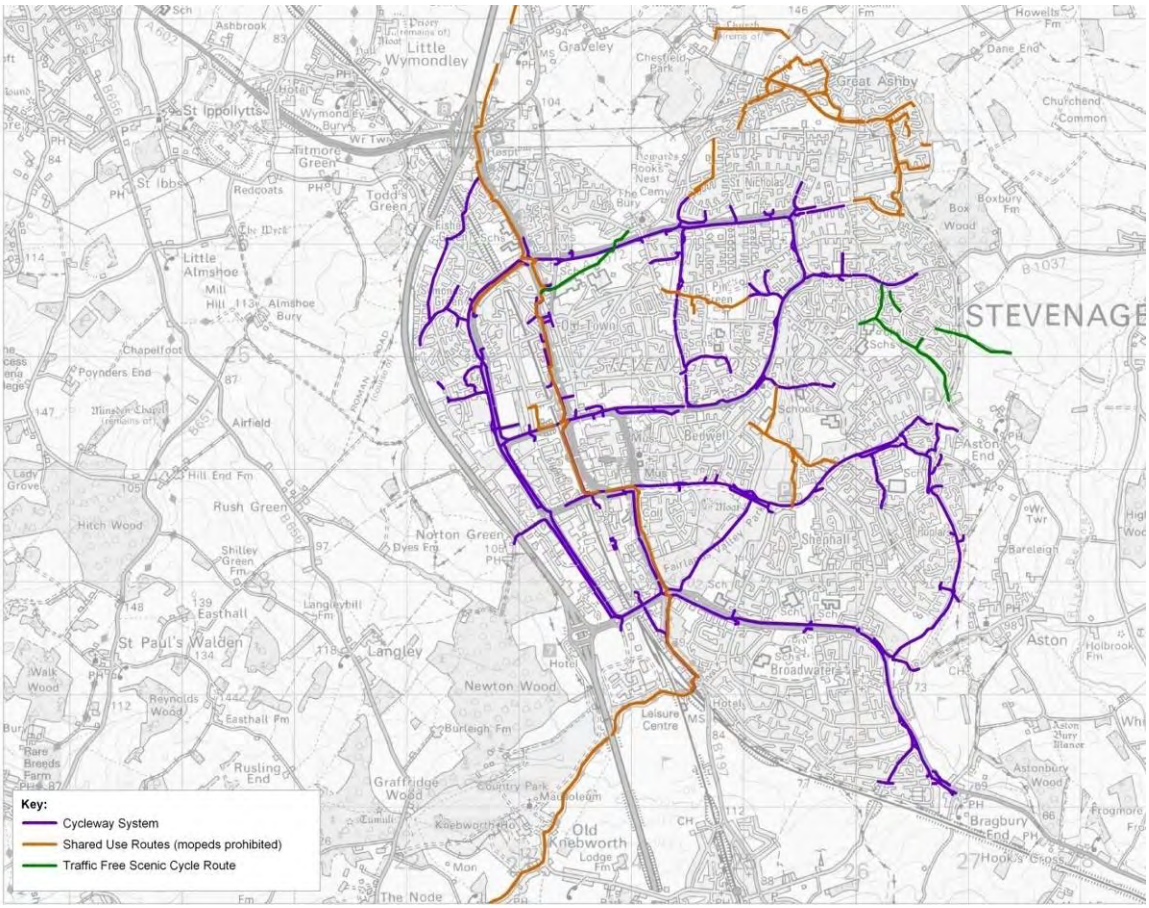
Journey Purpose	% of trips
Shop	25.0%
Work	4.8%
Recreation	7.1%
Other Unspecified	11.9%
Transport Connection	2.4%
Education	11.9%
Return Home	36.9%
Total	100%

[4] Stevenage Draft Data Report (HCC, 2008)

2.1.6 *Cycling*

Stevenage has an extensive segregated cycle way network which was designed to run alongside the primary road network, therefore providing good connectivity between the employment and residential locations. This network extends for nearly 40km around Stevenage and accommodates not only cyclists but also powered two-wheelers, up to 50cc as well as pedestrian routes adjacent to the cycle routes. The existing cycle network is shown in **Figure 2.5** below;

Figure 2.5 – Existing Cycle Network in Stevenage



2001 census data provides a lot of information about the journey to work patterns of people within Stevenage. The census indicated that 2.9% of people that worked in Stevenage cycled to work. Interestingly nearly all of these trips were made by people living and working in the town with only 0.1% of people commuting from out of town. This suggests that the majority of the trips are relatively short distance. This figure of 2.9% of commuting trips made to employment in Stevenage compares to 1.9% across Hertfordshire. Although Stevenage has a slightly higher proportion of cycle trips than Hertfordshire it would be expected that this would be even higher with the cycleway provision in place in Stevenage.

2.2 Travel Patterns

As outlined above, Stevenage has very good internal transport links through the extensive highway network and segregated pedestrian and cyclist networks

within the town. Its wider strategic connectivity is also strong with good rail and road links to other major conurbations in the county and wider region as well direct routes in to London. Analysis of the 2001 Census data shows that whilst car ownership levels in Stevenage are lower than those across the rest of Hertfordshire they are slightly higher than averages across the rest of England and Wales. Almost a quarter of households within Stevenage do not own a car, while nearly a third own multiple cars.

Table 2.5 – Car Ownership Levels in Stevenage[5]

Car / Van availability	% of households		
	Stevenage	Hertfordshire	England & Wales
None	23.05%	17.69%	26.79%
One	44.71%	41.96%	43.8%
Two	26.37%	31.61%	23.53%
Three	4.54%	6.56%	4.51%
Four of more	1.32%	2.18%	1.38%
All households	100%	100%	100%

More detailed analysis of the levels of car ownership within the town shows that there are some significant variations in the level of car ownership. This indicates that there are several output areas close to the town centre, in Bedwell and the Old Town wards, which have much higher levels of non car ownership than the rest of the county and national averages. The opposite happens when you look at the wards on the outskirts of the town with high car ownership levels (only 10% of households don't have access to a car). It could be assumed from this that those residents living close to the town centre place less reliance on the car as they have better access to good transport links in the town centre (rail, cycle, walk, bus etc), but it could also be related to a number of other issues such as land availability for residential parking and the cost of this.

The 2001 census showed that there were approximately 39,500 employed residents in the town, of whom 58% lived and worked in the town. This therefore means that approximately 16,700 commuted to locations outside of the town to work. Over 9% (3,650) of employed residents commuted to Greater London, with other popular destinations including North Herts (9%), Welwyn and Hatfield (9%) and East Herts (4%). With the exception of destination in Luton, Essex and St Albans the other key out-commuting destinations show strong north/ south patterns directly relating to the A1(M) corridor and other key rail corridors. This is further emphasised by the mode split of those people out-commuting from Stevenage with 83% travelling by car and a further 11% by train.

A similar analysis of those people who work in Stevenage showed that 42,000 people work in Stevenage, with approximately 58% living in Stevenage but the remaining 42% travel to Stevenage. The key origins of in-commuters to the town were North Herts (15%), Bedfordshire (8%), East Herts (4%) Welwyn and

[5] Stevenage Draft Data Report (HCC, 2008)

Hatfield (3%) and Greater London (3%). This again reflects the out-commuting pattern with the majority of people travelling from outside Stevenage to work being along the north south road and rail links. There was an even greater reliance on the car for those people travelling in to Stevenage to work than those travelling out, with approximately 89% of using the car, but only a further 5% using the train.

Of those people living and working in Stevenage (58% of residents), there was still a reliance on the car with around 59% of people using this mode. However it is interesting to note that approximately 14% of people chose to walk and a further 5% chose to cycle. This is most likely as result of the shorter distances involved and direct provision of segregated facilities for these modes. Analysis of the origin and destination of these walking trips shows that most people walk to the town centre from within a 1 mile distance with some other key destinations being Gunnels Wood and Pin Green. A very different pattern is observed for the cycling movements with the main destinations being Gunnels Wood followed by Pin Green. There are relatively few trips to the town centre by bike. A further 8% travelled by bus with the vast majority travelling from the east and south of the town where the majority of the residential areas are and very few travelling from the west and north.

2.3 Road Side Interviews

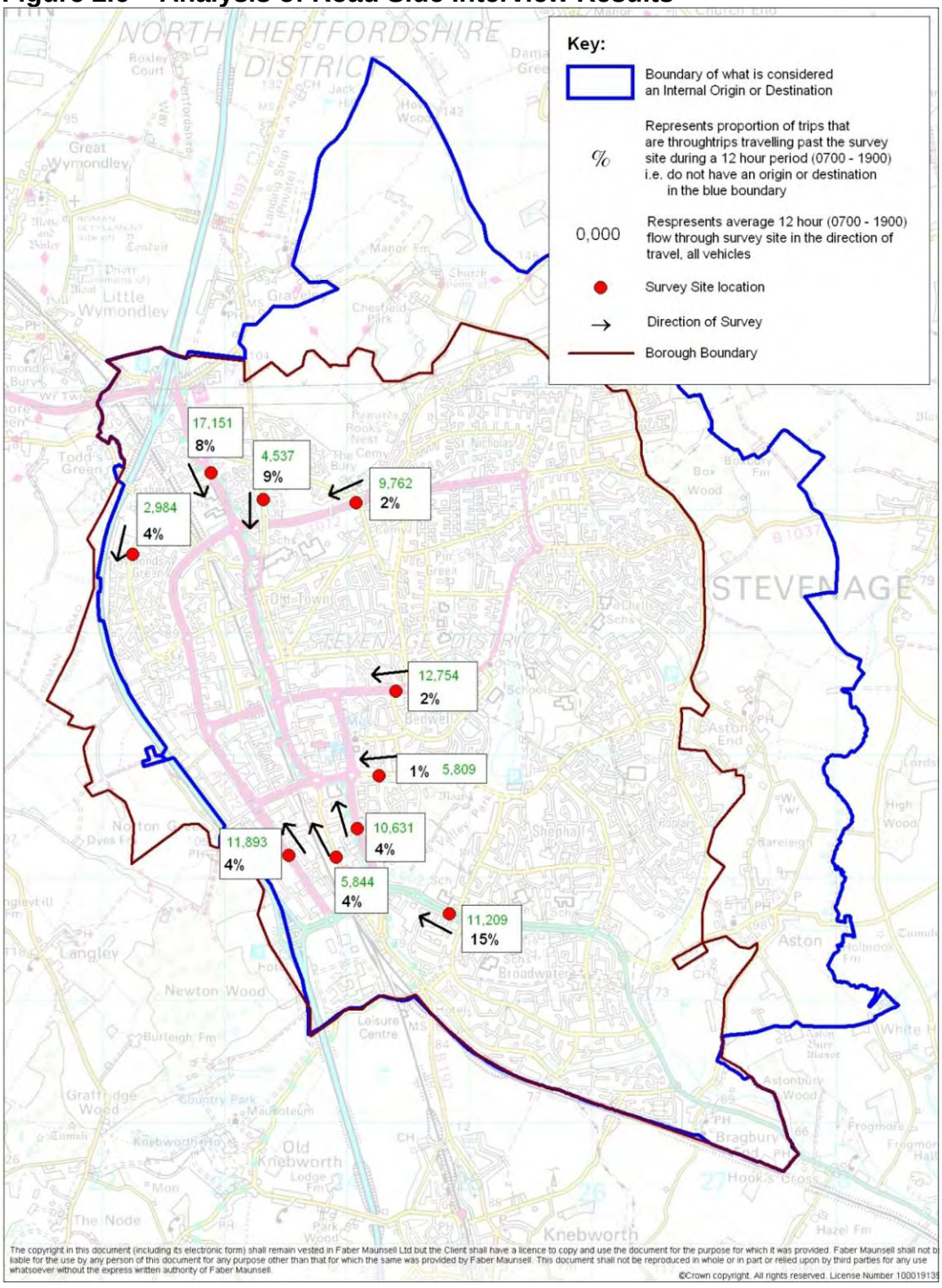
As part of the data collection exercise to build the computer traffic model a number of Road Side Interviews were undertaken on key routes within Stevenage. The location of these is shown in **Figure 2.6** below. The surveys involved cars and light/ heavy goods vehicles being stopped and asked a series of questions relating to their journey in order to try and build an accurate picture of the highway travel patterns within the town. Although much of the census analysis described above represents those people who live or work in Stevenage it does not account for those people on the road network within Stevenage who neither have an origin or destination within the town. Analysis of the results of these surveys shows some interesting trends which have been summarised below.

- With the exception of the A602 Broadhall Way in the south and the A602 Hitchin Road B197 North Road in the north less than 5% of people on the road in Stevenage (observed at the survey sites) do not have an origin or destination in the town. This represents a very low proportion of trips.
- The A602 Broadhall Way in the south and the A602 Hitchin Road B197 North Road in the north most likely have higher proportions of trips with neither an origin or destination in the town as they are some of the main access routes to and from the A1(M).
- The analysis of trips on the A602 Broadhall Way shows that over 15% of vehicles travelling northbound on this route over the 12hr assessment period neither have an origin or destination in the town centre. This could be because this route represents one of the main links from the east to the A1(M).

The surveys were undertaken in November 2008 and are explained in more detail in the **Appendix Volume 3 – Data Collection Report.** Overall some very good sample rates were achieved at the survey which indicates that a

good representation of people's travel patterns was achieved. Some locations achieved better sample rates than others, but this would be expected given the varying traffic flows across the network and also the practicality of carrying out surveys at particular locations. During the 12 hours that data was collected (0700 – 1900) the sample rates ranged from 8% on the A602 (but approximately 1,000 surveys obtained) to over 35% on Old Hale Way where traffic flows are considerably lower. An average sample rate of 17.6% was achieved across all sites, meaning that nearly 1 in 5 of all trip patterns were observed across Stevenage.

Figure 2.6 – Analysis of Road Side Interview Results



2.4 Development Growth

2.4.1 Existing land use characteristics

Stevenage is the third largest settlement in Hertfordshire by population, and features as a key commuter settlement given its strong transport connections. The town includes a traffic free shopping area, a leisure park and also distinct industrial and residential areas as a legacy of its New Town status when the town was planned in 1946. There are several key employment sites across the

urban area along with the town centre itself which is home principally to retail interests. There are also a number of offices located above the retail outlets as well as a number of office blocks on the outskirts of the centre.

Gunnels Wood is by far the largest employment site in Stevenage. This is situated between the A1(M) and the town centre, which provides the location with some key strategic road and rail links for high profile occupiers of the site. The site is made up of a large range of businesses, from small and medium businesses through to some very large employers including GlaxoSmithKline (GSK) and MBDA. Nearly 19,000 employees work on the estate for approximately 300 different businesses.

In addition to Gunnels Wood area there is also a concentration of warehousing and light industry at the Pin Green Industrial Estate to the northeast of Stevenage. Up to 5,000 employees work on the estate with a few major storage and distribution businesses occupying the site.

The Old Town makes up the other major concentration of employment within Stevenage. This is broken down in to three distinct areas including the High Street, Pond Close Industrial Estate and Primett Road. The employment land in these areas is predominantly made up of offices and service sector administration.

In addition to the four main employment sites of Gunnels Wood, Pin Green, the town centre and the Old Town there are also a number of free standing business premises within Stevenage. These provide a significant level of employment to supplement the main sites and include the Chells Enterprise Village and Icon One, Two and Three buildings[6].

2.4.2 Future Growth

There are a number of further developments proposed within and surrounding the town. These can be broadly broken down into 2 categories, including small scale developments and major development proposals to accommodate the proposed East of England Growth. The details of the proposed developments have been included in the **Forecasting Report** and have been fed in to the transport model for assessment of the likely impacts on the transport network of this growth. The small scale developments include residential and commercial expansions and will most likely impact on Stevenage in the short term (0 – 5 years).

There are also a number of major development proposals that would come forward through the planning system to accommodate the growth proposals indicated in the East of England Plan. The East of England Plan is the regional spatial strategy for the period 2001 to 2021 and outlines plans for growth within the region.

The main features of the East of England in and around Stevenage include

- 16,000 new homes to be built in sustainable communities in and around Stevenage by 2021, up to 6,400 of which could be affordable homes
- At least 9,000 new jobs

[6] SBC:ELSE2005

- A new park to the North of the town
- The rebuild or refurbishment of Stevenage secondary schools under the Government's *Building Schools for the Future* programme
- Expanded facilities at the Lister Hospital and a major restructure of local primary health care services.

It is anticipated that these developments will impact on Stevenage in the medium to longer term (5 – 25 years). In order to accommodate these proposals a number of major development sites are to be considered including:

The **A1(M) West of Stevenage** development consists of proposals for new homes and community facilities on land to the west of the A1(M) on the edge of Stevenage. These proposals were examined at public enquiry in 2004. On the 20th October 2005, the First Secretary of State (Rt Hon John Prescott MP) informed Stevenage Borough Council that he was "minded to grant" planning permission for 3,600 homes plus schools, community facilities, playing fields, shops and transport infrastructure at Stevenage West. Details of these proposals are still being refined but the quantum of this development has been considered as part of the Stevenage UTP.

The **Stevenage and North Hertfordshire Area Action Plan (SNAP)** will contain planning policies to direct the future growth of Stevenage to the north and west to deliver the East of England Plan proposals. The SNAP document is being prepared jointly by Stevenage Borough Council and North Herts District Council as proposals include some development in the North Herts district. In order to deliver this growth it is anticipated that, alongside a sustainable transport strategy to try and reduce reliance on the car, some new highway infrastructure may be required. The traffic model that has been developed as part of the Stevenage UTP has been used to assess the likely impacts on the current infrastructure and also determine what additional routes may be required.

The **Stevenage Town Centre Redevelopment** currently consists of a submitted planning application. This consists of a range of new shops including a major department store, new leisure facility, new town centre homes, a new museum, library and new civic facilities along with improved access, a new bus station and changes to town centre parking. Again these proposals have been included within the future scenarios that are being looked at as part of the Stevenage UTP.

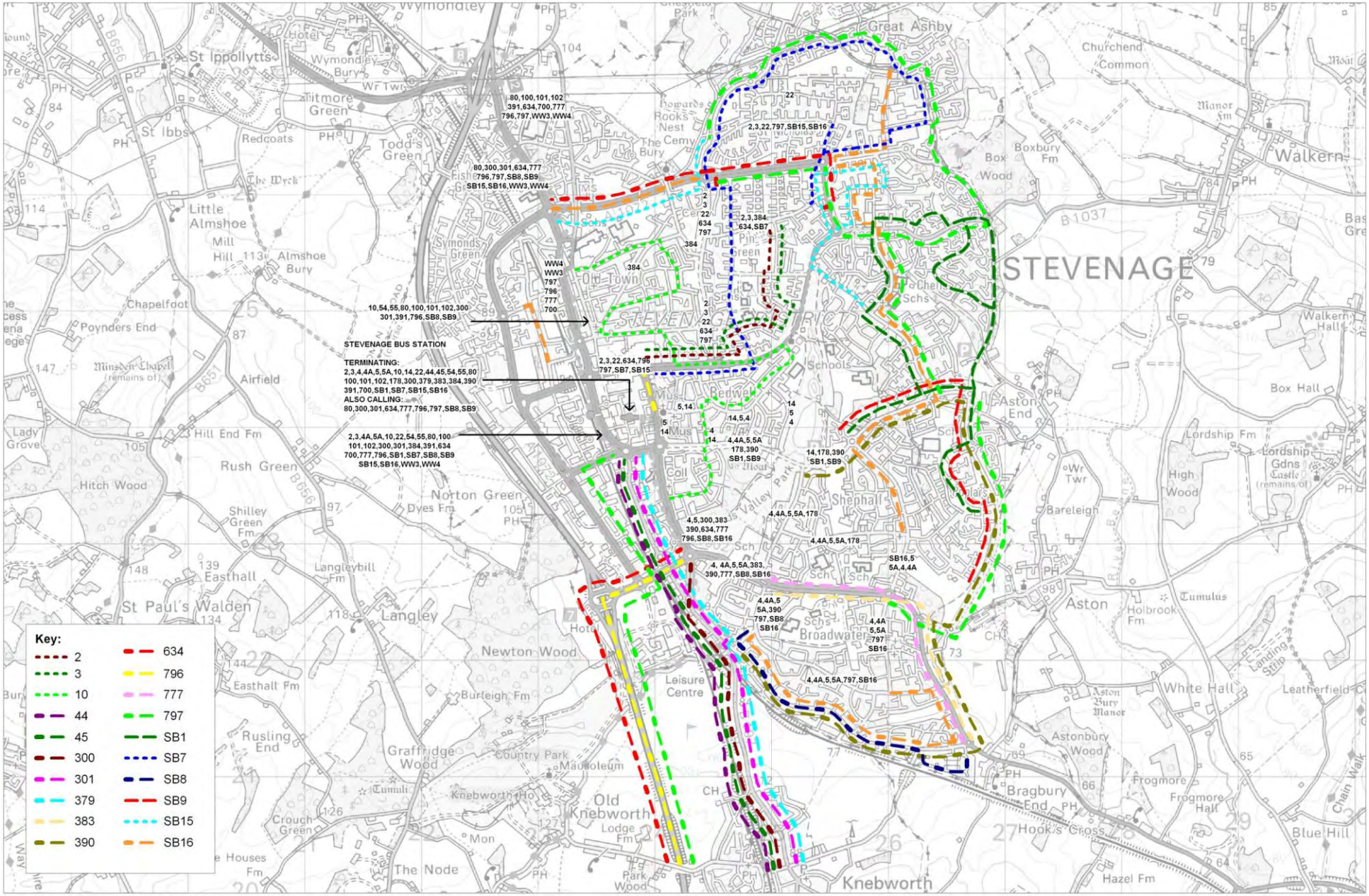
2.5 Summary of Key Transport Characteristics

The key transport characteristics in Stevenage are considered to be;

- Good strategic accessibility due to the proximity A1(M) to the west of the town, with Junction 7 providing access to the south of the town and Junction 8 to the north of the town;
- High capacity urban road network with many of the roads constructed to dual carriageway standard;
- Isolated congestion problems at specific locations during the peak hours;
- Good level of bus provision which is commercially driven and well patronised;

- The town is a regional interchange point for rail (as noted in the East of England Plan);
- The rail and bus stations are located close to one another with approximately a 3 minute walk time between the two stations;
- An extensive, high quality, cycling and walking network with some 40km of segregated routes.

Figure 2.7 – Stevenage Bus Network



Overarching Targets and Objectives

3 Overarching Targets and Objectives

3.1 Introduction

The Stevenage UTP needs to support the wider policy context for transport set at the national and regional levels, together with the local policy context as identified in the HCC Local Transport Plan and the local policy context of SBC.

At the national level, the government has set out its key goals for transport in Towards a Sustainable Transport System (TaSTS), published in October 2007 (http://www.dft.gov.uk/about/strategy/transportstrategy/pdfsustaintranssystem.pdf) and in Delivering a Sustainable Transport System (DaSTS) (http://www.dft.gov.uk/about/strategy/transportstrategy/dasts/dastsreport.pdf) published in November 2008 as follows:

- to **support** national **economic** competitiveness and **growth**, by delivering reliable and efficient transport networks;
- to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change;**
- to **contribute to better safety, security and health** and longer life-expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- to **promote** greater **equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society;
- to **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**.

The Regional Spatial Strategy for the East of England (Government Offices East of England) sets out a strategy to guide planning and development up to 2021. The East of England Plan was first published in draft form in December 2004 and has subsequently been revised before the finalised document was published in May 2008. The key transport related objectives in the Plan are as follows:

- locating development so as to reduce the need to travel
- effecting a major shift in travel away from car use towards public transport, walking and cycling;
- maintaining and strengthening the East of England's inter-regional connections by improving access to economic opportunities in London;
- ensuring adequate and sustainable transport infrastructure;
- promoting social cohesion by improving access to work, services and other facilities, especially for those who are disadvantaged;
- providing a network of accessible multi-functional green space;

It is imperative that the UTP responds to this agenda for transport so that it complements future planning of the area which will be taken forward through the Local Development Framework process.

HCC's approach to transport is formulated as part of its LTP. The current LTP covers the period from 2006/7 to 2010/11 and is currently in the process of being rolled forward for the next five year period and will also include a longer term strategy for transport across the County.

The County Council's LTP transport objectives contribute to the delivery of the shared priorities, which the DfT outlined its LTP Guidance, that Highway Authorities have to deliver, namely:

- Tackling congestion;
- Supporting the economy;
- Reducing casualties;
- Respecting the environment; and
- Improving accessibility.

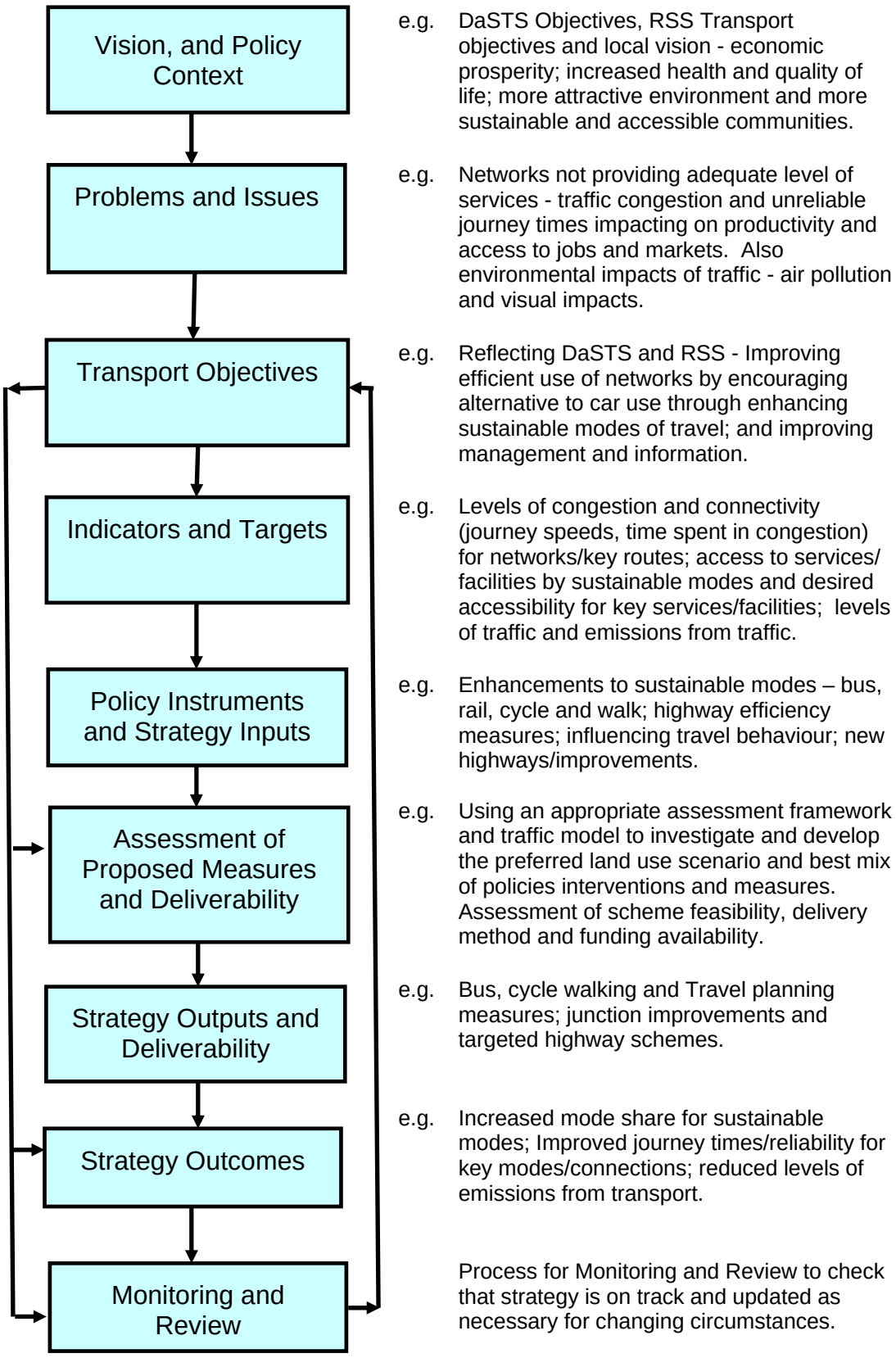
This UTP responds to transport problems that have been identified through local consultation and knowledge but the overall direction and content of the plan needs to respond to transport objectives and targets established in the relevant national, regional and local policy frameworks

The development of a transport plan for an area involves a number of steps but the key aspects of the structure are:

- The wider policy context (national, regional and local);
- Existing transport problems and issues and future threats
- A clear definition of objectives, indicators and targets as the starting point for identifying future transport problems and strategy responses;
- Possible transport interventions and their potential contribution to delivering objectives;
- Potential barriers to implementation of transport interventions;
- Identification of future development opportunities and threats;
- Assessment of possible measures and their feasibility/deliverability;
- Identification of the preferred schemes and programme;
- Formulation of a monitoring and review process for the transport strategy.

This process has several virtues and provides a structure within which participation can be encouraged at all the key stages in decision-making. It offers a logical basis for proposing solutions, and also for assessing proposals suggested by stakeholders. It ensures that the appraisal of alternative solutions is conducted in a logical, consistent and comprehensive way against the full set of transport objectives. The process for developing the UTP therefore has to draw from a number of policy drivers and subsequently attempt to address the appropriate objectives. This has been summarised in **Figure 3.1** below.

Figure 3.1: Relationship of Policy Framework and Objectives for the UTP



The LTP objectives are supported by targets and a range of indicators against which performance towards achieving targets may be measured.

The targets and objectives are framed by the County Council's vision for what the future of transport in Hertfordshire over the next 20 years, namely;

> *'to provide a safe, efficient and affordable transport system that allows access for all to everyday facilities. Everyone will have the opportunity and information to choose the most appropriate form of transport and time of travel. By making best use of the existing network we will work towards a transport system that balances economic prosperity with personal health and environmental well being.'*

3.2 Local Transport Plan Objectives

The UTP is intended to be the local expression of the LTP

The Hertfordshire Local Transport Plan 2006/07- 2010/11 sets the framework for achieving the vision for transport in Hertfordshire. This UTP has been developed with a view to delivering the following Local Transport Plan Targets which are listed under the DfT's shared priorities below;

Safety

- To improve safety for all by giving the highest priority to minimising the number of collisions and injuries occurring as a result of the transport system.

Congestion

- To obtain best use of the existing network through effective design, maintenance and management.
- To manage the growth of transport and travel volumes across the county, and thereby secure improvements in the predictability of travel times
- To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources.

Accessibility

- To develop a transport system which provides access to employment, shopping, education, leisure and health facilities for all, especially those without a car and those with impaired mobility.
- To ensure that the transport system contributes towards improving the efficiency of commerce and industry and the provision of sustainable economic development in appropriate locations.

Air Quality

- To mitigate the effect of the transport system on the built and natural environment and on personal health

Quality of Life

- To raise awareness and encourage the use of alternative modes of transport through effective promotion, publicity and information
- To reduce the need for the movement of people and goods through integrated land use planning, the promotion of sustainable distribution and the use of telecommunications.

3.2.1 *Local Transport Plan Objectives*

The LTP indicators and targets relevant to the UTP are shown in the table below;

Table 3.1 – LTP Indicators

Indicator	Baseline (2003/04)	Progress 2008/09	Target (2010/11)
Principal Road Condition	8% (2005-2006)	6%	No more than 8%
Non principal classified road condition	19.44% (2004-2005)	9%	No more than 19.44%
Unclassified road condition	19.29% (2004-2005)	13%	No more than 19.29%
Footway condition	52%	24%	No more than 52%
Killed and Seriously Injured	1084 (1994-1998)	459	No more than 600
Children Killed and Seriously Injured	113 (1994-1998)	37	No more then 56
Total Slight Injuries	5509	3925	No more than 5509
Public transport patronage	31 million journeys per year	35 million	31 million journeys per year
Bus service user satisfaction	55%	77%	60% (2009/10)
Bus punctuality	80% (2004/05)	91%	80%
% of people who find it difficult to travel to a local hospital (Accessibility)	29%	30%	24%
Change in area wide traffic mileage	20.7 million	21.05 million	22.4 million
Cycling trips	2397 trips per day (2004/05)	2778	2658 (11% increase)
Change in peak period traffic flows	Watford 22553	21,943	23284
	St. Albans/ Hatfield 16415	14,623	17289
Congestion	To be established		To be set
Air quality	No longer		To be set

	required		
Mode share of journeys to school	57.5%	Age 5-10 61% Age 11-16 76%	60% sustainable modes
Passenger transport information, User satisfaction	39%	65%	50%
Rights of way	61% (2004/05)	72%	80%
School travel plans	14%	74%	83%
Speed limit compliance	56% (2004/05)	64%	60%
Abbey Line	375,000 journeys	463,193	750,000 journeys

3.3 LTP Daughter Documents

There are also a number of daughter documents to the current LTP including;

- Cycling Strategy
- Bus Strategy
- Rail Strategy
- Accessibility Strategy
- Speed Management Strategy
- Road Safety Plan
- Rights of Way Improvement Plan

3.3.1 Cycling Strategy

The Cycling Strategy lists two headline objectives:

- more people cycling more often as a convenient, quick, healthy and sustainable form of transport for short journeys
- more people cycling more often as an activity that contributes positively to the primary shared local transport objectives
- To achieve a target of 2658 trips per day by 2010/11

3.3.2 Bus Strategy

The Bus Strategy lists the following targets:

- Reverse the declining trend in bus travel and restore patronage to 2004/04 levels by 2010/11 to 31m passengers per annum
- Achieve 60% satisfaction levels with services by 2010/11
- 95% of buses leaving from a terminus are to be between one minute early and five minutes late
- 70% of buses leaving intermediate timing points are to be between one minute early and five minutes late

- Achieve 50% satisfaction levels with passenger transport information by 2010/11

3.3.3 *Rail Strategy*

Rail targets and objectives are set by Network Rail and the rail operators, in this case National Express East Anglia. The Rail Strategy identified opportunities for partnership working between HCC and rail operators.

3.3.4 *Rights of Way Improvement Plan*

The Rights of Way Improvement Plan sets out the vision for Hertfordshire, which is

- To create, by 2026, an accessible and integrated off-road network for non-motorised users based on rights of way and other routes, that meets the current and perceived future needs and demands of Hertfordshire's residents and visitors.

The vision will be met through implementation of the following 12 core actions:

- Develop routes that cater for the needs of people with limited mobility and visual impairments
- Develop the rights of way network from significant passenger transport connections
- Reduce the number of unnecessary physical barriers on the network
- Promote Hertfordshire's countryside to residents and visitors
- Develop appropriate well-maintained links into the countryside for use by local people
- Create and develop off-road routes linking communities with places of work, schools and other local facilities
- Extend the network currently available to cyclists and horse riders
- Help people wishing to improve or maintain their health by developing a range of circular off-road routes
- Ensure that opportunities to protect, extend and enhance the off-road network are included in proposals for new developments
- Where the off-road network is affected by busy transport routes work to ensure that appropriate measures are taken to improve the safety and attractiveness of the routes for users
- Address problems of fly-tipping, litter and dog-fouling in partnership with appropriate local and regional agencies
- Identify and address potential demand for access to the countryside amongst those who currently do not use the network

3.3.5 *Road Safety Plan*

This Road Safety Plan will deliver the Local Transport Plan (LTP) 2006/7-2010/11 objective; *'To improve safety for all by giving the highest priority to*

minimising the number of collisions and injuries occurring as a result of the transport network'.

It will also deliver Hertfordshire's casualty reduction targets:

- To reduce the number of people killed or seriously injured in road collisions to no more than 600 by 2010
- To reduce the number of children killed or seriously injured in road collisions to no more than 56 by 2010
- No increase in slight casualties (5509)

The DfT have recently produced a consultation document *A Safer Way: Making Britain's Roads the Safest in the World* which seeks views on the targets and measures for improving road safety beyond 2010. This document will play a key part in influencing road safety policy post 2010 and at present proposes the following targets;

- To reduce road deaths by at least 33 per cent by 2020 compared to the baseline of the 2004–08 average;
- To reduce the annual total of serious injuries on our roads by 2020 by at least 33 per cent compared to the baseline.
- To reduce the annual total of road deaths and serious injuries to children and young people (aged 0–17) by at least 50 per cent against a baseline of the 2004–08 average by 2020.

3.3.6 Speed Management Strategy

The Speed Management Strategy sets out objectives as follows:

- To facilitate the safe and efficient movement of people (including pedestrians) and goods whilst protecting and enhancing quality of life within communities whilst minimising the effect on the local environment
- To achieve a consistent approach to setting speed limits based on the function and nature of the route
- To enable a consistent approach to the implementation of speed management tools
- To increase driver awareness of appropriate speed by ensuring a clear and logical approach to the setting of speed limits and speed management tools

The County Council will ensure that speed limits are introduced and reviewed in a manner consistent with the current government guidance. Exceptions to usual practise will be set out in the Speed Management Strategy which will be subject to periodic review.

The introduction of speed management measures will only be considered where it can be shown that their introduction will contribute to the delivery of the Local Transport Plan objectives and can be measured against one of the performance indicators. These primarily include safety (casualty reduction), speed limit compliance, mode share to schools and increasing cycling trips. Schemes will normally be identified through the Urban Transport Plans. The

range of measures considered will take into account the relevant regulations; best practise and local experience in Hertfordshire and may include the use of appropriate technology

This Speed Management Strategy is currently being reviewed and it is anticipated that it will be endorsed by the end of 2009.

3.3.7 *Accessibility Strategy*

The vision set by the Accessibility Strategy is

- To have a reasonable standard of access for all by appropriate transport to key services of health, learning, work, food shopping and leisure.

The objectives are

- To support those who are disadvantaged to achieve their potential and to access sustainable employment
- To work in partnership with transport providers to achieve an efficient, affordable and enhanced transport system
- To develop a transport system that provides access to employment, shopping, education, leisure and health facilities for all, including those without a car and those with disabilities

3.3.8 *Intelligent Transport Systems (ITS) Strategy (2008/9 – 2010/11)*

This strategy covers a three year period until 2011 (coinciding with the end of the second Local Transport Plan) and has the objective of identify ways in which ITS can contribute towards achieving the County Council's LTP objectives. The importance of ITS to transport in Stevenage has been a key consideration throughout the UTP and the applicability of these systems demonstrated through the development of specific measures.

3.4 Hertfordshire County Council Key Policies

In addition to the above targets, the plan will also proactively deliver the following County Council policies.

HCC has developed a number of proactive policies which will aim to be addressed through the UTP. These include;

- Review of direction signing for all road users (primarily motorists, cyclists and pedestrians)
- Review of speed limits
- Identification and promotion of pedestrian priority routes
- Reduction in congestion
- Reduction in street clutter through removing unnecessary signs and relocating other street furniture
- Reviewing provision of parking facilities for cycles, powered two-wheelers and disabled motorists
- Ensuring that all pedestrian crossing are compliant with current Disability Discrimination Act requirements

- Review of route hierarchy

Building on the HCC Proactive Policies there are a number of key challenges that will need to be addressed within the UTP, including;

- To help people feel safe and secure
- To tackle the causes and impact of congestion
- Deal with worn out roads and pavements
- Reduce the impact of new development on the environment
- Maximise opportunities for all children and young people
- Support the independence of the growing number of older people
- Maximise efficiency savings to help keep Council tax at an acceptable level

In addition, HCC corporate guidance now places an emphasis on the A1(M) through continuing to press for appropriate infrastructure investment to help the local economy- particularly through the widening of the two-lane sections of the A1(M).

3.5 Stevenage Local Objectives – Local Development Framework

SBC's Core Strategy sets out the spatial vision for the future of the town. The spatial vision is a description of how Stevenage would change by 2021. In the Core Strategy Preferred Options it said that Stevenage should be:

- An emerging regional centre that is prosperous, healthy, clean and safe; and;
- A balanced and more self contained community with a full range of jobs, homes and services.

The Core Strategy vision also says that, through Stevenage Borough Councils planning policies, they aim to:

- Make good use of land and provide a range of new homes to buy and rent;
- Regenerate the neighbourhood centres; and
- Provide green spaces that connect the town and surrounding countryside.

To help deliver the vision the Borough Council have developed a number of strategic objectives. The following are considered to be relevant to the UTP and have been scored within the assessment framework (although this does not have an influence on the total indicator score for each scheme)

- SO01 - Sustainable Development (Reducing travelling distances through sustainable development)
- SO02 - Prosperity through regeneration and growth (Promote a reduction in the need to travel)
- SO05 - Infrastructure (Provide infrastructure to support new homes and

jobs)

- SO12 - Sustainable Transport (Promote journeys by bus, train, bike and foot)
- Combination of SO04/SO06/SO07 - Providing 'infrastructure' to support key projects in EoEP.

Local Problems

4 Local Problems

4.1 Identification of Issues and Problems

The foundation of this UTP is the identification of issues and problems specific to Stevenage. In order to develop a comprehensive picture of all the issues and problems in the area a range of techniques were used. These primarily included:

Existing policy – a policy review was conducted to gain a contextual understanding of present and proposed measures to address issues, problems and opportunities. This included the Hertfordshire Local Transport Plan 2006/07 – 2010/11 (LTP2) and daughter documents:

Existing policies and development proposals were also discussed with planning officers at HCC, SBC and NHDC.

Data sets – Data sets were provided by HCC through their Data Report and were supplemented by additional information. Data sets were reviewed to gain an understanding of general travel and safety trends in the area. This also included an extensive data collection exercise to inform the building of a computer simulated traffic model. The surveys that were undertaken included Road Side Interviews where cars were stopped and asked questions about their journey and also traffic counts to determine the volume and type of vehicles travelling along key routes.

Officer and Member consultation – A workshop event was held with HCC Officers and relevant locally elected Members (County and Borough). This gave the project team an opportunity to introduce the study and gain detailed information about network operation. The issues that the project teams had identified were presented along with additional issues raised by different groups.

Stakeholder consultation – The stakeholder workshop process invited members of stakeholder groups with an interest in transport issues to an event where they were able to express their views. This day consisted of a presentation on the background to the study followed by a series of facilitated workshop groups where individuals could discuss the issues in a more conducive environment. The report of this event summarises all of the outcomes and is shown in **Appendix Volume 2 -*'Stevenage Urban Transport Study, Stakeholder Consultation Report, December 2008'***.

Site visits – Site visits were undertaken to gain an understanding of the local environment and to note congestion, sustainable transport, public transport, parking and safety issues in the area. These visits also provided an opportunity to audit and validate identified issues and problems.

The consultation process focussed on various modes of transport, rather than the DfT's shared priorities, to stimulate discussion and for ease of presenting a programme of works. (Chapter 7 on the Programme of Measures Required describes the assessment framework where the DfT's shared priorities have been considered.)

4.2 Key Local Problems

The following tables outline the key local problems identified through the above process. These problems have been grouped under the following specific themes

- Accessibility
- Walking
- Cycling
- Public Transport
- Congestion
- Highways
- Parking
- Sustainable Travel
- Environment

Issues, problems and opportunities have been given a unique alphanumeric reference (e.g. Walking problem 1 = W1).

4.2.1 Accessibility

Table 4.1- Accessibility Problems

Accessibility	
A1	Difficulty accessing the rail station for all users
A2	Access to the hospital is problematic, particularly for the mobility impaired
A3	Lack of disabled taxi drop-off points in the town centre
A4	Poor integration between bus and rail services
A5	Road and rail infrastructure causes severance and limits movement
A6	Poor links between residential and employment areas
A7	Unsuitability of Fairlands Way for all users
A8	Walking and cycling links to Pin Green need to be improved
A9	Conflicts between buses, taxis and 'Kiss and Ride' cars outside the rail station
A10	A lack of non-car links between the town centre/High Street and retail parks

4.2.2 *Walking*

Table 4.2- Walking Problems

Walking	
W1	Conflicts between cyclists and pedestrians in the town centre
W2	Gaps/breaks in the pedestrian network restrict movement
W3	Lack of suitable crossing facilities across the network
W3.1	Lack of controlled pedestrian crossing facility near Basils Rd junction
W3.2	Lack of direct pedestrian crossings from Chells Manor to Sainsbury's store at the Poplars
W3.3	Lack of a pedestrian/ cyclist crossing in front of Lister Hospital
W3.4	Lack of pedestrian links over Argyle Way for Gunnels Wood employees
W3.5	Lack of a safe route for pedestrians and cyclists between Stevenage and Walkern
W3.6	lack of crossings points across Great Ashby Way
W4	Unattractiveness of pedestrian underpasses
W5	Issues of personal safety with some pedestrian routes
W6	Lack of provision for vulnerable road users/ mobility impaired
W7	Pedestrian links between the town centre and the old town are poor
W8	No covered walkway from the rail station to the town centre
W9	Lack of a walking strategy for Stevenage
W10	Excessive amount of street clutter in places
W11	Lack of coherent routes along key desire lines
W12	Pedestrians walking in the carriageway where there is a lack of footway provision at certain locations

4.2.3 *Cycling*

Table 4.3- Cycling Problems

Cycling	
C1	Cycleways are under used
C2	Perceived problems with the use of mopeds and unauthorised vehicles on cycleways
C3	Gaps/breaks in the current cycle network limit connectivity
C3.1	North-south route through the town centre broken by the Tesco development
C3.2	Lack of a coherent cycle link Northwards along Gresley Way
C3.3	Access to the rail station from the west is poor

Cycling	
C3.4	Lack of direct cycle routes to surrounding residential areas
C4	Perceived problems with underpasses
C5	Lack of direction signs for cyclists along network
C6	Conflicts between cyclists and pedestrians in the town centre
C7	Many blind corners along the cycle network
C8	Many interface points between the cycle and road network are poorly designed
C8.1	Priority given to the vehicles at cycle/road intersections
C9	Lack of cycle facilities at key destinations
C9.1	Lack of secure cycle parking in desirable locations
C9.2	Location of town centre cycle parking is problematic
C9.3	Lack of sufficient cycle parking at the station
C10	Security, lighting and maintenance on the cycle routes is poor
C11	Permeability of the town centre for cyclists is an issue
C12	Insufficient space allowed on some on-road facilities
C13	Cyclists riding on the footway in parts of Stevenage

4.2.4 Public Transport

Table 4.4- Public Transport Problems

Public Transport	
PT1	Overcrowding on peak time trains
PT2	Perceived lack of bus service provision/frequency
PT2.1	The bus frequencies from rural villages to Stevenage are perceived to be poor
PT2.2	Buses do not serve all neighbourhood centres (Shops, surgeries etc)
PT2.3	Perceived lack of bus service around York Road
PT2.4	Perceived lack of direct/frequent services to Lister hospital
PT3	Bus fares are seen to be too high
PT4	Bus station is operating near to capacity
PT5	Bus priority is not extensive
PT5.1	Lack of bus priority on key town centre junctions
PT6	Poor bus usage at Pin Green employment area
PT7	Lack of platform space at the station
PT8	Sustainable modes of travel need greater priority

Public Transport	
PT9	Congestion is adversely affecting bus services
PT9.1	Buses have problems exiting the bus station due to traffic/ congestion
PT9.2	Buses get caught in congestion entering and leaving the bus station
PT10	Lack of integrated ticketing
PT11	Pin Green and Gunnels Wood have low % mode share of bus usage
PT12	Lack of information at bus station and other key locations
PT13	Lack of demand responsive transport

4.2.5 Congestion

Table 4.5- Congestion Problems

Congestion	
CO1	Congestion on the A1(M) impacting on Stevenage
CO2	Peak hour congestion on key junctions in Stevenage
CO2.1	Roundabouts at Great Ashby get blocked at peak times
CO2.2	Excessive queues approaching Gunnels Wood roundabout in the peak periods
CO2.3	Corey's Mill/Sainsbury's signals experience heavy congestion
CO3	Problems caused by school-related traffic
CO4	Cumulative effect of new housing developments on the highway network

4.2.6 Highways

Table 4.6- Highways Problems

Highways	
H1	Rat Running through Stevenage
H1.1	Church Lane being used for rat running to avoid High St
H1.2	Rectory Lane being used as a rat run
H2	Excessive vehicle speeds in parts of Stevenage
H2.1	White Way experiences excessive vehicle speeds
H2.2	Excessive speeds along Valley Way causes issues for on-street parked cars
H3	Lack of east-west links in Stevenage
H4	Priority given to the car driver over other modes
H5	Traffic volumes and speeds deter cyclists

Highways	
H6	Lack of maintenance on footways
H7	Vehicles queuing trying to turn out right out of Mobbsbury Way onto Fairlands Way

4.2.7 *Parking*

Table 4.7- Parking Problems

Parking	
P1	Perceived lack of parking provision at key destinations
P2	Poor car park signing
P3	Mopeds parked at the station cause obstructions
P4	Goods vehicles unloading cause obstructions for traffic
P5	Imbalance between long and short stay parking provision
P6	Obstructions caused by illegal/inappropriate parking along the High Street

4.2.8 *Sustainable*

Table 4.8- Sustainable Travel Problems

Sustainable	
S1	Lack of signing on pedestrian routes
S2	Lack of directional signage for cyclists
S3	Poor co-ordination of bus and rail timetables
S4	Lack of public transport information in suitable locations
S5	Lack of real time information at suitable locations
S6	Lack of business travel plans in Stevenage
S7	Lack of travel marketing to homes and business

4.2.9 *Environmental*

Table 4.9- Environmental Problems

Environmental	
E1	Air quality issues due to congestion within the town
E2	Sustainable modes of travel need to be given greater priority

4.3 Problems Raised Through Public Consultation

As part of the UTP process a public consultation exercise was carried out to give members of the public the opportunity to comment and provide feedback on the content of the UTP. The consultation period ran from the 21st September 2009 to the 30th October 2009. During the consultation process a number of additional problems within Stevenage were raised and these are detailed in **Table 4.10** below.

Table 4.10- Additional Problems Identified

Public Consultation	
PC1	The footpath through Watercress Lane (Poplars) needs to be improved, with a continuation of the Deans Lane footpath to the bridge with Gresley Way.
PC2	Mopeds use the cycle path around Mobbsbury Way school (around Fairlands Way/ Webb Rise) and the footpath is not wide enough to cope
PC3	Speeding on White Way and Mobbsbury Way is problematic
PC4	The speed of traffic coming along Great Ashby Way on approach to Canterbury Way causes is problematic, as well as the speed of traffic on the Canterbury Road link
PC5	Trees and vegetation obstruct the visibility of road signs around the town
PC6	There are currently no bus services in the vicinity of Chells surgery and the routes are quite discontinuous.
PC7	The SB1 service along Six Hills Way does not have any bus stops in the vicinity of Fairlands Valley Park which limits the accessibility of this destination for public transport.
PC8	Safety on buses is a concern for some users
PC9	The amount of commercial vehicles on the roads in Stevenage is a problem
PC10	Hospital parking should be free
PC11	Speed humps are considered by some to be a problem and should be removed
PC12	There are considered to be too many road signs and road markings in Stevenage
PC13	Road surfaces are considered to be poor, especially Martin's Way and its roundabouts

A Public Consultation Report has been prepared which includes the detail of all the comments received. Some of these comments were already addressed within the UTP whilst others were either proposing additional issues, as outlined above, or suggesting amendments to the measures included within the UTP. A response to all the comments received has been provided within the Public Consultation Report which addresses all of the comments raised, and explains how they will be incorporated within the UTP.

Local Opportunities / Future Pressures

5 Local Opportunities / Future Pressures

5.1 Introduction

This UTP takes into account the following known issues, effects and opportunities, **Table 5.1**. Any significant changes will be considered in the future reviews of the plan.

Table 5.1 – Issues, Effects and Opportunities within Stevenage

Issue	Time scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
Increased housing growth- of at least 25,000[7] new homes	Up to 2031	If not managed effectively could significantly worsen the existing highway network problems.	Opportunity to encourage a culture of sustainable travel within the town significantly reducing the impact of the new development New travel patterns and movements that are not currently accounted for. Opportunity to secure some developer funding to improve the transport network within Stevenage.
Employment growth	Up to 2031	If employment growth is not managed effectively it could exacerbate existing problems. However if it is planned effectively with appropriate travel planning measures put in place then the transport impacts could be mitigated.	New travel patterns and movements that are not currently accounted for. Opportunity to secure some developer funding to improve the transport network within Stevenage. Opportunity to introduce a culture of sustainable travel within the town significantly reducing the impact of the new development
Potential new bus station	Up to 2021	Could relieve some of the capacity issues currently experienced at the station	Could present an opportunity to better integrate the rail and bus services within the town

[7] Between 2001 – 2031 with the East of England Plan roll forward, within the town and SNAP area

Issue	Time scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
			centre. Could increase the overall mode share of buses within the town centre.
Increased number of trips on the network due to background traffic growth	Up to 2031	Could exacerbate existing issues within the town	Opportunities could exist to increase the mode share in favour of sustainable modes therefore satisfying LTP and other local targets. Could create a number of new locations where schemes are required to ensure that the network can continue to operate effectively
Changes to educational establishments (BSF programme)		Could exacerbate existing problems around those schools which are being retained and increased in size following the BSF programme.	Could relieve pressure in locations where schools are being closed to combine with the new BSF schools. If school trips are being focused in fewer locations then more resource can be devoted to minimising the transport implications.
Town centre regeneration		Redevelopment of the town centre will change the current land uses and possibly instigate a change in travel patterns to the town centre and possibly increase pressure on existing routes around the town centre	Presents an opportunity to better integrate the transport modes within the town and provide facilities to encourage a switch to more sustainable modes. Good land use planning and funding opportunities through new development could be invested in improving the transport network.

5.2 Future Year Modelling

In order to fully assess the impact of the future growth proposals on Stevenage a detailed traffic model was developed. The comprehensive background to the model development is explained in the modelling documents contained in

Appendix Volume 3. The traffic model was developed with a base year of 2008. This effectively meant that the model was created to replicate traffic conditions in 2008 and travel and traffic surveys were undertaken in November 2008 to assist in the model development. The model was calibrated and validated in line with government guidance to demonstrate that the model platform was robust and could be considered as a sound basis on which to develop future year forecasts about likely travel behaviour and consequent impacts on the transport network. Whilst the model has been used to determine where the problems might occur if the current network conditions didn't change, it has also been used to determine what additional infrastructure may be required to deliver the proposed levels of growth.

5.2.1 *Model years and scenarios*

In line with the UTP requirements and other timescales for delivering growth in the area, namely the East of England Plan a number of future years were created as follows;

- 2014
- 2021
- 2031

Use of these future years meant that the phasing and introduction of development could be tested and the incremental differences and requirements could be established.

As a basis for these future year scenario's it was necessary to make some assumptions about the level of growth or reduction in traffic levels as a result of primarily economic factors. These reflect the fact that, over time, people become better off, car ownership increases and trip making increases. The converse of this can also be true. These factors were developed for each of the future years. They are given in **Table 5.2** and **5.3** below

Table 5.2 – Background growth rates for trips originating in Stevenage

Growth Rates	AM peak hour	Inter Peak hour[8]	PM peak hour
Growth between 2008 - 2014	4.1%	3.4%	1.1%
Growth between 2008 - 2021	4.4%	4.2%	-0.7%
Growth between 2008 - 2031	3.9%	2.0%	-4.4%

Table 5.3 – Background growth rates for trips destinating in Stevenage

Growth Rates	AM peak hour	Inter Peak hour	PM peak hour
Growth between 2008 - 2014	0.2%	3.6%	3.6%
Growth between 2008 - 2021	-3.3%	4.6%	3.7%
Growth between 2008 - 2031	-8.6%	2.5%	2.6%

[8] Average hour between 10:00 – 16:00

For each of these modelled years it was necessary to develop alternative demand scenarios. These were a Do Minimum scenario and a Do Something scenario. The Do Minimum scenario represented what would happen if trends in traffic growth/ reductions continued based on rising or falling incomes and also included all those developments within the area that are considered committed. The Do Minimum scenario's also included all the committed highway schemes that are coming forward in the area. The information on developments was provided by the local planning authority as they are best placed to identify the location, quantum and status of these developments. The Do Something scenario represented all of the development and growth which was assumed in the Do Minimum along with all of the proposed development which is not considered committed or fixed. The detail of what was considered a Do Minimum or Do Something scenario is included within the Development Log contained within **Appendix Volume 3 – Forecasting Report. Table 5.4** below summarises what was included in each scenario and it should be noted that in each of the future years it is assumed that the growth that has come forward in the previous years has been delivered.

Table 5.4 – Summary of assumed growth in each of the forecast year

Year	Do Minimum	Do Something
2014	Background traffic growth assumed to take place regardless of development A number of committed developments around the town including: • Schools: Relocation of Valley (170 pupils), Lonsdale (80), Greenside (110), Educational Support Centre (100), closure of Heathcote (875) • Unimplemented housing permissions (534 dwellings) • Large Housing Applications (181 dwellings and 3,000 sq m Retail) • SHLAA Housing Stevenage and N. Herts (138 and 1450 dwellings) • GSK site extension (56,000 sq m) • Car Park Extension (519 spaces) • Health Facilities (4,000 sq m) • Employment (Herts) (29 hectares) • Hitchin Development Sites (38 dwellings)	All Do Minimum growth plus • Schools: Relocation of Thomas Alleyne (836 pupils). New N. Herts College Technology Centre (100) • SHLAA Housing Stevenage (501 dwellings) • SNAP Housing (1675 dwellings) • Health Facilities (4,000 sq m) • TAs (8,580 sq m Retail)

Year	Do Minimum	Do Something
2021	Background traffic growth assumed to take place regardless of development • A number of committed developments around the town including Unimplemented housing permissions (186 dwellings) • Large Housing Applications (52 dwellings) • Employment (Stevenage) (55,000 sq m) • SHLAA Housing N. Herts (1427 dwellings) • Hitchin Development Sites (38 dwellings)	All Do Minimum growth and previous years Do Something plus • Large Housing Applications (2334 dwellings) • Employment (Stevenage) (109,000 sq m) • TAs (30,047 sq m Retail and Office) • School Conversion to Housing (21 dwellings) • SNAP Housing (5300 dwellings)
2031	Background traffic growth assumed to take place regardless of development A number of committed developments around the town including • Housing Applications (51 dwellings)	All Do Minimum growth and previous years Do Something plus • Large Housing Applications (561 dwellings) • Employment (Stevenage) (20,000 sq m) • SNAP Housing (3925 dwellings)

5.3 Future issues and problems

A recent study carried out by Hertfordshire County Council called the Hertfordshire Infrastructure Investment Strategy (HISS) looked at the future pressures on the network within Hertfordshire using the East of England Regional Model. This made a number of conclusions for routes around Stevenage:

- By 2011 it is expected the A1(M) between Junctions 6 – 7 will be operating between 80 – 100%of its design capacity
- By 2011 the A602 approaches to the junction with A1(M) Junction 8 and A1072 (Martins Way) will be operating in excess of 100% of its design capacity
- By 2021 it is expected that without any Regional Spatial Strategy growth in Hertfordshire the A1(M) links between junction 7 and 6 will operate in excess of 100% of design capacity.

In addition to all of the issues that had been identified through the consultation and study work outlined in **Chapter 5**, there were also a number of other problems which could arise as a result of the proposed developments within and surrounding the town. These were identified through the future year modelling. In order to try and resolve the problems that have been identified on the future network a range of highway infrastructure improvements have been proposed as part of HM8 (Increase the throughput of major roundabouts by using either grade separation or filter lanes) which is included in **Appendix Volume 1**.

Targets and Objectives

6 Targets and Objectives

6.1 Introduction

A core component of the Stevenage Urban Transport Plan (UTP) involves developing an agreed range of overarching objectives for the plan. These objectives need to accord with the wider policy framework as well as providing the context and direction specific to the UTP area. The objectives for the Stevenage UTP have therefore been derived from the following sources;

- Identification and analysis of existing problems and issues within Stevenage
- Wider stakeholder consultation
- Existing policy documents

The relationship between the objectives of the Local Transport Plan and those of the UTP is recognised as being of key importance. As such, the UTP objectives have been closely aligned with the LTP so as to provide a quantifiable basis for assessing the progress of the plan.

6.2 UTP Context and Objectives

In order to define the rationale of the UTP for Stevenage the following Context Statement has been developed:

"This UTP will deal with the existing problems and also prepare the town to accommodate the future growth up to 2031."

The objectives for the UTP and their relation to the LTP indicators are shown in **Table 6.1** below.

Table 6.1: UTP Objectives and relationship to LTP Indicators

	Objective	LTP Indicator
1	Increase the pedestrian priority and environment along key desire lines	Rights of way/ footway condition
2	Improve the connectivity and continuity of the cycle network	Cycling trips
3	Improve the accessibility of key destinations for all users	Accessibility/Cycling Trips
4	Increase the amount and quality of public transport information available in Stevenage	PT information/ user satisfaction
5	Address peak hour congestion on the highway network, both for the present and in the future	Congestion
6	Address severance issues caused by the road and rail infrastructure	Accessibility/Cycling Trips
7	Reduce rat running and excessive vehicle speeds across the highway network	Speed limit compliance/ KSI's
8	Increase the number of sustainable travel measures and their uptake	Area-wide traffic mileage/Cycling Trips

6.3 Linkages to LTP targets

The UTP targets have been aligned directly with those given in the Hertfordshire LTP. These are explained in **Chapter 3** of this report. These indicators were used in the scheme assessment framework to score/rank the options. In addition to this all of the short term schemes, which have been outlined in the **Appendix Volume 1,** indicate the LTP targets they contribute towards.

Programme of Measures Required

7 Programme of Measures Required

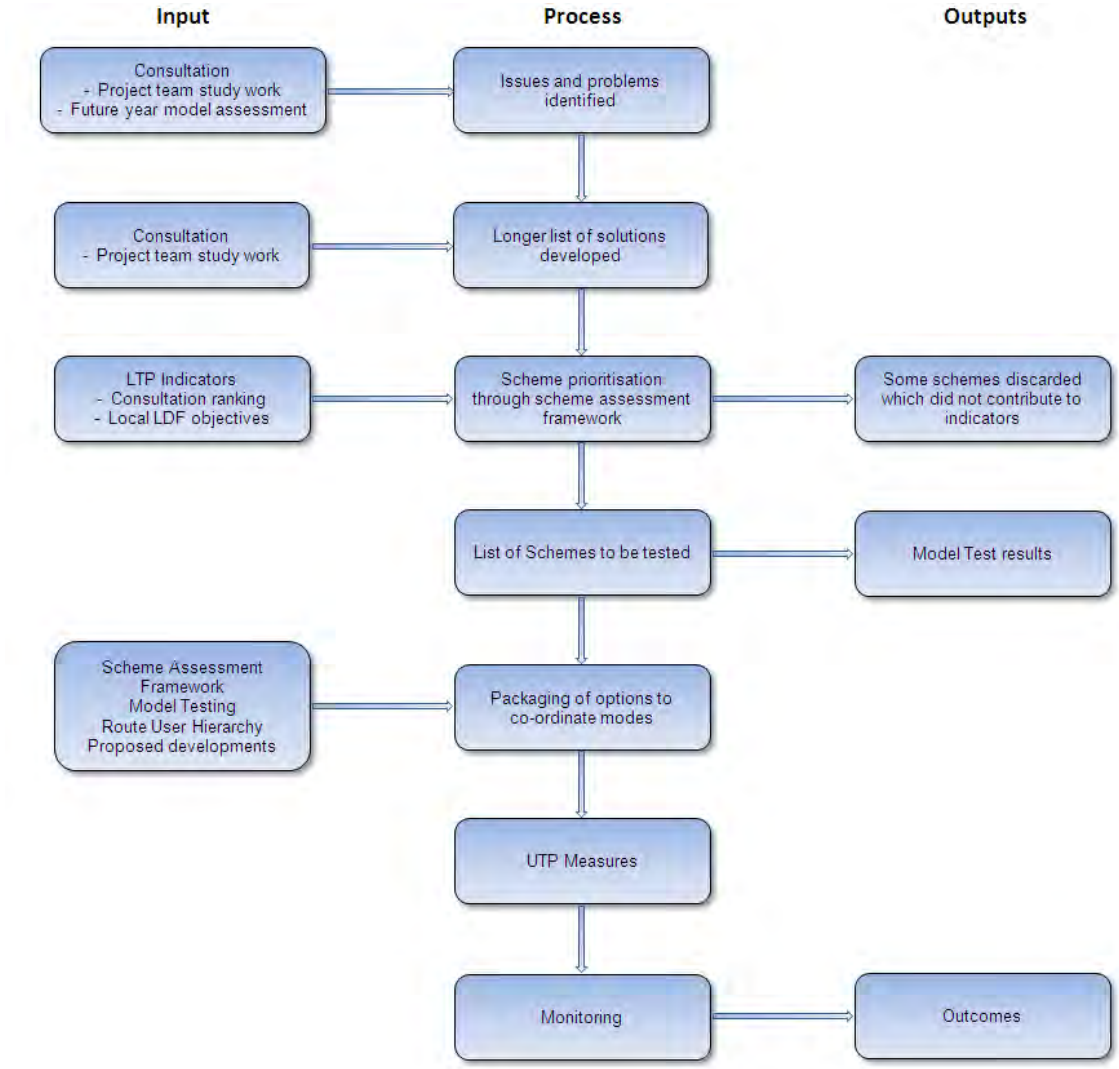
7.1 Introduction

A range of measures have been developed during the UTP process which address specific problems identified in Stevenage. The measures proposed in the UTP have been informed through consultation with officers, key stakeholders and members of the public. The project team have undertaken a review of the solutions suggested and developed additional schemes to ensure the issues/problems identified could be addressed. The full range of schemes is presented at the end of this section. Each scheme/measure sets out the issues that are to be addressed plus an outline cost has been developed for each measure along with a timescale for implementation and relevant priority that the scheme scored in the assessment framework.

7.2 Methodology for scheme selection

Following the various stages of consultation, study work and future year modelling, a number of schemes were proposed to try and address all of the issues that had been raised. In order to assess these schemes appropriately a scheme selection process was developed. This process is summarised in **Figure 7.1** below. How the issues and problems were identified is explained in **Chapter 5 & 6**

Figure 7.1 – Scheme Selection Process



7.2.1 *Long List of Solutions*

As briefly explained above a long list of solutions was compiled to try and address the existing and future problems on the network. The full list of schemes that were proposed is shown in the Assessment Framework in Appendix of this main document. In total there were 111 schemes that were put forward for assessment within the UTP. This number was however reduced during the scheme selection process which is explained below

7.2.2 *Scheme Prioritisation*

A key part of the Stevenage Urban Transport Plans involves identifying, assessing and developing a suitable range of solutions to address specific transport issues and problems within the respective areas that have been explained above. Any potential solutions needed to go through a sieving process which ranks each proposed measure against relevant policy targets and objectives as well as criteria such as scheme deliverability and feasibility. This process has reduced a large number of potential solutions to a targeted series of effective and feasible measures to be put forward within the UTP.

Through discussion with HCC it was agreed that the LTP2 indicators, which are used to measure delivery against the LTP objectives, should be used to assess and rank each scheme. The use of indicators was decided upon as this provides a direct link through to the funding streams that are in place within the HCC LTP.

The scoring of each of the options was broken down in to 3 stages which have been explained below.

Stage 1 – High Level feasibility score
This initial test determined whether there were any issues with the deliverability of the scheme. The following schemes were not looked at within the UTP any further as the risks to delivery were considered to great or to be outside the scope of the UTP.

Table 7.1 – Schemes with significant risks of delivery or already being delivered

Measures not being considered in detail in the UTP	Reasons
Introduction of congestion charging	Central government funding would have to be secured to introduce this scheme. Whilst funds are set aside for these schemes, the problem is that there is little support from Local Authorities to implement.
Build underpasses for vehicles in the town centre	This is not feasible for delivery within the remit of the UTP
Change some roads to below ground level (e.g. A1)	This is not feasible for delivery through the UTP
Increase parking for rail users and provide more drop-off points	This scheme is already being delivered through an existing Planning Application
Introduction of a shuttle bus between Gunnels Wood and surrounding destinations	This is being considered as part of the Gunnels Wood Influencing Travel Behaviour (ITB) study by the HA
Introduce a bus share scheme between employers in Gunnels Wood	This is being considered as part of the Gunnels Wood ITB study by the HA
Increase rail capacity	This is being delivered through the extension of train lengths from 8 to 12 carriages which is being implemented in November 2009
Improve signing to the station from key surrounding routes for cycling and walking	Study already being undertaken in to cycle-ways and signage by Herts. Highways, although funding has now been removed.
Improve maintenance, signing and markings along the cycle-	Study already being undertaken in to cycle-ways and signage by Hertfordshire Highways

Measures not being considered in detail in the UTP	Reasons
ways	
Improve the links between the pavement network, particularly where the pavements come to an end	It was identified that this would be picked up by the routine maintenance function carried out by the Highway Authority
Remove speed hump traffic calming measures from main residential routes	These schemes have been implemented to address safety concerns and should therefore not be removed as it would serve any significant transport purpose.
Make cycle network at grade	This scheme was discounted on cost grounds due to the significant highway and structural changes which would be required

Stage 2 – Scoring against indicators

Each scheme was then scored against a total of 19 indicators Once the individual indicator scores had been defined a total score was derived and this was then used to demonstrate which of the schemes contribute to the LTP2 indicators and also which do not satisfy any of the relevant indicators. The schemes which scored negatively against the LTP indicators were not included in the UTP and are shown in **Table 7.2**. All of the LTP indicators are shown in **Chapter 3** and also in the scheme assessment framework in **Appendix A**

Table 7.2 – Schemes which did not contribute to LTP Indicators

Schemes	Score
Build a ring road around Stevenage	-1
Ban mopeds from cycle-ways	-2
Increase parking provision in the town centre	-2
Provide underground parking in the town centre	-4
Provide more off-street parking in the new housing developments (increase housing unit/parking space ratio)	-6
Reduce pavements and create more parking bays on residential streets	-8
Introduce a one-way system in the town centre	-9

Stage 3 – Additional Considerations

There are also some additional considerations that are required which do not necessarily contribute to the scheme score but need to be considered when coming to a decision about the value of any particular scheme. These additional considerations include;

- Stakeholder Consultation score – during the consultation a score was given by each of the attendees to the particular schemes.

- Local Objectives – These have been taken from the Stevenage Local Development Framework.
- Timescale – Some consideration is given to the timescale for implementation of the scheme. This is broken in to:
    - Short term – 0-3 yrs
    - Medium term – 3-5 yrs
    - Long term – 5+ yrs

The scoring of the options was completed in the Scheme Assessment Framework excel spreadsheet with the outcomes given in **Appendix A**

The final list of schemes that were taken forward for further assessment and packaging within the UTP is described below. The inclusion of a particular scheme in the list below does not necessarily mean it will be included in the final UTP programme of measures as it may contradict another scheme that is considered a higher priority. In addition, any proposed schemes will have to go through a selection process by HCC Target Groups to ensure appropriate funding can be secured.

The schemes have been presented in the three relevant timescales for delivery with those being:

- Short term – Delivery in the first 3 years of the UTP
- Medium term – Delivered in years 3 – 5 of the UTP
- Long term – deliver beyond the 5 year programme of the UTP

Table 7.3 – Assessed Short Term UTP Schemes (not all schemes go forward for implementation)

Ref	Measure	Issues Addressed	Scheme Assessment Score
WM3	Improve existing Fairlands Way footbridge	W2, W7, C3.1, C11,	11
WM7	Support 'no cycling' restrictions in the town centre	W1, W5, C6	8
WM8	Introduce incentives for the walking bus scheme	W5, W6	7
WM10	Improve lighting around the town centre for pedestrians	W5, W6, W11	6
WM11	Co-ordinate initiatives to reduce street clutter	W5, W6, W10, W11	6
W13	Improve signing to the station from key surrounding routes	W11, C3.3	0
WM14	Provide a signalised crossing in front of Lister Hospital	W2, W3, W3.3, W6, H4	8

Ref	Measure	Issues Addressed	Scheme Assessment Score
WM15	Review footway provision on Gresley Way	W2, W3, H6	13
WM17	Introduce pedestrian crossings across Great Ashby Way	W3, W6	7
WM18	Provide a zebra crossing across Argyle Way for pedestrians to access Gunnels Wood	W3, W3.4	7
WM19	Provide a pedestrian crossing across Magpie Crescent to link into Sainsbury's	W3, W6	7
WM20	Provide warning signs that pedestrians are crossing ahead (Stevenage Road from Walkern)	W3.5	4
CM2	Review the existing cycle-way network	C1, C3, C3.4, C7, C8, C12,	19
CM3	Provide/improve secure cycle parking at all entrances to the town centre	W1, C1, C6, C9.1,	16
CM5	Improve policing on the cycle ways	W5, C1, C2, C4,	13
PTM1	Increase marketing of bus/rail services	PT2, PT12, S3,	20
PTM8	Provide a dedicated school bus service	PT2	12
PTM12	Increase the amount of bus information available at the rail station	PT12, S3, S4,	11
PTM14	Increase the amount of bus travel information available at the bus station	PT2, PT12, S3, S4	10
HM1	Promote smarter measures such as travel marketing, travel plans, car clubs, to reduce reliance on the car	PT8, H4, S7	20
HM4	Close White Way to through traffic or introduce traffic calming and crossing facilities	H2.1	11
HM6	Introduce 20mph zones around	H1, H2	10

Ref	Measure	Issues Addressed	Scheme Assessment Score
	schools and residential areas		
HM7	Close Rectory Lane to through traffic or introduce traffic calming measures	H1.2	10
HM9	Carry out further surveys to determine the effect of traffic which appears to re-route along Church Lane to avoid the High Street	H1.1	9
HM11	Ramp metering on the A1		7
HM18	Implement and achieve the parking policies and ambitions contained in the Parking Strategy (2004)	P1, P5	3
HM28	Widen Mobbsbury Way on approach to Fairlands Way	H7	1
HM29	Make it left turn only out of Mobbsbury Road onto Fairlands Way	H7	0
SM1	Improve publicity of sustainable transport options through a marketing campaign	W1, W9, W11, C6, PT8, PT12, S7	21
SM2	Promote awareness of opportunities for sustainable travel- Personalised Travel Planning	PT8, S7,	19
SM3	Provide integrated ticketing	PT8, PT10, S3	17
SM4	Provide walking/cycling maps	W1, C6, S2	14
SM5	Improve signage for pedestrians	W2, W11, S1	13
SM7	Introduce car sharing schemes	CO2	4
SM8	Provide better information on planned road works	CO2	4
SM9	Provide more information on the regeneration of the town centre	S7	2
SM10	Produce a walking strategy for Stevenage	W9	23
PM7	Carry out a parking review in Stevenage	P1, P2, P5, P6	2

Table 7.4 – Medium Term UTP Schemes

Ref	Measure	Issues Addressed	Scheme Assessment Score
WM1	Improve pedestrian and cyclists access to the rail station from the west	W2, W3, C3.3,	15
WM2	Redesign the footbridge to provide a covered walkway between leisure centre and the rail station	W8, W10	12
WM4	Increase the number of at-grade pedestrian crossings	W2, W3, W4, W11, C4, H4.1, H4	9
WM5	Improve lighting and visibility in underpasses	W4, W5, C4,	8
WM9	Provide an at-grade crossing over Lytton Way	W2, W3, C11,	6
WM12	Provide an at-grade crossing over Fairlands Way	W2, W3, W7, C3.1, C11, H4	5
CM1	Make sure cycle routes do not stop short of destinations	C1, C2, C3, C4, C5,	22
CM4	Provide secure storage of cycles at key destinations	C1, C9, C9.1, C9.2,	16
CM6	Provide an at-grade crossing over Lytton Way	C3, C3.1, C11, H4	12
CM7	Introduce a cycle Lane on Gresley Way	C3, C3.2, C3.4,	11
CM7.1	Provide a link from the proposed Gresley Way cycle route to the existing cycle route along Six Hills Way	C3, C3.2, C3.4,	11
CM7.2	Provide a link from the proposed Gresley Way cycle route to the existing cycle route along Martins Way	C3, C3.2, C3.4,	11
CM8	Introduce a cycle lane on St. Georges Way	C3, C3.1, C11	10
CM8.1	Connect existing cycle lanes on the Six Hills Way roundabout with the proposed cycle route along St. Georges Way	C3, C3.1, C11	10

Ref	Measure	Issues Addressed	Scheme Assessment Score
CM9	Provide cycle facilities through business partnerships	C9	10
CM10	Separate cyclists and mopeds on the cycle-ways	C2	8
CM11	Introduce a cycle hire scheme in the town centre	C1, C9.2,	2
CM15	Remove car parking and relocate cycle parking to the area immediately south of the rail station	C9, C9.3	10
CM16	Provide a cycling 'ring' around the leisure centre	C3, C3.1, C11	10
CM17	Provide a cycle crossing over St. Georges Way	C3, C11, H4	9
PTM2	Redesign the train station forecourt	C3.3, PT7,	18
PTM4	Upgrade key bus stops within the study area	PT8, PT12, S4	14
PTM6	Provide free/subsidised bus services for certain user groups	PT3, W6	13
PTM7	Tailor the bus service to meet people's needs i.e. provide smaller shuttle buses	PT2, PT2.1, PT2.2, PT6, PT11	12
PTM9	Provide priority bus lanes/junctions at selected locations	PT2, PT5, PT5.1, PT9, PT9.1, PT9.2,	11
PTM13	Provide subsidised rail travel	PT8	10
PTM15	Provide subsidies to encourage bus service providers to operate a greater number of routes/times	PT2, PT2.1, PT2.2, PT6, PT11,	9
PTM17	Improve bus links from the station to employment areas	PT6, PT11,	8
PTM18	Increase Taxi facilities	PT13, W6	5
PTM21	Provide real time information around the network	S4, S5, PT2	14
HM2	Reduce the need to travel through good land use planning	H4	18
HM5	Introduce traffic calming measures to reduce speeds	H1, H2, H2.2, H5	10

Ref	Measure	Issues Addressed	Scheme Assessment Score
HM8	Increase the throughput of major roundabouts by using either grade separation or filter lanes	H3	9
HM12	Introduce variable speed limits	H2	6
HM14	Alter signs to discourage through traffic and work with sat-nav companies	H1,	5
HM15	Introduce peak time traffic lights at town centre roundabouts	CO2, CO2.1, CO2.2	4
HM30	Convert Mobbsbury Way/ Fairlands Way junction to a roundabout	H7	1
HM31	Ban right turn in to Sainsbury's from the north, and force traffic to do a U-turn at Corey's Mill Lane	CO2.3	3
SM6	Increase the use of work travel plans	C9, PT6, PT11, S6	12
PM1	Improve signage of car parks - matrix signs with live updates	P1, P2,	10
PM8	Provide a dedicated motorcycle parking zone within the existing rail station car parking	P3	2

Table 7.5 – Long Term UTP Schemes

Ref	Measure	Issues Addressed	Scheme Assessment Score
WM6	Install CCTV and PA systems in underpasses	W4, W5, C4,	8
PTM3	Provide a dedicated bus/rail interchange	S3	16
PTM5	Introduce Park and Ride	PT2, PT8	13
PTM10	Provide inter-connecting routes between new developments	PT2, PT2.2	11
PTM16	Rebuild the rail station to provide better access and a better passenger experience	C3.3, PT7, W6	9
HM3	Improve the East-West transport links to the north of Stevenage	H3	11
HM13	Build a link road parallel to the A1(M) to access Stevenage West	CO1, CO4	5
HM16	Variable speed limits on the A1	CO1, CO4	3
HM17	Widening of the A1(M) including continued discussions with stakeholders	CO1, CO4	3
HM19	HOV (car pool/taxi/bus) lane on the A1(M)	CO1, CO4	2
HM20	Divert the A1(M)	CO1, CO4	2
HM21	Integrate Stevenage 'Old Town' gyratory system	H2, H3	1
HM32	Address operational issues at A1(M) Junction 8	CO1, CO4	6

7.2.3 *Packaging of Schemes*

The UTP aims to look at schemes that could address problems for all transport users across the network. If schemes were viewed and assessed in isolation then the situation may arise that by implementing one solution another problem could be caused on the network for another user. As a result, schemes proposed in the UTP were considered, where possible, in terms of a package of options to be delivered. Whilst any transport network has a capacity within which it can operate, compromises often have to be made to ensure that all transport users are given the appropriate level of priority within the system.

In order to inform how this packaging of options should be developed, a Route User Hierarchy was used to inform the process. The Route User Hierarchy is outlined in the *Manual for Streets* (MfS) which supersedes *Design Bulletin 32* and its companion guide *Places, Streets and Movement*. It complements

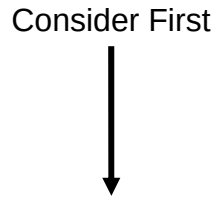
Planning Policy Statement 3: Housing and *Planning Policy Wales*. MfS comprises technical guidance but does not set out any new policy or legal requirements. The concept of the Route User Hierarchy is laid out in this document and defines the five principal functions of a street as:

- Place;
- Movement;
- Access;
- Parking; and
- Drainage, utilities and street lighting.

This clearly demonstrates that a street is not merely a link between nodes (a corridor for traffic) but can also fulfil a spatial element in the urban context (such as a town square).

MfS also sets out a road user hierarchy which should be considered during the design phase as follows:

- Disabled Users
- Pedestrians
- Cyclists
- Public Transport Users
- Specialist Service Vehicles
- Other motor traffic



It does, however, also state that this hierarchy is not meant to be rigidly applied in all circumstances; for example, on motorways, priority should be given to motor traffic to maintain undisrupted traffic flow and the same could be said for some of the primary traffic routes within Stevenage.

A key element of the scheme packaging has been the testing of these schemes within the transport model. The traffic model that has been developed only represents vehicles that travel along the highway, namely cars, Light Goods Vehicles, Heavy Goods Vehicles and buses. It is therefore ideal for testing the impact on road network operation of a whole range of schemes including the impact of a pedestrian crossing or narrowing of carriageway to implement bus priority. It is also possible however to test the impact of other non infrastructure related measures on the overall volume of traffic,

The emerging policies on sustainability that have emerged in the last decade has placed an emphasis on demand management rather than infrastructure provision. With this is mind there is a good body of evidence that indicates the kind of levels of trip reductions that can be achieved from sustainable initiatives such as travel planning, car clubs or improved travel marketing. This is an important element in any transport strategy or plan as provision will need to be made for schemes which attempt to encourage a shift to more sustainable modes. The level of trip reduction that might be expected by these schemes has been represented in the traffic model through a reduction of trips to reflect the scheme impacts. These values have been explained in more detail in the specific scheme descriptions in **Appendix Volume 1** and traffic model reporting in **Appendix Volume 3**.

It is not practical to test all of the schemes individually within the transport model given the number of time periods, years and development scenarios to be tested. In order to undertake an assessment of schemes within the transport model to determine whether they could be practically packaged, a process for the testing of scenario's was developed. This is summarised in the **Figure 7.2.**

7.2.3.1 Packaging of Options

The packaging of options for testing in the model was developed in line with the Route User Hierarchy explained above. All of the schemes which had been identified in the current transport situation in relation to disabled users, walking, cycling, and public transport were tested to develop a set of schemes defined as 'Package A'. This provided a foundation to work from which has addressed most of the issues around the access and sustainable modes but had not necessarily dealt with the junction and congestion related issues.

There are a number congestion and highway capacity issues that either came forward as a result of existing problems or problems that had been created through the implementation of the Package 'A' options. However, the situation changes as you move through the forecast years and demand scenarios. All the schemes that are proposed are included in **Appendix Volume 1** in the scheme description HM8- *to increase the throughput of major roundabouts by using either grade separation or filter lanes*. This becomes a very complex situation to try and address, as implementing some schemes have knock-on effects as capacity is released and traffic re-routes around the network to ensure it is taking the quickest or shortest route. A summary of the packages is described below and **Figure 7.2** shows how this was linked and tested through the modelling scenarios.

As the modelling was completed some schemes were not taken forward any further as they either did not deliver any benefits or contradicted another scheme. Therefore, some schemes were removed from the UTP and are not included in the Five Year delivery programme in Section 8.

It should be noted that the packages of improvements are additive, therefore as you move through the years and scenarios they include all of the schemes that have gone before. The packaging of options considered the following;

Package 'A'

The following schemes were assumed as part of this Package in order to resolve a number of the problems on the network, as well as adhering to the Route User Hierarchy explained above. Whilst it is intended that Package 'A' is delivered in advance of the subsequent packages, the order in which the individual schemes are presented is not intended to be prescriptive or indicate a dependency of schemes. Testing in the traffic model has indicated that all the Package 'A' schemes could be delivered in isolation, however to address the full range of issues identified it would be necessary to implement all of these schemes.

Scheme Ref	Scheme Description
WM3	Improve the existing Fairlands Way footbridge (and make available to all users) to enhance link between town centre and old town
WM7	Support 'no cycling' restrictions in the town centre
WM8	Introduce incentives for the 'walking bus' scheme
WM9	Provide an at-grade crossing across Lytton Way (under existing bridge)
WM14	Provide a Toucan crossing in front of Lister Hospital
WM15	Provide a footpath along Gresley Way from Six Hills Way to Jackdaw Close
WM17	Provide Toucan crossings at Great Ashby Way and Gresely Way
WM18	Provide a zebra crossing across Argyle Way for pedestrians to access to Gunnels Wood
WM19	Provide a Toucan crossing across Magpie Crescent to link in to Sainsbury's
WM20	Provide pedestrian warning signs on Stevenage Road
CM2	Review the existing cycle-way network
CM3	Provide/improve cycle parking at all entrances to the town centre (7 in all)
CM6	Improve existing cycle way east of Leisure Centre and provide linkage to crossing across Lytton Way
CM14	Improve maintenance, signing and markings along the cycle-ways
CM15	Remove car parking and relocate cycle parking to the area immediately south of the rail station
CM17	Provide a cycle crossing over St. Georges Way
PTM1	Increase marketing of bus/rail services
PTM12	Increase the amount of bus information available at the rail station
PTM14	Increase the amount of bus travel information available at the bus station
HM7	Introduce horizontal traffic calming through pinch points along Rectory Lane
HM9	Carry out further surveys to determine the effect of traffic which appears to re-route along Church Lane to avoid the High Street
SM1	Improve publicity and promotion of public transport, cycle-ways

	and pedestrian areas
SM2	Use Personal Travel Planning to promote awareness of opportunities for sustainable travel
SM5	Improve signage for pedestrians
SM10	Produce a walking strategy for Stevenage

Package 'B'

Junction improvements to mitigate the impact of problems in the base year

London Rd / Monkswood Way	Improve lane definitions of southern approach to improve capacity
Fairlands Way / Gunnels Wood Road	Increase capacity of northern a southern approach
Six Hills Way / St Georges Way	Increase eastern approach to 2 lanes with lengthened flare
Six Hills Way / Valley Way	Upgrade from mini-roundabout to a small roundabout and therefore increase capacity
Six Hills Way / Shephall Way	Upgrade from mini-roundabout to a small roundabout and therefore increase capacity
Six Hills Way / Homestead Moat	Upgrade from mini-roundabout to a small roundabout and therefore increase capacity
Six Hills Way / Rockingham Way	Upgrade from mini-roundabout to a small roundabout and therefore increase capacity

Package 'C'

Junction and infrastructure improvements to mitigate the impact of 2014 Do Minimum developments. This includes the revised layout for the GSK site, following the planning application to expand the site (Drawing No. CS00413/T/44 revision C[9]). In addition to this there is also a need to widen the A1(M) from Junction 6 – 7 and alter the lane designations on the southern approach to Junction 8.

Package 'D'

Junction and infrastructure improvements to mitigate the impact of 2014 Do Something developments. This includes the schemes outlined above.

Package 'E' – 2021 Do Minimum mitigation

Junction and infrastructure improvements to mitigate the impact of 2021 Do Minimum developments. This includes the schemes outlined above.

[9] Drawings provided by HCC in relation to these scheme and reflect latest known scheme drawings

Package 'F' – 2021 Do Something mitigation

Junction and infrastructure improvements to mitigate the impact of 2021 Do Something developments. This includes the schemes outlined above as well as a new road linking the development to the north of Stevenage connecting from the junction of North Road / Graveley Road, round the north of Stevenage and links back at a number of locations down the east of Stevenage. This link is based on proposals received from GlanvilleGroup (Drawing No: CS8/1301/103[9]). This package also includes modifications to the Stevenage Gyratory to make this a two-way route and A1(M) widening between Junction 7 – 8.

Package 'G' – 2031 Do Minimum mitigation

Junction and infrastructure improvements to mitigate the impact of 2031 Do Minimum developments. This includes the schemes outlined above and A1(M) widening between Junction 7 – 8.

Package 'H' – 2031 Do Something mitigation

Junction and infrastructure improvements to mitigate the impact of 2031 Do Something developments. This includes the schemes outlined above and an improvement to the links to the west of Stevenage to link in to the new development in this location via Meadway and Bessemer Drive.

7.3 Detailed Scheme Assessment

Having undertaken a detailed assessment of the individual schemes (see **Appendix Volume 1**), a number of these have subsequently been removed from the UTP. The list of discounted schemes and the reasoning behind their removal is detailed in **Table 7.6**.

Other schemes have been amended or had their specific descriptions changed as an outcome of detailed investigation so as to provide a final series of targeted and deliverable schemes to be implemented through the UTP. The scheme references have, however, remained unchanged throughout the assessment process.

Table 7.6 – Schemes not included in the UTP

Ref	Measure	Reason
WM6	Install CCTV and PA systems in the underpasses	Underpasses in the vicinity of the Town Centre already have CCTV and it is anticipated that the existing programme of maintenance carried out by SBC will identify additional locations where CCTV may be required
WM9	Provide an at-grade crossing across Lytton Way	This scheme is already included in the Town Centre

Ref	Measure	Reason
		redevelopment associated with the new bus interchange
WM10	Improve lighting for pedestrians around the Town Centre	It is anticipated that this scheme will be addressed as part of the proposals for the Town Centre redevelopment
WM11	Improve process for prioritising the public realm and coordinate initiatives to reduce street clutter	This scheme relates to urban design of the Town Centre and it is anticipated that this will be addressed as part of the redevelopment proposals
WM12	Provide an at-grade crossing across Fairlands Way	This scheme is not considered to be feasible to implement
WM13	Improve signing to the rail station from surrounding routes	This scheme is addressed through the Stevenage Cycleways Study, the Town Centre redevelopment and UTP scheme SM5
PCM11	Provide a hard standing surface along the bridleway to east of Gresley Way junction to link in to the footbridge across Gresley Way north	This scheme is already addressed through WM15
CM6	Introduce a crossing facility at street level over Lytton Way between the leisure centre and the rail station	This scheme is already included in the Town Centre redevelopment associated with the new bus interchange
CM11	Introduce a cycle hire scheme in the Town Centre	This scheme would prove prohibitively costly to implement
PTM5	Introduce Park and Ride facilities	This scheme is not considered to be viable for implementation in Stevenage
PTM6	Provide free/subsidised bus services for certain user groups	Due to budgetary constraints it is unlikely that further funding would be made available for this scheme
PTM7	Tailor the bus service to meet people's needs i.e. provide smaller shuttle buses	This scheme is not considered to be commercially viable
PTM8	Provide a dedicated school bus	HCC already operate a number of school bus services

Ref	Measure	Reason
	service	and have a policy of subsidising travel on these services where appropriate
PTM13	Provide subsidised rail travel	This scheme would prove prohibitively costly to implement
PTM15	Provide subsidies to encourage bus service providers to operate a greater number of routes/ times	Due to budgetary constraints it is unlikely that further funding would be made available for this scheme
PTM16	Rebuild the rail station to provide better access and a better passenger experience	This scheme is addressed through UTP schemes PTM2 and PTM3
PTM17	Improve bus links from the bus station to employment areas	There are currently that service these areas, but frequency of services is the issue. This is being considered within PTM15
PTM18	Increase taxi facilities	This scheme will be addressed through UTP schemes PTM2, PTM3 and the Town Centre redevelopment
PCM16	Investigate building a rail station on the Hertford branch in the Bragbury End	This scheme is not considered feasible or practical
SM3	Provide Integrated Ticketing	Integrated Ticketing is already provided with options such as ‘Plusbus’. Increased marketing of ticketing options is included as part of UTP schemes PTM1 and SM1
SM4	Provide walking/cycling maps	A cycle map already exists for Stevenage and this work is also being supplemented by the Stevenage Cycleways Study
HM1	Package of smarter measures such as travel marketing, travel plans, car clubs, to reduce reliance on the car	This scheme is addressed through other specific UTP schemes, namely SM1, SM2, SM7, SM10
HM5	Introduce traffic calming measures along Valley Way to	As a result of model testing and the fact that there is not an

Ref	Measure	Reason
	reduce speeds	identified accident problem in this location the scheme is not proposed to be taken forward.
HM12	Introduce variable speed limits	This scheme is not considered to be feasible for implementation in Stevenage
HM14	Alter signs to discourage through traffic and work with satellite navigation companies	Due to the fact that through trips form a low percentage of trips on the network in Stevenage, it is unlikely that this scheme would have a significant impact on lowering congestion levels
HM15	Introduce peak time traffic lights at town centre roundabouts	This scheme is investigated as part of HM8
HM16	Introduce variable speed limits on the A1(M)	This scheme is addressed through UTP scheme HM17
HM19	High Occupancy Vehicle (HOV) (car pool/taxi/bus) lane on the A1(M)	This scheme is addressed through UTP scheme HM17
HM20	Divert the A1(M)	This scheme is not feasible for implementation
HM28	Widen Mobbsbury Way on Approach to Fairlands Way	UTP scheme HM29 is the recommended solution for this location
HM30	Convert Mobbsbury Way/ Fairlands Way junction to a roundabout	UTP scheme HM29 is the recommended solution for this location
PM7	Carry out a parking review in Stevenage	It is considered that existing parking issues have been identified in the current Parking Strategy and will be addressed through specific UTP schemes and the Town Centre redevelopment
PM8	Provide a dedicated motorcycle parking zone within the existing rail station car parking	This is addressed through UTP scheme PTM2

7.4 Schemes Raised Through Public Consultation

As part of the UTP process a public consultation exercise was carried out to give members of the public the opportunity to comment and provide feedback on the content of the UTP. During the consultation process a number of additional schemes were raised by residents of Stevenage and these are detailed in **Table 7.7** below. Whilst these new schemes have not yet been progressed through the full UTP assessment phase, it is considered necessary to record them in the UTP for purposes of completeness. It is proposed that these schemes should be considered in further detail though a further amendment to the plan. The schemes contained within the UTP have been updated where relevant in line with the comments received from the public.

Table 7.7- Additional Schemes raised through Public Consultation

Public Consultation	
PCM1	Upgrade the existing pedestrian crossing point to the west of the Six Hills Way junction (near Marlborough Way) to a signalised crossing
PCM2	Extend the pavement on the western side of Chequers Bridge Road to continue past the junction with Trinity Road
PCM3	Introduce a zebra crossing across Trinity Road
PCM4	Introduce peak hour signals at the junction of Aston Lane/A602 Broadhall Way.
PCM5	Introduce a new crossing on Gresley Way adjacent to Uplands.
PCM6	Introduce a toucan crossing outside the Tesco's in the southern area of the town (London Road).
PCM7	Improve connectivity between Fairlands Way underpass and Ditchmore Lane
PCM8	Introduce a crossing facility on Old Knebworth Lane around the National Cycleway network
PCM9	Provide wider paths around Stevenage to accommodate mobility scooters
PCM10	Provide dropped curbs at the Lantern's Lane entrance to Gresley Way
PCM11	Provide a hard-standing surface along the bridleway to east of the Gresley Way junction to link in to the footbridge across Gresley Way north.
PCM12	Provide a cycle connection between Broadhall Way and Newton Wood to the west of the A1(M)
PCM13	Introduce greater enforcement to prevent horse riders and mopeds from using inappropriate routes such as footpaths
PCM14	The SB1 service should be routed into the Fairlands Valley Park access road to improve access to this destination
PCM15	Park and Ride measures should be implemented at Nobel School
PCM16	Investigate building a rail station on the Hertford Branch in the Bragbury End

PCM17	Gresley Way should be made part of the Ring Road
PCM18	Open Hertford Road
PCM19	Provide a second access from Cavendish Road industrial area to Meadway
PCM20	Provide a cycle route along Mobbsbury Way

Figure 7.2 – Modelling Approach to Scheme Packaging