

# Local Transport Plan

2011 – 2031

## Volume 1 Strategy Document



April 2011

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Hertfordshire County Council 100019606 2011.

## Section 1. Executive Summary

The third Hertfordshire Local Transport Plan (LTP3) is a statutory document to set out the county council's vision and strategy for the long term development of transport in the county. It provides the framework for transport's support of the economic and social development of Hertfordshire over the next 20 years, and will influence funding not only for the county council but for all who are engaged in development and in the provision and use of the transport network.

The new plan draws on the previous one (LTP2) and on the wider policies of the council. It has been produced in the light of existing national and regional transport policies and of the current financial situation. The draft plan was subject to public consultation in late 2010 and the finalised LTP draws on this and inputs from a wide range of interested organisations. The plan will be reviewed and updated throughout the plan period with the timetable dependant on circumstances.



The LTP consists of:

- The Strategy - vision, goals and challenges
- Policy Document - setting out the council's transport policies
- Implementation Plan - setting out intended short term and longer term interventions (actions)
- Daughter Documents - detailed strategies to support individual policy areas.

The LTP is one of a number of plans and strategies produced by the county council and by the council working with partners aimed at addressing issues in Hertfordshire including those related to transport. In particular the Sustainable Community Strategy and the County Council Corporate Plan provide an essential overview for the LTP.

This executive summary of the Local Transport Plan provides an introduction and guide to the full plan but should not be used as a substitute for it.

### The Hertfordshire Vision

**To provide a safe, efficient and resilient transport system that serves the needs of business and residents across Hertfordshire and minimises its impact on the environment.**

We will achieve this by:

- Making best use of the existing network and introducing targeted schemes where improvements are required so as to deliver a reliable and readily usable transport network to benefit local business, encourage further economic growth and allow access for all to everyday facilities.
- Promoting and supporting sustainable travel to reduce growth in car traffic and contribute to improved health and quality of life for residents with a positive impact on the environment and on the wider challenge of reducing transport's contribution to climate change.

Five goals support the vision. The transport strategy will (in no specific order):

- Support economic development and planned dwelling growth
- Improve transport opportunities for all and achieve behavioural change in mode choice
- Enhance quality of life, health and the natural, built and historic environment for all Hertfordshire residents

- Improve the safety and security of residents and other road users
- Reduce transport's contribution to greenhouse gas emissions and improve its resilience.

## 1.1 The Context

Despite successes during the previous two LTP periods transport in Hertfordshire faces serious challenges. Pressures of growth and population growth mean increasing levels of traffic are forecast which will add to the existing shortage of capacity during peak times. The major routes, road and rail, run north-south with particular issues in the peak hours while east-west movement can be difficult, particularly by passenger transport.

At the same time the settlement pattern of the county, with widespread small and medium sized towns and no major centre, creates a complicated pattern of movement which has been increasingly met by use of the car, leading to local congestion. Despite the high levels of car use and high car ownership there remains a significant minority without access to a car that can find it difficult to access other modes of transport and therefore to key services, including employment opportunities.

In the short term it is clear there will be uncertainty over the funding available to achieve any measures and schemes. 2010 has seen widespread cuts in government expenditure making it difficult for transport authorities such as the county council to plan for improvements in the traditional way. New methods of funding for a variety of measures will need to be considered.

Over the next 20 years there will be further issues. The level and location of housing growth and the nature of economic growth is not known and the impact on travel of emission levels and climate change and of the price and availability of oil is uncertain.

The county council will need to review its actions as the plan period unfolds but for the present its strategy and its intention to address the challenges are clear.

## 1.2 The Approach

This Local Transport Plan marks a shift in approach for the county council. The key transport issues in Hertfordshire remain the same: tackling peak-time congestion, maintaining roads, reducing casualties, reducing emissions for climate change and to improve health, supporting economic growth and maintaining access to key services. However, the prospect of higher demand and limited resources, plus the imperative to address climate change, has meant that we need to look for different ways to meet these challenges.

The plan will see less emphasis than LTP2 on building new roads or making major changes to existing roads, instead placing a much higher priority on making better use of the existing network.

A key element of the plan is 'intelligent transport systems'. Measures such as optimising traffic signals and providing real-time information will help network managers and drivers make the best use of our roads. The same systems will provide up-to-the-minute information on buses and trains, encouraging motorists to consider using other forms of transport. This encouragement will be supported through a co-ordinated programme of travel planning with the development of travel plans for businesses, schools, railways stations and for individuals. Above all, the aim is to make everyone aware of all the travel options available and the consequences of the choice that they make.



*Providing realtime traffic information for drivers*

Small scale highway improvements will be promoted to support local communities, economic regeneration and safety, with the priority given to sustainable and healthy transport, such as walking and cycling. These schemes will be identified through the continuing programme of Urban Transport Plans, developed with the local community and key stakeholders, which are also tools to secure external funding.

Major new road schemes such as bypasses will normally only be built through external funding where new development generates significant new traffic flows. New infrastructure will be necessary during the plan period and is essential for passenger transport improvements. The county council is presently the leading partner in the Croxley Rail Link project and is engaged in the planned major improvements to Watford Junction interchange and the Abbey Line.

In the short term at least, it is anticipated that the transport network will look similar to today, but it will be used in a much smarter way. The travelling public will be empowered through information to make sustainable transport choices and transport providers will be able to respond to these.

### 1.3 The Challenges

This section sets out how the challenges of the LTP are to be met and the interventions to achieve them. The actual measures to be implemented in the short term are detailed in the Implementation Plan and in the individual strategies, the daughter documents accompanying the LTP. Many of the interventions, however, will only be achieved through joint working with other organisations, including district councils, transport operators, health care providers and the emergency services.

#### **Goal: Support economic development and planned dwelling growth**

##### **Challenge 1.1: Keep the county moving**



*Congestion can have a negative impact on the economy*

Supporting the county's economy is essential to the county council and a vital role for transport. Efficient management of the network is to be enhanced by the use of technological solutions ('intelligent transport systems') to provide real time information, link traffic light signals and so on to allow active management to address congestion. Small scale improvements to the road network will be carried out where warranted, such as through the Urban Transport Plan process. These will address, where feasible, congestion hot spots including those on the main routes but major new infrastructure is not envisaged. Maintenance of the network

will continue to be prioritised as an essential part of efficient management.

The second important thrust of the county strategy is to reduce the need for travel, particularly by car and in peak periods, and to increase the use of sustainable modes of travel, particularly walking, cycling and buses. This aim runs through all the challenges, not only to help reduce the growth in traffic and therefore reduce delays for users, but also to achieve health and environmental benefits.

The strategy will not solve the problem of congestion in Hertfordshire but efficient traffic management coupled with more people walking and cycling should reduce the occurrences. New information technology will then allow network users to be aware of problems when they do arise and make other choices regarding mode or time of travel. This should improve journey time reliability and the overall resilience of the network in the face of delays. Benefits should be realised for all users including business and freight.

### **Challenge 1.2: Support economic development and planned dwelling growth**

The level of housing and population growth planned for the county over the next 20 years is uncertain, but, whatever the future level, the transport system has to provide for planned new development. Provision cannot be by new major infrastructure unless it is funded by the developments themselves and even where that is the case the impact of the additional traffic generated will extend across the whole network.

The LTP provides strong support for new development to be located and designed so that maximum use can be made of sustainable modes, including bus travel, to access services. Design and location can enhance existing passenger transport

corridors improving levels of service so the bus provides a real alternative to the car. The provision of local services, located near to existing centres and employment opportunities, will help ensure that destinations can be accessed by walking and cycling.

These aims apply equally to large and small developments. New residents should be fully informed of the options available using the new information technologies and should recognise the improved environment for sustainable transport which is being developed across the county. Developers will be expected to help fund the provision of facilities and services for sustainable travel and contribute to the long term maintenance of special highway features.

The district planning authorities, through their Local Development Frameworks, will play a key role in realising the aims of this challenge in terms of both location and developer contributions.

In time, levels of demand from new developments and other growth may become so great that infrastructure solutions are considered necessary. Solutions such as park and ride schemes, new interchanges and potentially new road links and bypasses would be assessed where appropriate if funding is available. Demand management measures may also be considered.



*Providing passenger transport infrastructure in new developments*

**Goal: Improve transport opportunities for all and achieve behavioural change****Challenge 2.1: Improve accessibility, particularly for non-car users and the disadvantaged**

Accessibility means people being able to access key services and employment opportunities at reasonable cost, in reasonable time and with reasonable ease. Generally, accessibility in Hertfordshire is good but there are challenges for the less affluent and the disadvantaged for whom existing transport services may not be usable or practical. The problems can be particularly severe in rural areas.

The county council aims to ensure passenger transport services can provide accessibility for all and that where they cannot, such as in some rural areas, other special services, including those provided by the voluntary sector, can maybe fill the gap. The provision of information and support for sustainable modes should also contribute to improving some peoples' accessibility but support for 'special arrangement' transport remains essential for the minority of disadvantaged residents, including the elderly and disabled.

Infrastructure improvements, such as pedestrian crossings, will also improve accessibility in appropriate locations, and some accessibility interventions could also reduce the need to travel at all.



*Community Transport helps to enhance accessibility to key services.*

**Challenge 2.2: Achieve behavioural change as regards choice of transport mode**

Increasing the number of journeys by sustainable modes has been a long running aim but the new LTP looks to increase the promotion of these modes to ensure that health as well as transport benefits are fully appreciated. If people change their behaviour to walk and cycle for more short journeys and to use buses and other modes, such as car sharing, traffic growth, particularly in peak periods, can be reduced.

Emphasis will therefore be on publicity and promotional work, for schools and businesses, with support for travel planning for organisations and individuals. Provision of information and improvements to facilities for sustainable modes forms the other part of this strategy.

**Challenge 2.3: Achieve further improvements in the provision of passenger transport (bus and rail)**

Passenger transport in the county is provided by commercial operators but the county council seeks to promote and support transport services across the county. Rail services are generally north-south and most lines suffer from lack of capacity in peak periods. While the county council supports the operators and Network Rail in their proposals to increase capacity it has little direct influence on major capacity provision on national rail services.

With no east-west rail service and few cross country coach services, buses provide the majority of passenger transport operations in the county. Bus patronage has increased in recent years and punctuality (as recorded in 2009) is over 90%. Nonetheless improvements, particularly in terms of service intervals and speeds, are necessary if services are to continue to be responsive to passenger needs, including the special

accessibility needs of the elderly and disabled, and are to offer a viable alternative to the car.



*The County Council supports and encourages rail travel*

Interventions by the county council working with operators will be varied but include improved information, with real time information on buses en route, and improved ticketing systems. Bus priority schemes to address delays will be implemented where feasible and work will continue in partnership with operators to achieve the desired services and improvements to interchanges, such as those proposed at Watford Junction.

As regards rail, the county council is leading the work on the Croxley Rail Link to link Watford town centre to the Metropolitan Line, improving accessibility in the town and to central London. The Abbey line from St Albans to Watford has been proposed as a light rail system and the county council intends to progress this to increase the service level through the period of the plan and potentially to extend the line to Watford and St Albans town centres.

**Goal: Enhance the quality of life, health and the natural, built and historic environment of all Hertfordshire residents**

**Challenge 3.1: Improve journey experience for transport users**

Issues such as comfort, regularity and reliability of service and perceptions of

safety apply to all users of the network and particularly to users of sustainable modes. Nearly 80% of the bus passengers surveyed in 2009 were 'very' or 'fairly satisfied' with services (Bus Booster Tracker survey) but improvements, for instance at rail and bus stations, are essential if the aim of increasing the usage of such modes and making them a viable alternative to the car is to be realised. The county council is currently supporting major improvements at Watford Junction which will improve accessibility and passenger comfort at that important interchange.

Improvements in information and publicity, especially for bus services and issues in accessing them, the management of the network and provision of small scale works will make all journeys easier, more secure and more reliable. This could include the availability of convenient parking for both vehicles and bicycles.

**Challenge 3.2: Improve the health of individuals by encouraging more physically active travel and improving areas of poor air quality**

Exercise is recognised as essential for health and modes of transport such as walking and cycling offer the opportunity for healthy exercise. Encouraging active travel will form part of the promotional work to encourage use of all sustainable modes. This could include provision of information on, for example, how to access recreational areas where walking and cycling may be more than just a means of transport.

Air quality can be a serious threat to health and emissions from transport are a major source of air pollution. In those areas where there are specific air quality problems the county council will work with district councils to seek to reduce the level of traffic emissions, potentially by addressing congestion in the area or by looking to limit



the most polluting vehicles, such as HGVs. More stringent solutions such as introducing low emission zones or major restrictions on vehicles will be considered where conditions make it appropriate.



*Transport is a major contributor to air quality problems in the county*

More generally, heavy traffic and poor air quality can deter pedestrians and cyclists from passing through an area, which is contrary to the main aim of the strategy. Reducing the impact of traffic is an overall aim for a number of challenges.

### **Challenge 3.3: Maintain and enhance the natural, built and historic environment**

Transport, predominantly road transport but also rail, can have serious impacts on the natural and urban environment both from the construction of new infrastructure and from the presence of traffic in the landscape and in towns. Traffic affects both the environment and people potentially making walking and cycling uncomfortable and difficult, particularly in congested towns.

Minimising the impact of traffic while overall traffic levels are expected to grow is a difficult challenge. The aim is to increase use of sustainable modes which, together with small scale improvements to ease traffic flow, will reduce the impact of traffic on areas making them more attractive for users of

those modes. Environmental improvements, particularly in town centres, will help reduce the impact of traffic if funding can be made available. This would include the removal of unnecessary street clutter but also the provision of furniture to help the mobility impaired and to enhance social interaction.



*A good example of unnecessary street furniture*

### **Challenge 3.4: Reduce the impact of transport noise**

Noise from traffic and aircraft is an element of transport's impact on the environment. While complaints about traffic noise are relatively few there are locations where residents are subject to high levels of general noise or to occasional or frequent high levels as a result of particularly noisy vehicles, sometimes associated with anti-social behaviour.

Traffic noise will be addressed where feasible but there is no easy cost-effective solution for most problems. Noise reducing surfaces and even noise barriers may be appropriate and will normally be provided as part of wider schemes while quieter vehicles, partly as a result of older ones being replaced, may provide some solution in the longer term.

Aircraft noise, including that from helicopters, affects most parts of the county to varying degrees and individuals' reaction

to noise also varies. Aircraft noise can only be addressed in conjunction with the industry and the government, and there is no action the county council can take to mitigate its impacts.

### **Goal: Improve the safety and security of residents**

#### **Challenge 4.1: Improve road safety**

Safety remains of paramount importance. Casualties from road collisions have fallen in the last 5 years (2005-2010) but any casualty is to be avoided and there remain some vulnerable groups, motorcyclists and young drivers for instance, where casualty rates are particularly high. Contributory factors in collisions, such as drink, drugs and driving too fast also require attention.

Casualty reduction will principally be achieved through education, engineering and enforcement. Education and training programmes in schools and communities will give people, adults and children, the skills and confidence to walk and cycle. Engineering involves an array of small scale improvements designed to tackle the underlying causes of collisions. 20mph restrictions will be considered where appropriate.

Enforcement includes the management of speed on the network in partnership with the police. Enforcement through speed cameras in appropriate locations will continue to be important together with driver/rider training (and retraining) and specifically targeted programmes to address the dangers to young drivers and motorcyclists. Detail is provided in the county's Road Safety Strategy.

#### **Challenge 4.2: Reduce crime and fear of crime in the network**

Hertfordshire has a relatively low incidence of crime but incidents do occur involving users

of the network, particularly pedestrians and travellers on passenger transport. Fear of crime, while a problem itself, can also reduce people's willingness to travel by sustainable modes, particularly in quiet periods such as the evening.



*Fear of crime can affect people's choices in using passenger transport*

Issues of security will be addressed through improved design and lighting particularly at interchanges in partnership with operators, the police the British Transport police and others. This could, where appropriate, be associated with higher levels of visible staffing. Technology such as CCTV will also be installed in locations where there are particular problems and where necessary on passenger transport vehicles. Publicity on the benefits of sustainable modes will also need to refer to the relative security of the network for travellers.

### **Goal: Reduce transport's contribution to greenhouse gas emissions and improve its resilience**

#### **Challenge 5.1: Reduce greenhouse gas emissions from transport**

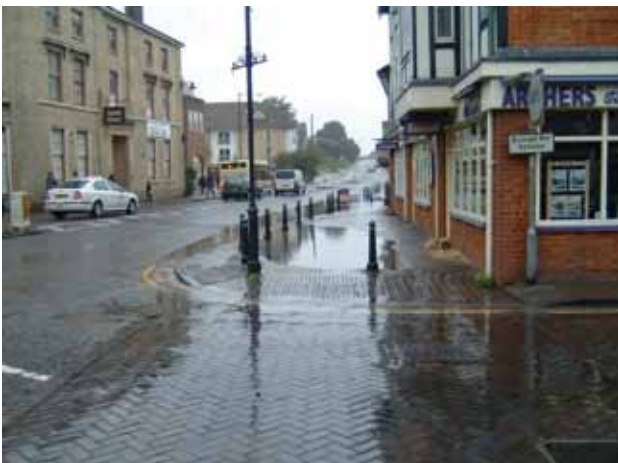
Transport in Hertfordshire makes a large contribution to the county's greenhouse gas emissions which in turn contribute to climate change. Reducing the county's contribution is essential if the nations' targets for carbon reduction are to be met.

This reduction can only be achieved by reducing overall traffic, mainly through increasing the use of sustainable modes, and by reducing emissions from individual vehicles.

The county council's strategy is aimed at both strands, reducing the need to travel and increasing sustainable modes and reducing vehicle emissions through measures such as addressing congestion hot spots, publicity and training regarding driving styles. The county council also supports the provision of infrastructure (charging points) for electric vehicles although the introduction of electric or low emission vehicles, while welcome, is largely a matter for operators and national government rather than for the county council.

### **Challenge 5.2: Design new infrastructure and maintenance in the light of threats from changing climate**

The changing climate brings increasing risks of periods of extreme weather. Heavy rain, wind, heat and snow can all bring problems to the transport system causing damage and delays.



*The need to plan for more frequent flooding events*

New infrastructure and maintenance to the network will be required to take these

issues into account to ensure that all works are designed to be resilient with, where feasible, a greater ability to handle severe weather conditions. In addition the intelligent technology systems will allow more active management of the network and enable travellers to be kept informed when and where problems do occur, improving the resilience of the overall network.

## **1.4 Indicators and Summary**

The challenges are accompanied by indicators intended to enable progress to be monitored. Ideally each challenge should have one or more indicators to show changes over time. Five year targets provide a measure of success and will help determine priorities for limited funding. The indicators are not comprehensive, and for some challenges there are no quantitative measures presently available.

The challenges and indicators are listed in Table 1.1.

Table 1.2, summarises the LTP approach, the issues and proposed interventions.

## **1.5 District Council Statements**

The final section of the strategy will set out the District Councils' commitment to the LTP approach and aims and their intentions to realise them for their own locality. Joint working between the districts/boroughs and the county has been an essential part of producing the Plan and will continue to be an essential element of the successful implementation of many of the interventions.

The statements produced by the individual districts/boroughs reflect their priorities, interests and aspirations. The county council will continue to work with them and other stakeholders to realise the shared goals for transport in Hertfordshire.

Summary Table 1.1: LTP 3 Challenges and Indicators

Challenge	Indicators
<b>1.1</b> Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy. NI 167 Congestion	<p><b>NI 167</b> Congestion</p> <p><b>NI 168</b> % local authority principal road networks where structural maintenance should be considered</p> <p><b>NI 169</b> % non-principal road network where structural maintenance should be considered</p> <p>% of Unclassified Road network where structural maintenance should be considered</p> <p>% of category 1, 1a and 2 Footway network where structural maintenance should be considered</p>
<b>1.2</b> Support economic growth and new housing development through delivery of transport improvements and where necessary enhancement of the network capacity.	Accessibility of new developments – % of new developments within 30 minutes by passenger transport of key services
<b>2.1</b> Improve accessibility for all and particularly for non car users and the disadvantaged (disabled, elderly, low income etc).	<b>NI 175</b> Accessibility - % of people who find it difficult to travel to key services
<b>2.2</b> Achieve behavioural change as regards choice of transport mode increasing awareness of the advantages of walking, cycling and passenger transport, and of information on facilities and services available.	% of all trips (under 1 mile) made by walking % of all trips (under 3 miles) made by cycling
<b>2.3</b> Achieve further improvements in the provision of passenger transport (bus and rail services) to improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users.	<p><b>NI 177</b> Passenger transport (Bus and Tram) Patronage</p> <p><b>NI 178</b> Bus punctuality</p>
<b>3.1</b> Improve journey experience for transport users in terms of comfort, regularity and reliability of service, safety concerns, ability to park and other aspects to improve access.	<p>User satisfaction with local bus services</p> <p>User satisfaction with Passenger Transport information</p>

Challenge	Indicators
<b>3.2</b> Improve the health of individuals by encouraging and enabling more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health.	<p><b>NI 198</b> Mode share of sustainable school journeys (Aged 5-10 years)</p> <p><b>NI 198</b> Mode share of sustainable school journeys (Aged 11-16 years)</p> <p>% Rights of Way easy to use by public</p> <p>Air Quality – Annual mean Roadside Nitrogen Dioxide</p>
<b>3.3</b> Maintain and enhance the natural, built and historic environment managing the streetscape and improving integration and connections of streets and neighbourhoods and minimising the adverse impacts of transport on the natural environment, heritage and landscape.	Speed limit compliance - % compliance with speed limits across the network
<b>3.4</b> Reduce the impact of transport noise especially in those areas where monitoring shows there to be specific problems for residents.	No specific indicator
<b>4.1</b> Improve road safety in the county reducing the risk of death and injury due to collisions.	<p><b>NI 47</b> Total Killed and Seriously Injured</p> <p><b>NI 48</b> Children Killed and Seriously Injured</p>
<b>4.2</b> Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised.	Total crimes per 100,000 passenger journeys at rail stations in Hertfordshire
<b>5.1</b> Reduce greenhouse gas emissions from transport in the county to meet government targets through the reduction in consumption of fossil fuels.	Transport related CO <sub>2</sub> emissions per capita (Government statistics)
<b>5.2</b> Design new infrastructure and the maintenance of the existing network in the light of likely future constraints and threats from changing climate, including the increasing likelihood of periods of severe weather conditions.	No specific indicator

**NI** – National Indicator

A qualitative Quality of Life indicator made up of a suite of indicators including noise, intrusive lighting, severance and impact of traffic, including speed, will be considered as part of Challenges 3.3 & 3.4.

Table 1.2 Summary of the Local Transport Plan 2011-2031

Challenge	Issue	Approach	Interventions	Summary
1.1 Keep the county moving	Congestion	<ul style="list-style-type: none"> <li>• Manage network efficiently</li> <li>• Maintain the network</li> <li>• Reduce need to travel by car</li> </ul>	<ul style="list-style-type: none"> <li>• ITS: Real time passenger info, linked traffic light signals</li> <li>• Promotion of sustainable modes including bus improvement measures</li> <li>• Small scale improvement to road network</li> </ul>	Efficient traffic management coupled with more people walking and cycling should reduce the occurrence of congestion
1.2 Support economic development and dwelling growth	Increased demand on network	<ul style="list-style-type: none"> <li>• Influence location and demand of new developments to utilise existing sustainable modes network</li> <li>• Support new passenger transport improvements where financially possible</li> </ul>	<ul style="list-style-type: none"> <li>• New infrastructure is presently being progressed for the Croxley Rail Link and for improvements to Watford Junction interchange.</li> <li>• Development of pedestrian and cycle routes</li> </ul>	Ensure new development is located and designed so that the maximum use can be made of sustainable modes, including bus travel
2.1 Improve accessibility for all	Accessibility	<ul style="list-style-type: none"> <li>• Seek to ensure all groups can access key services using passenger transport</li> <li>• Address information provision to aid accessibility</li> <li>• Identify where specific arrangements need to be made for certain groups, including issues of severance and in rural areas</li> </ul>	<ul style="list-style-type: none"> <li>• Support alternatives including ScooTs and Community Transport.</li> <li>• Roll out personalised travel planning schemes in selected areas of the county.</li> <li>• Improve the dissemination of passenger transport information through electronic and non-electronic means</li> <li>• Small scale improvements</li> </ul>	Increased information provision and a focus on identifying where specific arrangements are required for specific groups should help address issues of accessibility on transport across the county.
2.2 Achieve behavioural change as regards choice of transport mode	Sustainable modes and Behavioural change	<ul style="list-style-type: none"> <li>• Focus on health benefits and well as environmental benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Publicity and promotional work, in schools and businesses</li> <li>• Support for travel planning for organisations and individuals</li> <li>• Provision of information</li> <li>• Small scale improvements</li> </ul>	Increase the promotion of sustainable modes to ensure the health, as well as the transport, benefits are fully appreciated

Challenge	Issue	Approach	Interventions	Summary
2.3 Achieve further improvements in the provision of passenger transport (bus and rail)	Passenger transport	<ul style="list-style-type: none"> <li>Seeks to promote and support transport services across the county especially information improvements</li> </ul>	<ul style="list-style-type: none"> <li>Improved information</li> <li>Real time information on buses en route</li> <li>Improved ticketing systems</li> <li>Bus priority measures</li> <li>Improvements to rail and bus interchanges</li> </ul>	<p>The promotion of passenger transport alongside improvements in the quality of service provided by passenger transport will maintain and increase passenger transport patronage.</p>
3.1 Improve journey experience for transport users	Journey experience	<ul style="list-style-type: none"> <li>Address comfort, regularity and reliability of service and safety concerns</li> </ul>	<ul style="list-style-type: none"> <li>Better information</li> <li>Increased publicity</li> <li>Small scale improvement works including Interchanges</li> </ul>	<p>Focus is on making passenger transport journeys easier, safer and more enjoyable in order to improve quality of life.</p>
3.2 Improve the health of individuals by encouraging and enabling more physically active travel and improving areas of poor air quality	Health	<ul style="list-style-type: none"> <li>Promote health aspects of sustainable travel</li> <li>Discouraging use of car by focusing on air quality issues</li> </ul>	<ul style="list-style-type: none"> <li>Promotional work</li> <li>Provision of information</li> <li>Small scale works on cycle/ pedestrian routes</li> <li>Manage air quality of the network through AQMA's</li> </ul>	<p>The emphasis is on publicity around the health benefits of walking and cycling as well as the impacts of poor air quality.</p>
3.3 Maintain and enhance the natural, built and historic environment	Environment and quality of life	<ul style="list-style-type: none"> <li>Minimise the impact of traffic upon Hertfordshire's environment; buildings, landscape and people</li> </ul>	<ul style="list-style-type: none"> <li>Small scale improvements eg. to minimise 'street clutter'</li> <li>Small scale works on sustainable modes infrastructure</li> </ul>	<p>Aim is to increase use of sustainable modes and implement small scale improvements, and where appropriate speed restrictions, to reduce the impact of traffic on areas making them more attractive for users of those modes.</p>
3.4 Reduce the impact of transport noise	Noise (quality of life)	<ul style="list-style-type: none"> <li>Noise from traffic and aircraft is an element of transport's impact on the environment.</li> <li>There are locations where residents are subject to high levels of general noise or to occasional or frequent high levels as a result of particularly noisy vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Noise reducing surfaces</li> <li>Noise barriers</li> <li>Quieter vehicles</li> </ul>	<p>Traffic noise will be addressed where feasible but there is no easy cost-effective solution for most problems. There will be a need to look to future technological developments which may produce solutions.</p>

Challenge	Issue	Approach	Interventions	Summary
4.1 Improve road safety	Safety	<ul style="list-style-type: none"> <li>Vulnerable groups, identified locations and contributory factors to collisions to be addressed in partnership with the police, schools and others</li> </ul>	<ul style="list-style-type: none"> <li>Education</li> <li>Engineering</li> <li>Enforcement</li> </ul>	Road safety is a continuing programme of educational, engineering and enforcement measures designed to reduce the number of people killed and seriously injured on the roads.
4.2 Reduce crime and fear of crime	Crime/fear of crime	<ul style="list-style-type: none"> <li>Work in partnership with operators, the police and others to address design, lighting and staffing issues</li> </ul>	<ul style="list-style-type: none"> <li>Improved design and lighting</li> <li>CCTV</li> <li>Publicity on benefits of sustainable modes</li> <li>Better collaborative working with the Police and Transport Police</li> </ul>	Design and infrastructure measures will be used to tackle crime and reduce fear of crime.
5.1 Reduce greenhouse gas emissions from transport	Emissions	<p>2 Strand approach:</p> <ul style="list-style-type: none"> <li>reduce overall traffic through reducing need to travel and support of sustainable modes</li> <li>reduce emissions from individual vehicles</li> </ul>	<ul style="list-style-type: none"> <li>Addressing congestion hot spots</li> <li>Charging points for electric vehicles</li> <li>Publicity promoting better driving</li> </ul>	Reducing greenhouse gas emissions will be addressed through measures to reduce overall traffic and support sustainable modes and reducing emissions from individual vehicles.
5.2 Design new infrastructure and maintenance in the light of threats from changing climate	Climate Change	<ul style="list-style-type: none"> <li>Climate change likely to impact upon transport network - any new infrastructure and major maintenance should be built in the light of future climatic changes</li> </ul>	<ul style="list-style-type: none"> <li>Technology systems will allow more active management of the network</li> <li>Design to include a greater propensity to withstand extreme weather conditions</li> <li>Guidance on design provided in 'Roads in Hertfordshire'</li> </ul>	New infrastructure is to be designed to take account of climate risks and intelligent transport system measures will be introduced in order that in situations of extreme weather the transport system continues to operate.



## Section 2: Introduction

This is Hertfordshire's third Local Transport Plan.

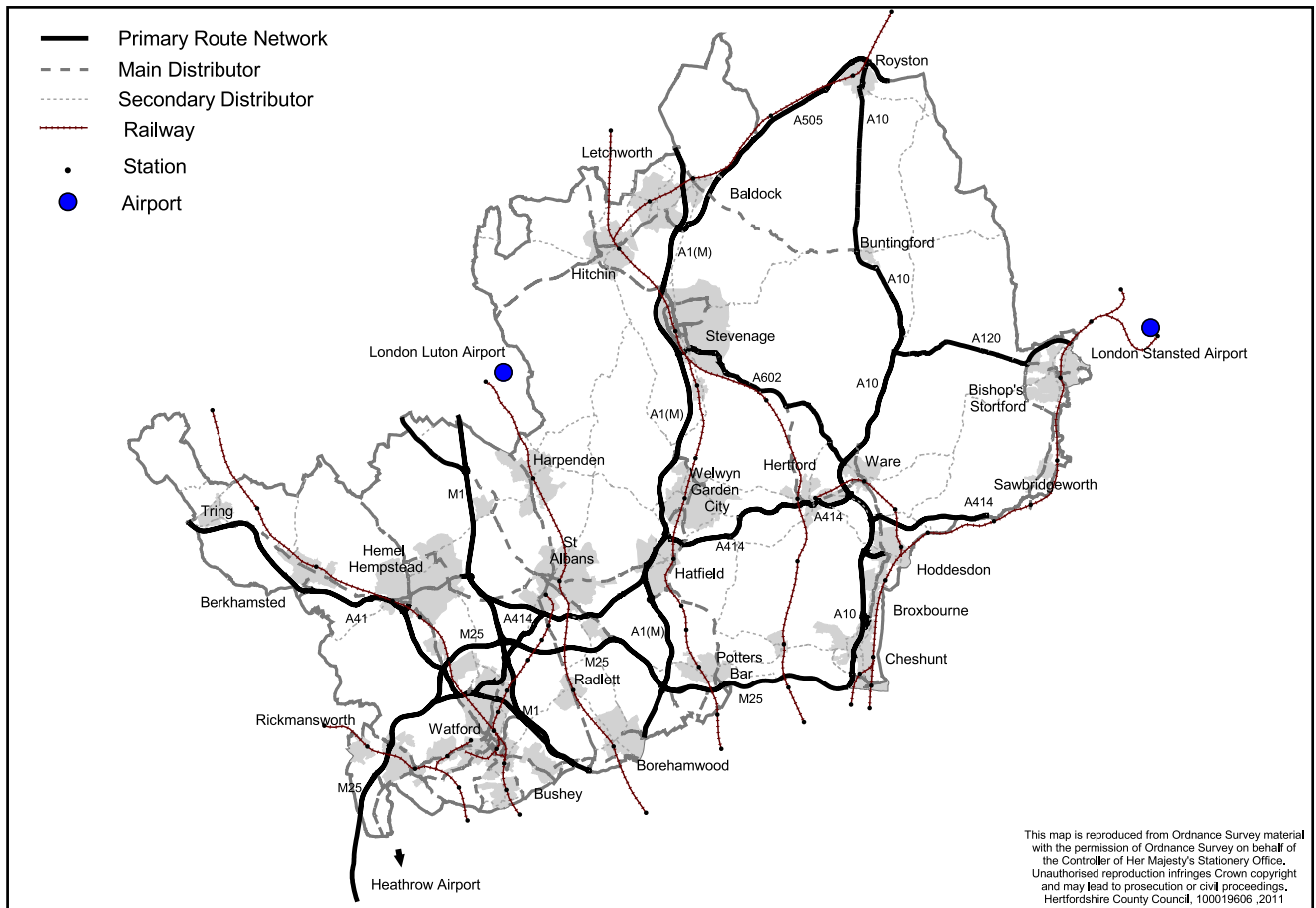
This Local Transport Plan (LTP3) has been produced by Hertfordshire County Council to replace LTP2 which covered the period 2006/07-2010/11. LTP3 sets the framework for achieving a better transport system for all over a plan period of 20 years (2011-31). This plan will build upon the successes of LTP2 (which are summarised in the LTP2 Annual Progress Reports from 2007/08 to 2010/11) and focus on delivering the goals of supporting economic growth, achieving behavioural change, enhancing the quality of life, safety and security and addressing transport's effect on climate change. Through these themes the Plan will continue to tackle the complex transport problems that face Hertfordshire.

Hertfordshire has a population of over 1 million residents and increasing numbers of long distance travellers passing through. There are pressures for substantial growth, residential and economic, which could have significant impacts on the transport infrastructure of the county.

The transport network has a north-south focus serving London, the Midlands and the North including the A1(M) and M1 motorways and the East Coast, Midland and West Coast Main Line railway routes. With the exception of the heavily congested M25 and A414 in the south of the county, east-west routes are limited. There is a particular problem for east-west rail passenger journeys, which often require taking the train via central London.

Settlements within the county are no more than five miles apart and consist of small and medium sized towns creating complicated movements to access facilities and services.

**Figure 2.1. Primary Route Network Map**



Congestion within towns creates local difficulties for all users and impacts on the quality of the environment. But, despite the low unemployment levels and high car ownership, there are also those who are excluded due to the lack of transport availability.

This Plan sets the county council's framework for tackling these transport issues and is focused on delivering outcomes which will make a demonstrable difference to the transport choices for residents and visitors in Hertfordshire. It provides the framework for transport improvements in the county and for transport's support of the economic and social development of Hertfordshire over the next 20 years. It will influence funding not only of the county council but for all who are engaged in development and in the provision and use of the transport network.

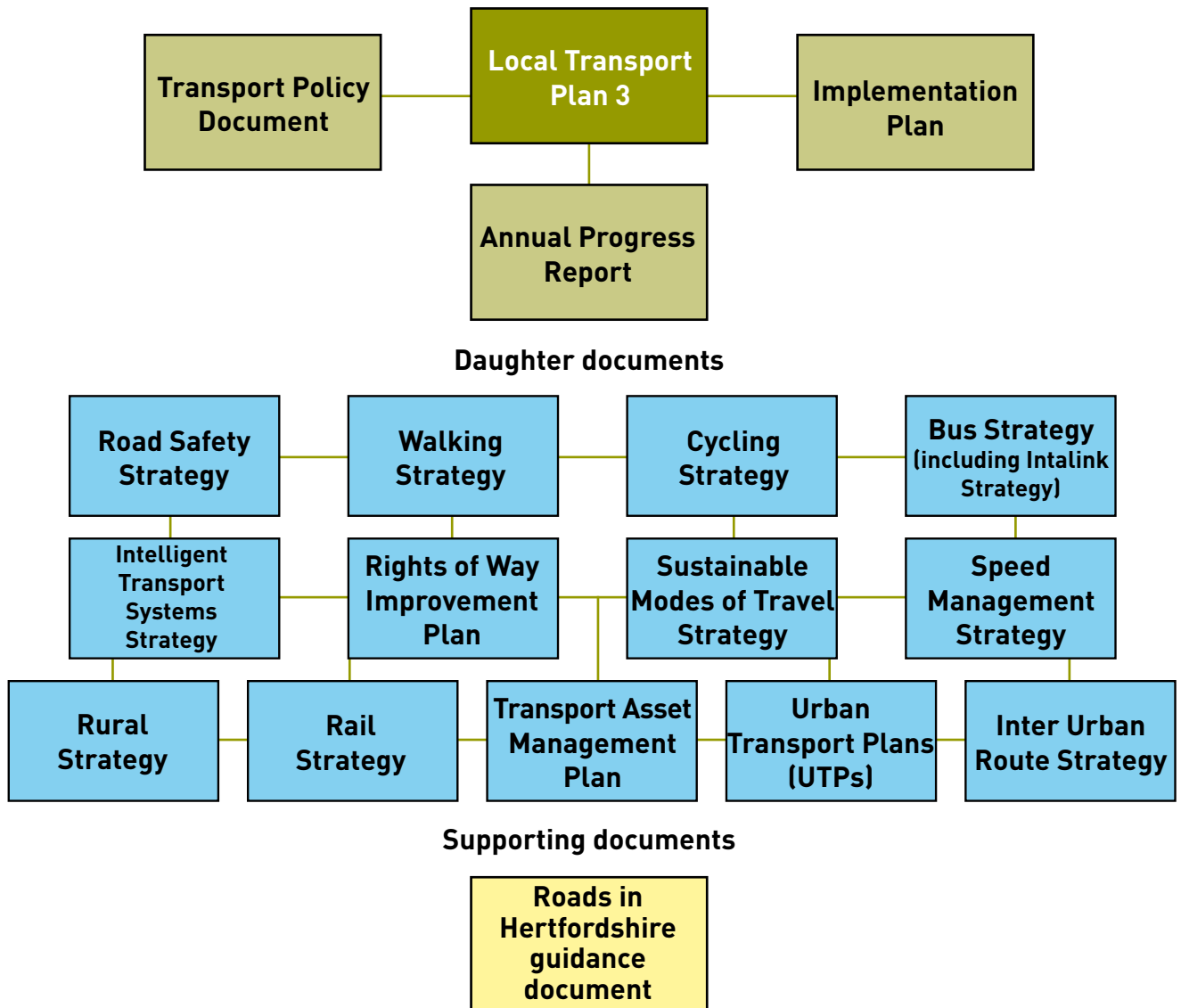
The Plan will be reviewed and updated throughout the plan period. The timetable for this will depend on circumstances such as changes in government policy or changes in funding levels. The Implementation Plan is for the 20 year plan period with a detailed 2 year programme of schemes and measures that will be reviewed annually and may be extended if financial provision allows for a longer programme.

The Local Transport Plan is in four parts:

- Volume 1, the Strategy Document, sets out the overall strategy, the goals and challenges to be addressed and the general approach to be taken
- Volume 2, the Policy Document, sets out the policies to achieve the challenges
- Volume 3, the Implementation Plan, lists the interventions (schemes and measures) planned in the short (2 year) term and the significant schemes that are to be delivered in the longer term
- The Plan is supported by a number of daughter documents - strategies which provide greater detail on key policy areas.

The general approach, the policies and the interventions have all been subject to appraisal under the Strategic Environmental Assessment process as have elements of the daughter documents. Progress on delivery is monitored through an Annual Progress Report. The diagram below shows the documents and their links to the Local Transport Plan.

Figure 2.2. Diagram showing the Local Transport Plan and associated documents



## 2.1 Consultation

Consultation with stakeholders and the general public has played, and will continue to play, a crucial role in the development of the final Local Transport Plan 2011-2031 and the daughter documents. In addition whilst the county council has the statutory duty to produce the LTP, its development and delivery rely on a wide range of other organisations.

Consultation on the pre-public consultation draft of LTP3 involved various stakeholders, councils, operators and members of the Transport Access Partnership (see Hertfordshire Forward section below). The draft was then subject to wider public consultation including parish, town, district and borough councils, neighbouring authorities, local interest groups, equalities groups, national organisations and transport operators.

In addition the county council has sought to engage groups across themes in order to develop and share knowledge amongst various groups. This has been done through discussions over individual strategies such as the Cycling Strategy.

The production of the Strategic Environmental Assessment (SEA) Environmental Report to accompany the LTP document is a statutory requirement. This has its own consultation requirements as set out in the EU Directive (2001/42/EC).

The following diagram shows Hertfordshire's consultation processes since the publication of the draft DfT guidance on Local Transport Plans in July 2009; this diagram also incorporates the SEA consultation processes.

**Figure 2.3. LTP Timetable**



## 2.2 Strategic Environmental Assessment

The European Directive 2001/42/EC and Central Government Local Transport Plan guidance requires that a Strategic Environmental Assessment (SEA) is carried out on Local Transport Plans.

The SEA is a process for the assessment of plans and programmes to determine how they take into account environmental, social and economic considerations in the way they are designed.

The main objective of the European Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations in the preparation and adoption of plans and programmes with a view to promoting sustainable development'.

The culmination of the process is that an Environmental Report is produced which details how consultation, and the recommendations from the assessment of the objectives, strategic alternatives, policy and major schemes have been taken into consideration and have influenced the development of the Local Transport Plan. This Report was available for comment as part of the public consultation process. An Environmental Statement is then produced summarising how the Strategic Environmental Assessment has been taken into account in the development of the plan.

## 2.3 The Wider Context

### National Policy

The Transport Act 2000 introduced a statutory requirement for local transport authorities to produce a Local Transport Plan. The Local Transport Act 2008 retains the statutory requirement to produce and review Local Transport Plans and policies. Prior to the

2008 Act, Plans were required to be renewed at least every five years. The new legislation means that local transport authorities may in future replace their Plans on a timescale of their choosing.

The previous LTP (LTP2) ran to March 2011 and the government made it clear that authorities were expected to have their new LTPs in place by April 2011. Hertfordshire County Council met this deadline and has decided to make the duration of their LTP3 twenty years (2011-2031), though reviews would be expected during the plan period.

The Department for Transport has set criteria for the development of the Local Transport Plan. These reflect the government goals for "Delivering a Sustainable Transport System" (DaSTS) as set out in 2008. The goals form the basis of the LTP3, but have been adapted to reflect the county's situation.

In summary the DaSTS goals are:

- Economic competitiveness and Growth
- Equality of opportunity
- Better safety, security and health
- Quality of Life
- Reducing emissions of CO2 and other greenhouse gases

Linked to these goals are a series of challenges setting out what needs to be achieved. How the county council has taken forward these goals and challenges into its Transport Plan is set out in Section 4 of this document.

Each challenge is expected to have at least one indicator and target by which to measure success. From the previous National Indicator set which local authorities were required to deliver there were 10 National Indicators which can be linked to the challenges. In addition other local indicators are required to measure delivery of the challenges (see Section 4).

## Regional Planning Context

The new government announced, in May 2010, that in line with its policy all regional plans will be withdrawn with development decisions to be made at the local planning authority level. The East of England Plan published May 2008 was the regional spatial strategy (RSS) for the East of England including Hertfordshire. It contained regional and sub-regional spatial policies, levels of proposed growth and transport policies for the period to 2021 but is no longer a material consideration for planning.

The implications of the abandonment of the RSS for future growth levels in Hertfordshire are not clear but at present there is no reason for the county council to change its approach to transport policy which is more widely based than that of the spatial strategy.

Hertfordshire is more closely related to and influenced by Greater London than by its neighbours in the region. As well as the considerable, largely rail borne, commuter traffic to central London there is much cross boundary movement. This movement, largely by car, between the south of the county and north London is for a range of purposes including employment and retail.

This relationship is very important in understanding and addressing traffic movements in the south of the county. Partnership working with Transport for London and the neighbouring authorities is an important part of the LTP.

## Local Land Use Planning

The Planning and Compulsory Purchase Act 2004 requires local planning authorities to prepare a Local Development Framework (LDF) which provides the essential framework for planning in their area. An LDF will include:

- Development plan documents
- Supplementary planning documents
- Statement of community involvement
- Local development scheme
- Annual monitoring reports

For the majority of planning issues, the local planning authority is the district or borough council, of which there are ten in Hertfordshire.

The Government has emphasised that the preparation of the local development framework is a participatory process and local authorities should seek the advice of the county council. In developing LDFs local planning authorities should take into account the strategic direction of the Local Transport Plan.

## 2.4 The Hertfordshire Context

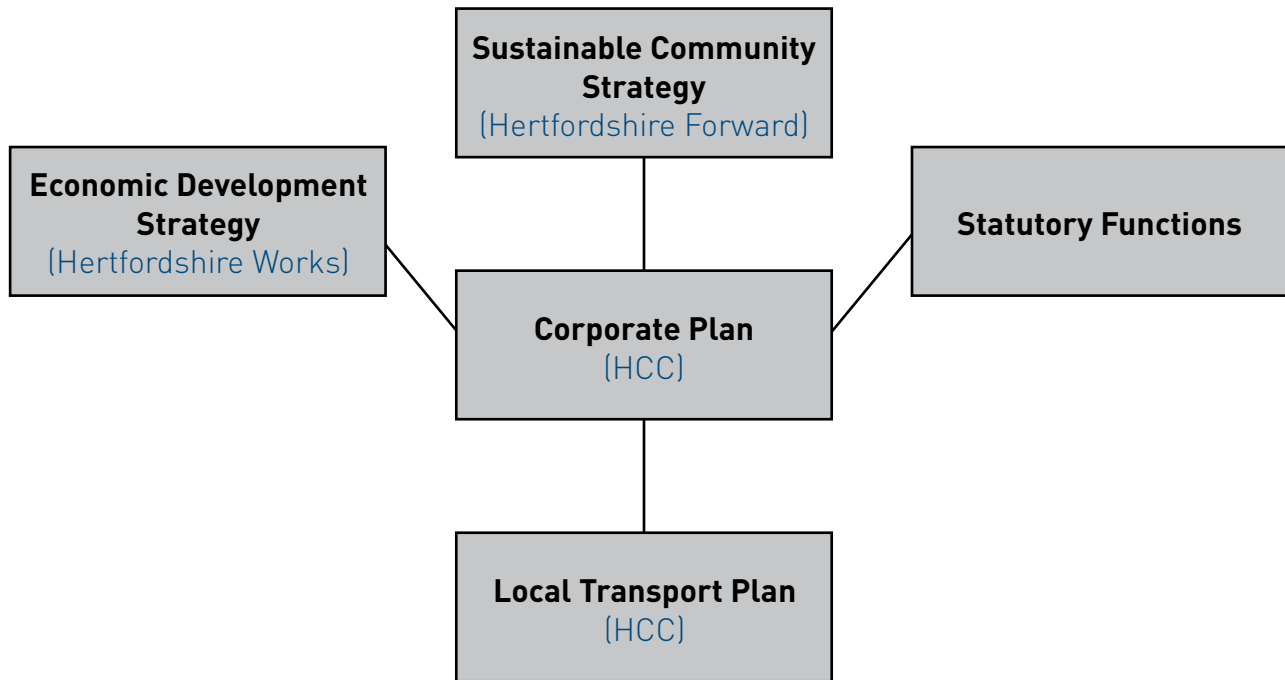
### Local Government

The Local Transport Plan contributes strongly to the corporate aims of the county council. The LTP ties into and supports the main corporate documents:

- Sustainable Community Strategy
- Hertfordshire County Council (HCC) Corporate Plan 2009-2012

The Hertfordshire Economic Development Strategy, produced by Hertfordshire Works (a partnership of the county council and business organisations) is a further important corporate strategy to be supported by the LTP.



**Figure 2.4 Corporate Strategies including Transport Issues** (owner in brackets)

### The Sustainable Community Strategy: Hertfordshire 2021

The Sustainable Community Strategy is produced by Hertfordshire Forward, the Local Strategic Partnership for the county that includes some 70 organisations and brings together primary care providers, the police, district councils, district level Local Strategic Partnerships, businesses and the voluntary and community sector. The partnership sets out a shared vision for the future of the county “to improve the well being of the people of Hertfordshire today and for future generations”.

The Transport Access Sustainable Development Partnership, a part of the Local Strategic Partnership, incorporates the Transport and Access Partnership where transport related issues are discussed.

The Sustainable Community Strategy document identifies a number of key issues for the county, both on a county-wide and more local basis.

“Transport and Access” is highlighted as a key area of concern for improvement. The long term transport and access objectives identified for 2008-2021 are:

- Reduce the need to travel and encourage the use of alternatives to the car
- Improve access to services, including education and health, no matter where you live
- Bring about a step change in the provision, quality and use of passenger transport in Hertfordshire
- Improve the reliability of journey times and improve East to West travel
- Improve access to the countryside, open spaces and cultural activities for recreation and health
- Ensure effective long term management and maintenance of the transport network
- Improve road safety

The complete list of areas addressed in the Sustainable Community Strategy is:

- Jobs, Prosperity and Skills
- Safer and Stronger Communities

- Children and Young People
- An Ageing Population
- Health and Wellbeing
- Housing, Affordable Housing and Quality Neighbourhoods
- Transport and Access
- Sustaining Hertfordshire's Unique Character and Quality of Life
- Promoting Sustainable Development

The Local Transport Plan seeks to use transport interventions to achieve improvement in all of the above areas.

Hertfordshire Forward is reviewing the Sustainable Community Strategy for Hertfordshire. The review started in June 2010. The strategic aim is to secure a Sustainable Community Strategy review that has broad based support across Hertfordshire through a process that is well led and managed by Hertfordshire Forward partners and addresses the key strategic and long-term issues.

### **Hertfordshire's Local Enterprise Partnership**

In October 2010, the Government published its White Paper, entitled 'Local Growth: realising every place's potential'. The White Paper outlined how businesses and councils should come together to form Local Enterprise Partnerships whose geographies reflect the natural economic areas of England.

Alongside the White Paper, the Government announced its approval of the formation of a Local Enterprise Partnership for Hertfordshire.

It is expected that the Hertfordshire Local Enterprise Partnership will be engaged with strategic transport issues in Hertfordshire over the lifetime of this Local Transport Plan.

### **The Corporate Plan 2009-2012**

The county council's overall objectives are summarised within the Hertfordshire County Council Corporate Plan. This set of 7 objectives reflects the continuing commitment to delivering priority services to the people of Hertfordshire. All of these objectives are reflected in the Local Transport Plan challenges and targets, and include:

- Support economic wellbeing
- Maximise independent living
- Ensure a positive childhood
- Secure a good education for all
- Reduce carbon emissions
- Promote safe neighbourhoods
- Be a leading council

These objectives are addressed in the LTP challenges and are to be achieved by the LTP through working with local communities and partners. The Corporate Plan and Local Transport Plan also incorporate National Indicators.

The county council's vision defines the kind of organisation the council aspires to be and the way the council needs to work to achieve the challenges and broader objectives. It is about providing modern effective solutions which allow the council to:

- play a full part in everything which affects the wellbeing of Hertfordshire and its residents
- join with others in the public, private and voluntary sectors to meet the aspirations of our residents, using our democratic legitimacy to lead and to champion the interests of the county
- be ambitious for our people, creating opportunities for them to maximise their potential and to live fulfilling lives in strong families and communities
- increase people's influence over local decisions, trusting them to take greater responsibility for their own communities.



## 2.5 Other Corporate Polices:

### Hertfordshire Economic Development Strategy

The Hertfordshire Economic Development Strategy for 2009-2021 has been produced and adopted by Hertfordshire Works, a partnership of the county council and county business and education organisations.

The vision of the Hertfordshire Economic Development Strategy is:

‘By 2021, Hertfordshire will have a resilient and low carbon economy characterised by quality jobs, innovative and dynamic business, supported by a well skilled workforce and an entrepreneurial culture, where everyone has the opportunity to prosper and fulfil their ambitions.’

The strategy sets out our five economic objectives:

- Creating a vibrant, low carbon economy
- Stimulating enterprise, innovation and inward investment
- Developing a well skilled workforce
- Providing quality locations and infrastructure
- Creating vibrant towns and vibrant communities.

The challenges of the LTP feed into this strategy and both documents will work together to deliver Hertfordshire’s economic development vision.

The relationship between the LTP challenges and the objectives of the Sustainable Community Strategy, the Corporate Plan and the Economic Development Strategy are summarised in the diagram at the end of the section on Challenges (Section 5).

## Other Plans

Other Plans taken into account in preparing the LTP include:

- Children and Young Peoples Plan – part of the Sustainable Community Strategy
- The Chilterns AONB (Areas of Outstanding Natural Beauty) Management Plan



## 2.6 Partnership Working

The challenges, policies, proposed interventions and indicators set out in the LTP were developed in co-operation with district and county colleagues along with stakeholders and local groups. Examples include:

- Consultation around the government's transport challenges (DaSTS) in November/December 2009 at 3 stakeholder events.
- Involvement in the county Herts and Beds Air Quality Network Group with the district and borough council's to address the issues associated with air quality management areas.
- Working with neighbouring authorities and Transport for London through a variety of groups

The county council has a number of strategic groups which contribute to and influence the LTP. These groups include:

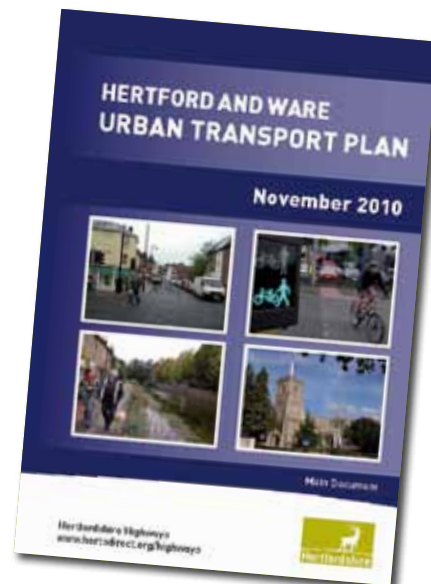
- Hertfordshire Technical Chief Officers Association LTP Group
- Transport Issues for Disabled Persons Group
- Cycle Forum
- Accessibility Steering Group

Delivery of the Plan's policies and interventions will involve a variety of organisations both public, such as the Highways Agency and Network Rail, and private, such as the transport operators and developers.

## 2.7 The Local Transport Plan and the Local Planning Authorities

The development of the Local Transport Plan has involved both officers and members of the county council. District and borough councils will contribute specifically with a section (Section 6) setting out how they look to achieve the LTP aims through their Local Development Frameworks (LDFs). This section has been written in the light of the public consultation responses. The LDFs can address transport issues and where they do this information will link to the Local Transport Plan.

Urban Transport Plans provide a specific transport plan for each of the main urban areas of the county. The county council develops the UTPs alongside the districts and borough councils. The UTPs are an important part of the LTP process in providing specific details of measures and schemes required in the urban areas which are then included in the Implementation Plan as appropriate.



## Section 3. Transport in Hertfordshire

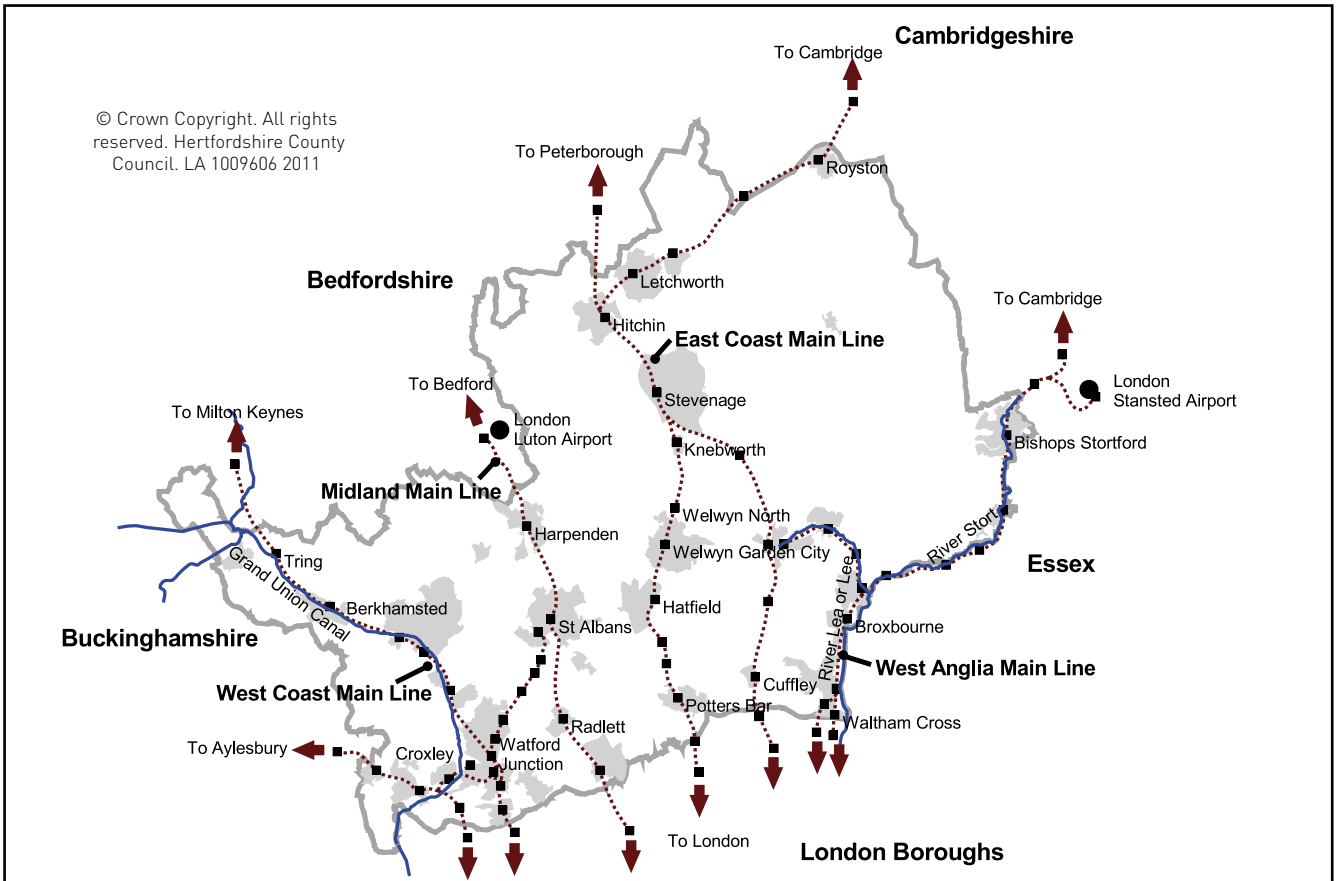
### 3.1 Overview

Transport in Hertfordshire reflects the county's location immediately to the north of London. The major roads and railways run north-south through the county as part of the national transport system linking London to the rest of the country and traffic levels are high with a complex movement pattern both within the county and across the borders.

The rail and road networks together with the navigable waterways of the county are shown on the maps below. Some statistics are provided in this section but additional information is available in the annual Hertfordshire Traffic and Data Reports.

### Railways and Navigable Waterways

Figure 3.1 – Rail Network and Strategic Waterways



The four major rail lines through Hertfordshire are the West Coast Main Line through Watford, the Midland Main Line through St Albans, the East Coast Main Line through Stevenage and the West Anglia Line through Broxbourne and Bishop's Stortford. The Midland Main Line is also part of the Thameslink system which crosses through London to the south.

The other lines include the Abbey Line, from St Albans Abbey station to Watford, and the Metropolitan Line from West Watford and Rickmansworth which is part of the London Underground system. There is no east-west rail line across the county. The county council supports proposals for such a link, initially possibly between Stevenage and Luton, but at present there seems no likelihood for this being built in the LTP period.

The majority of Hertfordshire's rail users are commuters to central London leading to capacity problems and overcrowding at peak hours. There are also reliability issues. Improvements to rail services, including new trains, and new infrastructure presently proposed for Thameslink and potentially for the West Anglia line are important to address these.

There is also considerable commuter usage in the opposite direction to the main flow and use of the long distance lines to destinations north of the county. Limited track capacity on the main lines throughout the day reduces the potential for fast long distance trains to stop at even the major Hertfordshire stations of Watford Junction and Stevenage.

Immediately to the east and to the west of the county are two major civil airports, London Stansted, near Bishop's Stortford, and London Luton, north of Harpenden. Both add to traffic and rail demands in the county though the majority of airport related demand uses the rail and motorway links to London.

Heathrow lies to the southwest of the county. The rail issues for Hertfordshire relate mainly to capacity in the peak periods. In addition to peak time unreliability and overcrowding lack of capacity on the main lines limits the number of trains that can serve Hertfordshire stations and the potential for changing stopping patterns. These issues are addressed by the county council working with Network Rail, the operators and Transport for London.

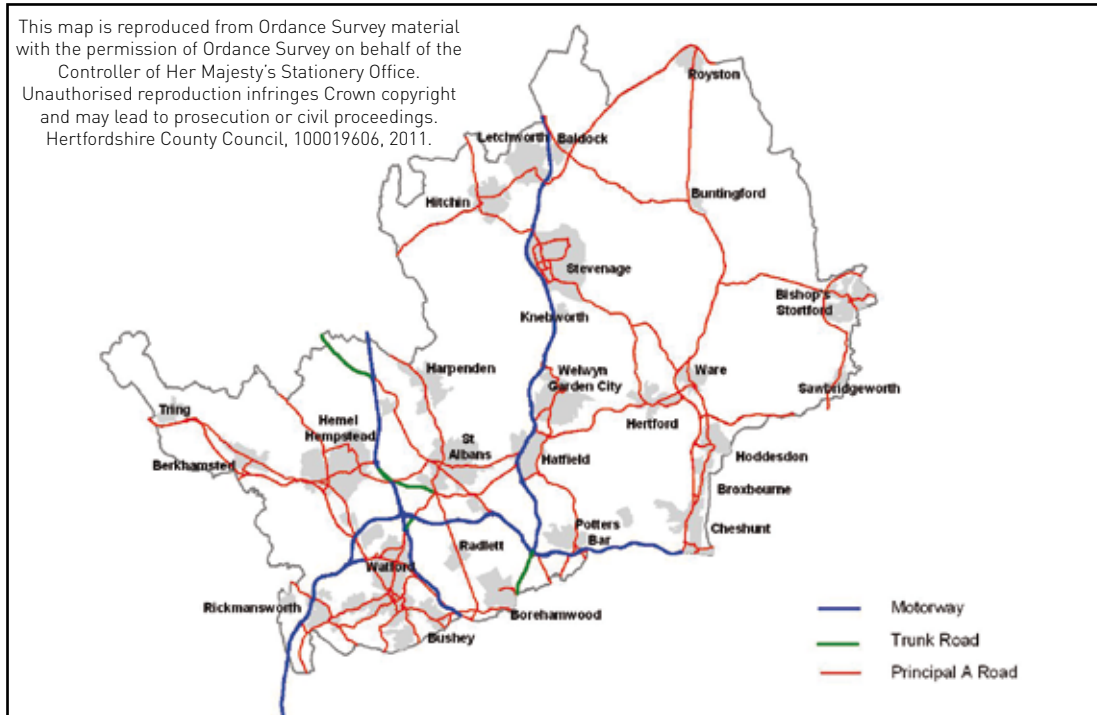
There are two systems of navigable waterways in the county, the Grand Union Canal in the west through Berkhamsted and the Lea and Stort Rivers in the east from Hertford and Bishop's Stortford. They are mainly used for recreation, boating, fishing and walking and cycling on the tow paths (both are Sustrans routes) and may offer further possibilities for sustainable transport.

The waterways could have limited potential for carrying freight. Levels of use would need to be limited to ensure it did not conflict with the well-established recreational uses.

## Road Network

The road network, like the railways, is dominated by the north-south routes, the M1 and A1(M) motorways with the M11 immediately to the east of the county. The M25 provides an east-west route across the south of the county with the A414 another east-west route a little to the north. In the north of the county the A505 links the M11 to the A1(M) via the Baldock Bypass and then continues through Hitchin to Luton.

**Figure 3.2 - Road Network in Hertfordshire**



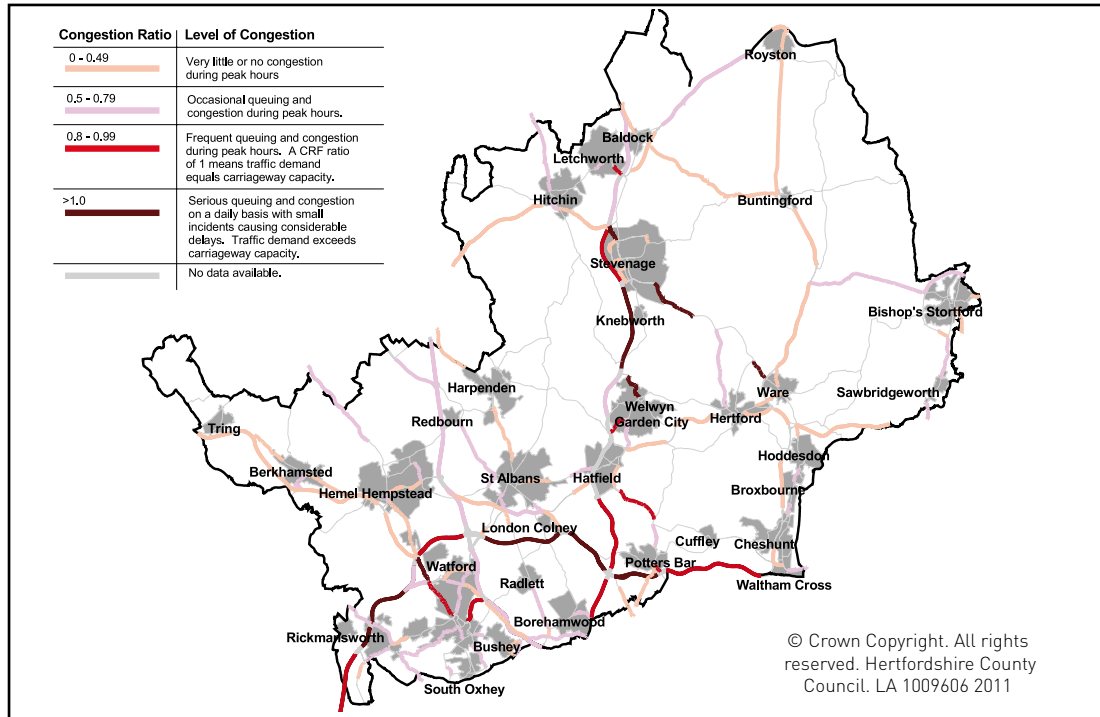
*Source: Hertfordshire Traffic and Transport Data Report 2009*

The county's strategic network of motorways and principal A roads is shown on the map but there is also a comprehensive network of smaller A and B roads. While all the towns could be said to have good road links, there is no direct east-west route across the centre or north of the county. All but the most major routes pass through rather than round urban areas leading to congestion and delays plus the inevitable environmental impacts on the local environment.

As an economically buoyant county near London traffic levels are high. Daily flow rates on the motorways and trunk roads are over twice the national average and on the principal (A) roads 80% higher. On the

motorways, which carry much traffic passing through the county, congestion can occur at any time, particularly as a result of collisions or road works. Throughout the network congestion at peak times is a major issue. Hertfordshire is closely related to and influenced by Greater London. As well as the considerable, largely rail borne, commuter traffic to central London there is much cross boundary movement. This movement, largely by car, between the south of the county and north London is for a range of purposes including employment and retail and the relationship is particularly important in understanding and addressing traffic movements in the south of the county. Congestion levels on Hertfordshire's main roads in the peak hours (7am-10am) in 2009 are shown in Figure 3.3.

Figure 3.3 Link Congestion Levels on Hertfordshire's Road Network 2009



Source: Hertfordshire Traffic and Transport Data Report 2009

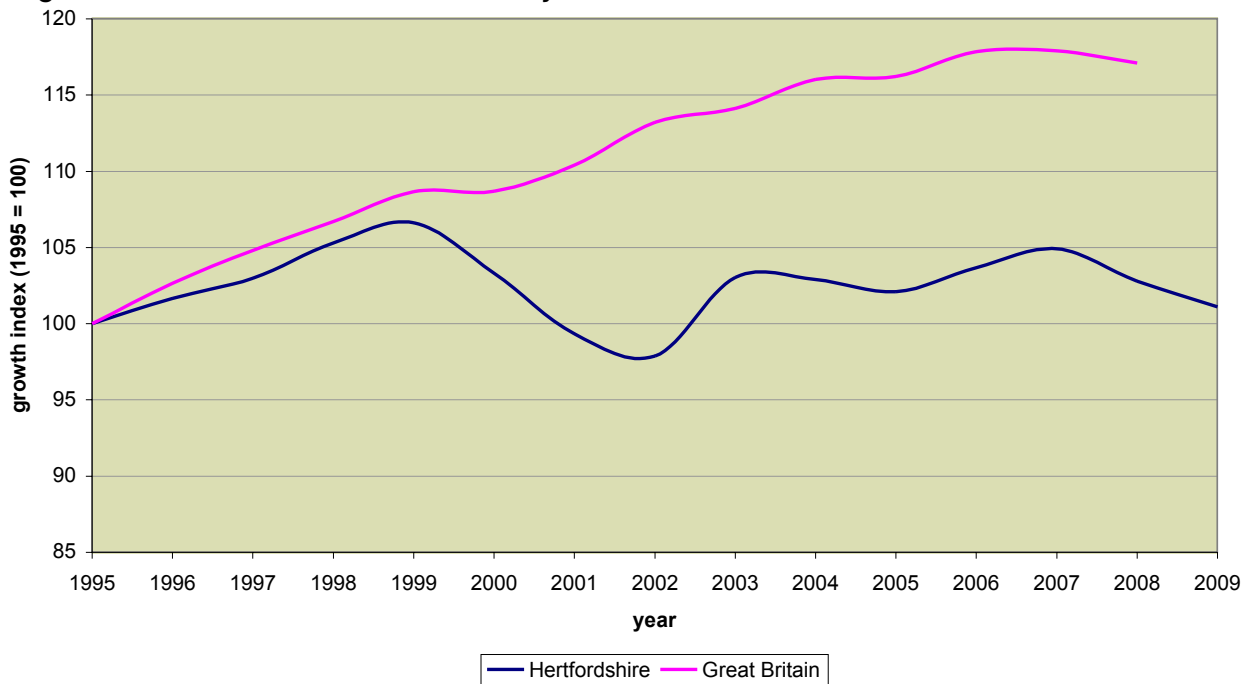
The main congested routes run north-south, apart from the M25 where completion of the ongoing road works will increase capacity. This map though does not show congestion within the towns which is measured differently. The average peak hour speed on the main routes in the main towns 2008/09 was just under 3 minutes a mile (2.87m/m), a small improvement on that of 2007/08 (2.97m/m), but speeds do vary across the county.

Congestion, both on the major links and within urban areas, has significant costs. It causes delays to peoples' journeys to work, schools and elsewhere (welfare costs) and impacts on the economic competitiveness of the county. Figures for the East of England region (modelled in the Transport Economic Evidence Study (TEES)<sup>2</sup>) estimated that the economic cost of congestion in Hertfordshire in 2003 was about £0.20 billion and that despite planned and committed investment,

and allowing for projected growth in development and travel, this figure would rise to £0.44 billion in 2021.

These estimates are comparing congested peak flows with a free flowing system which is not achievable in Hertfordshire or the region. Congestion, whatever the estimated cost, remains a major issue in the county both for residents and for the economy and needs to be addressed in a variety of ways not least by reducing the need for car travel during peak periods. It should also be noted that traffic from rural locations where no alternative mode is available contributes to total congestion.

Total mileage travelled has not increased greatly between 2000 to 2009 and by less than the national rate but part of the reason is likely to be the recent recession. Economic, housing and population growth will increase demands for travel over the plan period, demands which, if they are met by car travel in the peak hours, will just add to existing congestion.

**Figure 3.4 Historical Trends of County and National Traffic**

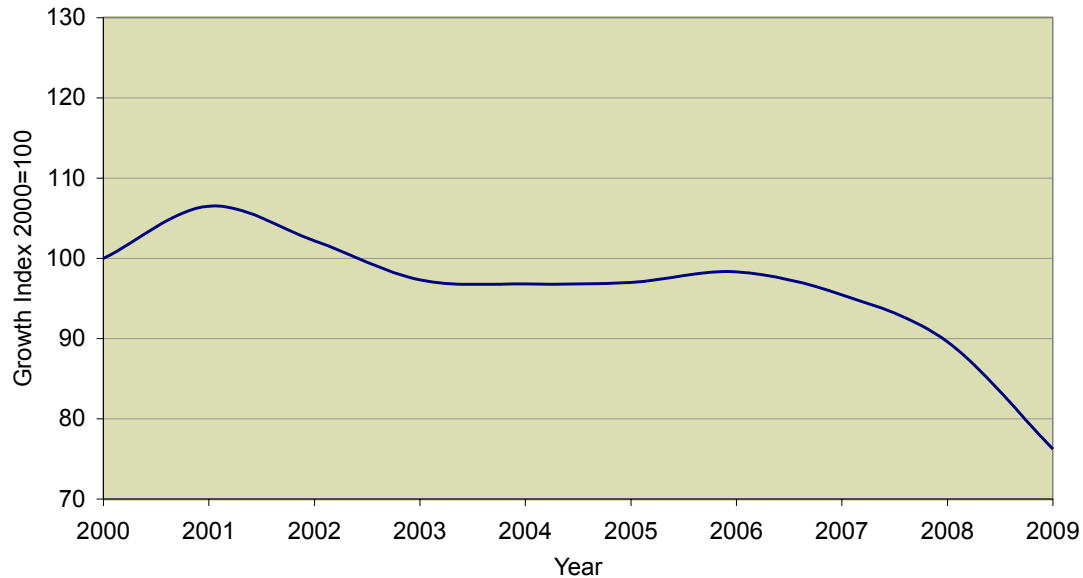
Source: Hertfordshire Traffic and Transport Data Report 2009

It is important that transport, not just road transport, continues to serve the county's economy and residents as demand grows. Under the present financial and environmental circumstances it is not feasible, in the county council's view, to meet demand and address congestion on major links by the construction of new roads and bypasses. Other solutions are required but the need to meet the requirements of a growing economy, including the movement of freight, remains.

Freight transport is an essential part of the national and local economies. In 2008, road freight accounted for two thirds of goods moved in Great Britain. Hertfordshire has both freight traffic distributing goods within the county and a large number of HGVs (heavy goods vehicles over 3.5 tonnes) passing through the county on the strategic routes. Hertfordshire's motorway and trunk road networks carry two and a half times the national level of HGVs, with principal A roads carrying almost double the national levels.

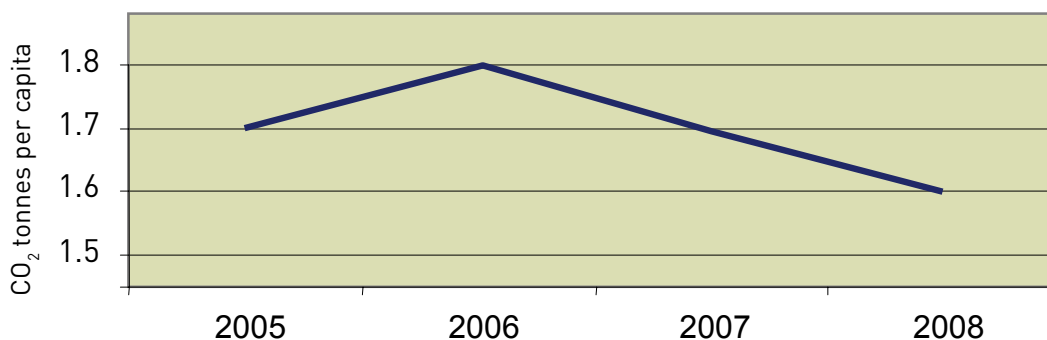
It is council policy to encourage HGVs travelling in Hertfordshire to keep to the motorway, trunk and principal road network where possible and almost 90% of total mileage travelled by HGVs takes place on these roads.

HGV flows have declined since 2007. HGV mileage decreased by around 13% 2008-09 with the largest decreases in HGV traffic being on the motorways and trunk roads though most roads have seen some fall. The decline will be partly due to the recession and partly due to the trend towards the use of larger lorries and also of light goods vehicles (which are not recorded as HGVs).

**Figure 3.5 Historical Trends of HGV How in Hertfordshire (All Road Types)**

Source: Hertfordshire Traffic and Transport Data Report 2009

Road traffic and, to a lesser extent, railways create pollution, notably noise and air pollution. The greenhouse gases which contribute to climate change are of particular importance. It is estimated (by the Department for Energy and Climate Change) that road transport in Hertfordshire created 1.6 tonnes of CO<sub>2</sub> per capita in 2008 which is over a quarter of the county's total estimated CO<sub>2</sub> emissions. Increased road traffic threatens to increase greenhouse gas emissions overwhelming any savings from 'cleaner' new vehicles replacing older polluting ones.

**Figure 3.6 Transport's contribution to emissions in Hertfordshire:**

Source: Department for Energy and Climate Change

Pollutants from traffic also affect the quality of air locally. Air Quality Management Areas (AQMAs), where air quality falls below threshold levels; have been declared in a number of districts/boroughs and, in each case, traffic is the main source of the problem. A list of AQMAs and the actions being considered to deal with the problems is provided in the LTP Annual Progress Reports.



Safety on the county's roads remains a critical issue with concerns not only over the numbers killed and injured but also on the perceived threat to other road users from speeding traffic. The number killed and seriously injured on the roads in 2009 is significantly less than in 2005 but the decline has not been consistent and there remain particular vulnerable groups, such as young drivers and motorcyclists, with disproportionate casualty rates.

**Table 3.1 - Number of people Killed and Seriously Injured on Hertfordshire roads (including motorways) 2005-2009**

Year	Killed and Seriously Injured (KSIs)
2005	580
2006	499
2007	550
2008	459
2009	413

*Source: Hertfordshire Traffic and Transport Data Report 2009*

It is apparent that despite improvements in recent years the road and rail networks suffer demands in excess of the capacity that can comfortably be handled, especially at peak times. It is inevitable that in this LTP plan period this 'infrastructure deficit' cannot be met by the construction of sufficient new infrastructure. There is unlikely to be the finance and the wider environmental consequences with new infrastructure, particularly new roads, generating new demands would prove unacceptable.

Despite the congestion, the car is the dominant form of transport and is expected to remain so. The character of the county with medium sized and small towns and without a major centre makes for a complex pattern of movements for employment and for services. No village is more than 5 miles from a

medium sized town but there are large rural areas of the county where travel other than by car is difficult.

Most householders in the county have access to a car (Table 3.2). Nearly half have more than one but in 2009 one household in ten had no car and would be largely reliant on the county's passenger transport system. The major element of this system is the bus network but there is also an important element, including the voluntary and community sector, of transport aimed specifically at those unable, for whatever reason, to use the public bus and rail services.

With no east-west rail and only limited cross county coach services the bus has to serve the towns, rural areas and the longer distance cross county routes. This presents difficulties for the commercial bus operators with the average passenger journey being comparatively short at less than 3 miles. Long distance journeys can be slow as the service has to meet local demands and services in rural areas can be costly to maintain. For all services there is the problem of delays and reliability for buses using the congested network during peak times.

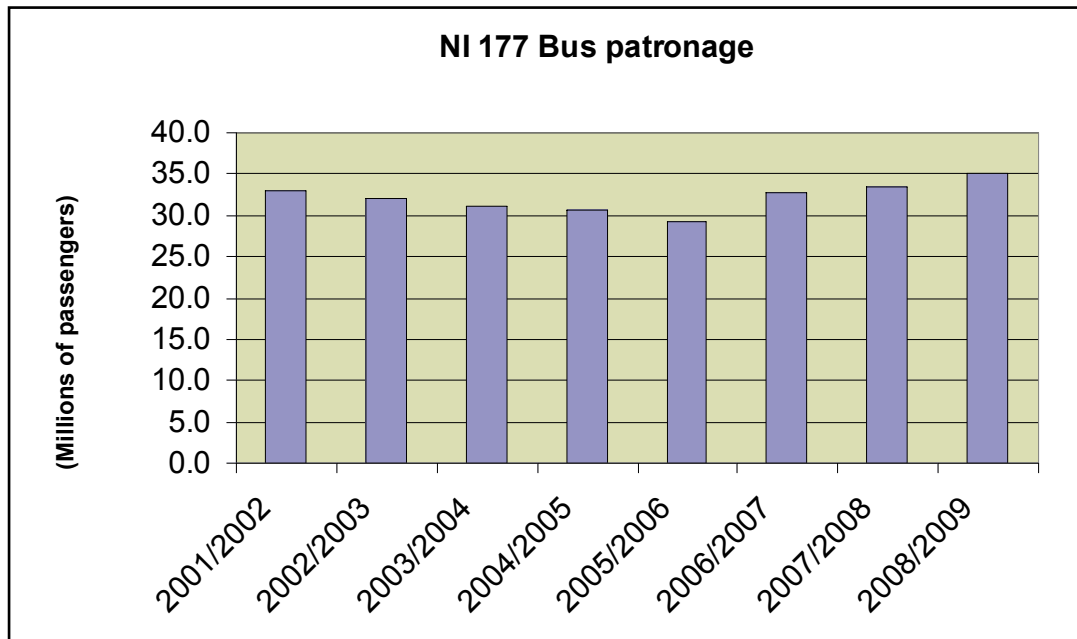
Table 3.2 - Car Ownership in Hertfordshire

	2001 Census (%)	2005 Travel Survey (%)	2009 Travel Survey (%)
<b>Households without a car</b>	18	13	10
<b>Households with one car</b>	42	43	46
<b>Households with two or more cars</b>	40	45	43

Source: Hertfordshire County Travel Survey 2009

Nonetheless bus patronage has increased over the past few years and was at just over 35 million passengers in 2008, levels not seen since the 1980s when changes were made to allow competitive commercial operations. However, maintaining and increasing the number of passengers, at a time of funding constraints, could be difficult without specific measures to aid bus travel particularly if car ownership continues to increase.

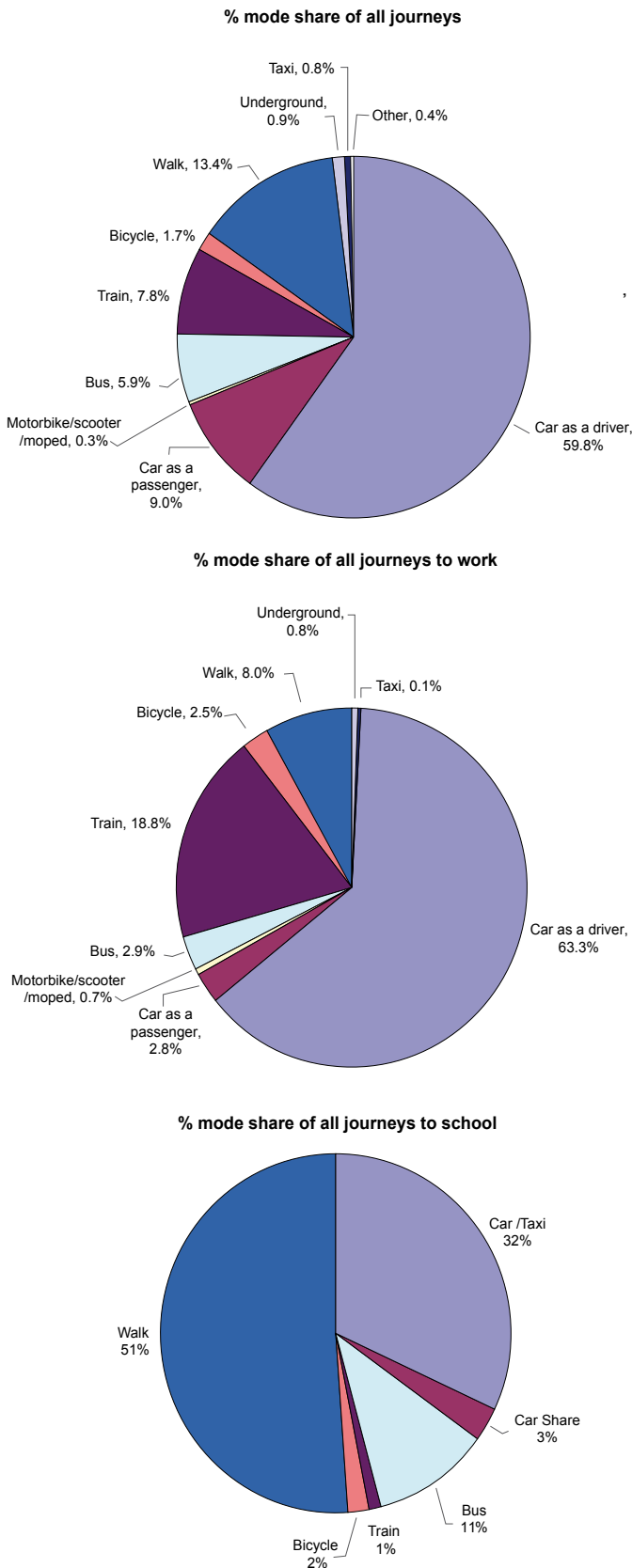
Figure 3.7 - Bus Passengers in Hertfordshire



Source: DfT NI Data 2008/09

The other important form of transport in the county is walking, both as a frequently used mode to access employment and other services, and for recreation. The county has a comprehensive rights of way network which provides for recreational walkers, cyclists and horse riders but which also provides links which may be used for other purposes. The health benefit of physical activity through such modes of travel is increasingly being recognised for both young and old.

**Figures 3.8 - 3.10. Mode Shares (Source: Hertfordshire County Travel Survey 2009)**



The share of the different modes of travel for all journeys in Hertfordshire (2009) is as shown in Figures 3.8 – 3.10. Cars, drivers and passengers, make up 70%, with walking 13%, bus journeys 6%, and cycling 2%. For journeys to work, important as the majority are in the morning and evening peak periods, the proportions of cycling, train, motorcycle and ‘car as driver’ are more than for total journeys. The figures are averages with more people likely to walk or cycle in good weather and increasingly people may work at home on some days in a week.

Mode shares are also related to the distance to be travelled, with walking and cycling obviously being more suited to short journeys. Many of Hertfordshire residents’ journeys to work are short, a fifth being less than 3 miles, and many of the longer ones, being by train to London, contain a short segment from home to the rail station which would suit walking and cycling. There should therefore be potential to increase the proportion of commuters who walk and cycle. The London cycle hire scheme could help encourage rail commuters to cycle as part of their journey.

**Figure 3.11 - Distance travelled to work**

	1999	2002	2005	2009
Works at home	1%	3%	4%	4%
<3 miles	24%	20%	19%	19%
3 to <5	13%	10%	10%	9%
5 to <10	16%	20%	14%	16%
10 to <15	10%	12%	11%	11%
15 to <20	6%	6%	8%	7%
20 to <30	12%	12%	13%	13%
30 to <40	7%	8%	8%	8%
40 to <50	2%	2%	3%	3%
50+	2%	2%	2%	2%
Varies	7%	4%	9%	7%
Total Responding	1589	1576	2855	5763

Source: Hertfordshire County Travel Survey 2009

### Perception of Transport in Hertfordshire

Transport is not an end in itself except perhaps for recreational journeys. It is a service which provides a vital contribution to the economy, moving employees and goods, and enabling people to access the services they want, shops, health and leisure. The increasing availability of web-based services has cut the need to travel for some services but overall it appears demand continues to rise.

Forecasts of traffic levels in the county pre-date the recession and uncertainties over the level of housing developments that may occur in the plan period. Some increase can still be expected but the impact of any growth will vary depending on where it occurs. More traffic on a widened M25 may not affect many residents but relatively small increases in certain locations at certain times can appreciably add to local impact and to congestion.

The county council carries out a number of surveys of its residents including a County

Travel Survey normally every three years providing statistics on travel in the county, mode share, etc. Respondents are also asked what their major concerns and Table 3.3 shows residents' priorities for the years 1999 -2009.

The top priority in 1999 and 2002 was 'building new roads' but in the 2005 and 2009 surveys this was replaced by 'maintaining existing roads'. Other surveys confirm maintenance as being of the highest priority. The winters in 2009 and 2010 which caused particular damage to many roads have not improved the situation.

The second and third priorities in the 2009 survey were 'improving bus and rail facilities' and 'reducing road accidents'. Priorities were similar in 2005 but with 'reducing traffic congestion' ranked above traffic accidents. Overall during the 10 years 'reducing the number of accidents' would rank slightly above 'reducing traffic congestion'.

**Table 3.3 - Resident's Transport Priorities from County Travel Surveys**

Improvements	1999	2002	2005	2009
Maintaining existing roads	6	9	1	1
Building new Roads	1	1	9	7
Reduce Road Accidents	7	9	4	3
Improve bus and rail facilities	6	8	2	2
Improve pedestrian facilities	3	4	5	5
Provide better walk/cycle access to schools	3	5	5	4
Improve cycling facilities	2	2	6	4
Manage traffic in rural areas	2	3	10	-
Manage traffic in urban areas	4	6	8	-
Tackle air pollution	5	7	7	6
Reducing traffic congestion	-	-	3	4
Real time transport information and journey planning	-	-	-	6

Source: Hertfordshire County Travel Survey 2009

Across the county 'building new roads' has fallen to last place behind 'providing better walking and cycling access to schools' and 'improving pedestrian and cycling facilities' across the whole county. There are variations by districts/boroughs and in Watford for instance 'new roads' rank fourth just above maintenance and just below reducing congestion with access to schools as the top priority.

## 3.2 Issues

This brief overview of transport in the county and public perceptions suggests that there are three major longer term issues.

### 1. Congestion

The demands for travel from the million residents plus that from people travelling into and through the county are greater than the capacity of the road and rail network. Improvements in the past, such as the building of the M25, have encouraged longer distance travel for work and other services overloading major routes while the urban areas are congested by both long and short distance travellers particularly in peak periods.

### 2. Emissions and Climate Change

Road transport contributes to greenhouse gas emissions and therefore to climate change. The emissions also affect local air quality with risks to health. The contribution transport makes to climate change emissions must be reduced while its contribution to supporting the economy is maintained. Reliance on the car in the long term should be considered in the light of the emissions, congestion and health consequences, and the cost implications as the price of fuel rises.

### 3. Accessibility and Quality of Life

Being able to access public services, employment opportunities and other facilities is important, and all members

of society should have this opportunity. Despite the dominance of the car there are sections of society which have difficulty accessing services and employment, either because they do not have access to a car, are elderly or mobility impaired or cannot afford the fares. In rural areas problems are exacerbated by limited access to services for those without access to a car.

Additionally transport can have an adverse effect on the natural and urban environment and on the quality of life of those residents affected.

There are other issues arising from the traffic, including:

### 4. Safety

Safety is of paramount importance. The county has seen a fall of about a quarter in those killed and seriously injured on the roads in the five years 2005-2009 and has had the highest reduction in the East of England region. There remain specific issues for vulnerable groups and of inappropriate speeds, and improvements can only be maintained by continued interventions.

### 5. Environmental impacts

Environmental impacts are not limited to those caused by emissions. Traffic in urban areas can affect the buildings, the residents and other network users, e.g. pedestrians and cyclists. Traffic levels and inappropriate speeds may make an area less attractive and can affect the local economy. Rural areas can similarly suffer the impacts of traffic.

### 6. Support to the Economy

Transport has to support the economy enabling freight to be delivered and people to access work, retail and leisure opportunities. Access to facilities is an issue for all road users. Issues of the availability and cost of car parking affect peoples' choice of destination. Towns need visitors to support

their economies and reliance on visitors who travel by car means a need for acceptable parking and other facilities.

### **7. Maintenance**

Maintenance of the network has been the public's highest priority for the previous five years. The county council has a comprehensive maintenance programme but sufficient funding is unlikely to be available at least in the near future to provide a total solution. The issue will remain therefore but the problems are arguably more easily addressed than the more fundamental transport issues of growth, emissions and capacity.

### **8. Passenger transport**

Improving passenger transport (particularly bus and rail facilities and services) is now the second biggest issue for the public. This is evidence of passenger transport's importance in the county both for commuters, school children and for those who do not have the opportunity or do not wish to use a car. Maintaining and improving services will inevitably be an issue for commercial operators where public financial support is difficult to provide. Taxis and voluntary services can meet some demands but inevitably have limitations.

These issues are addressed in the Local Transport Plan. Section 4 of the LTP contains the approach to be adopted and the challenges and the interventions proposed to address the issues. Further detail on the interventions and challenges is contained in Section 5.

The main element of the overall approach is to support alternative modes to the private car, notably walking, cycling, bus services and potentially car sharing, so as to provide alternatives to driving the car. This will be coupled with the provision of more and better information to enable travellers to choose the best mode and time of travel for their journey.

## Section 4. The Strategy - Vision Goals and Challenges

### 4.1 The Vision

The Local Transport Plan sets out the county council's vision and strategy for the long term development of transport in the county. It will provide the framework and influence funding both for the county council and for all who are engaged in the development of Hertfordshire and the provision and use of the transport network.

This Plan (LTP3) draws on the previous Plan (LTP2), on the guidance from the Department for Transport (DfT) regarding transport issues nationally and on wider county policies, notably the Sustainable Community Strategy and the County Corporate Plan, as explained in the Introduction (Section 1). These policies and the outcome of the public consultation process and appraisal process of the SEA have helped to determine what are considered to be Hertfordshire's specific transport requirements over the plan period.

The overall aim is summarised in the vision.

#### Hertfordshire's Transport Vision Statement

**To provide a safe, efficient and resilient transport system that serves the needs of business and residents across Hertfordshire and minimises its impact on the environment.**

We will achieve this by:

- Making best use of the existing network and introducing targeted schemes where improvements are required so as to deliver a reliable and readily usable transport network to benefit local business, encourage further economic growth and allow access for all to everyday facilities.

- Promoting and supporting sustainable travel to reduce growth in car traffic and contribute to improved health and quality of life for residents with a positive impact on the environment and on the wider challenge of reducing transport's contribution to climate change.

The vision draws upon that of LTP2 as no major change of direction is envisaged but it reflects an increasing emphasis on promotion, information and new technology solutions. Despite the successes during the period of LTP2 many issues remain unresolved while new pressures, notably climate change and increased financial constraints on public expenditure, have to be taken into account.

### 4.2 The Goals

The government's guidance on LTPs and transport generally (DaSTS ) sets out five goals for transport, focusing on the challenge of delivering strong economic growth while at the same time reducing greenhouse gas emissions. These goals take full account of transport's wider impact on climate change, health, quality of life and the natural environment.

The aim for the transport system is:

- 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 government attached to these 5 goals 22 challenges in order to provide more detail of what needs to be achieved. These national goals and challenges have been considered in the light of Hertfordshire's situation to enable the council to determine a set aimed more specifically at the county's issues. The result is the county council's 5 Goals and 13 Challenges which form the basis of this LTP.

The 5 LTP goals which form the basis of the county transport strategy differ little from those of national guidance. They have been determined as:

- Support economic development and planned dwelling growth
- Improve transport opportunities for all and achieve behavioural change in mode choice
- Enhance quality of life, health and the natural, built and historic environment for all Hertfordshire residents
- Improve the safety and security of residents and other road users
- Reduce transport's contribution to greenhouse gas emissions and improve its resilience.

The 13 challenges are listed at the end of this section. While aimed at Hertfordshire's requirements they encompass all the elements covered in the government's 22 challenges.

### 4.3 The Approach

Hertfordshire's vision, goals and challenges provide the strategy for transport in the county for the next 20 years. There might seem to be a contradiction between supporting economic and dwelling growth and reducing transport's contribution to greenhouse gas emissions and its impact on the natural and built environment.

The former would traditionally require new road capacity to keep business, employees and customers moving which could be considered to be contrary to the environmental needs and is certainly difficult to fund.

Economic growth therefore needs to be provided for by measures that do not add avoidable car traffic, and emissions, on our roads, and which concentrate on the alleviation of specific problems. This will be achieved through small scale schemes, which increase the efficiency of the network, are environmentally friendly and affordable, and through provision of advanced technological solutions such as real time information for all network users. The main corridors into the larger urban areas of the county will be prioritised for such improvements.

Supporting economic growth remains a top priority for the county. Improving accessibility for all is another goal but this cannot be achieved through unrestricted car access and this is not only because a significant minority do not have access to a car. Sustainable modes, including bus and car sharing, as well as walking and cycling which have the added bonus of offering healthy exercise, are the way forward. They offer alternatives to car travel but providing a better, more usable network depends on investment by a range of organisations in addition to the county council. To make the most of the range of transport opportunities, the public needs readily available, accurate and timely information.

Protecting the environment continues to be a high priority and not just in regard to transport's contribution to greenhouse gas emissions. The quality of the built, historic and natural environment will play a role in boosting walking and cycling and will continue to make a major contribution to residents' quality of life. Quality of highway design and the public realm will also be relevant.



The safety of network users is always a priority. The LTP will continue to promote reduction in the level of casualties but as well as reducing the number of fatalities and serious injuries on the network it is also essential to combat peoples' fear of crime, anti social behaviour and robberies, when travelling.

#### 4.4 The Alternatives

A strategy to achieve the goals and challenges for Hertfordshire could be addressed in different ways meeting different needs with different impacts and requiring different levels of funding. As part of the process to assess alternative options for the LTP, to ensure all possibilities are considered and weighed in the balance, the council determined four possible approaches.

The intention was to represent a wide spectrum of potential different approaches. At one end of the spectrum is a high investment approach of providing new infrastructure to meet capacity shortfalls and new demands and at the other a strong demand management approach of road charging and parking restrictions. Between the two, one approach is aimed at promoting behavioural change to increase the use of sustainable modes and the other at efficient network management with small scale improvements, increased information provision and improved bus services.

In summary the alternative approaches were:

1. Demand management – restrictions and pricing mechanisms to reduce traffic flow.
2. New infrastructure investment – new roads and passenger transport infrastructure to meet demand.
3. Promoting behavioural change and support for sustainable modes, particularly walking and cycling (including small scale infrastructure).
4. Small scale improvements to the road

network, increased information and significant improvements to bus services.

It was not intended that any one of the approaches would be adopted on its own but having four alternatives meant they could each be assessed to see where the benefits and disbenefits lie. Each has been appraised through the Strategic Environmental Assessment (SEA) process to identify the impacts on the environment, natural and cultural heritage, social inclusiveness and economic development.

The SEA appraisal (the SEA Report is a separate document accompanying the LTP) showed alternatives 3 and 4, behavioural change and small scale infrastructure and bus service improvements, had a range of positive impacts and no significant negative ones. Alternatives 1 and 2 had some negative impacts and some important positive ones. The positives were for supporting economic development with the new infrastructure investment approach and reducing emissions with the demand management approach.

#### 4.5 The Preferred Approach

A preferred approach to achieve the goals and challenges has been developed from the alternatives. This preferred approach has been determined in the light of the SEA appraisals and of other factors, including the potential funding levels required and likely to be available and the consideration of public attitudes to transport. The preferred approach therefore combines elements of alternatives 3 and 4 together with limited new infrastructure from alternative 2 but would not rule out other potential elements from 1 and 2 should circumstances warrant it. Such elements would be subject to environmental appraisal and the availability of funding.

The preferred approach is to achieve the efficient management of the existing network and an increase in the use of sustainable

modes with the main elements being:

- use of 'intelligent transport systems' to better manage traffic with, for instance, linked traffic lights and real time traffic information for users
- small scale improvements to the road network to improve travel conditions including addressing congestion hotspots
- improvements to bus services to provide a network of efficient bus services which are responsive to existing and potential passenger needs
- improved information for bus users through new technology such as real time information via mobile phones
- promoting the use of modes alternative to the car through publicity and travel planning
- promoting the benefits of modes, particularly walking and cycling, for healthy 'active travel' through schools and other forums
- improving facilities for walking and cycling particularly on routes identified for these modes
- promoting the use of 'cleaner' vehicles and supporting the provision of infrastructure for electric vehicles
- targeting key corridors where traffic demand is greatest through corridor strategies to prioritise interventions. Key corridors are generally those linking and entering the major settlements and would include:

North-South: M1, A1(M), A41, A10  
(Broxbourne)

East-West: A414 / A405 Hemel / St Albans / Hatfield, A602 Ware / Stevenage, A505 Hitchin, A414 Hatfield / Hertford / A10, and Ware / A10 / A120 Bishop's Stortford

- promoting and, where appropriate, funding new infrastructure where necessary, particularly for passenger transport improvements.

The emphasis is therefore on sustainable modes and efficient network management enhanced by the provision of information using modern technologies. It is intended that this strategy will meet the growing needs of the economy in allowing traffic, including freight traffic, to travel satisfactorily around the county albeit there will continue to be congestion in certain locations at certain times.

The strategy is intended to support the county's economy and allow sustainable growth, housing growth and economic growth. It may be that some future major developments will require investment in new roads to operate adequately and certain areas may require new infrastructure. This could include schemes such as park and ride or bypasses to meet demands. Such infrastructure would have to be fully assessed and would be subject to funding, whether public or private, being available.

The strategy is also intended to enable the county to reduce the relative contribution to greenhouse gas emissions of its transport sector to meet government targets. This, and aspects such as local air quality, can be reviewed over the plan period. Restrictions on traffic, such as low emission zones or potentially road charging, will need to be considered as circumstances require.

The preferred approach has itself been subject to an SEA appraisal. The approach as amended has then been followed to address the county's transport challenges as detailed in Section 5.

#### 4.6 The Interventions

The LTP strategy addresses the goals through a series of challenges. Achieving the challenges and realising the desired outcomes will require a variety of interventions (schemes and measures) chosen, after SEA appraisal, to reflect the

overall preferred approach. The following section sets out how the challenges are to be achieved over time through the implementation of the interventions, the packages of schemes and measures.

Some schemes will be implemented in the immediate future and these are set out in the 2 year Implementation Plan which will be updated annually with additional schemes and measures. Other interventions will inevitably take longer and the rate they can be implemented will depend on priorities and on the level of funding that can be devoted to them. The longer term interventions are also listed in the Implementation Plan (Volume 3 of the LTP).

A third element is the major schemes, those costing over £5 million, which are normally individually reliant on government funding. Major new infrastructure, particularly for elements of passenger transport, will be essential during the plan period and the current schemes are described in the Implementation Plan. At present the major schemes are the Croxley Rail Link linking Watford town centre and Watford Junction to the Metropolitan line and the Watford Junction Interchange improvements. Other schemes such as the Abbey Line, St Albans to Watford, and the Little Hadham Bypass may be pursued if finance is available.

The county has a programme for producing Urban Transport Plans for each of the towns in Hertfordshire. These plans look at all the local transport issues of an area and recommend a series of interventions to help meet the issues in line with the overall county transport approach. These schemes and measures as prioritised make up the major part of the Implementation Plan together with those of rural areas and the more generic countywide schemes such as introducing new technology systems.

Where practical, linked schemes will be implemented in an area so that the collective benefit will be greater than where single schemes are introduced. Where relevant, for instance in introducing high tech information and management systems, initial schemes will be concentrated in the central area of the county from Hemel Hempstead and Watford to St Albans, Hatfield and Welwyn Garden City and up to Stevenage.

This central area includes most of the county's main towns and major routes and is likely to be the site of much of the major planned housing development and economic growth during the LTP period. However the implementation of any measure will go through a detailed process taking account of an array of factors so this should not be seen as in any way excluding other parts of the county from transport expenditure.

The following section sets out how each of the 13 challenges is to be achieved. Each challenge has one or more indicators to enable progress to be monitored. No indicator can fully cover the complexity of a challenge but they do provide some measure of change, whether successful or not.

For each indicator, targets have been developed for the four 5 year periods of the 20 year plan and these will be reviewed as necessary. These targets will be used to help inform the prioritisation of funding on the various interventions as explained in the Implementation Plan.

A list of the Challenges is included in Table 4.1.

**Table 4.1 Hertfordshire LTP3: Goals and Challenges**

<p><b>GOAL - Support economic development and planned dwelling growth</b></p> <p>1.1 Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy.</p>
<p>1.2 Support economic growth and new housing development through delivery of transport improvements and where necessary enhancement of the network capacity.</p>
<p><b>GOAL - Improve transport opportunities for all and achieve behavioural change in mode choice</b></p> <p>2.1 Improve accessibility for all and particularly for non car users and the disadvantaged (disabled, elderly, low income etc).</p>
<p>2.2 Achieve behavioural change as regards choice of transport mode increasing awareness of the advantages of walking, cycling and passenger transport, and of information on facilities and services available.</p>
<p>2.3 Achieve further improvements in the provision of passenger transport (bus and rail services) to improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users.</p>
<p><b>GOAL - Enhance quality of life, health and the natural, built and historic environment of all Hertfordshire residents</b></p> <p>3.1 Improve journey experience for transport users in terms of comfort, regularity and reliability of service, safety concerns, ability to park and other aspects to improve access.</p>
<p>3.2 Improve the health of individuals by encouraging and enabling more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health.</p>
<p>3.3 Maintain and enhance the natural, built and historic environment managing the streetscape and improving integration and connections of streets and neighbourhoods and minimising the adverse impacts of transport on the natural environment, heritage and landscape.</p>
<p>3.4 Reduce the impact of transport noise especially in those areas where monitoring shows there to be specific problems for residents.</p>
<p><b>GOAL - Improve the safety and security of residents and other road users</b></p> <p>4.1 Improve road safety in the county reducing the risk of death and injury due to collisions.</p>
<p>4.2 Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised.</p>
<p><b>GOAL - Reduce transport's contribution to greenhouse gas emissions and improve its resilience.</b></p> <p>5.1 Reduce greenhouse gas emissions from transport in the county to meet government targets through the reduction in consumption of fossil fuels.</p>
<p>5.2 Design new infrastructure and the maintenance of the existing network in the light of likely future constraints and threats from changing climate, including the increasing likelihood of periods of severe weather conditions.</p>

## Section 5: The Challenges and Interventions

This section sets out the 13 challenges, their indicators and targets, and the interventions proposed to address them. Detail of the issues raised by the challenges and a list of the relevant policies is provided in a supporting document accompanying the Plan. The policies are detailed in the accompanying Transport Policy Document (Volume 2 of the LTP).

A series of individual strategies, daughter documents to the LTP, provide further detail of how the policies are to be achieved and the proposed interventions required to meet them and the challenges.

The interventions follow on from the approach (Section 4) which the county council has determined to follow, one of promotion and support for sustainable modes and the efficient management of the network through using modern information technology. Interventions are prioritised in relation to the indicators and the targets. The process is explained in the Implementation Plan, Volume 3 of the LTP.

The interventions though can only be achieved through available funding, public and other sources. The proposed implementation for the initial 2 years together with schemes for the longer term is set out in the Implementation Plan.

The two year programme will be regularly updated with interventions drawn from the challenges and prioritised in line with the overall strategy and the targets related to each challenge. The programme will be dependent on the level of funding available but the framework laid out in the county's approach will provide the guide for the development of transport in the county whatever the actual funding levels.

The indicators accompanying the challenges are to provide some measure of progress in meeting the challenges but they are not comprehensive, nor are they listed in any particular order of importance and other measures will be considered during the plan period. The full list can be found in Appendix 1.

### GOAL: SUPPORT ECONOMIC DEVELOPMENT AND THE PLANNED DWELLING GROWTH

**Challenge 1.1 Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy.**

**Issues:** This challenge is focused on managing and maintaining the network, tackling congestion and improving journey reliability.

#### Interventions

Interventions will be mainly aimed at publicity and travel planning, to reduce travel by car, especially in busy periods and increase the use of sustainable modes, and the efficient management of the network with the introduction of new technology (intelligent transport systems) to improve management and inform network users (both the public and commercial operators).

#### Publicity and Travel Planning

- Encourage people to reduce their need to travel particularly by car, for example by working at home and to reduce their journeys in peak hours, for example by working more flexible hours.

- Encourage behavioural change by publicising the positive effects of using alternatives modes of travel (e.g. health, environmental benefits, and cost) and the potential to reduce the need to travel. Better information will help people switch from the car to sustainable modes for some journeys. Linked with this is the opportunity to use personalised travel planning to help residents understand their travel choices and have a greater awareness of alternative methods of travel and their benefits.



*Real-time Traffic Information for Hertfordshire road users*



*Personalised Travel Planning in Watford*

- Additionally there is the need to make small scale improvements to the network to keep it running as smoothly as possible and in particular address congestion hotspots. As part of this work it is intended to develop route user hierarchies which should ensure that routes are maintained and upgraded in a planned and coordinated manner to meet the needs of the type of traffic using it.
- It is also intended to develop corridor strategies for the main routes in the county but the approach is not one of reliance on new infrastructure.

- In addition targeted road safety messages will help to reduce collisions that cause congestion on the network.

### Network Management and 'intelligent transport systems'

Keeping the transport network moving requires it to be resilient and reliable.

- Management to minimise traffic congestion from road works and other unplanned disruption such as collisions will benefit from new 'intelligent transport systems' (ITS) with real time information for road and bus users and network improvements such as linked traffic signals.
- Investment in ITS should make the road and passenger transport networks easier to use, informing people about the best way of making their journey and contributing to more reliable journey times.

### Bus Improvement measures

As part of the network management measures, targeted bus priority measures will be implemented- aimed at improving bus services. This will help achieve mode shift from the car and, in so doing, should reduce delays for both bus users and car-drivers.

- Bus priority measures, which will complement the provision of real time information, aim to reduce journey times and improve the reliability of bus services and will include aspects such as segregation, traffic management, traffic signal control and bus stop improvements

### Maintenance

An efficient network has to be maintained and maintenance of the road system (county roads not motorways and trunk roads) is

both a primary responsibility of the county council as Highway Authority and, at present, the highest priority of the public. The Transport Asset Management Plan (a daughter document to the LTP) sets out the programme and priorities for maintenance though the level of maintenance in any one year will depend on the funding available.



*Maintenance of the road system is presently considered the highest priority by the public*

Road works, maintenance and works by utility companies, can cause disruptions to free flowing traffic. The new information systems should allow better management of traffic while all works are to be subject to a Permit Scheme to ensure a coordinated programme of such works.



*The County Council liaise with the utility companies to minimise disruption on the network*

A number of the individual Strategies, daughter documents to the LTP, relate to this challenge, particularly the Intelligent Transport Systems Strategy and the Transport Asset Management Plan. In addition it is the intention to produce an Inter Urban Route Strategy drawing together the

various route corridor strategies for the main routes in the county. The Rural Strategy is also important in view of the contribution of trips from rural origins to congestion in Hertfordshire.

A list of schemes to help realise these interventions is set out in the Implementation Plan.

### Indicators

#### NI 167 Congestion

Progress in achieving the challenge will be assessed using the national indicator NI 167 Congestion. This indicator measures the average journey time per mile, during the morning peak (excluding weekends and school holidays) on specific routes for the academic year. The data is averaged for the defined towns and weighted by the relative traffic flow on the routes.

The intention is to widen the measure to include all towns. For the present the defined towns are:

- Bishops Stortford
- Hatfield
- Hemel Hempstead
- St Albans
- Stevenage
- Watford
- Welwyn Garden City

Indicator: NI 167 Congestion		Average Journey Time per mile during the Morning Peak (minutes)			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
2.87 mins	N/A	2.80	2.75	2.70	2.65

This indicator like a number of others uses data from specific areas to provide a countywide measure. Individual congestion

'hotspots' are also monitored so that specific data is also available.

Maintenance is assessed by two National Indicators and by two local indicators.

Indicator: NI 168		% local authority principal road networks where structural maintenance should be considered			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
6%	6%	No more than 6%	No more than 6%	No more than 6%	No more than 6%

Indicator: NI 169 Non-principal Roads		% non-principal road network where structural maintenance should be considered			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
9%	11%	No more than 9%	No more than 9%	No more than 9%	No more than 9%

Indicator: Unclassified Road condition		% unclassified road network where structural maintenance should be considered			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
13%	13%	No more than 13%	No more than 13%	No more than 13%	No more than 13%

Indicator: Footway condition		% of category 1, 1a and 2 Footway network where structural maintenance should be considered			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
24%	26%	26%	26%	26%	26%

## Outcomes

The desired outcomes are:

- Businesses able to transport goods across the county quicker and without delay
- Employees and school children able to travel to work/school quickly and efficiently
- The impact of emergencies and unexpected events, such as collisions, mitigated by comprehensive management of the county's transport network

## Delivery by other Plans and Strategies

The County Council as Highway Authority is responsible for most roads in the county except the Motorways. The Highways Agency is responsible for these and Trunk Roads while the district and borough councils are responsible for a range of aspects including parking in their local areas. The District's Local Plans (Local Development Frameworks) form an important implementation element for the challenge and it is intended that each District will set out its position in the light of the draft LTP. (This will form Section 6 of this volume.)

**Challenge 1.2 Support economic growth and new housing development through delivery of transport improvements and where necessary enhancement of the network capacity.**

**Issues:** This challenge is focused on minimising and managing capacity demand created by new developments while serving the needs of a growing economy



## Interventions

### Focused on new developments

Design of new developments will have a major impact on the connectivity of the development and the degree that sustainable modes can take the place of car journeys.

- This strategy provides strong support for locating developments near to passenger transport links with access to key services and major interchanges, and with appropriate facilities to support sustainable modes, cycling facilities and a layout attractive to bus movements, and potential future transport initiatives such as infrastructure for electric cars.
- Where there is the possibility for developments to be radical in design, such as being car free developments supported by car clubs, the county council and local planning authorities can help ensure their needs are met.

The intention is to realise every opportunity for new residential developments to be served by sustainable modes. The provision of up to date and comprehensive information to users (including the new residents, for example through residential transport plans) will form part of this.

- Local authorities will encourage housing development in locations with good access to passenger transport, or where good access is to be provided. For developments that are being built in locations without passenger transport links, commercial bus services should be provided from the start of the development supported by developer contributions (Section 106 funding).
- The same principles will apply to other developments, such as employment and retail developments. Travel planning will reduce the level of car travel generated

as will the right location and the provision of facilities and services for sustainable modes. Mixed uses with both residential and commercial developments can further minimise journeys. Provision must also be made for freight deliveries.

### Focused on sustainable routes

Hertfordshire will require new developments to include sustainable infrastructure including cycle and pedestrian routes and these should be funded by the developer.

Sustainable modes infrastructure requires good design and location in order that use is maximised and the benefits for congestion, the environment and health are fully realised.

- Pedestrian routes need to be provided to link popular areas and possibly between large residential areas on the outskirts of towns and urban and commercial centres. They should be designed so that they are easily maintained.
- Cycling routes should be linked to those existing in towns to encourage cycling to work and for leisure journeys. Links to schools are particularly important.
- Road access for cars from developments to the main road network can be made less attractive to give sustainable modes, including buses, some kind of advantage but this would depend on the characteristics of each location.

The list of schemes which will form the interventions are set out in the Implementation Plan. In addition to the long term and short term lists some additional infrastructure may be required but this cannot be determined in advance of more certainty as to the location of planned new developments and the impact of other growth.

Solutions such as park and ride schemes, new interchanges and potentially new road links and bypasses would be assessed where appropriate though funding, potentially contributions from developers, would need to be available. Demand management measures may also be considered.

### Indicators

There is no National Indicator directly linked to this challenge. A local indicator of the percentage of new dwellings built each year within a 30 minute passenger transport journey of key services will be used. The figures are collected by all the districts/ boroughs of the county on a comparable basis.

Local Indicator:		Percentage of new dwellings accessible to key services			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
94%	97%	>90%	>90%	>90%	>90%

### Outcomes

“What will success look like?”

- Additional population able to access services and facilities, preferably through sustainable modes
- Economic growth in Hertfordshire through new businesses, reduction in unemployment
- No increase in levels of congestion

### Delivery by other Plans and Strategies

The county council will work closely with other authorities, including district councils, to address this challenge, including through the investigation of new funding streams. The Council will concentrate on

the provision of information and promoting sustainable modes and on working with the district councils to locate and integrate new development. District local plans (Local Development Frameworks) will be key strategies for implementation coupled with the work of the developers and transport operators who will provide new infrastructure and services as well as travel plans for developments.

### GOAL - IMPROVE TRANSPORT OPPORTUNITIES FOR ALL AND ACHIEVE BEHAVIOURAL CHANGE IN MODE CHOICE

**Challenge 2.1 Improve accessibility for all and particularly for non car users and the disadvantaged (disabled, elderly, low income etc).**

**Issues:** This challenge is focused on maintaining and improving accessibility for all.

### Interventions

Interventions will be concentrated on non car users and those who have difficulty using the transport system (the transport disadvantaged) with different measures being used for different target groups. It is recognised that specific accessibility issues exist in rural areas, and the accompanying Rural Strategy is intended to address this.

### Behavioural change

- Better information and publicity such as that disseminated through the Intalink Partnership, real time passenger information or targeted personalised travel planning can provide information to people as to how to achieve access to places without the use of a car, and guide them towards sustainable modes of transport.

- The availability and affordability of good quality passenger transport is an important element of this as is providing people with the confidence to use passenger transport. For certain groups, such as people with learning disabilities, access can be a problem even when services exist and publicity and training programmes can help address this.

### Specific arrangements for transport

This intervention involves the provision by the public and voluntary sector of transport to and from key services for those who are mobility impaired or learning disabled.

- The voluntary sector and the County Dial-a-Ride scheme provides a much needed door to door community transport service for many members of the community who would otherwise have difficulty getting out of their homes and the council will continue to support this work.
- Alternative community transport provision, under the 2008 Transport Act, will continue to be evaluated and developed to best support transport opportunities and impact on modal choice decision making.
- A separate measure is the scooter loan scheme "ScooTs" which is part funded by Hertfordshire County Council to provide motorised scooters to young people who live in rural areas and who would otherwise be unable to access employment or training opportunities.



*Providing access to employment or training opportunities for young people*

Realising these interventions will depend on funding being available.

### Affordability

The county council aims to ensure passenger transport services can provide accessibility for all and that where they cannot, such as in some rural areas, other special services, including those provided by the voluntary sector, can fill the gap. People on low incomes however can find the cost of bus fares prohibitive. Although concessionary travel is now available throughout the country for older people and qualifying disabled travellers, there are groups such as young people or those unemployed who may have difficulty affording fares.

- Fares are set on a commercial basis by the operators. Interventions to directly address problems of affordability would require specific funding which is presently not available. However there are some interventions directed at certain groups of young people, such as the existing SaverCard scheme funded by the county council that provides half-price bus travel to students aged 11 to 18.



## Infrastructure

- ‘Dropped kerbs’ and pedestrian crossings, will also contribute to improving accessibility in specific locations. Potential improvements are considered in the Walking Strategy and would be detailed in Urban Transport Plans.

## Integration between transport and land use planning

- Planning can bring a positive difference to people’s lives and can help to deliver homes, jobs and better opportunities for everyone. The location of homes and services therefore has vital implications for the achievement of social inclusion in terms of accessibility and decisions on the location and design of any facility must be taken in this light.

The measures which will form the interventions are set out in individual strategies such as the Bus Strategy and in the Implementation Plan.

## Indicators

The main national indicator for this challenge is:

- NI 175 – access to services and facilities by passenger transport, walking or cycling.

In the past NI 175 measured only perceived ease of access to hospitals in Hertfordshire but a wider measure will now be used based on annual surveys of residents regarding their ease of access to various facilities.

Indicator: NI 175		% of people who find it easy to travel to key services			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
89%	N/A	91%	93%	93%	93%

## Outcomes

The intended outcomes are:

- Decrease in numbers of people who are unable to access key services
- An increased number of “transport disadvantaged” using passenger transport
- Increased levels of “transport disadvantaged” people walking and cycling
- Improved information and service provision
- Affordable fares for those in most need
- Safer and enhanced quality of the urban realm.

## Delivery by other Plans and Strategies

Delivery of interventions to improve accessibility involves partnership working with health care providers, the voluntary sector, local planning authorities and various local government departments including those of the county council such as Adult Care Services and Children Schools and Families. Passenger transport operators including taxi firms provide many of the services.

Schemes supported include the Hertfordshire Integrated Transport Partnership, a partnership between the council and the Health Authority which implements the Travelink call centre and the Health Shuttle services in Stevenage and Broxbourne, and jointly funds several community car schemes.



*Providing patients with better access to their local hospital*

**Challenge 2.2 Achieve behavioural change as regards choice of transport mode increasing awareness of the advantages of walking, cycling and passenger transport, and of information on facilities and services available.**

**Issues:** This challenge is focused on achieving behavioural change to increase the use of sustainable modes.

### Interventions

Interventions to achieve an increase in the use of modes other than the car have been part of the county's ongoing policies for over the past decade.

The new emphasis of this challenge is to promote the benefits of sustainable travel, including for health, to achieve a change in people's behaviour and, through the provision of real time information, to provide certainty regarding a journey.

The main intervention is through promotional work and the provision of information. Specific areas where this can be most readily achieved are through:

#### Publicity and Promotional work

- School Travel delivering the Sustainable Modes of Travel Strategy (SMoTS) and school travel plans.



- Individualised Travel Marketing (ITM) with schemes similar to the TravelSmart schemes in Watford, Three Rivers and Broxbourne aimed at changing travel behaviour and reversing the trend towards more increased car use by encouraging more walking, cycling and use of passenger transport.
- Travel Planning for Businesses and other organisations which include measures to improve access by modes other than the car and should become both more accepted and ambitious as users recognise the benefits of alternative modes.
- Information provision for all areas as provided in the Bus Strategy with new technology ('intelligent transport systems') offering increased potential for getting the right information to people at the right time.
- Safety and perceived safety (personal security) on the network will be subject to targeted publicity campaigns which should enhance the promotion of behavioural change. This will include 'safe cycling' (Bikeability) training for children.



The intention is to promote the advantages of sustainable travel and the disadvantages of car travel with school (and pre-school) children and their parents and businesses seen as warranting particular attention. Information on what opportunities are available will be linked to the promotional work with personalised travel planning to be offered in targeted areas where residents may more easily be persuaded to abandon their cars for some journeys.

Ideally promotional work will link with national efforts to promote alternative modes and active travel. However the county will need to concentrate at least some of its efforts on particular aspects and areas.

Promotional work will need to be linked to interventions to improve facilities and services for users of sustainable modes. The Urban Transport Plans provide programmes of improvement schemes for walking and cycling for the urban areas while the Bus Strategy sets out how improvements to bus facilities and services are to be realised. More particularly aspects which hinder sustainable travel at an individual school can be addressed.

### Infrastructure

- Other interventions will include infrastructure provision to facilitate the use of sustainable modes such as walking and cycling journeys. These will normally be detailed in Urban Transport Plans and also delivered as part of the Safer Routes to Schools programme.

Infrastructure and publicity/promotional work both contribute to behavioural change and will include those more directly related to other challenges, such as:

- security on the network (Challenge 4.2)
- improvements to passenger transport (Challenge 2.3)
- encouraging more physically active travel (Challenge 3.2)
- safety on the network, particularly in reducing speed in certain locations and addressing slipping and falling on the footway (Challenge 4.1).

Where interventions have been determined for the next 2 years they are included in the Implementation Plan together with further interventions for the longer term.

### Indicators

The success of promotional campaigns can be difficult to assess especially when long term changes in personal behaviour are being sought. The simplest form of indicators

for this challenge will be the change in modal splits of sustainable modes, walking and cycling, for journeys. The 2009 modal split of work and school travel is:

Mode	Work	School
Walk	8%	51%
Cycle	2%	2%
Bus	3%	11%

(2009 Hertfordshire County Travel Survey)

The local indicator will be the percentage journeys by walking and by cycling figures collected every 3 years but annual counts of pedestrians and cyclists can supplement the findings.

Indicator:		% of all trips (under 1 mile) made by walking			
Walking					
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
N/A	58.9%	64%	68%	73%	77%

Indicator:		% of all trips (under 3 miles) made by cycling			
Cycling					
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
N/A	2.7%	3%	5%	8%	11%

As regards rail travel the important 'sustainability' indicator is the use of sustainable modes to gain access to the station. This element of the journey will be measured where possible and addressed in the Walking and Cycling Strategies.

### Outcomes

The desired outcomes are:

- More people walking and cycling to school and work and to access services
- Increase in Bus Patronage
- Healthier residents using 'active travel'.

## Delivery by other Plans and Strategies

The county council will work in partnership with the district councils and others to promote behavioural change with schools being particularly important in both education and delivering change in travel patterns. The police are essential to help improve safety and security for all modes. Health authorities are important partners with regard to active travel.

**Challenge 2.3 Achieve further improvements in the provision of passenger transport (bus and rail services) to improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users.**

**Issues:** This challenge is focused on improving passenger transport

## Interventions

The county council will continue in its role to provide, support, promote and improve a network of bus services working in partnership with the operators. The detailed intentions are set out in the Bus Strategy, a daughter document to the LTP.

### Focus on specific routes

- Buses are important to provide access to facilities for those without a car in both urban and rural areas. In addition they provide a viable alternative for those who have a car already. The county has to prioritise its interventions on routes and specific services to ensure maximum benefit is provided in the most cost effective way.

- One priority will be to concentrate on particular corridors such as that between Hemel Hempstead and Watford where there are relatively high levels of demand, including for journeys to work. This may require new initiatives, such as used in the St Albans Quality Network Partnership, which bring together partners in order to achieve improvements to all sustainable modes.



*Encouraging the integration of sustainable modes*

### Information provision

- The aim is to increase the programme of information provision, although the emphasis is likely to be less on printed material and more on electronic and real time information using 'intelligent transport systems'. Information provision will be provided in partnership with other measures as detailed in the Intalink Strategy.
- Technology will provide various solutions over time, including the ability to provide real time information on bus timings and location to a user's mobile phone and potentially at certain bus stops, but the uptake of these solutions will depend on funding availability and the ability of all bus users to access them.





*Taking forward mobile phone technology*

- Other improvements will be through bus priority measures in congested locations, largely through the use of 'intelligent transport systems' such as automatic vehicle location data, traffic signal priorities, and improved ticketing systems.

The council has far less influence over rail services in the county but will continue to press for improvements particularly in improving the quality of stations and the integration of bus services with rail services. It will continue to support the capacity improvements planned for various routes through Hertfordshire as set out in the Rail Strategy as well as jointly funded projects to improve rail. It will also take opportunities to help deliver innovative services in new ways through closer collaboration with government. An example is the proposed conversion of the Abbey Line, the railway between St Albans and Watford, to a light rail/tram system.



*The current St Albans Abbey Line*

Taxis also form an important part of the integrated passenger transport network, and have a role to play in reducing dependency on the private car by providing a final leg in rail or bus journeys.

### **New Infrastructure**

New infrastructure for passenger transport will be essential during the plan period and will be pursued in partnership with operators and other parties. Currently the council is the leading partner in the Croxley Rail Link project to link Watford town centre with the Metropolitan Line to north-west and central London and is engaged in the planned major improvements to Watford Junction Interchange. Future schemes could include line capacity increases on the Abbey Line, if it is successfully converted to light rail, and extensions of the light rail line, initially to Watford and St Albans town centres and potentially beyond, could then be considered.

Major rail schemes, increases in track and train capacity, are largely a matter for government and the rail operators but the county council will continue to try to influence provision of capacity and aspects such as timetabling and ticketing.

Where interventions have been determined for the next 2 years they are included in the Implementation Plan together with the major schemes and interventions for the longer term.

### **Indicators**

Data are collected by various organisations on a wide range of elements of passenger transport operations and ranges from patronage levels and punctuality and reliability to the satisfaction levels of users. The National Indicators are:



Indicator: NI 177		Passenger transport Patronage: million (Bus and Tram) passengers per annum			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
35.1 million	35.4 million	36 million	37 million	39 million	41 million

- Better more comfortable passenger transport journeys with newer fully accessible buses, more reliable services with fewer delays of all kinds and readily available real time information for users
- Continued improvement in performance indicators for bus use, satisfaction and punctuality.

Indicator: NI 178		Bus Punctuality % of buses within acceptable timeframe			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
91%	82.5	90%	91%	91%	91%

### Delivery by other Plans and Strategies

Delivery of improvements to passenger transport services depend heavily on the operators of those services, bus and rail. The district councils as local planning authorities have an important role particularly in terms of the location of facilities. The government sets the framework on various aspects, rail, concessionary fares and school travel.

In addition the council has indicators regarding satisfaction levels with bus services and provision of information, measured through HCC annual/biannual Tracker surveys (see Challenge 3.1).

While there are aspirations for an increase in bus patronage over the plan period and that there are a continued improvement in levels of satisfaction, these will be challenging to achieve in a climate of budget reductions for local authorities.

### GOAL – ENHANCE THE QUALITY OF LIFE AND THE HEALTHY NATURAL ENVIRONMENT OF ALL HERTFORDSHIRE RESIDENTS

#### Outcomes

“What will success look like?”

The main aim is to improve passenger transport services in the county especially bus services, to increase the number of passengers carried, provide improved access to facilities, including employment, and increase the proportion of journeys made by bus compared to those made by car.

There should be;

- More people using the bus for all journey purposes
- An increase in the proportion of passenger transport journeys compared to car journeys

**Challenge 3.1 Improve journey experience for transport users in terms of comfort, regularity and reliability of service, safety concerns, ability to park and other aspects to improve access.**

**Issues:** This challenge is focused on improving journey experience particularly for users of sustainable modes

#### Interventions

Achieving an increase in the use of sustainable modes of transport has played a significant role in the county’s ongoing policies for over a decade. Interventions to bring about an improvement in overall journey experience are:

## Publicity

- Information provision for all areas as provided in the Bus and Intalink Strategies with new technology ('intelligent transport systems') offering increased potential for getting the right information, including real time information on bus stop signs and mobile phones, to people at the right time.
- Information on the health benefits and other benefits of "active travel" will help increase the numbers using alternative modes which should lead to improved facilities.

## Education

- A combination of training and information for both children and adults to raise awareness of the issues surrounding road safety and how to stay safe whilst travelling whether they are a driver, passenger or pedestrian/cyclist. Selected interventions should contribute to improving the overall journey experience because they can better prepare people for the potential dangers involved in the use of the transport system, making the network easier to navigate and therefore more accessible.



*Pedestrian and cyclist training provided by the County Council.*

## Network Management/Maintenance

Measures will be aimed to achieve a more efficient management of the existing transport network. Intelligent transport systems, linked with Automatic Vehicle Location (AVL) and Real Time Passenger Information (RTPI) systems now exist to enable traffic flows to be effectively managed in order to deal with traffic volumes and improve traffic flows so as to speed up journey times.

Available interventions include:

- Real Time Passenger Information (RTPI) to provide live information on congested areas, incidents, available capacity at car parks, bus locations and arrival times to aid people on their journeys;
- Vehicle activated signs (Speed Indicator Devices) to warn drivers about speed limits or possible hazards, such as a crossing point or a junction, to aid traffic flow and help reduce potential collisions;
- Electronic road signs to help notify drivers of collisions on the road ahead, changing speed limits and road closures;
- Provision and maintenance of CCTV and lighting security to help reduce the fear of crime for transport users;
- Establishing route user hierarchies for roads in order to award greater priorities to particular users which are most suited to the road type
- Traffic levels and inappropriate speeds can impact on pedestrians and cyclists making these journeys more uncomfortable, so wherever possible, traffic management measures will be introduced to improve conditions.



*A Vehicle Activated (VA) sign to warn drivers about their speed*

Maintenance interventions and the winter maintenance programme mainly concentrate upon ensuring the network is kept operational and receives the necessary maintenance which is important for the comfort of all road users.

### **Bus and Interchange Improvement measures**

Measures to improve overall journey experience on the bus network include those aimed at creating a competitive, reliable, convenient, economical and accessible means of alternative transport to the private vehicle.

Interventions include:

- Bus priority measures to ensure buses are not affected by congestion through priority traffic lights, traffic signal control, and bus stop improvements. Such measures are contained within the Bus Strategy and would normally be included in Urban Transport Plans



*Rising bollards that give priority to buses*

The quality of interchanges is an important element in the journey experience of passenger transport users for both bus and rail. Cafes and good lighting make interchanges both more comfortable and more secure (see Challenge 4.2).

Improvement to interchanges, both through major schemes such as that planned for Watford Junction and more minor improvements ranging from improved lighting to better integration between services, is an important element of the interventions.

### **Small Scale Infrastructure and Road Improvements**

- Infrastructure improvements can be used to mitigate traffic congestion hotspots, improving capacity and throughput at existing junctions and intersections, but new road schemes to provide easier connections to popular locations and urban centres are unlikely to be practical, at least in the early part of the plan period, unless funded by developers;
- Engineering measures to reduce speeds, improve traffic flow and reduce the risk/number of personal injuries from collisions on the transport network.

### **Environmental/Sustainable Modes Infrastructure**

- Improved pedestrian and cycle routes to create a more established and connected sustainable mode network which is easier and safer to use;
- Provision of secure cycle parking including at interchanges;
- Signs for pedestrians and cyclists to enable easy navigation;
- Benches to improve accessibility and make walking a more viable option;
- CCTV and lighting to improve the perception of crime and reduce personal fears over safety when using the network.



*Secure cycle parking*

Interventions which contribute to improving journey experiences will include those more directly related to many of the other challenges, including keeping the county moving, increasing accessibility, passenger transport improvements, achieving behavioural change, improving road safety and reducing the fear of crime on the network.

Where interventions have been determined for the next 2 years they are included in the Implementation Plan together with the interventions for the longer term.

### Indicators

This challenge can contribute to achieving both National (NI's) and Local (PI's) Indicators though there are no direct indicators that exist specifically for improving users' journey experience of the transport network. The indicators used are those from the HCC Environment Tracker Bus Booster Survey which specifically asks questions directly related to journey experience.

Indicator: satisfaction		% of people very satisfied/fairly satisfied with local bus service			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
77%	78%	80%	82%	84%	85%

Indicator: satisfaction		% of people very satisfied/fairly satisfied with information on bus services			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
65%	84%	85%	86%	87%	88%

### Outcomes

The desired outcomes are:

- More people walking and cycling for all trip purposes
- Increase in bus use
- Improved results in satisfaction surveys with regards to transport
- Improvements to interchanges

### Delivery by other Plans and Strategies

Delivery of improvements on buses and to interchanges will be achieved in conjunction with the transport operators and Network Rail.

**Challenge 3.2 Improve the health of individuals by encouraging and enabling more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health**

**Issues:** This challenge is focused on improving the health of individuals and reducing problems of poor air quality.

### Interventions

Interventions to achieve more active travel will build on the promotional activities to increase the use of sustainable modes as part of Challenge 2.2.

### Promotional work

- Promotional work and publicity will include that aimed at health benefits of walking and cycling, including that for recreation, and that aimed at greater knowledge, awareness and use of the Rights of Ways network.



*An example of a Health Walk leaflet*

### Infrastructure

- Other interventions will be those to facilitate walking and cycling journeys as set out in the Walking and Cycling Strategies and normally detailed in Urban Transport Plans and the Rights of Way Improvement Plan. These should also help improve connectivity between neighbourhoods within urban areas.

### Management of the network

- Interventions to improve air quality in specific locations will include those related to the management of the network. These could be actions to reduce congestion and stop-start traffic which may be the introduction of relevant 'intelligent transport systems'. Such systems will allow traffic light phasing to be altered in the light of changing road conditions to reduce unnecessary queuing.



*One of the county's AQMAs*

- Other interventions could go further to limit the type of traffic using a location such as through the introduction of low emission zones or an HGV ban. Interventions of this nature can only be introduced after detailed analysis of the problem and consultation but the health problems created by poor air quality can warrant such restraints.
- In areas of particularly poor air quality, classified as Air Quality Management Areas, the county council will work with the relevant district councils to assess the potential interventions.

The list of schemes which will form the interventions in the first 2 years of the plan are set out in the Implementation Plan.

### Indicators

Success as regards the health of individuals should be evidenced in a decline in obesity among children and adults and potentially a decline in respiratory diseases though there are many factors which contribute to obesity and respiratory illness as well as physical activity and air quality. However the mode share of 'active travel' to school should increase regardless of obesity levels and it forms a National Indicator for monitoring.

Indicator: NI 198 mode share		Mode share of sustainable school journeys (5-10 years)			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
61%	62%	65%	67.5%	70%	72%

Indicator: NI 198 mode share		Mode share of sustainable school journeys (11-16 years)			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
76%	78%	78%	78%	78%	78%

Access to and use of the Rights of Way Network as a recreational resource is another measure with the percentage of the network that is easy to use by members of the public being monitored.

Indicator: Rights of Way		% of the network that is easy to use by members of the public			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
72%	78%	77%	74%	70%	70%

Indicator: Air Quality		Annual mean for roadside Nitrogen Dioxide			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
33	33	25	22	18	16

Air quality at the roadside is monitored across the county. The annual mean is below the government's threshold but an improvement is still desired. These levels can be affected by factors outside the county while in specific locations conditions may worsen despite the overall picture improving. Those areas classified as Air Quality Management Areas (AQMA) will therefore continue to be monitored separately.

## Outcomes

The desired outcomes are:

- More children walking/cycling or using sustainable modes to travel to school
- More people using sustainable modes to go to work
- Healthier residents in Hertfordshire
- Improved air quality across the county
- Improved air quality in the AQMAs.

## Delivery by other Plans and Strategies

Various organisations will have a role in publicising the health benefits of active travel including the health authorities and schools. District and borough councils are directly involved in issues of air quality and designating AQMAs and potential actions.

**Challenge 3.3 Maintain and enhance the natural, built and historic environment managing the streetscape and improving integration and connections of streets and neighbourhoods and minimising the adverse impacts of transport on the natural environment, heritage and landscape.**

**Issues:** This challenge is focused on minimising the impacts of transport on the natural, built and historic environment to improve quality of life.

## Interventions

Improving quality of life for residents is a well recognised aim of the county council but minimising the impact of traffic while overall traffic levels are expected to grow is a difficult challenge. In order to achieve this challenge, interventions will concentrate on improving facilities and the environment for walking and cycling, improving the environment

generally (e.g. noise and intrusive lighting) and reducing the impact of traffic.

### Environmental/Sustainable Modes Infrastructure

Interventions will provide infrastructure for sustainable modes of transport in particular walking and cycling facilities, to increase the use of these modes and reduce reliance on the car.

Such interventions would be designed to integrate into the existing streetscape. Where appropriate, streets can be “decluttered” of unnecessary furniture to promote their use particularly for pedestrians and cyclists.



*An extreme example of street clutter*

### Small Scale Infrastructure and Road Improvements

Schemes to address traffic congestion hotspots can reduce queuing traffic reducing its impact on the environment and other users and in doing so improve connections to popular locations and urban centres.

- A route user hierarchy as part of an Urban Transport Plan will concentrate vehicles on those routes most suited to them benefiting the users of other routes.
- Schemes to address safety issues and noise problems similarly benefit the wider environment. Heavy traffic and

inappropriate speeds make walking and cycling unattractive and measures such as 20 mph limits and zones and restrictions on certain types of vehicle will be considered where appropriate.



*20mph zones could be considered to encourage walking and cycling*

The sorts of interventions envisaged are set out in the individual strategies for modes and are detailed for urban areas in the Urban Transport Plans. In the future, it might be necessary to introduce further interventions to meet specific problems. These might involve the introduction of charging mechanisms such as road user charging or restrictions on vehicles which prohibit them from entering areas during certain times of the day but such measures are not being proposed at present.

The list of schemes which will form the interventions in the first 2 years of the plan are set out in the Implementation Plan.

### Indicators

Determining indicators for this challenge is difficult given its varied nature. Speed limit compliance is used as it is an important element of controlling the impact of traffic on both urban and rural settlements. Other wider indicators could be those related to health and quality of life.

Local Indicator: Speed limit		Speed limit compliance across network (30 - 70mph)			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
64%	81%	82%	83%	84%	85%

## Outcomes

The desired outcomes are:

- More people walking and cycling for all trip purposes
- Increased social interaction
- Enhanced streetscape and town character
- Less cluttered streets
- Improved environmental conditions.

## Delivery by other Plans and Strategies

A wide variety of organisations, public, private and voluntary, have a role in maintaining and enhancing the rural and urban environment. District and borough councils are directly involved in planning issues and the development of their areas through their local plans (Local Development Frameworks). Identification of areas where transport is a problem for the environment will be done in partnership with the districts/boroughs.

**Challenge 3.4 Reduce the impact of transport noise especially in those areas where monitoring shows there to be specific problems for residents.**

**Issues:** This challenge is focused on reducing the impact of traffic noise to improve quality of life.

## Interventions

The county council will consider actions to reduce noise where evidence shows it is unacceptable. This will be in regard to the

Noise Policy Statement for England 2010 and the concept of the Significant Observed Adverse Effect Level (SOAEL). Such actions might include:

### 'Quieter' infrastructure

- the use of noise-reducing surfaces where they are cost effective and do not compromise safety. This may be done as part of planned maintenance works
- the use of noise barriers and other noise screening to highway structures and road works
- smoothing traffic flow especially for passenger transport and HGVs which can be particularly noisy
- addressing individual problems, including where traffic calming measures cause noise problems.

### 'Quieter' vehicles

- the use of quieter tyres on existing vehicles;
- introduction of inherently quieter vehicles (especially HGVs and PSVs where these can be with low emissions)
- driver training (again linked to low emissions where feasible);
- the development of cost-effective quieter railway track.

The Urban Transport Plans (UTPs) will identify locations in the plan areas where road noise is a problem and can consider what solutions may be employed. Elsewhere the noise mapping process and residents' complaints will identify areas for study. However, it must be recognised that there is not always a clear remedy and improving the sound proofing of the buildings affected, e.g. with double or triple glazing, may provide a solution where funding can be made available.

Aircraft noise, including that from helicopters, is a major source of disturbance in some parts of the county but is not a responsibility



of local authorities. The Airport Noise Action Plans are prepared by the operators of the major airports, such as Stansted and Luton, and they propose actions to control and mitigate the impact of the noise. The county council will continue to use what influence it can on the airports and the government to reduce the impact of aircraft noise on its residents.

### Indicators

There are currently no National Indicators related to this challenge. A local indicator of the extent of the areas of high traffic noise will be provided by the government's Noise Mapping process should it be completed for the county. Monitoring any change in complaint levels is unlikely to provide reliable evidence on noise conditions.

### Outcomes

The desired outcomes are:

- Reduction in road transport noise in locations which are currently experiencing high levels of noise.

### Delivery by other Plans and Strategies

The county council as the Highway Authority is responsible for most roads in the county except the motorways and those in private ownership but will need to work with the transport industry to address issues and with the Highways Agency as regards the motorways and trunk roads. District and borough councils, with their responsibilities for environmental health, will also have a role.

## GOAL – IMPROVE THE SAFETY AND SECURITY OF RESIDENTS

### 4.1 Improve road safety in the county reducing the risk of death and injury due to traffic collisions

**Issues:** This challenge is focused on reducing injury accidents (collisions) and casualties

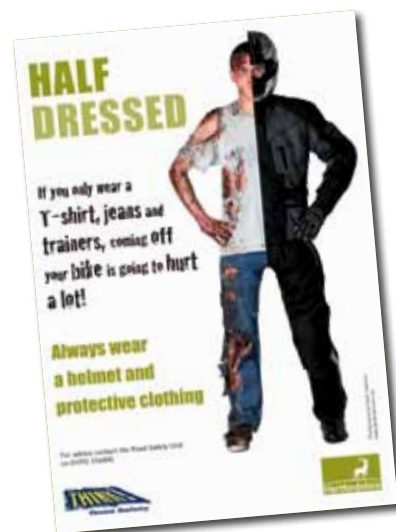
### Interventions

Interventions to achieve this challenge will continue to be education, enforcement and engineering programmes. The details of these are contained in the county's Road Safety Strategy, a daughter document to the LTP.

Example areas of intervention are:

#### Safety Education

- Influence people's behaviour through changing their attitudes to safe road use. Raise awareness of factors that are known to contribute to injuries in the county such as not wearing a seatbelt, distraction through use of mobile phones, impairment through drink or drugs, and failing to look.



*Improving the safety of motorcycle users through safety campaigns*

- Training programmes that will give road users the knowledge, information and skills to enable them to make decisions about how to use the road network in a safer way, for example pedestrian and cycle training, a range of driver training courses including driver alertness and speed awareness and promotion of enhanced training for motorcyclists.
- Specific education initiatives to tackle the over representation of young drivers and moped riders in collisions.
- Support the county council aim of increasing the use of sustainable modes of travel (walking and cycling) through partnership working with schools.

### Engineering and Enforcement



*Changing the layout of a junction approach*

- Safety engineering which seeks to alter the highway layout through engineering measures to influence highway user behaviour where a pattern of collisions has been identified. Criteria are used to determine locations (site specific, route, area) for investigation and or treatment.
- Remedial measures vary greatly from basic road markings through to installation of traffic signals or a roundabout. To treat, for example loss of control collisions on a bend, the appropriate remedial measures would potentially be road resurfacing, road markings, signage, and vegetation clearance. 20mph restrictions will be

considered where collision investigation shows that this is the appropriate measure.

- Where there has been a history of speed related collisions, to avoid a rise in KSI collisions from the current reduced level, continued enforcement of speed limits through safety cameras will be required. The criteria for the location of safety cameras are set out in the Road Safety Strategy. Other police officer enforcement and the use of speed indication devices (SID) are measures designed to increase awareness of the dangers of inappropriate speed in local communities.



*Increasing the awareness of speed*

- Develop further schemes with the Police whereby driving offenders are recommended for further training rather than receive points on their licence, for example driver distraction through the use of mobile phones.

### Intelligent use of data

- Intelligent use of data to target initiatives for specific user groups, age and community groups, using home post code data and specialised analytical tools to reach audiences at a very local level.

The individual schemes and measures which will form the interventions for the first 2 years of the plan period are set out in the Implementation Plan.

### Indicators

In order to measure the success of the interventions in achieving the challenges the

following National Indicators are currently measured:

Indicator: NI 47 Road Accidents			Total killed and seriously injured in road traffic accidents			
Baseline 04-08 average	Actual 2008	Actual 2009	Target 15/16	Target 20/21	Target 25/26	Target 30/31
556	459	413	no more than 413	no more than 413	no more than 413	no more than 413

Indicator: NI 48 Road Accidents			Children Killed and Seriously Injured in Road Traffic Accidents			
Baseline 04-08 average	Actual 2008	Actual 2009	Target 15/16	Target 20/21	Target 25/26	Target 30/31
44	37	42	no more than 42	no more than 42	no more than 42	no more than 42

In addition to the above targets, the Department for Transport’s draft national strategy “A Safer Way” has proposed an amendment to the child KSI target to include young people (0-17). The county council is likely to adopt this.

Proposed new Indicator:			Children and Young people Killed or Seriously Injured in Road Traffic Accidents			
Baseline 04-08 average	Actual 2008	Actual 2009	Target 15/16	Target 20/21	Target 25/26	Target 30/31
86	73	69	56	43	43	43

### Outcomes

The desired outcomes are:

- Fewer people killed and seriously injured in collisions on the road
- Greater awareness of road safety messages
- Measurable attitudinal change following interventions.

### Delivery by other Plans and Strategies

The county council as the Highway Authority is responsible for most roads in the county. The Highways Agency is responsible for motorways and trunk roads.

The Strategic Road Safety Partnership, comprising Hertfordshire Constabulary, Hertfordshire County Council, Hertfordshire Fire and Rescue Service, Highways Agency and Hertfordshire Primary Care Trust, exists to ensure a comprehensive approach to safety in the county using resources to best effect, reducing duplication and promoting road safety message to communities.

Many other partners, public, private and voluntary are involved in the delivery of casualty reduction and prevention initiatives.

**Challenge 4.2 Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised.**

**Issues:** This challenge is focused on reducing crime and fear of crime to enable people to use all modes of transport.

### Interventions

The measures to address this challenge include:

### Improving Stations

- Interchanges should be designed to reduce the number of dark spaces and isolated areas. Major redesign will take time but small scale improvements such as better lighting and cameras can address particular problem areas. An increased number/visibility of staff at stations may also be appropriate.

- Secure parking for cycles at interchanges and other locations will reduce the incidence of theft.

### CCTV

- Management of the network through increased CCTV coverage can increase detection rates of crime on the transport network and help deter crime as well as contribute to making users feel safe.

### Lighting Security

- HCC will encourage operators to improve lighting at train/bus stations across Hertfordshire and improve lighting on the network as appropriate.



*Adequate lighting helps to detract crime and reduce the fear of crime on the network*

### Safety on Buses

- Buses need to be a secure form of transport. Particular problems such as anti-social behaviour, threatening behaviour and crime on board buses will deter patronage. These issues can be addressed through technology such as on board cameras and specific training/powers for drivers.

### Publicity and Information

- Vulnerable groups can be helped by publicity and information aimed at helping them use passenger transport. This will involve more than solely security but security concerns, including where people feel threatened solely by the presence of other people, have to be addressed. Publicity will also help reassure people of the relative safety of the transport network.

Implementation is likely to be through a variety of schemes involving a range of stakeholders rather than specific county council schemes.

### Indicators

To measure the success of the interventions targeted at the challenge an indicator has been selected to measure actual crime committed on the rail network. The indicator measures both crimes committed at the station and also crimes committed on the transport network to and from the selected station.

Indicator:		Total crimes per 100,000 passenger journeys at rail stations in Hertfordshire.			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
1.81	1.62	1.62	1.62	1.62	1.62

## Outcomes

The desired outcomes are:

- More people satisfied with the level of security on the network
- Reduction in crimes committed on the transport network.

## Delivery by other Plans and Strategies

Realising this challenge relies heavily on other organisations particularly the police, the Hertfordshire Constabulary and the British Transport Police, for enforcement and the transport operators, bus and rail, for security on their facilities. District and borough councils also have a role for example in the provision of CCTV in urban areas.

## GOAL- REDUCE TRANSPORT'S CONTRIBUTION TO GREENHOUSE GAS EMISSIONS AND IMPROVE ITS RESILIENCE.

**Challenge 5.1 Reduce greenhouse gas emissions from transport in the county to meet government targets through the reduction in consumption of fossil fuels.**

**Issues:** This challenge is focused on reducing transport's contribution to greenhouse gases and climate change.

## Interventions

The interventions intended to reduce transport's contribution to greenhouse gas emissions are designed to reduce travel, particularly by car, through behavioural change and use of new technology, and to achieve reductions in emissions from vehicles transport.

## Encourage use of sustainable alternatives

- Encouraging the take up of alternative modes of transport such as cycling and passenger transport forms a major element of the county's policies on a number of challenges.
- As well as the publicity and improvements to facilities there are a range of financial incentives that could be used if funding were available such as concessions on fares, travel-cards, and bicycle discounts.

## Support for electric cars

- The council will support the use of electric vehicles to reduce emissions and work with other stakeholders to identify appropriate locations for electric car charging points throughout the county.



*One of the first electric vehicle charging points in the County*

- In addition the council will ensure new developments can provide charging facilities including in dwellings. By ensuring the transport network has these facilities in place Hertfordshire will be in a position to encourage greater numbers of electric car users by making it easier to use and charge the vehicles in the county.

### Low emission HGVs and buses

- Dialogue with major freight users in the county and those that pass through the county will be directed at encouraging a switch to cleaner vehicles.
- In addition the county will look to its bus contractors to phase out older vehicles and introduce newer, cleaner fleets where it is possible.



*Encouraging the use of newer, cleaner buses in Hertfordshire*

- The council has little influence on the introduction of cleaner cars but will continue to publicise improved driving skills to reduce fuel consumption.
- Traffic moving at appropriate speeds uses less fuel and produces fewer emissions than stop-start and queuing traffic. The range of measures to address congestion (Challenge 1.1) will help to reduce emissions across the county.

The list of schemes which will form the interventions in the first 2 years of the plan are set out in the Implementation Plan.

### Indicators

The effectiveness of our interventions against this challenge will be measured through an indicator showing transport related CO<sup>2</sup> emissions per capita using data provided

annually by government. This relates directly to the National Indicator NI 186.

Indicator: Emissions (NI186)		Road transport's contribution to emissions in Hertfordshire: CO <sup>2</sup> tonnes per capita			
Actual 08/09	Actual 09/10	Target 15/16	Target 20/21	Target 25/26	Target 30/31
-	1.73	1.35	1.27	1.20	1.13

### Outcomes

The desired outcomes are:

- Reduction in CO<sup>2</sup> from transport per resident
- Increase in the number of people travelling by sustainable modes
- Reduction in the mileage travelled by car.

### Delivery by other Plans and Strategies

The county council and the Highway Authority are not at present in a position to constrain traffic levels and traffic growth. Reducing greenhouse gas emissions will only be done in partnership with all agencies, the government and the public.

District and borough councils and other stakeholders will be involved in the provision of electric charging infrastructure.

**Challenge 5.2. Design new infrastructure and the maintenance of the existing network in the light of likely future constraints and threats from changing climate, including the increasing likelihood of periods of severe weather conditions.**

**Issues:** This challenge is focused on maintaining and adapting the transport network to meet the potential impacts of a changing climate.

## Interventions

### Network Management/Maintenance

Interventions to meet this challenge mainly revolve around network management and maintenance to prepare for the impacts of climate change.

However, further assessment of the impacts on transport caused by climate change is required in order to fully understand the risks and to produce a reliable adaptation programme.

For the risk of flash flooding due to heavy rainfall, interventions could include:

- Ensuring developments minimise flooding, for instance by implementing the most vulnerable infrastructure away from river edges or above extreme flood levels;
- Incorporating flood proofing in high risk areas, such as planning for flooding at those stations where there is a particularly significant risk of flash flooding, and ensuring critical equipment is above flood levels or can be isolated;
- Implementing measures to manage and where possible reduce flood risk, including identified source control, flood storage, provision of higher capacity drains, improved drain maintenance, flood warning systems, construction and operation of barriers to prevent water infiltration to stations, and better information on flooding to transport users through for example ITS. Management includes work under the Sustainable Urban Drainage Systems programme.



*Improved drain maintenance to reduce flood risk*

Network Rail is undertaking research and implementing measures to improve safety and enhance resilience to increased temperatures, helping to mitigate the chances of impacts associated with heat waves.

The county council is concentrating on its maintenance regime.

- Work is required to cost the potential future impact of delays on the railways and roads as well as the infrastructure costs (such as repairs and renewals) for long-term infrastructure assets, such as bridges. This is needed to evaluate the costs and benefits of adaptation measures.
- Where road maintenance/resurfacing is needed and where funding allows, materials which can withstand more extreme temperatures can be used.

Similarly, resistance and adaptation considerations should be given to all stages (including design and implementation) of new small scale infrastructure and improvements to ensure minimum disruption should a climatic event occur. These climate risk management measures should be flexible to ensure schemes can be adapted if necessary, to manage the uncertainty of future impacts.

## Indicators

The National Indicator designed to measure local authorities' preparedness in assessing and addressing the risks and opportunities of a changing climate is NI 188. The indicator sets out a five level (0 - 4) process for climate change adaptation, including the making of public commitment, undertaking a climate change risk assessment of service delivery, infrastructure, local communities and developing an action plan to address both threats and opportunities identified. Hertfordshire County Council is currently at level 1 and has set itself the target of reaching Level 2 by March 2011, the target that all local authorities across Hertfordshire have agreed to work towards in partnership, and then level 3 beyond that.

There is no appropriate specific indicator for resilience to climate change at present.

## Outcomes

The desired outcomes are:

- Infrastructure which can withstand the impacts of climate change
- Minimal disruption to the network as a result of climate events and their impacts.

## Delivery by other Plans and Strategies

Other agencies including developers and other infrastructure providers as well as the county council as Highway Authority will be responsible for ensuring that climate risk management is included in infrastructure provision.



## Section 6: District/Borough Council Statements

### Statement by Broxbourne Borough Council



#### **Commitment Statement:**

***Broxbourne Council will promote sustainable transport choices for existing communities and new development. It will work with the highways authority to manage congestion, to improve road and rail infrastructure and to provide high quality bus, train, cycle and pedestrian facilities within the Borough.***

#### **Contribution to Hertfordshire County Council goals**

##### Supporting economic development and dwelling growth:

The Council has appointed consultants to examine the potential impacts of future growth on the highway network. The study's findings will help ascertain what measures may be required in order to support planned growth and the costs of such measures. This will in turn inform future actions of the LTP.

Greater Brookfield, a strategic site identified in the Core Strategy, will also help to deliver improved public transport facilities, pedestrian and cycle access.

The Council will continue to try to secure funding in order to improve access arrangements at Essex Road in Hoddesdon. This will involve the widening of the existing highway to create a more attractive gateway and help improve congestion at a key employment site.

To help draw people into Hoddesdon town centre the Council has re-opened the High Street thereby creating a one way through

system and additional short term parking bays.

##### Improving transport opportunities for all and achieving behavioural change in mode choice:

The council continue to support Urban Transport Plans including the Waltham Cross and Cheshunt UTP, now completed, and the Hoddesdon and Broxbourne UTP, currently in production. Urban transport plans outline actions required to improve the local transport network including both private and public transport.

The Council is working jointly with Enfield, Haringey, Waltham Forest, Transport for London, the Greater London Authority and the Lee Valley Regional Park to produce an Upper Lee Valley Opportunity Study. This will look at transport improvements in the Upper Lee Valley area. The Council will look to extend Oyster Card services into Waltham Cross via this study.

Greater Brookfield will include a new public transport hub and better walking and cycling routes from residential areas.

##### Enhancing the quality of life and the environment:

The Council will be enhancing links and facilities at existing train stations to help deliver an improved quality of life. This includes projects to improve pedestrian movement around the Theobalds and Waltham Cross area and to provide appropriate signage at all train stations including Rye Park.

##### Improving safety and security:

Broxbourne Borough Council will look to improve existing sub-ways for pedestrians either through lighting upgrades and CCTV or by working with the County Council to replace them with over-ground crossings. The Council will continue to enforce against illegal parking to ensure safety across the Borough.

Reducing transport's contribution to greenhouse gas emissions:

Broxbourne Council liaises with the Highways Agency and regional transport planning authorities along with other neighbouring councils to ensure issues relating to 'Local Air Quality' are incorporated into projects and proposals for the highway and local transport network.

**Significant schemes and actions over the next LTP3 period (2011-2016)**

- Realignment of existing southern entrance to Hoddesdon High Street to improve vehicle access
- Improved taxi and public transport provision in Broxbourne's town centres
- Access improvements at local centres and parades including a parking bay scheme at Rye Road Parade
- Revised junction layout at the Old Pond to help alleviate congestion and provide additional space for pedestrians
- Construction of a horse bridge and bridleway at Park Plaza site
- Improve passenger waiting areas and provision of cycle storage at Theobalds Grove train station.

**Schemes and actions required by the Borough over the LTP3 period (2011-2031)**

- The Broxbourne Core Strategy identifies Areas of Search for long-term housing and employment development and seeks to prepare an A10 Route Management Strategy to list programmed improvements at key junctions on the A10 and other roads to manage congestion
- Targeted traffic management and environmental improvements within Broxbourne's town centres
- Support for capacity improvements at Broxbourne's rail stations
- Improvements to Broxbourne's bus network
- Enhanced pedestrian walks and cycle lanes along the main highway networks

- Support for Broxbourne's development agenda and in particular for the phased development of the Brookfield Centre.

**Statement by Dacorum Borough Council**



**Commitment Statement:**

***Dacorum Borough council supports Hertfordshire County Council in delivering LTP3 objectives. Integrated transport and land use strategies are critical to the Borough Council's planning policies and the sustainable community strategy. The commitment is long term and essential to the delivery of sustainable development and sustainable communities.***

**Contribution to Hertfordshire County Council goals**

Supporting economic development and dwelling growth:

Improving transport opportunities for all and achieving behavioural change in mode choice:

Enhancing the quality of life and the environment:

Improving safety and security:

Reducing transport's contribution to greenhouse gas emissions:

The Council supports local improvements to the transport network, including road improvements and junction works, where necessary, to relieve local congestion hotspots and deal with planned growth. A key improvement is the North East Hemel Hempstead relief road which will assist the growth of the Maylands Business Park and residential area to the north and is expected to be in place by 2021.

The Council supports these objectives through:

- development management and application of parking policy and standards

- the preparation of a developer contributions policy to raise funds to assist the County Council to deliver sustainable transport measures
- Dacorum Cycling Strategy – which acts as a basis for schemes in urban transport plans and for using developer contributions
- public parking management and enforcement policy
- the identification of air quality management areas in Hemel Hempstead and Berkhamsted (Northchurch), and
- positive action to assist and accommodate public transport (for example, in assessing the feasibility of improvements to the station gateway and measures to support the delivery of a co-ordinated sustainable transport policy for Maylands Business Park, including “park and ride” at Hemel Hempstead).

The Council also welcomes the County Council’s continuing subsidy of bus services in the borough.

### **Significant schemes and actions over the next LTP3 period (2011-2031)**

The Urban Transport Plan for Hemel Hempstead is in place. Work needs to continue to deliver schemes within the Plan, in particular to support the regeneration of Maylands Business Park and the town centre and confidence in the town. Further support should be given to the planning of transport interchanges in the town centre and at the main station, and longer term issues around the road network linked to the delivery of new development and potential growth in traffic. Urban Transport Plans for Berkhamsted and Tring should be completed. The Council asks the county council to help reach and expedite decisions relating to roads and other infrastructure. Dacorum’s Cycling Strategy and the Infrastructure Delivery Plan (for Dacorum) should be used as the basis for inclusion of schemes in expenditure programmes and the use of developer contributions.

### **Statement by East Herts Council**



#### ***Commitment Statement:***

***East Herts Council is committed to supporting the principles of LTP3 via the development of its LDF. It will particularly support initiatives which help deliver against the East Herts Sustainable Community Strategy ambitions to:***

- ***reduce the district’s carbon footprint and relieve congestion by achieving less private car use via integrated travel options and initiatives(modal shift)***
- ***achieve safe access to services in rural and urban areas.***

***It will work closely with the County Council in the development of transport plans and initiatives and, in parallel with the County Council’s development of LTP3, it will prepare its own Transport and Parking Strategy, incorporating a district parking policy.***

### **Contribution to Hertfordshire County Council goals**

#### *Supporting economic development and dwelling growth:*

East Herts Council will continue to support appropriate economic development and planned dwelling growth through policies in its adopted Local Plan and emerging LDF. These policies are intended to support development in sustainable locations to reduce the need for travel.

The adopted Planning Obligations SPD further ensures that contributions towards sustainable transport modes are realised via the development process to enable greater travel choice and engender modal shift away from private motorised transport. The district’s emerging Transport and Parking

Strategy should likewise promote suitable transport and parking strategies to respond to this challenge.

*Improving transport opportunities for all and achieving behavioural change in mode choice:*

Through the implementation of policies in its adopted Local Plan and development of both its emerging LDF and Transport and Parking Strategy, the council will continue to seek to influence travel behaviour away from private motorised transport and engender change towards sustainable transport modes. It will continue to support county council initiatives aimed at encouraging school journeys to be made by more sustainable modes of transport and also continue development of its green travel plan for staff and members.

East Herts Council contributes, in partnership with other organisations, towards the provision of local community based bus services not funded by HCC to improve access options in this very rural district. East Herts LSP currently contributes towards the 'Broxbourne Shuttle' and is also supportive of the 'Lister Shuttle', both schemes providing access to hospitals.

*Enhancing the quality of life and the environment:*

East Herts Council will support actions proposed in LTP3 that seek to improve the quality of life and natural environment of all residents. Delivery of LTP3 schemes will need to respect policies regarding the preservation and enhancement of the district's important historic conservation and landscape features.

The council will continue to review and assess the air quality in its area according to the Local Air Quality Management Process and develop an action plan to improve air quality. As land drainage authority, it will continue to ensure that the scope and frequency of traffic disruption as a result of flooding incidents and (to a lesser extent) road freezing incidents, is reduced.

*Improving safety and security:*

While East Herts has one of the lowest crime rates in the country, the council is committed to aiding the reduction both in actual crime and perceived risk of crime in the district through its Community Safety Plan. It currently contributes to the provision of CCTV in three town centres and provides financial support towards the provision of Police Community Support Officers.

*Reducing transport's contribution to greenhouse gas emissions:*

In respect of carbon emission reduction, the council will seek to develop strategies towards meeting the aims of the East Herts SCS through both its emerging LDF and Transport and Parking Strategy.

The council will continue its support for a reduction in polluting car-borne journeys and an increase in journeys made by sustainable transport modes. Particular support is given to initiatives aimed at reducing school related motorised journeys. It will also encourage businesses to adopt Green Travel Plans to aid a reduction in harmful emissions.

East Herts Council has installed charging points in its Gascoyne Way, Hertford, car park to help promote the use of electric and hybrid vehicles. It will also consider reforming its parking management strategy and policies (e.g. through use of car park designation and pricing as tools) to influence demand to reduce emissions.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

East Herts Council urges Hertfordshire County Council to pay particular attention to the needs of residents living in rural areas in the county. In the council's view, if an increase in realistic passenger transport options serving the rural areas could be achieved, it could result in a reduction in the amount of rural car journeys made, which would in turn reduce congestion in the urban

areas, lower the county's carbon footprint and lessen the instances of rural transport deprivation.

East Herts Council advocates greater investment in the development of passenger transport services, including establishing connections across different public sector transport providers, as a means of securing modal shift. It further seeks improved integration of passenger transport services to enable frequent, safe, reliable, timely and seamless travel across the county and urges the county council to give priority to the installation of Real Time Passenger Information systems throughout Hertfordshire to improve confidence in passenger transport.

As LTP3 is to run until 2031, the County Council should be cognisant of the level of increased housing planned in Hertfordshire and the subsequent additional extra traffic this will generate. This level of growth could necessitate the construction of new infrastructure, possibly including by-passes, as the most appropriate solution to congestion and East Herts Council will require developer contributions for such infrastructure or alternatives such as park and ride facilities.

## Statement by Hertsmere Borough Council



### **Commitment Statement:**

***Hertsmere Borough Council is committed to supporting HCC in developing and delivering LTP3. Hertsmere Council's Watling Chase Greenways Strategy 2003 ("GWS") provides the Borough with a Walking and Cycling Strategy that is integrated with both the Rights of Way Improvement Plan and local strategies. The Strategy directly contributes to each of the HCC Goals.***

### **Contribution to Hertfordshire County Council goals**

*Supporting economic development and dwelling growth:*

**Hertsmere Council is not (as of 10 July 2010) able to support the HCC goal that alludes to 'planned dwelling growth'.**

The GWS offers an accessible, effective network for non-motorised travel. It promotes and improves a network of routes that are both easy to use and strategically integrated, connecting non-car users with neighbourhoods and key destinations like schools, employment and leisure facilities.

Improving transport opportunities for all and achieving behavioural change in mode choice: Hertsmere Council supports changed behaviours in modal choice, supporting both car free development and a general reduction in parking provision through its Parking Standards for new development. However, lower parking provision can only be achieved through a more consistent and demanding approach to road adoption by HCC.

Hertsmere also promotes and facilitates easy access for all users through its

GWS, specifying that routes should be “as accessible as possible to the communities they serve”. Greenways can be used by all sections of the community, regardless of age, ability or income, with costs for trips being free or minimal. Urban residents, often neglected in terms of safe leisure routes, will benefit from increased provision.

Through encouraging walking, cycling and horseriding as leisure activities, the *Countryside Access* aspect of the Strategy is leading to more sustainable travel choices, by highlighting the advantages of travelling by non-car modes. Walking and cycling trips increase as travellers’ confidence improves and increased exposure to non-car travel encourages more trips to shift away from motorised modes.

*Enhancing the quality of life and the environment:*

Hertsmere specifically aims to link residential areas with leisure facilities as well as other strategic destinations. Greenways can also be more cost effective than small sports centres, being cheaper to implement and to maintain and meeting multiple forms of recreational demand of many, especially for more informal sporting activities.

Greenways enhance the natural environment, being well integrated into it as they are surfaced with more sustainable recycled material and include green margins. With a lower visual impact, they follow natural corridors and desire lines to minimise conflict with their surroundings.

Residents will experience improved quality of life as the Greenways concept is promoted and routes are improved, as increasing numbers of users leads to a reduction in local motorised trips that currently contribute to air pollution.

*Improving safety and security:*

Greenways help in tackling safety for non-motorised users by reducing their danger from motorised traffic via shared use of footways or off-road routes and through improved road crossings. This will in turn help in minimising the number of accidents on the roads, a transport priority for Hertfordshire County Council.

*Reducing transport’s contribution to greenhouse gas emissions:*

As well as reducing congestion and pollution by promoting and facilitating non-motorised travel, new opportunities for environmental enhancements will be possible in the development of new routes and along existing routes.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

Hertsmere will continue to develop and implement the GWS, to create a continuous, connected network of predominantly off-road routes for walkers, cyclists and horse riders, to improve access to a variety of destinations including work, school, leisure facilities, shops and transport interchanges.

## Statement by North Hertfordshire District Council



### ***Commitment Statement:***

***North Hertfordshire District Council (NHDC) supports the Vision and objectives set out in Local Transport Plan 3 and consider that they align with NHDC's own Corporate Vision - 'Making North Hertfordshire a Vibrant Place to Live, Work and Prosper'.***

***NHDC is keen to build on its successful partnership working on transport schemes during LTPs 1 and 2. Greater emphasis on partnership working will be needed to address future growth issues and the financial constraints that will be faced by local authorities.***

### **Contribution to Hertfordshire County Council goals**

#### *Supporting economic development and dwelling growth:*

NHDC continues to plan for growth of housing and jobs in the district following the revocation of the Regional Spatial Strategy. The longer term growth picture is unclear but all future growth will have a transport impact.

The emerging LDF will seek to include policies that complement the LTP and will deliver development on sites that are the most appropriate in terms of promoting sustainable access. NHDC will continue to seek to secure developer contributions that can be used towards transport improvements as set out principally in Urban Transport Plans and, where appropriate, Village or Parish Plans.

#### *Improving transport opportunities for all and achieving behavioural change in mode choice:*

NHDC understands the importance of providing choice and the links this has with

promoting sustainable travel as well as personal mobility and safety. The future financial pressures on public spending are likely to see increased focus on smaller scale, low cost schemes and initiatives to promote change. A good example of this is recent low cost provision of cycle parking at Hitchin station that soon became over subscribed despite no additional expensive facilities being provided on roads around the station.

#### *Enhancing the quality of life and the environment:*

NHDC is keen that the ongoing impact of through traffic and HGV access is managed so as to ensure that both do not seriously undermine the attractiveness of the district. Peak time traffic remains an ongoing problem in several locations and creative ways of managing this impact will need to be found given the unlikely availability of significant new infrastructure.

NHDC has a lot of experience at dealing with the adverse impacts of, largely, non-residential parking and the effect this has on local quality of life. The Council's parking strategy seeks to continue progress made with parking management on an area wide basis, town by town on an annual rolling programme.

#### *Improving safety and security:*

NHDC recognises the success story in Hertfordshire with regard to safety improvements. The Council is especially keen to see vehicle speeds kept low in built up areas not least because this will reduce the number and severity of casualties but it will also help promote walking and cycling – both considered to be viable options in the district's towns and villages.

NHDC is also keen that personal and property security is not overlooked and will be keen to build on its successful CCTV partnership where it can add value to promoting security for transport.

Reducing transport's contribution to greenhouse gas emissions:

NHDC supports initiatives to tackle climate change that complement other key objectives such as economic development, safety and improved choice. NHDC's Climate Change Strategy makes specific reference to the need to consider climate change issues, specifically in the Urban Transport Plans of the district's four towns.

NHDC's Climate Change Strategy also commits the Council to developing its own Travel Plan to reduce its travel to work and operational transport impact.

**Significant schemes and actions over the next LTP3 period (2011-2016)**

- A new subway under the railway at Royston for pedestrians and cyclists, along with associated cycle networks linking two sides of the town to employment area, schools, leisure centre and retail facilities.
- A potential new grade separated railway curve between Hitchin and Letchworth on the Cambridge branch line to alleviate the capacity constraints at the 'flat' Hitchin junction.
- Potential major new town centre redevelopment at Churchgate, Hitchin on land owned by NHDC.
- Potential major new town centre redevelopment in Letchworth Garden City by the Letchworth Garden City Heritage Foundation.
- Annual reviews of parking management in each town as well as improvements to town centre parking facilities.
- Ongoing review and management of traffic in towns so as to promote local access and sustainable modes of transport.
- Pro-active management of traffic so as to support the commercial viability of bus services in and between towns.
- Ongoing commitment to smarter choices via school and employer travel plans.

**Schemes and actions required by NHDC over the LTP3 period (2011-2031)**

- Partnership working to plan for and better manage and improve the A1(M), A505, A602, A10, A507, A600 and rail network to reduce the impact of traffic on local roads.
- Identification of the most suitable sites for growth, their likely transport impacts and mitigation measures that are required to deliver them.
- Ongoing delivery of NHDC's proposed Cycle Route Network via Urban Transport Plans.
- Improvements to Letchworth Station interchange
- Improvements to Baldock station parking provision alongside a developer's scheme to extend the station car park and NHDC's potential area wide parking management.
- Review of HGV access and parking restrictions in most environmentally sensitive areas of towns and villages.
- Improved bus interchange facilities and real time information on public transport.
- Continued support for local area, match funded projects delivered via Highways Joint Member Panel, NHDC Area Committees and Parish/Town Councils.
- Strengthening partnerships between key organisations in transport provision and management as well as identifying new opportunities for partnerships and resource sharing.



## Statement by St Albans City and District Council



### ***Commitment Statement:***

***The City and District of St Albans is committed to the development and implementation of sustainable transport and development policies and strategies to promote the economic, social, historic and general environment of the District. St Albans is a historic City and the policies and strategies have to be sympathetic to the conservation of the historic environment as well as promoting the economic, social and general environmental well being of the district.***

### **Contribution to Hertfordshire County Council goals**

#### Supporting economic development and dwelling growth:

In partnership with HCC, St Albans are investigating the reprioritisation of traffic in St Albans City centre. The aim of the scheme is to improve journey times and reliability of bus services through the city centre, making their use more attractive to residents.

The 'St Albans District Vision' was published in December 2009. The Core Strategy, the main component of the Local Development Framework expected to be adopted in 2012, will include a chapter on 'A connected District with ease of movement'. The draft strategic objective for this chapter seeks to achieve:

"The provision of a sustainable movement network which encourages the use of public transport, walking and cycling and which reduces the use of private car use, whilst improving access for all to services, jobs and facilities, particularly for rural settlements."

A traffic modelling study is being carried out, which will influence decisions in the Core

Strategy on the location of major development and on what transportation schemes are needed. Major proposed developments being considered include shopping and mixed use schemes in the city centre, a new business park near London Colney Roundabout and several housing sites. As far as possible, further development will be located within existing settlements and development in the Green Belt will be minimised.

#### Improving transport opportunities for all and achieving behavioural change in mode choice:

The Council has produced a Cycle Strategy and a Walking Strategy detailing how cycling and walking will be encouraged within the District. As part of the cycle strategy the Council has produced a District-wide cycle map, allowed cycling through some of our green spaces and has continued to install more bicycle racks across the District.

St Albans is continuing to install new bus shelters and upgrade existing shelters. The installation of real-time passenger information at bus shelters continues in partnership with HCC.

St Albans set up the Quality Network Partnership with local bus and train operators and the County Council. This is a voluntary partnership aiming to improve transport and reduce congestion around St Albans. The partnership has secured European Funding for sustainable travel in 80 small and medium enterprises.

St Albans is an active partner within the Abbey Line Community Rail Partnership and supports the introduction of a lightweight rail scheme. St Albans will continue to lobby for a twenty minute service to encourage greater use. St Albans City and St Albans Abbey railway stations have been selected as Station Travel Plan pilots by ATOC.

Enhancing the quality of life and the environment:

Parking Services are constantly investigating the provision of new parking schemes such as residents' parking, short sections of waiting restrictions to address safety concerns and trying to improve residents' ability to park or new restrictions to prevent damage to verges in the District.

The Council has drafted a Streetscape Design Manual and are currently working on the details of the document with Herts Highways. This will link in with the Planning Department's Public Realm Strategy and the aforementioned District Vision.

An Air Quality Management Area for properties in Holywell Hill around the Peahen junction has been declared.

There are a number of Environmental Health Promotion Projects including Highfield Health Walks, Verulamium Health Walks and CMS Health Walks.

Improving safety and security:

A grant application is currently being prepared for the St Albans District Hazard Alley Partnership.

St Albans will continue to install lighting on certain footpaths; it is hoped that these will mostly be low energy LED lanterns.

Reducing transport's contribution to greenhouse gas emissions:

The work being carried out as part of the Council's cycling and walking strategies will reduce transport's contribution to greenhouse gas emissions.

The Council are actively promoting walking, cycling, public transport and car sharing as an alternative to driving.

In association with HCC and Herts Highways a feasibility study on park and ride to reduce

car usage in the city centre has begun. Further work will be undertaken but any scheme will be subject to the availability of capital and S106 funding. The study also looks at the feasibility of providing a coach interchange in the area of the M1 / M25 interchange, and servicing the needs of Butterfly World which is projected to have up to 1 ½ million visitors a year.

**Significant schemes and actions over the next LTP3 period (2011 – 2031):**

- Reprioritisation of traffic in St Albans City Centre
- Park and Ride Scheme
- Growth of Network St Albans, improving and coordinating public transport
- Schemes arising from City Vision and the Local Development Framework.

## Statement by Stevenage Borough Council



### **Commitment Statement:**

***The Council supports the County Council's transport vision and objectives as set out in LTP3.***

***The Council is keen to ensure that the transport implications of development within Stevenage are properly addressed partly through the Local Transport Plan.***

***The second Stevenage Community Strategy 2007 states our key transport policy is to:***

***“Develop a sustainable transport network that balances the contribution that transport can make to the development of the local economy with local and national pressures to reduce road traffic. Reduce the need to travel through the planning and development process and promote improvements in the provision of public transport, walking and cycling and encourage employers to produce green travel plans.”***

### **Contribution to Hertfordshire County Council goals**

#### Supporting economic development and dwelling growth:

We welcome the commitment to support economic and housing growth and, in particular, the proposals to support that aim contained within the Stevenage Urban Transport Plan (UTP).

The Stevenage UTP provides an agreed way for the two Councils to work in partnership to support economic development and dwelling growth in the district; monitoring traffic flows on congested routes and considering

measures to avoid congestion and ensure a steady traffic flow rather than stop/start flow.

#### Improving transport opportunities for all and achieving behavioural change in mode choice:

The Council, in partnership with other organisations and groups, continues to develop policies aimed at influencing travel behaviour. The “Stevenage Bike Boro” initiative, for example, aims to “make people cycle more and make more people cycle”.

The Borough Council is working with HCC to develop Walking and Cycling Strategies as daughter documents to UTP.

We continue to provide disabled parking spaces free of charge for blue badge holders.

We support the renewal of bus shelters through joint funding by Neighbourhood Action Teams, Joint Members Panel and Passenger Transport Unit.

#### Enhancing the quality of life and the environment:

The Borough Council has a duty under the Environment Act 1995 to assess air quality against the objectives contained in the Air Quality Regulations. The results show levels of NO<sub>2</sub> and PM<sub>10</sub> below the objective levels for the whole Stevenage area.

Within the emerging Local Development Framework all new development is designed to encourage more physically active travel and access to recreational areas as well as to maintain and enhance the built and natural environment. The Borough Council is working on major projects to refurbish and enhance the Neighbourhood Centres and Town Centre Gardens.

The Council is gradually rolling out Traffic Regulation Orders (TRO) across Stevenage to protect grass verges from damage by inconsiderate parking and has introduced a Biodiversity Action Plan to maintain and

enhance the diverse fauna and flora in the town.

Improve the safety and security of residents

The Borough Council will work with HCC to support implementation of accident reduction schemes and SRTS (Safer Routes to School) schemes particularly with regard to enforcement of new waiting restrictions.

We will work to reduce crime (and the fear of crime) on the network by working with the Police through the So Stevenage Community Partnership.

Through the Highways JMP, both authorities work in partnership to identify and implement local schemes aimed at improving safety. Funding is made available for small traffic management, speed reducing and lighting schemes by the Council's Neighbourhood Action Teams, all of which make a significant contribution towards improving the safety of highway users.

New waiting restrictions are being introduced across the town to prevent dangerous and obstructive parking on the highway.

Reduce transport's contribution to greenhouse gas emissions

The Council has introduced policies into the emerging Local Development Framework (LDF) aimed at reducing the need to travel. The emerging LDF includes policies on transport which support, complement and integrate with the County Council's LTP3.

The Council widely promotes the benefits of using alternatives to the car, the use of green fuels, new vehicle technology and other best practice to minimise the environmental impact of road traffic.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

In addition to supporting the development and implementation of schemes arising from the Stevenage UTP, the Borough is working on the following:

Rolling out a series of Parking Studies across all wards within Stevenage leading to:

- i) Provide additional on-street parking spaces.
- ii) Make new traffic regulation orders restricting dangerous and obstructive parking.
- iii) Implement verge and footway parking bans.

Refurbishment of the street-scene at three local neighbourhood centres to support local shops and encourage their use, thereby supporting a modal shift away from car travel.

Town Centre Redevelopment including development of enlarged, relocated bus station and on-street bus stop provision on ring road, reduction of traffic speeds on ring road and improved pedestrian permeability across and along the ring road.

Develop SBC's Green Transport Plan.

Replacement of the Fairlands Way footbridge to enhance the link between the town centre and old town High Street.

Increase marketing of bus/rail services: improve sustainable transport options through marketing campaign.

Introduce a package of 'smarter choices' measures, such as travel marketing, travel plans and car clubs, to reduce reliance on the car.

## Statement by Three Rivers District Council

### **Commitment Statement:**

**Three Rivers District Council supports the County Council in delivering LTP3 through sustainable, integrated transport. The Council's policies are set down in the Three Rivers Local Development Framework and the Sustainability Action Plan.**

**This Council will promote transport measures identified in the Infrastructure Delivery Plan in partnership with Hertfordshire County Council, the Highways Agency and transport providers.**

### **Contribution to Hertfordshire County Council goals**

#### Supporting economic development and dwelling growth:

The Council will promote a programme of shopping centre enhancements to support the local economy and local communities.

Development proposals in Three Rivers will be expected to contribute to the delivery of sustainable transport and travel measures identified as necessary for the development, either on-site as part of the development or through contributions to off-site provision as appropriate.

Improving transport opportunities for all and achieving behavioural change in mode choice: The District Council regards provision for interchange and access by public transport, walking and cycling as particularly important.

Every opportunity will need to be taken to integrate means of travel. The following transport and travel measures will be supported at appropriate locations across

the District, and development will need to consider the provision of measures and facilities that encourage integration including:

- a) Secure cycle parking
- b) A safe network for pedestrians
- c) Taxi ranks
- d) A layout to enable convenient access for buses
- e) Provision of covered waiting facilities
- f) Improvements to transport hubs within and including the provision of Mobi-Hubs where appropriate
- g) Links to and from the Grand Union Canal towpath
- h) Links to and from railway stations.

#### Enhancing the quality of life and the environment:

The District Council will support greener and healthier forms of travel through its policies for tackling climate change set down in the Three Rivers Sustainability Action Plan.

Measures in the Council's Sustainability Action Plan include: -

- Improved air quality management
- Control over polluters
- Promotion of cleaner fuels and vehicles fleets
- Promotion of green travel plans by services, businesses and schools
- Support for TravelSmart
- Improved cycling and walking networks.

#### Improve the safety and security of residents

The Council's policies as set down in the Local Development Framework seek to ensure that all development should be designed and located to minimise the impacts of travel by motor vehicle on the District. In particular, major development will be expected to be located in areas highly accessible by the most sustainable modes of transport, and to people of all abilities in a socially inclusive and safe manner.

Reduce transport's contribution to greenhouse gas emissions

The Council will promote greener and healthier forms of travel, and in particular supports cycling, walking and good public transport within sustainable patterns of development, through the LDF and Sustainability Action Plan.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

The Council supports the Croxley Rail Link to achieve improved access to public transport, to facilities in Watford, reduce traffic congestion, improve transport links to London, and provide future opportunities for services from Watford to Rickmansworth and beyond.

The Council's transport priorities are to achieve: -

- Better and integrated bus and rail services
- Safer cycle routes
- "Smart" travel choices to cut carbon emissions and reduce car use
- Cleaner vehicle fleets
- Green Travel Plans for service providers, schools and businesses
- Parking management as part of an integrated approach to sustainable transport.

**Statement by Watford Borough Council****Commitment Statement:**

***Watford Borough Council is committed to working in partnership with Hertfordshire County Council and others to deliver LTP3.***

**Contribution to Hertfordshire County Council goals**Supporting economic development and dwelling growth:

Support economic development and the planned dwelling growth by producing the Core Strategy as part of the Local Development Framework. This will look to direct new development to sites that are readily accessible by public transport and are in close proximity to local facilities such as neighbourhood centres. Produce an Economic Development Action Plan which will support the County Council's Economic Development Strategy in maintaining and improving Watford's role as a key employment centre and place to do business.

Improving transport opportunities for all and achieving behavioural change in mode choice:

Improve transport opportunities for all and achieve behavioural change in mode choice working with the County Council and others to deliver the objectives of the South West Herts Transport Plan. Support major schemes which will improve the resilience of the sustainable transport network and offer better travel choices such as the Croxley Rail Line and Watford Junction interchange. Delivery of the Watford Commuter scheme which aims to work with businesses to promote modal shift and encourage sustainable travel. Operate a parking policy which aims to discourage car use by limiting the availability of town centre parking.

Operating a Green Travel Plan for the Council as an employer.

Enhancing the quality of life and the environment:

Enhance the quality of life and the healthy natural environment of all Hertfordshire residents by developing action plans for the AQMAs in Watford. This will include a range of measures to reduce congestion. Using our resources to improve cycle and pedestrian routes across the town.

Improve the safety and security of residents

Improve the safety and security of residents working with the Local Strategic Partnership, One Watford, on PPAs.

Reduce transport's contribution to greenhouse gas emissions

Reduce transport's contribution to greenhouse gas emissions by working with the Carbon Trust to reduce the Borough's Carbon footprint and implementing actions within the Council's Carbon Management Strategy.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

Croxley Rail Link  
Watford Junction regeneration  
Watford Health Campus  
Intelligent Transport Systems (e.g. real time information)

**Statement by Welwyn Hatfield Borough Council**



**Commitment Statement:**

***Welwyn Hatfield Borough Council is committed to playing its part in delivering the targets and objectives in the LTP. The goals of the LTP will help to deliver the council's vision for the borough which emphasises the importance of enjoying a high quality of life within healthy, safe and inclusive communities and neighbourhoods where people have the opportunity to benefit from growing prosperity while reducing their impact on the environment, with strengthened town centres, reinforced existing neighbourhoods and new ones with the necessary supportive infrastructure.***

**Contribution to Hertfordshire County Council goals**

Supporting economic development and dwelling growth:

This council's strategy is to accommodate development in accessible locations more efficiently in ways that, as far as possible, make provision for modes of travel that are more sustainable than the private car and do not exacerbate congestion.

Improving transport opportunities for all and achieving behavioural change in mode choice: This council is developing a planning strategy that seeks to achieve a shift in travel patterns away from the private car to less polluting modes for transport.

This council takes opportunities to secure contributions to cycle and pedestrian networks through Section 106 agreements as well as green travel plans for major new developments.

We are actively supporting PedalPoint and the council is leading by example in setting up a car share scheme as part of its green travel plan for staff.

Enhancing the quality of life and the environment:

Actions to achieve a shift away from car dependence should impact positively on people's quality of life because it will give them the opportunity to increase the amount of exercise they take.

Improve the safety and security of residents

This council makes an annual contribution to the joint highways panel to improve lighting where people have concerns about their personal safety.

This council has also invested in CCTV at Welwyn Garden City bus station to improve personal safety and has also invested recently in a jointly-funded scheme to introduce automatic number plate recognition equipment, which helps to reduce the number of unroadworthy vehicles being used.

The Community Safety Partnership has also recently invested in speed guns and associated signage for rural communities.

Reduce transport's contribution to greenhouse gas emissions

Many of the council's actions set out under the first three goals above should have a beneficial effect on greenhouse gas emissions.

In its consideration of planning applications, this council is concerned to ensure that a reduction in transport's contribution to greenhouse gas emissions is achieved.

**Significant schemes and actions over the next LTP3 period (2011-2031)**

Implementation of the Broadwater Road West supplementary planning document should

achieve improved walking and cycling links to Welwyn Garden City railway station and the town centre.

The Hatfield town centre regeneration scheme incorporates new cycle links and a bus station.

The development plan for Welwyn Garden City town centre will incorporate an improved bus interchange and other travel improvements.

Cycle links will also be developed as part of the Ellenbrook Park scheme.

The council's core strategy will incorporate objectives to:

- maximise the opportunities to travel by walking, cycling and public transport to provide access to homes, jobs, key services such as health and education as well as shopping, sport, leisure, cultural and community facilities.
- help minimise the need to travel by promoting a balance of jobs and homes within towns and villages.
- manage parking demand and provide good public transport, walking and cycling connections between centres and communities.



## Appendix 1: LTP3 Indicators and Challenges

Challenge	Indicator	Recorded levels (previous target)					Indicative Targets			
		07/08	08/09	09/10	10/11	15/16	20/21	25/26	30/31	
1.1 Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy.	<b>NI 167</b> Congestion	2.97mins/mile (not set)	2.87mins/mile (not set)	Not available at time of print	-	2.80m/mile	2.75m/mile	2.70m/mile	2.65m/mile	
	<b>NI 168</b> % local authority principal road networks where structural maintenance should be considered	4% (no more than 8%)	6% (no more than 6%)	6% (no more than 6%)	-	No more than 6%	No more than 6%	No more than 6%	No more than 6%	
	<b>NI 169</b> % non-principal road network where structural maintenance should be considered	7% (no more than 7%)	9% (no more than 9%)	11% (no more than 9%)	-	No more than 9%	No more than 9%	No more than 9%	No more than 9%	
	% Unclassified Road network where structural maintenance should be considered	12% (12%)	13% (14%)	13% (14%)	-	No more than 13%	No more than 13%	No more than 13%	No more than 13%	
	% of category 1, 1a and 2 Footway network where structural maintenance should be considered	27% (33%)	24% (33%)	26% (33%)	-	26%	26%	26%	26%	

Challenge	Indicator	Recorded levels (previous target)						Indicative Targets		
		07/08	08/09	09/10	10/11	15/16	20/21	25/26	30/31	
1.2 Support economic growth and new housing development through delivery of transport improvements and where necessary enhancement of the network capacity	Accessibility of new developments – % of new developments within 30 minutes by passenger transport of key services	New Indicator	93.8% (average of all five components)	97.04% (average of all five components)	-	>90%	>90%	>90%		
2.1 Improve accessibility for all and particularly for non car users and the disadvantaged (disabled, elderly, low income etc).	<b>NI 175</b> Accessibility- Percentage of people who find it easy to travel to key services	89%	89%	Not available at time of print	-	91%	93%	93%		
2.2 Achieve a behavioural change as regards choice of transport mode increasing awareness of the advantages of walking, cycling and passenger transport, and of information on facilities and services available.	% of all journeys by walking under 1 miles in length  % of all journeys by cycling under 3 miles in length	New Indicator	New Indicator	58.9%	-	64%	68%	77%		
2.3 Achieve further improvements in the provision of passenger transport (bus and rail services) to improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users	<b>NI 177</b> Passenger transport Patronage  <b>NI 178</b> Bus punctuality	33.49 million (32.7m)  90.8% (80%)	35.1 million (32.7m)  90.8% (80%)	35.4 million (32.9m)  82.5% (85%)	-	36m  90%	37m  91%	41m  91%		

Challenge	Indicator	Recorded levels (previous target)						Indicative Targets			
		07/08	08/09	09/10	10/11	15/16	20/21	25/26	30/31		
3.1 Improve journey experience for transport users in terms of comfort, regularity and reliability of service, safety concerns, ability to park and other aspects to improve access	User satisfaction with local bus services	65% (60%)	77% (56%)	78% (58%)	-	80%	82%	84%	85%		
	User satisfaction with Passenger Transport information	57% (42%)	65% (44%)	84% (47%)	-	85%	86%	87%	88%		
3.2 Improve the health of individuals by encouraging and enabling more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health.	NI 198 Mode share of sustainable school journeys (Aged 5-10 years)	60.4% (50%)	61% (50.5%)	61.7% (51%)	-	65%	67.5%	70%	72%		
	NI 198 Mode share of sustainable school journeys (Aged 11-16 years)	76.8% (65%)	75.7% (65.5%)	78.1% (66%)	-	78%	78%	78%	78%		
	Air Quality-Mean roadside Nitrogen Dioxide levels across the county	New indicator	33 ug/m <sup>3</sup>	33 ug/m <sup>3</sup>	-	25 ug/m <sup>3</sup>	22 ug/m <sup>3</sup>	18 ug/m <sup>3</sup>	16 ug/m <sup>3</sup>		

Challenge	Indicator	Recorded levels (previous target)					Indicative Targets		
		07/08	08/09	09/10	10/11	15/16	20/21	25/26	30/31
	ROW - % of the total length of footpaths and other rights of way that were easy to use by members of the public	67.25% (69%)	72% (73%)	78% (77%)	-	77%	74%	70%	70%
<b>3.3</b> Maintain and enhance the natural, built and historic environment managing the streetscape and improving integration and connections of streets and neighbourhoods and minimising the adverse impacts of transport on the natural environment, heritage and landscape.	Speed limit compliance - % compliance with speed limits (30 - 70mph)	New indicator	New Indicator	New Indicator	81%	82%	83%	84%	85%
<b>3.4</b> Reduce the impact of transport noise especially in those areas where monitoring shows there to be specific problems for residents.	No specific Indicator	-	-	-	-	-	-	-	-
<b>4.1</b> Improve road safety in the county reducing the risk of death and injury due to the traffic accidents.	<b>NI 47</b> People Killed and Seriously Injured	550 (no more than 640)	459 (no more than 620)	413 (no more than 610)	-	no more than 413	no more than 413	no more than 413	no more than 413
	<b>NI 48</b> Children Killed and Seriously Injured	42 (no more than 59)	37 (no more than 58)	42 (no more than 57)	-	no more than 42	no more than 42	no more than 42	no more than 42

Challenge	Indicator	Recorded levels (previous target)					Indicative Targets			
		07/08	08/09	09/10	10/11	15/16	20/21	25/26	30/31	
<b>4.2</b> Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised.	Total crimes per 100,000 passenger journeys at rail stations in Hertfordshire	New indicator	1.81	1.62	-	1.62	1.62	1.62	1.62	
<b>5.1</b> Reduce greenhouse gas emissions from transport in the county to meet government targets through the reduction in consumption of fossil fuels.	Transport related CO <sub>2</sub> emissions per capita (Government statistics)	New indicator	1.73 tonnes	Not available at time of print	-	1.35 tns	1.27 tns	1.20 tns	1.13 tns	
<b>5.2</b> Design new infrastructure and the maintenance of the existing network in the light of likely future constraints and threats from changing climate, including the increasing likelihood of periods of severe weather conditions.	No specific Indicator	-	-	-	-	-	-	-	-	

## Appendix 2 – Strategic Environmental Assessment, Environmental Statement

It is necessary to produce a statement which reports how the findings of the SEA and consultation results have been taken into account (a SEA Environmental Statement). This Statement covers:

- How environmental considerations have been integrated into the LTP, for example any changes to or deletions from the LTP in response to the information in the Environmental Report;
- How the Environmental Report has been taken into account;
- How the opinions and consultation responses have been taken into account. The summary should be sufficiently detailed to show how the LTP was changed to take account of issues raised, or why no changes were made;
- The reasons for choosing the LTP chosen route as adopted in the light of other reasonable alternatives dealt with; and
- The measures that are to be taken to monitor the significant environmental effects of implementation of the LTP. The Environmental Report will already have documented proposed measures concerning monitoring; these can now be confirmed or modified in the light of consultation responses.

### Scoping Study & Strategic Options Assessment

The Strategic Environmental Assessment of LTP3 commenced with the Scoping Study in April 2010 to determine the level of detail that needed to be assessed to define the SEA criteria and begin to collect the SEA baseline data. The report reviewed the SEA objectives used for LTP2 to ensure that all of the objectives are still relevant for LTP3, and to check that new ones are/are not required, as a result of new legislation/guidance since 2005. It also outlined the different

options available for developing the preferred approach upon which LTP3 is based.

Consultation on the SEA Scoping Report was then undertaken outlining the environmental issues and alternative options identified at the scoping stage. A number of changes were made to the Scoping Report as a result of consultation and the key changes can be found in Section 11.1.

Consultation around the Strategic Options assessment did not result in any major redirection to the proposed preferred approach, and the assessments concluded that there would be no significant negative impacts on the environment in Hertfordshire as a result of the delivery of LTP3. The emphasis of the preferred approach concentrates on reducing the need to travel, supporting sustainable modes and efficient network management enhanced by modern technologies.

### Policy and Interventions Assessments and Significant Environmental Impacts

Hertfordshire's strategic transport policies are contained within Volume 2 of the LTP, with operational policies recorded elsewhere in other documents. The policies in general are a continuation of those contained in LTP2, but with a number of small changes and some new policies such as those relating to climate change.

Each of the policies were assessed against the SEA objectives and generally were found to have a positive effect on the socio-economic and environmental criteria used in the appraisal process. Some of the policies assessed will be backed up by detailed strategies (daughter documents) and these will be assessed separately as and when they are developed/reviewed.

Interventions are the generic schemes and measures that could be implemented to deliver the LTP goals and challenges.

A complete list as possible was drawn up that would deliver both the strategic options and the preferred option. These interventions were then put into categories/packages and it was these packages that were assessed. From the assessments it was clear that some of the interventions would have a significantly negative impact i.e. major new road building and road charging, but these are interventions that would not be considered in delivering the LTP3 preferred approach.

### **Daughter Documents**

It was clear by September 2010 that the majority of the 13 LTP3 daughter documents would not be developed/reviewed in time for the Autumn consultation period (September – December 2010). It was agreed that daughter documents developed/reviewed after the main consultation period would be screened individually to identify if they require a separate SEA. Draft daughter documents with their associated SEA assessments would then be agreed for consultation at Highways & Transport Panel, and then agreed for adoption by the Executive Member for Highways & Transport.

### **Cumulative, Secondary and Synergistic Effects**

It is important that the combined effects of delivering the different LTP3 policies and interventions are considered and assessed. This was done for LTP3 by comparing the SEA objectives with the overall effect of the preferred approach, the policies and the interventions. As a result of this assessment there are no significant negative impacts from the combined effects of delivering the different strategies/measures on any of the SEA objectives.

### **Consultation on the Draft Environmental Report**

The culmination of all the assessments was documented in a Draft SEA Environmental Report, and this underwent 10 weeks consultation in Autumn 2010. The

consultation comments were considered by Highways & Transport Panel on 11 January 2011, and by LTP3 Member Reference Group on 17 January 2011. The small number of consultation comments received resulted in only minor changes needing to be made to the Environmental Report (as detailed in Section 11.1), Therefore the majority of the Environmental Report remains unchanged.

### **Final Environmental Report and Monitoring**

The final SEA Environmental Report was approved by Highways & Transport on 8 February 2011, and then agreed by Cabinet on 21 March 2011, and adopted by Full Council on 29 March 2011.

As a result of consultation the monitoring methods as detailed in the draft SEA Environmental Report remain largely unchanged. The six key areas that still require work on availability and quality of data are:

- congestion
- effects on climate change
- air pollution
- noise pollution
- poor access to disadvantaged sections of the community and those who live in rural areas
- childhood obesity levels

Consultation also highlighted a number of baseline gaps that needed to be investigated as part of the monitoring process.

Monitoring will be undertaken on an annual basis and reported with any LTP3 Progress Report, through a SEA Monitoring Report. Wider monitoring of environmental effects by using all of the indicators in the Environmental Baseline will also be considered as part of this process. The impact of the recent comprehensive spending review, will also need to be carefully monitored and mitigation measures implemented where necessary.

## Glossary

AONB	Areas of Outstanding Natural Beauty	PPAs	Planning Performance Agreements
AQMA's	Air Quality Management Areas	PSV	Passenger Carrying Vehicle
ATOC	Association of Transport Operating Companies	PTP	Personalised Travel Planning
AVL	Automatic Vehicle Location	PTU	Passenger Transport Unit
BTP	British Transport Police	QNP	(Bus) Quality Network Partnership
CCTV	Closed Circuit Television	QOL	Quality of Life
CIL	Community Infrastructure Levy	ROW	Rights of Way
CJU	Criminal Justice Unit	RSS	Regional Spatial Strategy
CYP	Children and Young People	RSU	Road Safety Unit
DaSTS	Delivering a Sustainable Transport System (Department for Transport White Paper)	RTPI	Real Time Passenger Information
DECC	Department for Energy and Climate Change	S106	Section 106 (funding from developers)
DDA	Disability Discrimination Act	ScooT S	Scooter and cycle Transport Solutions
DSA	Driving Standards Agency	SCS	Sustainable Community Strategy
DfT	Department for Transport	SEA	Strategic Environmental Assessment
FQP	Freight Quality Partnership	SID	Speed Indicator Devices
FWP	Forward Works Programme	SMoTS	Sustainable Modes of Travel Strategy
HA	Highways Agency	SOAEL	Significant Observed Adverse Effect Level
HCC	Hertfordshire County Council	SPD	Supplementary Planning Document
HGV	Heavy Goods Vehicle	SRSP	Strategic Road Safety Partnership
HIIS	Hertfordshire Investment and Infrastructure Strategy	SRTS	Safer Routes to School
HJMP	Highways Joint Member Panel	SUSTRANS	Sustainable Transport (Charitable Organisation)
ITS	Intelligent Transport Systems	TAMP	Transport Asset Management Plan
IWP	Integrated Works Programme	TEES	Transport Economic Evidence Study
JMP	Joint Member Panel	TTP	Transport Planning and Policy
KSI	Killed and Seriously Injured	TPS	Transport Programmes and Strategies Unit
LAF	Local Access Forum	UTMC	Urban Traffic Management and Control
LDF	Local Development Framework	UTP	Urban Transport Plan
LED	Low Energy Display		
LEZ	Low Emission Zone		
LSP	Local Strategic Partnership		
LTP	Local Transport Plan		
LUL	London Underground Line		
NI	National Indicator		
PCSO's	Police Community Support Officers		



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LTP3 April 2011

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## Related documents

- Local Transport Plan Volume 2 - The Policy Document
- Local Transport Plan Volume 3 - The Implementation Plan
- Local Transport Plan Strategic Environmental Assessment - Environmental Report

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