

HERTFORD AND WARE URBAN TRANSPORT PLAN

November 2010



Main Document

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Appendix A Consultation Report

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Appendix C Scheme Assessment Framework (SAF)

Appendix D Bengo Traffic Modelling Study

Appendix E Mead Lane Access Master Plan Study

Appendix F Short Term Scheme Feasibility Pro-Forma

Appendix G Medium Term Scheme Feasibility Pro-Forma

Figure 1 Cycle & Pedestrian Measures

Figure 2 Cycle & Pedestrian Network

Figure 3 Passenger Transport Measures

Figure 4 Highways, Freight And Car Parking Measures

Figure 5 Congestion Step Change Measures

Figure 6 Combined Measures Plan

GLOSSARY OF TERMS

A1	Land uses classified as 'Shops' in the Use Classes Order 1987
A2	Land uses classified as 'Financial and Professional Services' in the Use Classes Order 1987
A3	Land uses classified as 'Restaurants and cafes' in the Use Classes Order 1987
A4	Land uses classified as 'Drinking Establishments' in the Use Classes Order 1987
A5	Land uses classified as 'Hot Food Takeaways' in the Use Classes Order 1987
BEN	UTP Bengeo Measures & Options
C1	Land uses classified as 'Hotels' in the Use Classes Order 1987 Community Development Agency (for Herts)
CDA for Herts	
CIF	Community Infrastructure Fund
CO₂	Carbon Dioxide
CPK	UTP Car Parking Measures
CPM	UTP Cycle and Pedestrian Measure
CPZ	Controlled Parking Zone
CTC	Cycling Charitable Trust
CYC	UTP Cycle Measures
D1	Land uses classified as 'Non residential Institutions in the Use Classes Order 1987
D2	Land uses classified as 'Assembly and Leisure' in the Use Classes Order 1987
DaSTS	Delivering a Sustainable Transport Strategy
DfT	Department for Transport
DMRB	Design Manual for Roads and Bridges
EHC	East Herts Council
FRT	UTP Freight Measures
GAF	Growth Area Fund
GEH	Goodness of Fit Statistic
Glaxo	GlaxoSmithKline
GSK	GlaxoSmithKline
GTP	Green Travel Plan
H	Hertford
HCC	Hertfordshire County Council
HE8	Hertford Employment Areas
HGV	Heavy goods Vehicle
HOV Lane	High Occupancy Vehicle Lane
HWY	UTP Highway Measures
KSI	Key success Indicator

LAA1	Local Area Agreement 1
LAA2	Local Area Agreement 2
LDF	Local Development Framework
LGV	Light Goods Vehicle
LMVR	Local Model Validation Report
LTP	Local Transport Plan LTP Indicators 1-21
LTP1-21	
LVATP	Lea Valley Area Transport Plan
MDL	UTP Mead Lane Measures
MPs	Members of Parliament
MPs	Members of Parliament
MSGM	Member Steering Group Meeting
NCN61	National Cycle Network Route 61
NR	Network Rail
OSGM	Officer Steering Group Meeting
P&R	Park and Ride Micro-simulation traffic modelling software package
Paramics	
PCT	Primary Care Trust
PED	UTP Pedestrian Measure Active bus priority facility now available within SCOOT Traffic signals
PROMPT	
PTM	UTP Passenger Transport Measure
RSS	Regional Spatial Strategy
RTPI	Real Time Passenger Transport
S106	Section 106 (of the Town and Country Planning Act 1990)
SA	Study Area
SAF	Scheme Assessment Framework Satellite Navigation
SATNAV	
	A tool for managing and controlling traffic signals across urban areas linking traffic signals. It is an adaptive system that responds automatically to fluctuations in traffic flow through the use of on-street detectors embedded in the road.
SCOOT	
SEA	Strategic Environmental Assessment
SMT	UTP Smarter Choices Measures Selective Priority system used in conjunction with signals (e.g. to allow Public Transport Priority)
SPRINT	
SRtS	Safer Routes to Schools
STC2	Local Plan Policy STC2 - Primary Shopping Frontages
STC3	Local Plan Policy STC3 - Secondary shopping Frontages
TAG	Intelligent location device to identify transport access restrictions
TMA	Traffic Management Act 2004
	Database of observed trip generation survey data by land use type
TRICS	

UTC	Urban Traffic Control
VMS	Variable Message Sign
W	Ware
WA8	Ware Employment Areas

1 Introduction

1.1 AN URBAN TRANSPORT PLAN FOR HERTFORD AND WARE

1.1.1 Hertfordshire County Council (HCC) has developed a five-year Urban Transport Plan (UTP) for the towns of Hertford and Ware that also looks ahead to 2021. This UTP identifies and prioritises the key transport and development issues which need to be tackled over the next five years and beyond.

1.1.2 The County Council in partnership with East Herts Council (EHC) has developed this plan to improve the transport prospects for the two historic towns and to support sustainable development. Above all, and in line with EHC's Sustainable Community Strategy for East Hertfordshire 2009-2024, the UTP should be "sympathetic to the conservation of the historic environment as well as promoting the economic, social and general environmental well being of the district".

1.1.3 The Hertfordshire Local Transport Plan 2006/7–2010/11 and the Lea Valley Area Transport Plan (LVATP), sets out the strategic context. This UTP will replace the LVATP in the Hertford and Ware area.

1.1.4 The UTP for Hertford and Ware seeks to deliver a prioritised package of measures which covers all modes of transport. It takes into consideration the wider social, environmental and economic context of the study area, in addition to the future plans for the two towns, in support of the aspirations outlined above.

1.1.5 The vision for the Hertford and Ware UTP is:

*"To provide an **accessible** and **affordable integrated** transport system for all, making travel within the local area **sustainable, safe and efficient**."*

1.1.6 Stage 1 of the UTP sought to identify the key transport problems and issues in Hertford and Ware to be tackled by the UTP over the next five years and up to 2021.

1.1.7 Stage 2 of the UTP has considered the key issues identified in UTP Stage 1 and developed potential solutions to address the problems within the study area.

1.1.8 The key issues and potential scheme options have been identified and developed in consultation with local Council Members, Officers and Key stakeholders within the study area, including inter alia bus and rail transport providers.

1.1.9 Shortlisted schemes have been evaluated and prioritised based on a scoring system used consistently across all UTP's within Hertfordshire. This enabled the full set of proposed measures to be compared in terms of their contribution towards delivering LTP and UTP objectives which are set out in the UTP Stage 1 report on the HCC website. The schemes have been allocated a timescale. However, all timescales quoted are indicative at this stage and subject to funding availability. The subset of Short and Medium term schemes have also been evaluated in more detail using a standard set of feasibility checks. These provide an outline and summary of the proposed schemes and measures. They also identify significant design issues which may affect the delivery of the schemes within the proposed timescale.

1.1.10 This report summarises the key issues and problems identified in UTP Stage 1. The Stage 1 report contains further detail and is available on Hertfordshire County Council's website at <http://www.hertsdirect.org/urbantransportplans>.

1.1.11 This report presents the Hertford and Ware Final UTP following the 6-week consultation period starting on the 15th March 2010.

1.2 REPORT STRUCTURE

1.2.1 The structure of remainder of this report is summarised as follows:

- Chapter 2 provides the background to the UTP area;
- Chapter 3 covers consultation and community engagement. It illustrates consultation to date, including workshops with key stakeholder organisations and Local Council Members. HCC and EHC officers have also been consulted throughout the UTP. This section of the report will be updated for the final UTP at the end of May 2010 to describe the public consultation process and outcomes;
- Chapter 4 sets out the overarching targets and objectives expressed within key local policy documents;
- Chapter 5 describes the local problems and the identification of issues across all modes of travel within the study area;
- Chapter 6 identifies the specific vision and objectives for the Hertford and Ware UTP;
- Chapter 7 sets out the programme of measures required;
- Chapter 8 provides a five year delivery programme for the UTP; and
- Chapter 9 describes the monitoring and date of the plan review.

2 Background to the Plan Area

2.1 BACKGROUND

2.1.1 The study area, covering the towns of Hertford and Ware, is outlined in red in Figure 2.1. Hertingfordbury village is also included as part of the area.



Figure 2.1: Hertford and Ware UTP Study Area

2.1.2 The area of interest that the UTP is focused on covers the urban areas of Hertford and Ware. Both Hertford & Ware are historic market towns and as such suffer from associated traffic and environmental problems, partly due to the central medieval street patterns. Located in the District of East Herts, they represent two of the four main urban areas in the District.

2.2 STUDY AREA CONTEXT

HERTFORD

2.2.1 The confluence of the River Lea with the three other Rivers Beane, Mimram and Rib in Hertford's valley setting have marked the town's development pattern and present both opportunities and constraints in shaping the future development of Hertford.

2.2.2 The main shopping area within Hertford is Bircherley Green shopping centre. The adopted Local Plan additionally identifies other primary shopping frontages at Fore Street, Market Street, Maidenhead Street, Honey Lane, Mill Bridge, Old Cross, Railway Street, The White Hart, Salisbury Square and The Wash. These areas are defined in Appendix A Policy STC2 of the adopted Local Plan, which defines primary shopping frontages as those at which proposals for development or changes of use from Shop (A1) to Non-Shop (non-A1) will not be permitted.

2.2.3 Secondary shopping frontages are defined by Policy STC3 as those at which proposals for development or change of use falling within use classes A1, A2, A3, A4, A5, C1, D1 or D2 will be permitted provided that it would not result in an excessive concentration of non-shop uses. These are located along parts of Bircheley Street, Bull Plain, Castle Street, Evron Place, Fore Street, The Salisbury Arms Hotel, Green Dragon Yard, Market Street, Old Cross, Parliament Square, Post Office Walk, Railway Street, St Andrew Street, The Marquee, and Warren Place.

2.2.4 Tesco's on Mill Road also has significant footfall and traffic access.

2.2.5 A number of transport initiatives were implemented in Hertford town centre as part of the previous transport plan for the town, in 1993. These measures have provided some significant improvements to traffic in the town centre and its interaction with pedestrians and cyclists in the town in particular.

2.2.6 Hertford bus station is located on Bircherley Street and is connected to the Bircherley Green shopping centre, providing access into the town centre. The bus station underwent some relatively minor improvements as part of the previous Hertford Transport Plan, which improved the overall operation and internal layout for bus operations.

2.2.7 There are two rail stations within Hertford: Hertford North and Hertford East. Hertford North, operated by First Capital Connect; is connected to Kings Cross and Moorgate to the south as well as Stevenage and Letchworth to the north. The Hertford East branch line service, which also serves Ware, is operated by National Express and connects to London Liverpool Street.

2.2.8 In terms of current highway infrastructure the A414 runs to the south of the town centre and provides an important east-west link through Hertfordshire connecting Essex in the east with Hemel Hempstead in the west. It runs parallel to the M25, connecting the M11 to the A1(M) and therefore offers an alternative east-west route. The A119 connects Hertford with Ware to the east and provides connections to Stevenage and the north.

Employment and Commuting in Hertford

2.2.9 Hertford's designated employment areas include Caxton Hill/ Ware Road, Foxholes West, Hartham Lane/Station Approach, Mimram Road, Warehams Lane, Windsor Industrial Estate on Ware Road and Mead Lane (East of Marshgate Drive). According to Policy HE8 of the adopted Local Plan, these areas will be primarily reserved for industry comprising Classes B1 Business and B2 General Industrial uses. However, the key employers in Hertford are located in the Mead Lane area, Foxholes Business Park off the A414 and the (non-designated) employment areas off Pegs Lane which includes Hertfordshire County Council and the East Herts Council offices (Wallfields). The designated employment areas are shown in Appendix B.

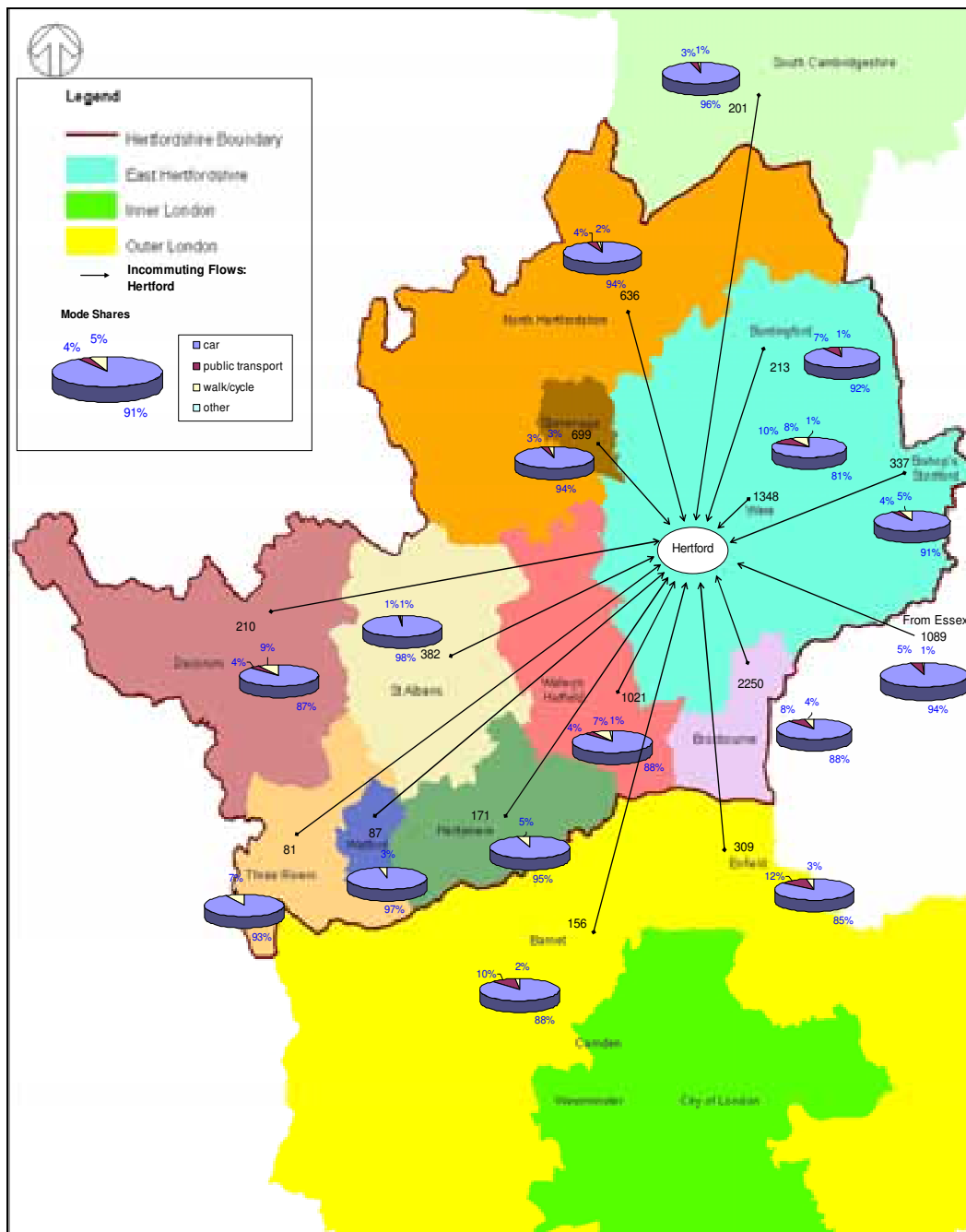


Figure 2.3: In-commuting Trip Origins and Mode shares for Hertford Workers (Source Census 2001)

2.2.12 Of those who live and work in Hertford, the walking mode share is 27%. Cycling is only 5% and bus is only 4%. Private cars are the predominant mode of transport, being used by 61% of those people living and working in Hertford for travel to work, while 3% use other modes including taxi and motorcycle.

2.2.13 Although it is recognised that a number of changes to employment in Hertford have occurred since the 2001 Census data was collected, (e.g. the large employment site occupied by Orange in Foxholes Business Park has relocated and left much of the office space empty) it is expected that this data still reflects the main movements and mode shares for work purposes to and from Hertford.

2.2.14 The Census statistics also show that Hertford has a high level of multiple car owning households and that even for local employment trips within the study area, the car is the predominant form of transport.

WARE

2.2.15 Ware's primary shopping frontages (according to the adopted Local Plan Policy STC2) are located along the High Street, Amwell End, Bridgefoot, East Street, West Street, while its secondary shopping frontages (based on Local Plan Policy STC3) are parts of Baldock Street, Church Street, High Street and New Road. The High Street runs through the centre of Ware and connects the eastern and western areas.

2.2.16 The rail station is located on Station Road at the north side of the railway line and south of the town centre and is served by the National Express route between Hertford East and London Liverpool Street, with connections at Broxbourne to the wider network.

2.2.17 Ware does not have a bus station. However, the main bus stops within the town centre are clustered around the rail station on Station Road, London Road and Amwell End with additional stops provided on High Street, New Road and Star Street.

2.2.18 The A10 to the west of Ware acts as a bypass for the town and can be accessed via three junctions (A414 roundabout to the south accessed via A1170 Pepper Hill, the junction with the A602 and the junction with the A1170 in the north).

Employment and Commuting in Ware

2.2.19 Ware's designated employment areas (based on Local Plan policy WA8) include Land off Marsh Lane, Broadmeads, Widbury Hill, Park Road/ Harris's Lane (Glaxo Smith Kline) and Crane Mead, as shown in Appendix B. However, the key employers in Ware are located at Ware College on Scott's Road and along Park Road which includes the Glaxo Smith Kline site. An expansion in this area has recently been completed.

2.2.20 2001 Census data for Ware indicated that 63% commute out of the town, 15% commute to Greater London, 13% to Hertford, 7% to Broxbourne Borough and 6% to Harlow. Car mode share for journey to work trips in 2001 was around 75%. Out-commuting patterns by mode are highlighted in Figure 2.4.

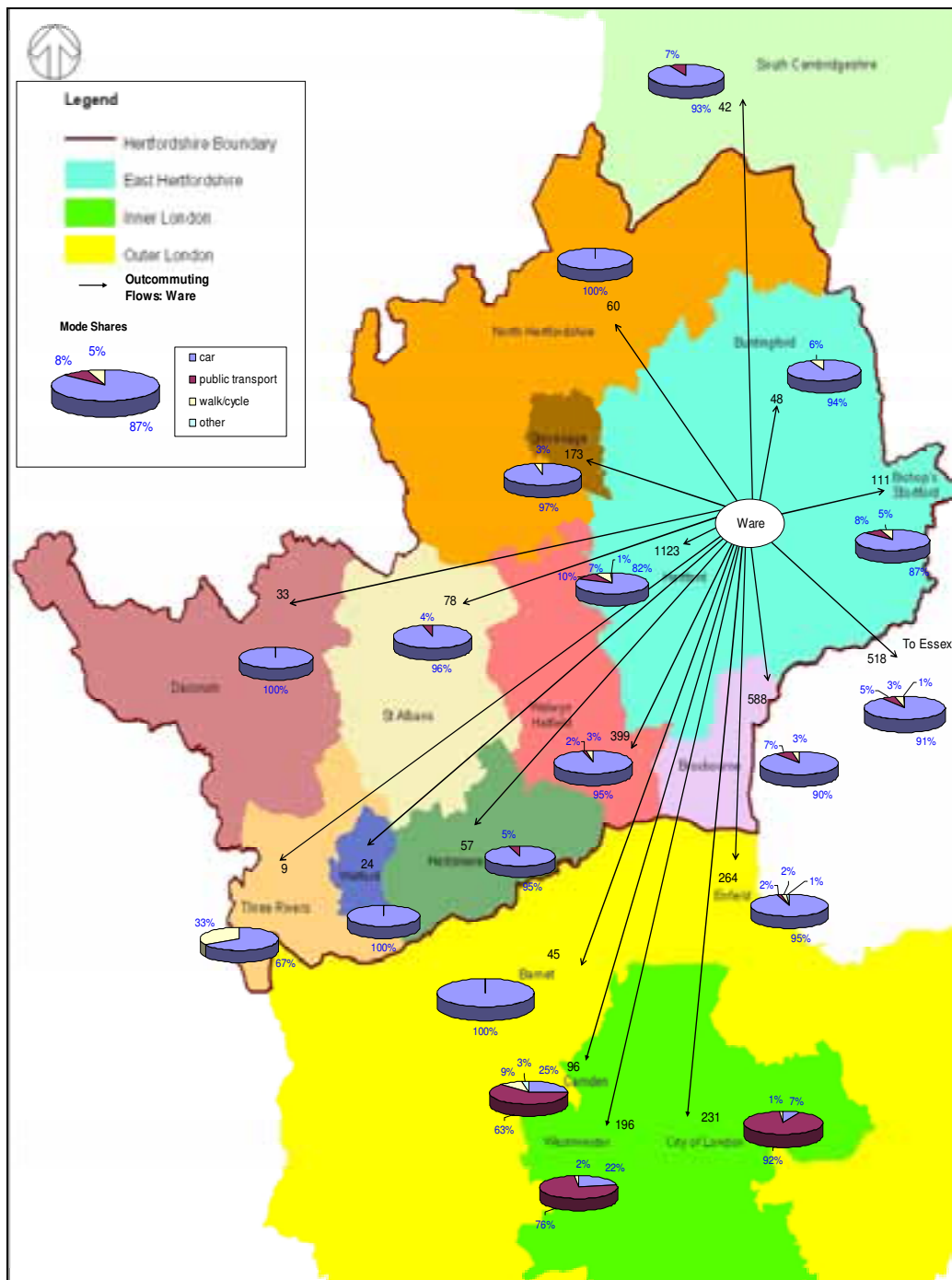


Figure 2.4: Out-commuting workplaces and mode shares for Ware Residents (Source Census 2001)

2.2.21 In terms of in-commute trips 90% travel in to Ware by car with 3% by bus, 2% by train, 2% walking and 2% cycling. This is illustrated in Figure 2.5 below. Of those who live and work in Ware, 54% use their car to travel to work (including car passenger), 36% walk, 2% use the bus, 5% cycle and 3% use other modes, including motorcycle and taxi.

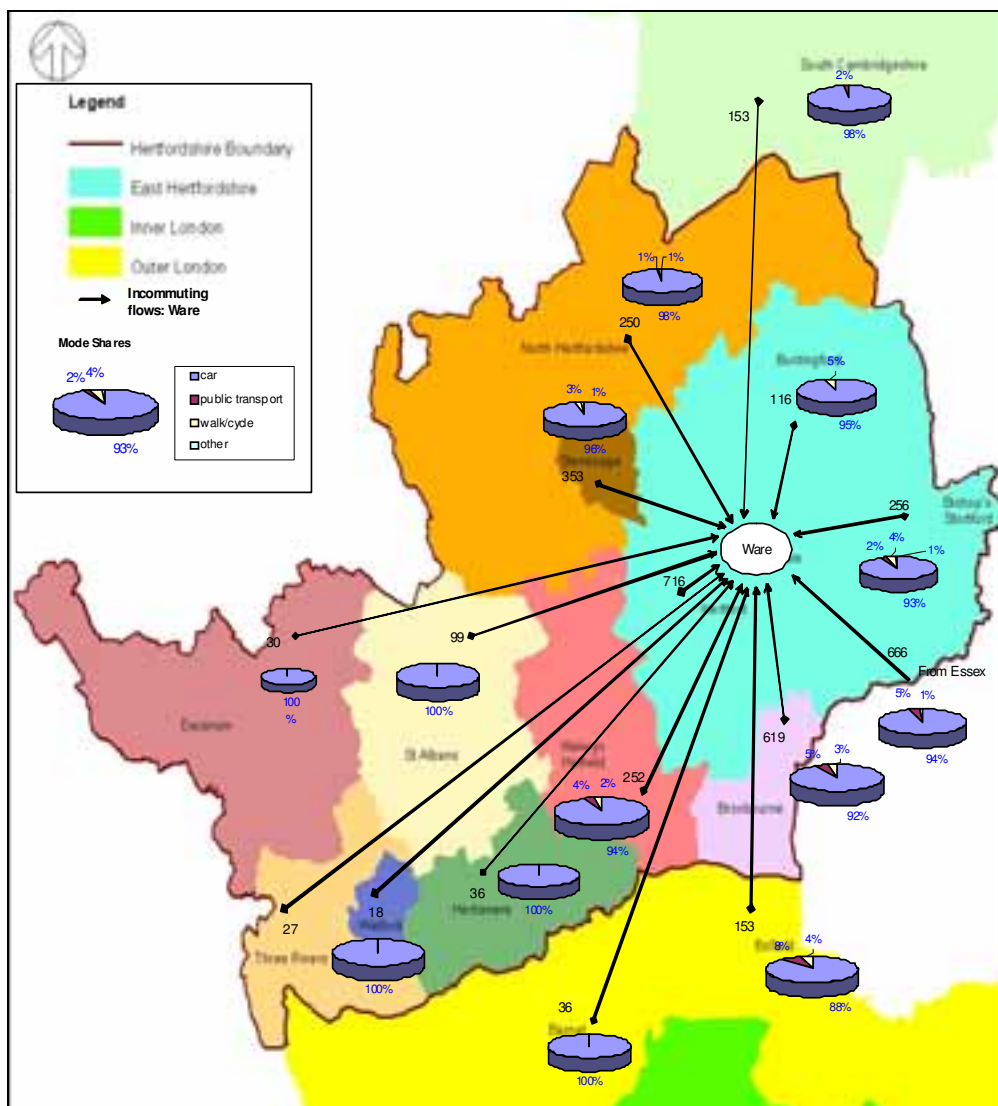


Figure 2.5: In-commuting workplaces and mode shares for Ware Residents (Source Census 2001)

2.2.22 Similar to Hertford, commuting patterns in Ware exhibit a significant number of car trips taking place over a relatively short distance. In the future this could be reduced with improved provision of alternative modes of travel and associated necessary promotion of them to residents. For longer distance trips, the rail and bus mode shares could also be improved.

2.3 LINKAGES BETWEEN THE TWO TOWNS

Population

2.3.1 Census data from 2001 shows that Hertford had a resident population of 24,146 in a total of 10,300 households and Ware has a resident population of 17,143 in a total of 7,153 households. Table 2.1 illustrates the breakdown of population by age group in Hertford and Ware.

Age	% of total by age band			
	Hertford	Ware	Hertfordshire	England and Wales
0 - 4	6.43	6.12	6.28	5.95
5 - 7	3.76	3.97	3.94	3.74
8 - 9	2.42	2.65	2.7	2.62
10 - 14	5.56	6.26	6.6	6.58
15	0.93	1.08	1.23	1.27
16 - 17	1.85	2.18	2.44	2.51
18 - 19	2.29	1.62	2.1	2.4
20 - 24	6.64	5.35	5.33	6.00
25 - 29	8.62	7.39	6.58	6.6
30 - 44	25.31	25.35	24.06	22.55
45 - 59	18.25	19.04	19.04	18.93
60 - 64	4.37	4.45	4.54	4.89
65 - 74	7.3	7.76	8.04	8.39
75 - 84	4.8	4.72	5.26	5.64
85 - 89	1.01	1.27	1.23	1.3
> 90	0.46	0.78	0.6	0.65
All People	100.00	100.00	100.00	100.00

Table 2.1: Hertford and Ware Age Profile: Source HCC Data Report, 2001 Census Table KS02

2.3.2 Hertford has a lower percentage of under 17's than the average for both Hertfordshire and England & Wales, and a lower percentage of over 60's. However, the town has a higher percentage of 18 – 44 year olds. Ware, on the other hand, has a higher percentage of 25 – 59 year olds.

2.3.3 The local population age structure has implications for transport provision. An aging population may be more dependent on public transport, and while public transport is important for younger people, walking and cycling facilities may be more relevant.

Car Ownership

2.3.4 Multiple car ownership in Hertfordshire is higher than the national average and the number of households without a car is significantly lower than the national average. Hertford and Ware have similar levels of car ownership with 17% having no car available, 44%-45% having one car and 39% having two or more cars available which is similar to the County average but significantly higher than the England and Wales average. This is shown in Table 2.2.

Car Availability	% of Households			
	Hertford	Ware	Hertfordshire	England & Wales
None	17%	17%	18%	27%
One	44%	44%	42%	44%
Two or more	39%	39%	40%	29%

Table 2.2: Summary of car ownership levels within the study area, county wide and nationally; Source: 2001 Census

2.3.5 This shapes the way that transport is used in the towns of Hertford and Ware and leads to car travel being the dominant mode of transport for the towns. The numbers are also likely to have increased since the 2001 census, as evidenced by the County Travel Survey.

Mode Share

2.3.6 There are high levels of car ownership and there are also a significant number of commuters who travel by rail for journeys to work (approximately 13% of Hertford residents commute by rail and 10% of Ware residents commute by train). These high rail mode shares can be attributed largely to the proximity of the study area to employment within London. Approximately 20% of study area commuters travelled to London for work in 2001, with almost 50% of these commuting by rail. A summary of commuting mode shares for Hertford and Ware residents is provided in Figure 2.6.

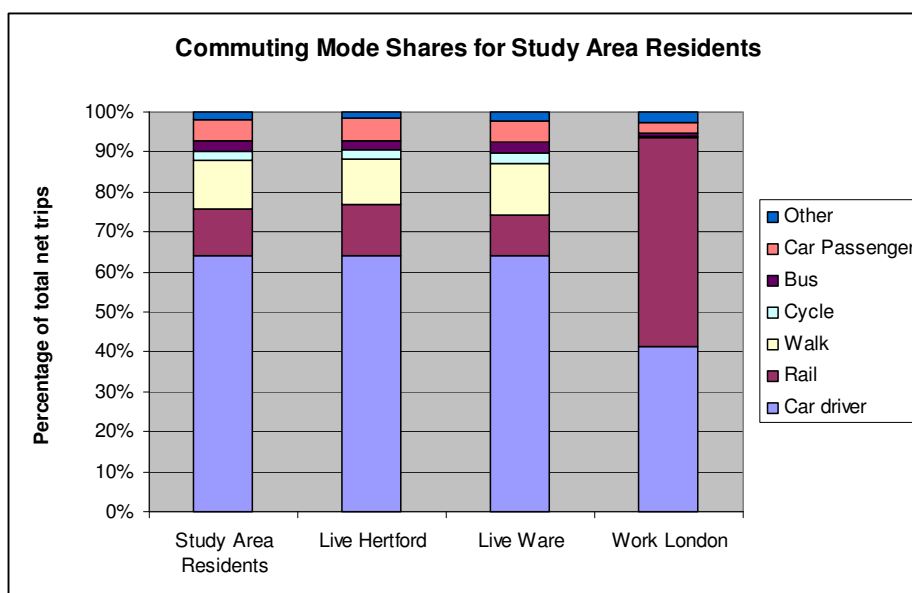


Figure 2.6: Commuting Mode shares for Hertford and Ware Residents; Source: 2001 Census.

2.3.7 Of those living in Hertford and working in Ware or living in Ware and working in Hertford, the 2001 Census car driver mode share was high at 70%, despite a range of alternative modes available. In 2001 there were 1,247 people commuting from Ware to Hertford and 783 commuting from Hertford to Ware. The mode shares for commuting journeys with both their origins and destinations within the study area (based on travel to work data from the 2001 census), are summarised in Figure 2.7.

2.3.8 As this shows there is an opportunity to improve the “live Hertford and work Ware” mode share of bus travel to match that of the “live Ware and Work Hertford”.

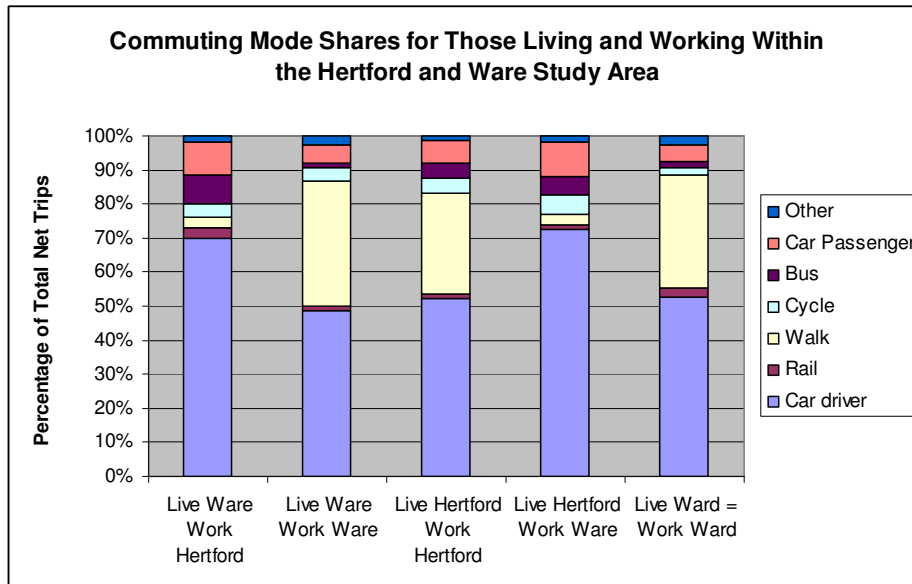


Figure 2.7: Intra study area commuter mode shares

Road Network

2.3.9 The main vehicular routes used for access between Hertford and Ware are the A119, the A414 and Hoe Lane (via the A10/A414 junction). All of these routes are congested during the morning peak hour in particular. AM peak hour 8am -9am flows, taken from HCC data, are as follows:

- A414 has a flow of around 2,250 in each direction;
- A119 has a flow of around 900 in each direction (at the Hertford end);
- The A10 has a flow of around 2,000 in each direction;
- The A602/B158 Route has traffic flows of around 750 in each direction; and
- Hoe Lane has traffic flows of around 250 in each direction.

2.3.10 Figure 2.8 shows the main routes in and out of both Hertford and Ware, providing access to a number of key external destinations (shown orange) and also shows the context of the routes that link the two towns together (shown green).

2.3.11 Whilst it is acknowledged that the A414 is a primary route that passes through the centre of Hertford, and there is peak time congestion associated with this road in the town, Hertfordshire County Council does not currently plan to construct a bypass. The UTP does, however, include a wide range of schemes and measures that will seek to help address the issue via the management of congestion and encouragement of walking, cycling and the use of passenger transport.

2.3.12 This UTP sets out short and medium term schemes over a five-year period but also includes longer term schemes up to 2021. Whilst a bypass is not included within this Plan as a longer term scheme, a review in five-years may involve revisiting potential bypass proposals. Should a bypass scheme gain support, implementation would be subject to funding and satisfactorily resolving other aspects such as establishing suitable routes and mitigating the impacts of any proposals.

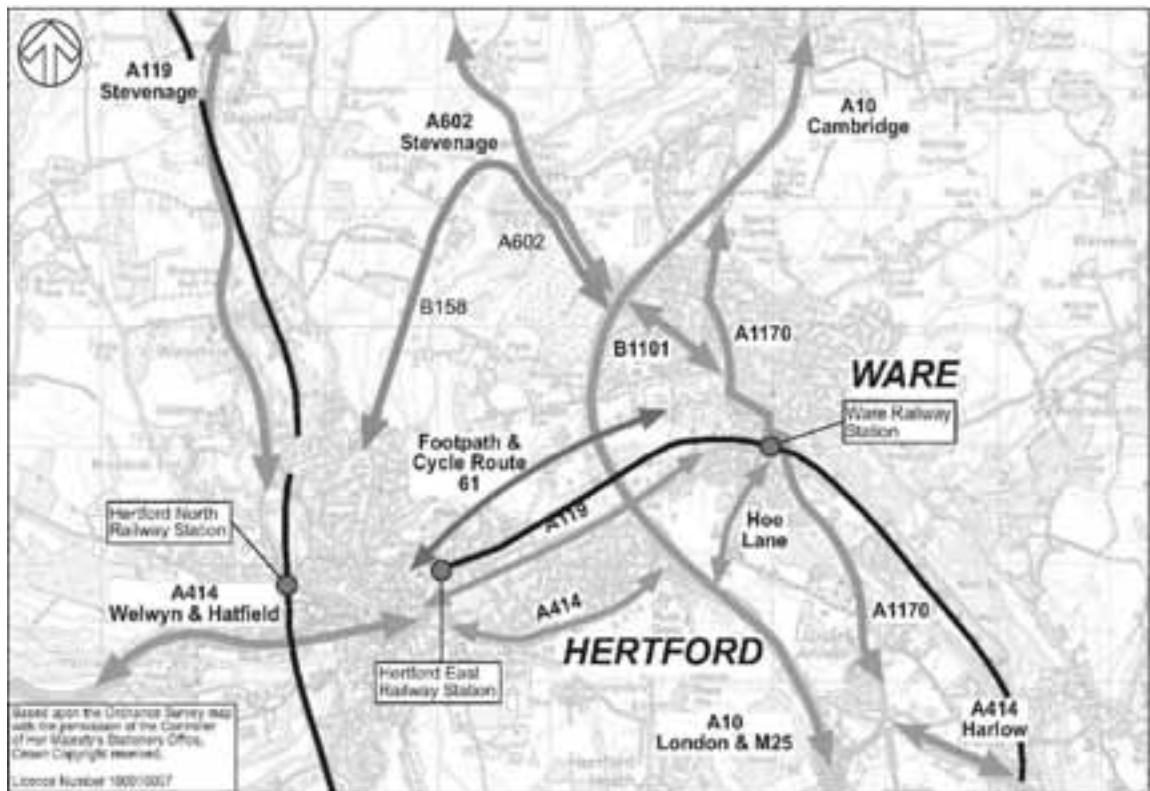


Figure 2.8: Main access routes for Hertford and Ware and key linkages

Passenger Transport

Bus

2.3.13 The bus routes connecting the two towns run via the A119 Hertford Road / Ware Road, with a peak hour headway of at least 10 minutes in both directions. However, service frequencies are lower during evenings and weekends. The mode share statistics from the 2001 Census indicate that these services are relatively poorly used for journeys to work between the two towns, with only 7% commuting by bus. The bus service network coverage of the whole study area is shown in Figure 2.9.

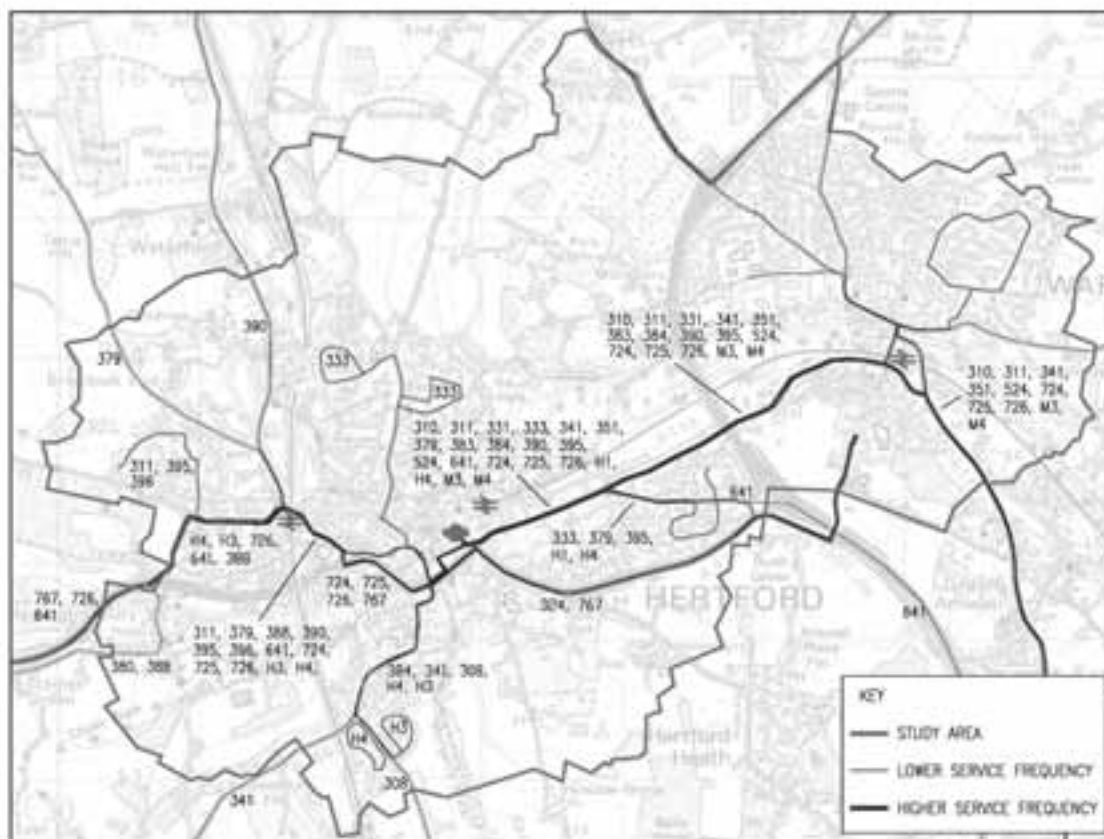


Figure 2.9: Bus Network Coverage within Hertford and Ware and Surrounding Areas

2.3.14 Across the study area road traffic congestion presents a significant constraint to providing reliable and frequent bus services.

2.3.15 In particular, the A119 between Hertford and Ware is one of the main routes for vehicular traffic and currently there is no priority provided anywhere along the length of the route for buses. This leads to a high degree of bus unreliability and extended journey times due to congestion during the morning peak hour. Whilst priority along this route has been considered in the past within the Lea Valley Green Route bus corridor study, it is recognised that in order to address the imbalance in car commuting trips between the two towns this may need to be reconsidered.

Rail

2.3.16 Hertford East and Ware rail stations are currently linked by services to and from London Liverpool Street Station and Hertford North to Moorgate and King's Cross. As the census analysis outlined below shows, these services are relatively poorly utilised for work-commuting between the two towns, with only 51 people commuting by train between the two towns. The service frequency is given in Table 2.3.

Origin - Destination	Frequency		
	Via	AM	PM
Hertford North-London	Finsbury Park	10-20 minutes	10-20 minutes
Hertford East-London Liverpool Street	Ware	30 minutes	20-40 minutes

Table 2.3: Services between Hertford and Ware during the AM and PM peak periods

2.3.17 Rail services on the Liverpool Street and King's Cross lines are currently subject to levels of overcrowding in the peak periods.

Walking and Cycling

The towpath along the River Lea between Hertford and Ware is classified as a Public Footpath and forms part of both the Lea Valley Walk from Luton to the Thames and also Hertfordshire Way (a circular county route following the County boundary). The footpath owners have also permitted cyclists to use the route and Sustrans have identified it within the National Cycle Network as NCN Route 61. The towpath offers a route for cycling and walking between the two towns.

The towpath alongside the river is a well used recreational route which has undergone significant improvement recently and it provides an ideal route linking the two town centres as it is completely segregated from traffic. However, it is less well used for commuting journeys since width constraints can cause conflicts between cyclists and pedestrians. Poor surfacing and the impact of poor drainage in places can also make it unattractive to use throughout the year.

2.4 BENGEO TRANSPORT MODEL

2.4.1 Through traffic represents an ongoing problem for the residents of Lower Bengoe. However, there is limited capacity issues at Old Cross junction which causes congestion on the B158. As part of the UTP, options for reducing rat-running through the Victorian residential streets of Bengoe and the impacts on wider traffic flows have therefore been investigated.

2.4.2 A Paramics micro-simulation model has been developed to test the impacts of closing Byde Street, particularly in respect of accommodating the additional traffic at the already congested Old Cross junction in Hertford town centre.

2.4.3 The Bengoe Transport model assesses whether the surrounding road network can accommodate the traffic that is currently avoiding the town centre congestion by using the narrow Victorian residential streets of lower Bengoe.

2.4.4 The needs of the local residents have been considered and measures which take into account their travel requirements have been identified. The implications of the closure of Byde Street, in terms of the resulting traffic impact on the surrounding junctions, have also been investigated.

2.4.5 The modelling study also takes into account the recently consented Sainsbury's superstore development on the former McMullens Brewery site in the immediate vicinity of the Old Cross junction. The results and recommendations from the Bengoe study are documented later in this UTP and a full report is provided in Appendix D.

2.5 MEAD LANE ACCESS MASTERPLAN STUDY

2.5.1 The Mead Lane industrial area in Hertford is in need of regeneration. The Local Plan allocates the area west of Marshgate Drive for residential use and, should environmental, ground contamination, traffic and highway problems prove surmountable, to a mixed use scheme including employment, residential and leisure uses to the east of Marshgate Drive. However, it is currently only served by one means of access via Mill Road, which suffers from congestion in the peak hours.

2.5.2 The Mead Lane Access Masterplan Study primarily considers the planning and transport issues in the area served by Mead Lane close to the Hertford East Railway Station. The study of the area takes into account opportunities and constraints and identifies measures that could to enable further development of the site in the future.

2.5.3 A traffic model of the Mead Lane area and surrounding roads has been developed using the micro-simulation program Paramics. The model has been developed specifically to test various transport solutions and to evaluate capacity for additional development. The findings and conclusions of the Mead Lane Access Master Plan Study are reported later in this UTP and a full report is provided in Appendix E.

3 Consultation and Community Engagement

3.1 SEEKING LOCAL OPINIONS AND FEEDBACK ON THE UTP

3.1.1 Consultation is an important part of producing transport schemes and measures in the local community. The UTP consultation process has enabled the UTP to reflect the opinions and views of interested parties, stakeholders and residents within the study area.

3.1.2 A consultation methodology has been used to deliver a Hertford and Ware Urban Transport Plan which adequately reflects local views by gathering input and feedback from stakeholders and residents throughout the UTP process.

3.1.3 The findings of the consultation through the development of the Final UTP are included in Appendix A.

3.2 ENGAGEMENT WITH KEY GROUPS

3.2.1 During the production of the UTP the following main groups of people have been consulted at regular intervals as this plan was developed:

- Selected Council Members and Officers from both Hertfordshire County Council and East Herts Council;
- Key Local Stakeholders, local focus groups and organisations;
- Passenger Transport Operators; and
- Local residents and members of the public (*undertaken between 15th March and 30th April 2010*)
- Local Secondary School pupils

3.2.2 The Draft UTP Stage 2 report has been reviewed by Council Officers and feedback incorporated into this Final version of the UTP.

3.3 ENGAGEMENT WITH LOCAL COUNCIL OFFICERS AND MEMBERS

3.3.1 Bi-monthly meetings have been held throughout the UTP development process to inform officers at the County Council and East Herts Council of progress. Monthly progress reports have been supplied to the County Council and East Herts Council.

3.3.2 There have been three member steering group meetings held during Stage 2 of the UTP development period. These followed the form of the steering groups held during UTP Stage 1 and have been invaluable in providing an opportunity to take onboard feedback on the work conducted so far and gain input for the next stage of work as the plan progressed.

3.3.3 Key officer surgeries were also held to discuss issues in detail with local key officers in relation to a specific mode or theme. The following topics were considered during the key officer surgery:

- Cycling and Walking (including Sustrans);
- Highways (including traffic/network management, signals, parking);
- Travel Planning (including schools);
- Policy and Development; and

- Passenger & Community Transport.

3.3.4 Specific officer and member workshops have also been conducted to guide the development of the Bengoe Transport Modelling and the Mead Lane Study workstreams of the UTP.

3.4 KEY STAKEHOLDER ENGAGEMENT

3.4.1 Key stakeholders have played a unique and important role in the creation of the UTP for Hertford and Ware. During their day to day work and/or lives they contend with the transport problems in Hertford and Ware that the UTP seeks to address. Therefore the opinions and ideas from key stakeholders are invaluable during the UTP process.

3.4.2 During Stage 1 of the UTP, the list of key stakeholders to be consulted during the UTP process was identified and agreed with HCC. In preparation for the first stakeholder workshop event, a mailing list of key contacts to include in the consultation was compiled by HCC.

3.4.3 This included representatives from the following groups, as shown in Table 3.4

East Herts Councillors	Abbeyfield, Hertford & Ware Society
Local MPs	Rush Green Preservation Society
Hertfordshire County Councillors	Richard Hale Association
Network Rail	Molewood Residents Association
Hertfordshire Fire & Rescue Services	Oak Grove Residents Association
Beds & Herts Ambulance & Paramedic NHS Trust	National Express (Hertford East and Ware)
Hertfordshire Building Preservation Trust	Watermill Estate Residents' Association
Hertford & Ware Police Station	West Street Residents Association
Hertfordshire Constabulary	Lower Bengoe Residents Association
Hertfordshire Chamber of Commerce & Industry	Ware Town Council (2 cllrs and 1 officer)
CDA for Herts	Ware Town Partnership
Age Concern Hertfordshire	The Ware Society
Lee Valley Regional Park Authority	Ware Town Centre Management Board
East Herts Archaeological Society	Bluecoat Yard Residents Association
East Herts Footpath Society	Hertingfordbury Conservation Society
Ramblers' Association	CTC
Hertford Town Council (2 cllrs and 1 officer)	Sustrans
Hertford Disability Support Group	First Capital Connect (Hertford North)
Ware Disability Group	Environment Agency
Hertford Civic Society	English Heritage
PCT	Arriva
Churches Together - Hertford	SM Coaches
Churches Together - Ware	Trustybus
Hertingfordbury Parish Council	Golden Boy Coaches
Riversmead Housing association	Hertford Regional College (Ware)
Glaxo	Uno buses
Rail users group	Centrebus

Table 3.4: List of key stakeholders invited to participate in UTP consultation activities

3.4.4 All of the above organisations were invited to attend the first Stakeholder workshop; approximately 30 people attended, representing some of these groups. The session included a presentation on the UTP process and a group workshop session which was intended to gain opinions on:

- What the UTP vision and objectives should be;
- What the key problems and issues facing Hertford and Ware are in terms of transport; and
- What opportunities are present in Hertford and Ware in terms of transport to solve the identified problems.

3.4.5 Many of the representatives of the above organisations who attended the first stakeholder workshop have continued to be involved in the following two further UTP stakeholder workshops to provide a consistent basis for obtaining feedback as the plan progressed.

3.4.6 The second stakeholder workshop, held in November 2009, provided an update on progress with the UTP and reported on the finalised list of issues and problems identified as part of UTP stage 1. Feedback from stakeholders was requested on potential schemes to tackle each of the transport problems identified. The second workshop also included an interactive survey in which participants were asked to prioritise different types of measures and compare options. Around 20 participants from key stakeholder groups took part.

3.4.7 Most significantly, the results of this survey highlighted a local consensus of opinion in relation to the prioritising of schemes which deliver sustainability (achieving 100% votes) over those which create more road capacity as shown in Figure 3.1 below.

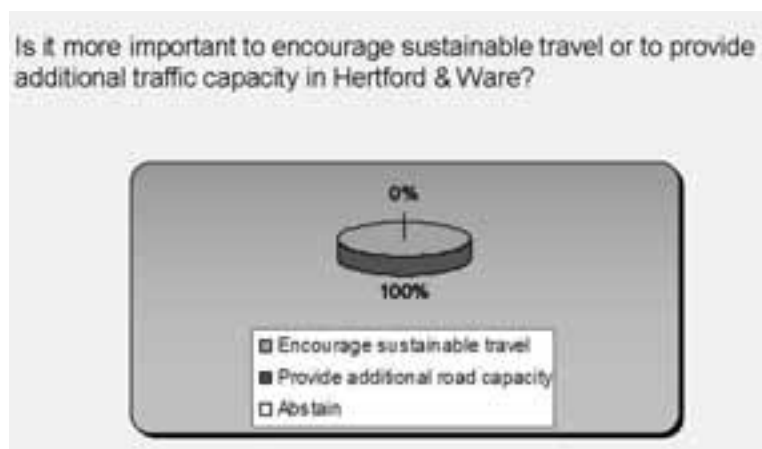


Figure 3.1: Stakeholder Workshop Participants Responses to Question 6

3.4.8 This workshop survey also identified a general consensus as shown in Figure 3.2 that the majority of key stakeholders in Hertford and Ware consider that rat-running through residential streets should be reduced, even if this causes additional congestion on primary routes.

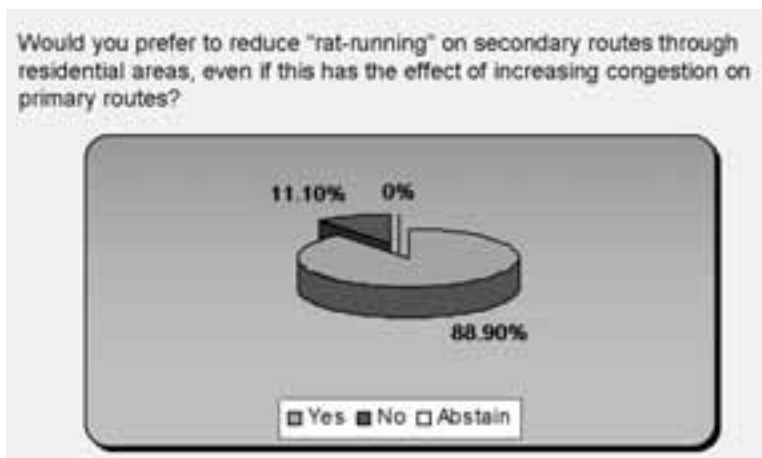


Figure 3.2: Stakeholder Workshop Participants Responses to Question 7

3.4.9 As shown in Figure 3.3 the results of Question 9 also showed that the majority of participants believe that bus and cycle journeys have the greatest scope for reducing car journeys within the study area:

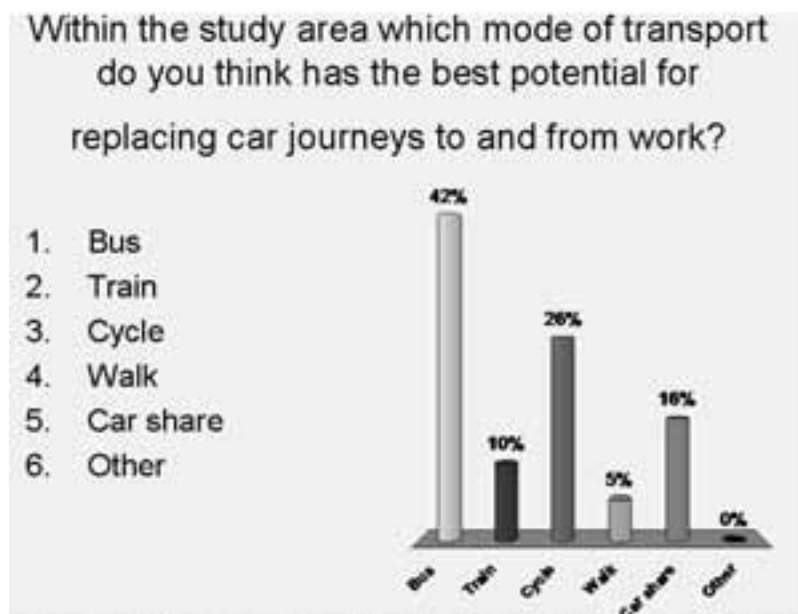


Figure 3.3: Stakeholder Workshop Participants Responses to Question 9

3.4.10 A final stakeholder workshop was held in January 2010 to provide feedback on the results of the Scheme Assessment Framework and a final set of prioritised schemes which have been subject to public consultation.

3.4.11 A circulation list, comprising all key local stakeholders, has been set up in order to allow circulation of updates on UTP progress. UTP updates have included summary notes following workshops, minutes of meetings and consultation materials.

3.5 ENGAGEMENT WITH PASSENGER TRANSPORT OPERATORS

3.5.1 In addition to the general key local stakeholder workshops discussed above, Rail and Bus Workshops were held with local passenger transport operators in October 2009, to discuss specific issues and opportunities which surround the provision of rail and bus services for both passengers and freight (where applicable) in the Hertford and Ware study area.

3.5.2 One of the main outcomes of the rail workshops was to seek views on improvements at all three railway stations to improve interchange facilities. Clarification was also sought on Network Rail's position in relation to creating a second vehicular access into the Mead Lane site via the level crossing at Rowley's Road.

3.5.3 The bus operator workshop helped to clarify the operational requirements of the bus station and identified requirements for creating an acceptable interchange area at Hertford East rail station. The bus operators also showed a willingness to consider potential bus route diversions to County Hall and the rail stations within the study area. The bus operators also raised congestion as being a key issue affecting services and reducing reliability and hence making bus travel less attractive to users.

3.6 PUBLIC CONSULTATION ACTIVITIES

3.6.1 Public consultation has been a key element of the production and endorsement of the final UTP and took place between 15 March and 30 April 2010 following the completion of the draft UTP and review by Council Officers.

3.6.2 There have been three elements to the public consultation undertaken on the Hertford and Ware UTP.

3.6.3 Firstly, leaflets giving information that included an outline of the preferred strategy and schemes as well as a questionnaire, together with detail about the UTP, were distributed throughout the study area. These leaflets also contained information about the Public Exhibition dates and locations. Leaflets and questionnaires were also made available at the exhibitions and were available for online completion through the UTP pages on the County Council website.

3.6.4 Secondly, a website area was launched at the beginning of the consultation period, for people who were either unable to attend either of the exhibitions or wanted to see more detail on the UTP than either the leaflet or exhibition material was able to cover.

3.6.5 Thirdly, consultation was undertaken with the general public. This exercise was conducted in two stages as follows:

- **Stage One** – raising awareness through the press and website setting out the development of the UTP and highlighting the issues and problems relevant to the UTP. This was undertaken during October and November 2009; and
- **Stage Two** – two public exhibitions were held during the main consultation period in March 2010, one in Hertford and one in Ware. There was also a press release and details available via shop window displays in Ware and Hertford and on the County Council website to advertise the events.

3.6.6 The outcomes of the consultation and survey responses have been collated into a supporting technical annex (Appendix A of this Final UTP report) which documents the consultation processes and responses. This additionally provides an audit trail to demonstrate that the UTP has been developed in accordance with the requirements of the Local Government Act.

3.6.7 Workshops were also undertaken with Secondary schools in the local area to seek the views of younger members of the local population and raise awareness of the UTP proposals.

3.7 CONSULTATION TIMELINE

3.7.1 Table 3.5 shows the timing of consultation activities (highlighted green), as well as other key dates, which have taken place over the UTP development period:

Meeting/Event	Proposed Date	Details
Inception Meeting	2 June 2009	Scope and agree work through contract
Officer Steering Group Meeting (OSGM) 1	8 July 2009	Inception report completion UTP Stage 1 Methodology
Member Steering Group Meeting (MSGM) 1	8 July 2009	UTP Vision and Objectives Problems and Opportunities
Stakeholder Workshop 1	30 July 2009	UTP Vision and Objectives Problems and Opportunities
Officer Steering Group Meeting (OSGM) 2	25 Aug 2009	UTP Stage 1 Report Progress
Officer Steering Group Meeting (OSGM) 3	14 Oct 2009	UTP Stage 1 Report sign off
Member Steering Group Meeting (MSGM) 2	14 Oct 2009	Present UTP Stage 1 Report Long list of UTP Solutions (schemes and measures) and prioritisation
Launch of H&W UTP Process on Website with UTP Stage 1 Report & Press Release	26 Oct 2009	UTP Stage 1 Report Published
HCC Key Officer Workshop/Surgery Session	11 Nov 2009	Discuss long list of UTP Solutions (schemes and measures) and prioritisation
Rail Stakeholder Workshop	13 Nov 2009	Rail problems and opportunities Developing schemes and measures
Bus Stakeholder Workshop	13 Nov 2009	Bus problems and opportunities Developing schemes and measures
HCC Key Officer Workshop/Surgery Session	11 Nov 2009	Discuss long list of UTP Solutions (schemes and measures) and prioritisation
Stakeholder Workshop 2	19 Nov 2009	Discuss long list of UTP Solutions (schemes and measures and prioritisation
Officer Steering Group Meeting (OSGM) 4	8 Dec 2009	Progress on UTP Stage 2
Member Steering Group Meeting (MSGM) 3	8 Dec 2009	Progress on UTP Stage 2 and short list of schemes
Mead Lane Officer workshop	14 Jan 2010	Develop Mead Lane Masterplan and access proposals
Stakeholder Workshop 3	28 Jan 2010	Progress on UTP Stage 2 and short list of schemes
Officer Steering Group Meeting (OSGM) 5	28 Jan 2010	Draft UTP Stage 2 Report
Member Steering Group Meeting (MSGM) 4	28 Jan 2010	Draft UTP Stage 2 Report
DRAFT UTP REPORT	Friday 5 Feb 2010	Draft UTP Stage2 Report to HCC and EHC
Public Consultation leaflet distribution throughout study area and Draft UTP plus leaflet on HCC Website & press release	Week comm. 15 Mar 2010	Summary of UTP Report plus questionnaire
HCC Statutory Consultation – Draft UTP on HCC website (6 weeks)	15 Mar 2010 – 30 April 2010	UTP Report and Questionnaire
Public Exhibition Ware	Thursday 25 March 2010	Seek public views on Draft UTP
Public Exhibition Hertford	Saturday 27 March 2010	Seek public views on Draft UTP
Schools workshops at Sele School, Hertford and Chauncey School, Ware	21 April 2010	Involve young people in consultation process and seek their views
Close of Public Consultation	30 April 2010	End of consultation
Officer Steering Group Meeting (OSGM) 6 and Member Steering Group Meeting (MSGM) 5	20 May 2010	Present findings/results of consultation and any changes to UTP
Final Draft UTP Presented to HCC	Friday 28 May 2010	Present final UTP

Table 3.5: Schedule of UTP Consultation and other Key Activities

3.8 CONSULTATION RESULTS

3.8.1 The public consultation leaflets were delivered to 23,436 households and local business premises within the study area. This stimulated a significant number of responses to the public consultation, with 1252 questionnaire responses received which represents a return rate of 5.2%.

3.8.2 The sample was analysed for bias in terms of the age and gender profile and mode of travel to work (where applicable), this suggests that, despite a low response rate within the youngest age group (aged 16-29), the sample is otherwise broadly representative of the population and commuting behaviour within the study area, based on Census statistics.

3.8.3 Responses to questions on the proposed UTP schemes, indicated that in general the majority of the proposals were supported, with the positive responses (those expressing either full support or partial support for the proposed measures) on all questions outweighing the negative responses (those expressing full or partial opposition to the measures proposed).

3.8.4 The following matrix summarises the levels of support or opposition indicated by respondents towards the draft Hertford and Ware UTP proposals, with respondents indicating that they fully or partly support the proposals classified as positive and fully or partly oppose responses classed as negative. Did not answer is included in 'No View':

Levels of support for HWUTP Measures (% of Total Responses)	No View	Positive	Negative
Joined Up Walking and Cycling Network	19%	76%	6%
Increased Pedestrian Crossing Facilities	20%	68%	12%
More Bus Lanes and Increased Bus Priority	23%	45%	32%
Better Waiting Areas at Hertford Bus Station	32%	63%	5%
Better On-Street Bus Stops With RTPI	23%	72%	5%
P&R System Serving Both Towns	30%	42%	28%
Better Rail Station Access	32%	63%	5%
Congestion Tackling Measures	23%	61%	16%
Intelligent Systems to Improve Traffic Flow	19%	75%	6%
Message Signs to Alert Drivers to Congestion	23%	62%	15%
Changes to Loading Restrictions	38%	48%	14%
Discourage Long Stay Parking	26%	41%	33%
Reduce Rat-Running	15%	60%	25%
Mead Lane	43%	51%	7%

Table 3.6 Summary of Broad levels of Support for Proposed UTP Schemes

3.8.5 Table 3.6 above shows that there is a clear majority in favour of the UTP proposals on joined up walking and cycling networks, better on street bus stops with Real Time Passenger Information (RTPI), better waiting areas at Hertford bus station, improved access to rail stations and intelligent systems to improve traffic flow. There are also good levels of support for improved pedestrian crossing facilities, additional measures to tackle congestion, message signs to alert drivers to congestion and reducing rat running.

3.8.6 There are clearly mixed views on proposals to allocate more priority to buses, create a new park and ride system and change loading restrictions and discourage long stay parking.

3.9 QUESTIONNAIRE FEEDBACK ON BENGEO OPTIONS

3.9.1 Question 15 of the survey offered two options in relation to the closure of Bye Street in the lower Bengo area of Hertford in order to discourage rat running through this narrow street. Option 1 is to implement a trial closure of Bye Street once Sainsbury's is opened and monitor the outcome. Option 2 is to do nothing.

3.9.2 There were 1048 responses to this question of which 42% voted for Option 1 and 58% voted for Option 2 which suggests the results are inconclusive. However, only 453 respondents live in the Bengoe ward (based on the home postcodes provided). Of the Bengoe residents only, 36% voted for Option 1 and 64% voted for Option 2. Of those living within the Lower Bengoe area (as defined by the Lower Bengoe Residents Association), 59% were in favour of Option 1 and 41% preferred Option 2.

3.9.3 It is interesting to compare the results of Question 15 on the specific options for Bye Street with the responses to Question 13 which shows a higher level of support for measures to reduce rat running more generally. 60% of respondents were in favour of generally reducing rat running, whereas only 25% were opposed to reducing this effect.

3.9.4 The results are summarised by geographical area in the table below:

Area	All Responses			'No View' Not Counted	
	Option 1 Close	Option 2 Do nothing	No View	Option 1 Close	Option 2 Do Nothing
Hertford & Ware	36% (442)	48% (606)	16% (204)	42% (442)	58% (606)
Hertford	36% (305)	51% (435)	13% (117)	41% (305)	59% (435)
Bengoe	35% (157)	60% (275)	5% (21)	36% (157)	64% (275)
Lower Bengoe	57% (92)	40% (64)	4% (6)	59% (92)	41% (64)

Table 3.7 Summary of Question 15 Bye Street Option responses by geographical area

3.9.5 Postcode analysis of Bengoe responses and comments on the Bengoe issues are provided in Appendix A. It is important to note that 178 respondents did not provide their home postcode, so these results have not been included in the location specific rows in Table 3.7 above. The inconclusive survey results on the issue of Bye Street have led to the conclusions of the Bengoe study presented in Appendix D. Further detail on the outcomes of this study are provided in Section 7.8 below.

3.10 QUESTIONNAIRE RESPONSES ON MEAD LANE MEASURES

3.10.1 Question 14 of the survey asked respondents to indicate their level of support for the Mead Lane proposals and master planning which has been a key part of the UTP. The Mead Lane measures were well supported by those who responded with 51% of the total respondents fully or partly supporting the proposals and only 7% opposing the masterplan scheme. There was a high level of 'no view' responses to this question but levels of opposition were generally low, even in the immediate vicinity of the site.

3.10.2 Postcode analysis of the Mead Lane responses and comments on the proposals are provided in Appendix A and further discussion is provided in Appendix E.

4 Overarching Targets and Objectives

4.1 INTRODUCTION

4.1.1 An extensive review of existing policies, influences, and studies that have been developed for Hertford and Ware and this was carried out during UTP Stage 1. The UTP Stage 1 report contains more detail and is available on the County Council's website. This identifies the key policy drivers, for the study area, that would need to be taken into account in the Urban Transport Plan.

4.1.2 This section therefore only provides a summary and identifies the key objectives and targets which are advocated within the overarching policy framework which have been used to guide the development of the UTP for Hertford and Ware. A more comprehensive report covering all of the policies reviewed is provided within the UTP Stage 1 report.

4.2 NATIONAL CONTEXT

4.2.1 The **Climate Change Act (2008)** commits the UK to achieving at least an 80% reduction in greenhouse gases on 1990 levels by 2050 and the transport sector will be required to contribute towards this target. Carbon budgets are to be established for the periods 2008-2012, 2013-2017 and 2018-2022. At the same time the Government is developing a new national framework for transport, following the recommendations of **The Eddington Transport Study**.

4.2.2 The document '**Delivering a Sustainable Transport System**' (DaSTS), published by DfT in November 2008, sets out an approach to addressing five clear policy goals, one of which focuses on reducing the transport sector's emissions of carbon dioxide. DaSTS outlines the challenge of supporting the economy whilst at the same time reducing emissions.

4.2.3 Informed by the Eddington Report, DaSTS and the recently published guidance for Local Transport Plan 3 issued in December 2008 both identify five key goals which can be summarised as:

- Supporting continued sustainable economic growth;
- Reducing transport's contribution to greenhouse gas emissions and seeking to address climate change;
- Helping transport contribute to a safer, securer and healthier society;
- Helping to improve the overall quality of life; and
- Supporting equality of opportunity and reducing social exclusion.

4.3 REGIONAL CONTEXT

4.3.1 The **East of England Regional Spatial Strategy (RSS)** (2008) outlines the strategic development strategy for the East Anglia region for the period to 2021. It covers the scale and distribution of housing, environmental matters, transport, services, economic development, agriculture, waste matters and minerals extraction.

4.3.2 Some core objectives of the East of England Plan include:

- To reduce the region's impact on, and exposure to, the effects of climate change by locating development so as to reduce the need to travel, and effecting a major shift in travel away from car use towards public transport, walking and cycling;
- To realise the economic potential of the region and its people by facilitating the development needed to support the region's business sectors and clusters, providing for job growth broadly matching increases in housing provision and improving the alignment between the locations of workplaces and homes, maintaining and strengthening the East of England's inter-regional connections by improving access to economic opportunities in London; ensuring adequate and sustainable transport infrastructure; and
- To improve quality of life within the region, providing a well designed living environment adequately supported by social and green infrastructure, promoting social cohesion by improving access to work, services and other facilities.

4.3.3 There is also an emerging RSS Implementation Plan for the East of England that will consider the requirements to accommodate growth.

4.4 LOCAL CONTEXT

LOCAL TRANSPORT PLAN OBJECTIVES

4.4.1 The County Council's vision for Hertfordshire's transport over the next twenty years is *'to provide a safe, efficient and affordable transport system that allows access for all to everyday facilities. Everyone will have the opportunity and information to choose the most appropriate form of transport and time of travel. By making best use of the existing network we will work towards a transport system that balances economic prosperity with personal health and environmental well being.'*

4.4.2 The LTP has nine objectives set out under the government's shared priorities of safety, congestion, accessibility, air quality and quality of life. The objectives, listed under the shared priorities, include:

- **Safety**
 - To improve safety for all by giving the highest priority to minimising the number of collisions and injuries occurring as a result of the transport system.
- **Congestion**
 - To obtain the best use of the existing network through effective design, maintenance and management.
 - To manage the growth of transport and travel volumes across the county, and thereby secure improvements in the predictability of travel time.
 - To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources.
- **Accessibility**
 - To develop a transport system that provides access to employment, shopping, education, leisure and health facilities for all, including those without a car and those with impaired mobility.

- To ensure that the transport system contributes towards improving the efficiency of commerce and industry and the provision of sustainable economic development in appropriate locations.
- **Air Quality**
 - To mitigate the effect of the transport system on the built and natural environment and on personal health.
- **Quality of Life**
 - To raise awareness and encourage use of more sustainable modes of transport through effective promotion, publicity, information and education.
 - To reduce the need for the movement of people and goods through integrated land use planning, the promotion of sustainable distribution and the use of telecommunication.

4.4.3 There are 21 relevant Local Transport Plan indicators to this UTP, which will be used to monitor progress towards the LTP objectives. The indicators, targets and the objectives they relate to are given in Table 4.8, with main targets that will be addressed by the UTP highlighted green. Those in orange have their own programmes for schemes and measures and will not be addressed directly through the UTP.

Ref	Indicator	Baseline (2003/04)	Target (2010/11)	LTP Objective(s)
LTP1	Principal Road Condition	To be established	To be set	2,4
LTP 2	Non-Principal Road Condition (% of non-principal roads where structural maintenance should be considered)	19.44%	19.44%	2,4
LTP 3	Unclassified Road Condition (% of unclassified roads where structural maintenance should be considered)	19.29%	19.29%	2,4
LTP 4	Footway Condition (% of footways where maintenance should be considered)	52%	52%	1,2,4,5
LTP 5	Total Killed and Seriously Injured	1084 (1994-98)	No more than 600	1
LTP 6	Children Killed and Seriously Injured	113 (1994-98)	No more than 56	1
LTP 7	Total Slight Casualties	5509	No more than 5509	1
LTP 8	Public Transport Patronage (no. of bus passenger journeys)	31 million journeys per year	31 million journeys per year	3,4,5,7,8
LTP 9	Bus Service Satisfaction (% of bus users satisfied with the local provision of passenger transport services)	55%	60% (2009/10)	4,5
LTP 10	Bus Punctuality	80% (2004/05)	80%	2,3,4,5
LTP 11	% of people who find it difficult to travel to a local hospital (Accessibility)	29%	24%	2,3,4,5,6,8,9
LTP 12	Change in Area-Wide Traffic Mileage (vehicle kilometres per day)	20.7 million	22.4 million	3,7,9
LTP 13	Cycling Trips	2397 trips/day (2004/05)	2658 (11% increase)	2,5,7,8
LTP 14	Mode Share of Journeys to School	57.5%	60% sustainable modes	3,5,8
LTP 15	Changes in Peak Period Traffic Flows (Watford and St Albans/Hatfield)	Watford 22,553 and St Albans / Hatfield 16,415	Watford 23,284 and Hatfield 17,289	2,3,6,7

Ref	Indicator	Baseline (2003/04)	Target (2010/11)	LTP Objective(s)
LTP 16	Congestion	2:58 (minutes and seconds - average journey time per mile)	To be agreed	2,3,4,6,7,8,9
LTP 17	Air Quality	To be established	To be set	2,3,7,8,9
LTP 18	Passenger Transport Information, User Satisfaction	39%	50%	4,5,8
LTP 19	Rights of Way (% of the total length of footpaths and other rights of way that were easy to use by members of the public)	61% (2004/05)	80%	2,4,5,7,8
LTP 20	School Travel Plan (% of schools with school travel plans)	14%	83%	1,3,5,7,8
LTP 21	Speed Limit Compliance (% level of compliance with 30mph speed limit)	56% (2004/05)	60%	1,2,7

Table 4.8: LTP Indicators and Targets

4.4.4 The first 17 of the indicators in the table above are mandated by the Department for Transport (DfT), with the final five being selected by the County Council following a three stage approach, including local consultation. The objectives and indicators have been specifically designed to deliver a truly multimodal solution for any scheme or package of measures suggested.

4.4.5 This section applies to the existing 2nd LTP and it should be noted that a new 3rd LTP document is currently being produced by the County Council and will be published in April 2011.

Associated LTP daughter documents

Accessibility Strategy

4.4.6 Hertfordshire's vision for accessibility is *"to have a reasonable standard of access for all by appropriate transport to the key services of health, learning, work, food shopping and leisure."*

4.4.7 The key objectives of its accessibility strategy are:

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

Bus Strategy

4.4.8 The bus strategy's objectives contribute to the overall LTP shared priorities of safety, congestion management, accessibility and quality of life by:

- Providing an effective and efficient network of bus services as a travel mode which passengers will choose to use;
- Reviewing the network with others to ensure resources are used to best effect;

- Improving bus punctuality through commercial partnerships and better management of the highway network;
- Developing accessibility to employment, shopping, education, leisure and health facilities by effective design of the bus network, the use of less conventional approaches and securing maximum external funding;
- Continuing to improve vehicle quality and associated infrastructure at bus stops and interchanges to increase access to the network by those with impaired mobility; and
- Raising awareness and encouraging the use of bus services through improved information, marketing and branding.

4.4.9 The strategy sets out some indicators and targets for its objectives as follows:

- Number of bus passenger journeys per annum
 - The target is to achieve a bus passenger level at 31m similar to 2003/04, by 2010/11, reversing a prolonged period of decline.
- Percentage of residents satisfied with provision of services
 - To increase the level of satisfaction from 55% (2003/04) to 60% by 2010.
- Bus punctuality
 - To have 95% of buses departing a terminus to be within 5 minutes of schedule, and a minimum of 70% for points along a route within the acceptable time frame of 1 minute early to 5 minutes late.
- Locally set indicators and targets to increase the percentage of residents satisfied with provision of passenger transport information
 - To increase the satisfaction with passenger transport information from the 2003/04 base of 39% to 50% by 2010/11.

Cycling Strategy

4.4.10 The Cycling Strategy documents mentions that Hertfordshire has the lowest levels of cycling to work in the East of England region. The primary purpose of the cycling strategy is *“to encourage more people to cycle more often, and involve and support other stakeholders in doing the same.”*

4.4.11 Over 40% of journeys to work within the county begin and end within the same town, implying that there is great potential for a growth in cycling within the county. To realise this potential, the strategy includes a range of activities and measures which should be accompanied by marketing and promotional activities that spread the word about the benefits and opportunities of cycling. The measures include:

- cycle networks both within and between towns;
- new developments that encourage sustainable modes of travel;
- workplace and Safer Routes to Schools;
- Safer Routes to School programmes; and
- Creation of safer cycling environments through traffic calming and traffic management schemes.

4.4.12 Progress towards the Cycling Strategy’s main objective will be measured by the Monitoring Strategy. The Monitoring Strategy will also measure progress towards the LTP’s target of increasing cycling by 11% during the Plan period to 2010/11.

Rail Strategy

4.4.13 Unlike the bus network, the County Council does not have direct influence over the rail network including the specification of services nor control of their operation. The Council is hence limited to setting the strategic context in which rail services operate. It also has some influence over facilities and improvements at stations and on marketing and promotion of services through its revenue and capital programmes.

4.4.14 Hertfordshire's rail strategy therefore sets out how the Council will engage with the rail industry to ensure that its rail objectives are met. The Council will engage with the rail industry in the following ways:

- Growth and Capacity of the Network, where it will press for adequate rail capacity and promote service improvements amongst others;
- Major rail projects strategy where the county would act as a promoter of schemes, and join forces with others authorities, regional bodies, and business interests to lobby for schemes to be progressed;
- A strategy for basic service parameters where the county would press for such things as minimum frequencies of half-hourly from all train stations, sufficient capacity for peak services, maintenance of clock-face standard hour timetable; and
- Strategies on franchising issues, fares and ticketing, access to stations, station improvements, passenger information and rail freight.

Road Safety Plan

4.4.15 The Road Safety Plan is to deliver the LTP objective of improving safety for all by giving the highest priority to minimising the number of collisions and injuries occurring as a result of the transport network. It is to deliver Hertfordshire's casualty reduction targets:

- to reduce the number of people killed or seriously injured in road collisions to no more than 600 by 2010;
- to reduce the number of children killed or seriously injured in road collisions to no more than 56 by 2010; and
- no increase in slight casualties (5,509).

4.4.16 It should be noted that the safety targets (KSI and slight) have their own ranking system. Any scheme the UTP may develop will only have safety as a secondary target and a UTP scheme cannot be funded by a safety-related target.

Speed Management Strategy

4.4.17 The speed management strategy, a daughter document of the Hertfordshire Road Safety Plan and the LTP, was produced in recognition of the need to pro-actively address speed issues in Hertfordshire, and sets out speed management objectives, a policy for the establishment of speed limits and a Speed Management Toolkit.

4.4.18 The purpose of the November 2009 speed management strategy is to set out:

- How speed management schemes are selected and funded;
- A consistent approach to setting speed limits based on the function and nature of the route;
- A consistent approach to the implementation of speed management traffic calming measures;

-
- The role of the Police and County Council as Highways Authority in relation to speed enforcement;
 - The key criteria for the selection of safety camera sites; and
 - Outlines education and publicity programmes.

LTP2 Strategic Environmental Assessment

4.4.19 The Strategic Environmental Assessment (SEA) assesses the options available for developing the core objectives of the LTP against criteria including biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage, landscape and interrelation between the aforementioned issues; and outlines preferred options and recommendations for each. In assessment of the LTP policy, the SEA noted that the main areas where there were significant negative environmental impacts were:

- impacts on biodiversity;
- air, noise and water pollution;
- encouraging the use of recycled, local and sustainable materials;
- light pollution; and
- general impacts on the socially excluded and rural areas.

4.4.20 The process also assessed six major scheme options, where 'major schemes' are those costing more than £5 million. One of the six major schemes was the proposed A602 Ware to Stevenage improvements, but this was not progressed. It is noted that major safety, traffic flow control and bypass measures planned on the A602 Ware to Stevenage could have strong impacts on the townscape character and biodiversity resource. It therefore recommends that safety lighting and any other improvements should take note of their impacts in terms of light pollution and townscape character and that the use of sustainable and local construction materials should be strongly encouraged.

4.5 POLICY CONTEXT OVERVIEW

4.5.1 The policies reviewed are summarised in relation to the UTP Objectives in Table 4.9.

UTP Objective	Summary from reviewed documents	Reference to National, Regional and Local documents
<i>Transport should support new development and facilitate economic prosperity within Hertford and Ware</i> <i>Transport should be integrated and reliable, allowing easy access to employment, leisure and key facilities and services for all</i>	To develop a transport system that provides access to employment, key services and facilities for all, including those without a car and those with impaired mobility. To contribute towards improving the efficiency of commerce and industry To support sustainable economic development in appropriate locations. Improve the quality of public transport interchanges and increase integration of sustainable modes. Improve access to rail stations Improve access to hospitals and health care facilities Improve station capacity, access and facilities at Hertford East and capacity expansion proposals via the Greater Anglia route utilisation strategy. Improve public transport passenger information provision, including real time information at key interchanges. Maximise external funding to support bus network improvements and facilitate access to bus services. Improve the image of bus services by creating and facilitating quality bus corridors. Contribute towards reversing the decline in the patronage of bus services since 2003.	• East of England Regional Spatial Strategy • Hertfordshire Infrastructure and Investment Strategy • Great Anglia Route Utilisation Strategy • East West Rail Central Section – Operating Case Discussion Paper • Hertfordshire Local Transport Plan 2006/7 – 2010/11 ◦ Accessibility Strategy ◦ Bus Strategy ◦ Cycling Strategy ◦ Rail Strategy • Sustainable Community Strategy for Hertfordshire • Everyone Matters: A Sustainable Community Strategy for East Hertfordshire 2009 - 2024 • Local Area Agreement 2 • East Hertfordshire Local Plan – Second Review • Lea Valley Area Plan (2006/7 – 2010/11) • Bengo Traffic Issues Feasibility Study (2006) • East Hertfordshire Retail and Town Centres Study 2008
<i>UTP Schemes should be as safe and efficient as possible and focus on encouraging less car use and promoting sustainable and healthy travel choices</i>	To minimise the number of collisions and injuries occurring as a result of the transport system. Reduce the severity of casualties and the number of children killed and seriously injured in personal injury accidents. Increase the provision of Casualty Reduction Safer Routes to Schools schemes. Continue to educate children about road safety and cycling proficiency Create safer cycling environments. Adopt a proactive and consistent approach to speed management Improve driver awareness of speed limits. Consider significance of equestrian movements and potential to incorporate bridleway provision within the cycle network.	• East of England Regional Spatial Strategy • Hertfordshire Infrastructure and Investment Strategy • Hertfordshire Local Transport Plan 2006/7 – 2010/11 ◦ Road Safety Plan ◦ Speed Management Strategy • Sustainable Community Strategy for Hertfordshire • Everyone Matters: A Sustainable Community Strategy for East Hertfordshire 2009 - 2024 • East Hertfordshire Local Plan – Second Review • Lea Valley Area Plan (2006/7 – 2010/11) • Bengo Traffic Issues Feasibility Study (2006)

UTP Objective	Summary from reviewed documents	Reference to National, Regional and Local documents
<i>The UTP should deliver value for money to local people UTP</i> <i>Schemes should be as safe and efficient as possible and focus on encouraging less car use and promoting sustainable and healthy travel choices</i>	To make best use of the existing network through effective design, maintenance and management. To manage the growth of transport and travel volumes and secure improvements in the predictability of travel time. To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources. To encourage and incentivise mode shift, especially from private car to cycle for shorter journeys. Reduce the need to travel and distances travelled Improve the scope of alternatives to the private car Increase capacity on key public transport routes Improve journey time reliability on key public transport routes Increase the use of sustainable modes of transport for passengers and freight Improve priority for sustainable modes, especially buses at congestion hotspots Increase the uptake of cycle-based journeys to work Improve attractiveness of non-car mode networks and facilities Respond to increases in demand for sustainable travel Improve east-west links to complement the existing network of north-south links Safer Routes to Schools schemes	• East of England Regional Spatial Strategy • East of England Economic Strategy • Hertfordshire Infrastructure and Investment Strategy Great Anglia Route Utilisation Strategy • East West Rail Central Section – Operating Case Discussion Paper • Hertfordshire Local Transport Plan 2006/7 – 2010/11 ◦ Speed Management Strategy • Sustainable Community Strategy for Hertfordshire • Everyone Matters: A Sustainable Community Strategy for East Hertfordshire 2009 - 2024 • Local Area Agreement 1 • Local Area Agreement 2 • East Hertfordshire Local Plan – Second Review • Lea Valley Area Plan (2006/7 – 2010/11) • Bengo Traffic Issues Feasibility Study (2006)
<i>The UTP should improve the quality of life for residents and visitors alike</i>	To raise awareness and encourage the use of sustainable modes of transport. To reduce the need for the movement of people and goods through integrated land use planning. Facilitate the regeneration of the Lea Valley corridor and promote economic growth. Facilitate the delivery of regional housing targets Prioritise the provision of Green infrastructure Capitalise upon opportunities provided by new development to improve the transport system Improve access to open spaces and recreational facilities to encourage healthier lifestyles Reduce social exclusion and consider improvements to community transport and DRT. Improve access to services for older people, socially excluded groups and vulnerable people Prevent erosion of retail and town centre services	• East of England Regional Spatial Strategy • Hertfordshire Local Transport Plan 2006/7 – 2010/11 ◦ Bus Strategy ◦ Cycling Strategy ◦ Rail Strategy • Sustainable Community Strategy for Hertfordshire • Everyone Matters: A Sustainable Community Strategy for East Hertfordshire 2009 – 2024 • Local Area Agreement 1 • Local Area Agreement 2 • East Hertfordshire Local Plan – Second Review • Lea Valley Area Plan (2006/7 – 2010/11) • Hertford Green Fingers • East Hertfordshire Retail and Town Centres Study 2008

UTP Objective	Summary from reviewed documents	Reference to National, Regional and Local documents
<i>The UTP programme should improve the local environment and respect the heritage of the study area</i>	To mitigate the effect of the transport system on the built and natural environment and on personal health. To contribute towards reducing transport sector's emissions of CO₂ Reduce air and noise pollution in town centres Protect the environment and consider environmental impacts of transport proposals To promote sustainable development both in terms of transport networks directly, but also in terms of land use planning.	• East of England Regional Spatial Strategy • East of England Economic Strategy • Hertfordshire Infrastructure and Investment Strategy • Hertfordshire Local Transport Plan 2006/7 – 2010/11 ◦ LTP2 Strategic Environmental Assessment • Sustainable Community Strategy for Hertfordshire • Everyone Matters: A Sustainable Community Strategy for East Hertfordshire 2009 - 2024 • Local Area Agreement 2 • East Hertfordshire Local Plan – Second Review • Lea Valley Area Plan (2006/7 – 2010/11) • Hertford Green Fingers

Table 4.9: Policy Review implications for Development of the UTP

5 Local Problems

5.1 IDENTIFICATION OF ISSUES

5.1.1 A key part of the UTP was to identify current and emerging issues that would influence the formation and development of the strategy for Hertford and Ware. To develop a comprehensive picture of all the issues and problems in the study area a range of techniques were used. The outcomes are included in the Stage 1 UTP report, available on the County Council's website. These primarily included;

5.1.2 **Data sets from HCC:** Existing transport and related socio-economic data relating to the study area in the form of surveys and local statistics obtained from HCC and other sources has been reviewed. A number of issues that have been identified by HCC have been consolidated through our transport network audit. These fall broadly into issues for each of the main modes of transport and are also specific to the two towns, and these issues have been addressed by the UTP.

5.1.3 **Desktop Study:** An extensive review of existing policies, influences, developments and studies that have been developed for Hertford and Ware was carried out to gain a contextual understanding of present and proposed measures to address issues, problems and opportunities.

5.1.4 **Site Inspection:** An audit of the local highway and transport facilities in the study area was undertaken to clarify the existing transport problems in Hertford and Ware and to better understand the local area and existing transport provision.

5.1.5 **Consultation:** In addition to the emerging transport issues identified during the local network audits, feedback from workshops held with Council Officers, Members and key local stakeholders identified and prioritised several other transport issues which were considered for the development of options as part of the UTP.

5.2 TRANSPORT & DEVELOPMENT ISSUES IN HERTFORD

Traffic Congestion Issues

A414

5.2.1 Key congestion hotspots in Hertford are cited as being mainly on the A414 on its route through the town and at its connection with the A10. The Bluecoats and Mill Road junctions are often identified as areas causing the most significant delays to traffic, both in the morning and evening peak periods. Congestion also occurs frequently at the Castle Street junction with Parliament Square and at the junction of Hale Road with Pegs Lane (County Hall and Wallfields roundabout). The proximity of the M25 to the study area also can lead to these problems being exacerbated when disruption occurs on the motorway network.

Old Cross

5.2.2 The Old Cross junction also poses significant delays to traffic from the north on the B158 leading to rat-running through the residential streets of Bengoe. Options for alleviating this problem have been directly considered through a Paramics model for the area.

Other

5.2.3 Other parts of the town centre that suffer from peak period congestion include Railway Street and Fore Street. Specific measures to relieve congestion at these locations whilst making provision for other road users, have been investigated through the UTP.

Passenger Transport Access Issues

5.2.4 Public transport is important for sustainable access to employment. However, areas such as the employment areas around County Hall (the town's largest employer) have poor connectivity with passenger transport.

Railway Station Car Parking

5.2.5 Both Hertford North Station and Hertford East Station have insufficient car parking capacity which can lead to overflow on-street parking in nearby residential streets.

Hertford East Station

5.2.6 There may be opportunities for alleviating some of these problems at Hertford East Station by providing improved levels of interchange in the locality and addressing congestion issues both at Mill Road and in the Mead Lane area. These outcomes could possibly be achieved in connection with the potential future redevelopment of the western part of the Mead Lane employment area. These will also be considered through the Mead Lane Access Masterplan Study.

Hertford North Station

5.2.7 Hertford North station has relatively good bus service provision and on-road cycle provision. However, more could be done to promote and encourage the use of these modes of travel to access the rail station as part of the Urban Transport Plan.

Hertford Bus Station

5.2.8 Hertford bus station is well sited in the town centre, but would benefit from improvements to passenger waiting facilities and particularly increased provision of sheltered space for passengers. This, coupled with improvements to fleet and bus stop infrastructure attractiveness along key bus routes, could potentially contribute to improving the quality and utilisation of public transport within Hertford.

Hertford Bus Services

5.2.9 Within Hertford the most frequent bus services run in an east-west direction with relatively infrequent services between the northern and southern areas of the town.

5.2.10 Currently, there is limited bus priority within Hertford. The key radial routes emanating from the town which connect to residential areas, employment, retail and leisure facilities, as well as outlying towns and villages, are heavily congested during the morning and evening peak hours. This impedes the passage of bus services through the town centre and makes buses less competitive in comparison with the private car.

5.2.11 Whilst it is recognised that space is limited on some of the routes, there may be some opportunities for further provision of bus priority measures which will be fully investigated through the development of the UTP.

Cycle Access Issues

5.2.12 Currently cyclists in Hertford are relatively constrained by the existing pattern of traffic routes and in particular the dual carriageway along the A414, which causes severance issues for cyclists travelling north-south as well as the other narrow and traffic dominated streets within the town.

5.2.13 The Mill Road bridge is also a constraint which causes severance issues for cyclists connecting to the National Cycle Network route 61 (NCN61).

5.2.14 The topography of the area also provides a deterrent for cyclists as the gradient along key routes such as Port Hill can be quite steep. Heavy volumes of traffic can also be off-putting for cyclists. This is currently a problem on Welwyn Road.

5.2.15 There are a number of cycle routes in and around Hertford that avoid main roads and further improvements to the cycle network within the town will be developed through the UTP process. These will take on-board the studies and strategies that are already in existence as part of the study framework.

5.2.16 The wider Rights of Way Improvement Plan for the region would also facilitate cycle access through the study area by delivery of other Public Rights of Way routes, albeit this will be more focused on leisure related journeys.

Pedestrian Access Issues

A414 Severance Issues

5.2.17 The A414 (Gascoyne Way) through Hertford causes significant severance issues in terms of access to facilities such as schools and employment for pedestrians where this involves crossing the A414. An at grade Toucan crossing on Gascoyne Way has gone some way towards providing an improvement for north-south pedestrian and cycle movements. However, the subways under Gascoyne Way currently offer a poor environment for pedestrians in terms of fears for personal security issues, especially during the hours of darkness. The subways are also less attractive as cycle routes since cycling is prohibited through the underpasses.

Access to Schools

5.2.18 The provision of safe access to secondary schools in Hertford is currently poor for pedestrians, particularly in relation to key residential areas of the town (e.g. Foxholes estate). Access from the Foxholes estate to Simon Balle School along the A414 London Road is currently difficult although there are off road routes which are shared with cyclists and routes via subways at Stag House on London Road.

Cross Road

5.2.19 It is further recognised that Cross Road which provides a link between the A414 and North Road offers a traffic dominated environment which may discourage walking and cycling between parts of Hertford.

North Road

5.2.20 Pedestrian safety in North Road has been reported as a concern for local residents. There have been observations of vehicles speeding through the residential area, and the location of bus stops may need to be considered in terms of passenger safety.

Hartham Common and Leisure Centre

5.2.21 Hartham Common and Leisure Centre are accessed via Hartham Lane for all modes and pedestrian access is also available via Folly Island and from Port Hill. There is no pedestrian crossing facility on Port Hill which is a busy road with hills affecting visibility for pedestrians and cyclists. Access for pedestrians via Hartham Lane is poor with footways which are narrow and uneven and an unattractive environment for pedestrians while the approach from Cowbridge / Hartham Lane for pedestrians offers a low quality route.

Major Development Sites in Hertford

5.2.22 There are a number of sites in Hertford and Ware which either have committed development with associated planning permissions or are vacant sites with development potential. These sites need to be given consideration in the development of the UTP to ensure that any potential transport related issues associated with the sites are considered. The list below identifies the sites; their development potential and identifies any emerging transport issues. Their locations are included in Appendix B.

- **Mead Lane** is the main area in the town being considered for future development, but currently has a number of access issues that restrict its development potential. Any future development of the site is likely to impact on the nearby highway network including Mill Road, Ware Road and the A414. An application on Mead Lane for business units within use classes B1, B2 and B8 has permission and land at Marshgate Drive has approval for 182 units. Approval has also been granted for an extension to an existing factory unit on Fountain Drive. S106 contributions have been secured for these three developments, some of which have been ring fenced for funding the Mead Lane Access and masterplanning study as part of the Hertford and Ware UTP. The former TXU site on Mead Lane has also been approved for redevelopment as 130 residential flats with reduced car parking and a car club. This development is anticipated to generate an additional 35 trips in each of the AM and PM peak hours which would impact directly on Mead Lane. See the Mead Lane study in Appendix E;
- **McMullens Brewery Site, Hartham Lane** has been approved for development of a new Sainsbury's supermarket totalling 5,065m² GEA with a proposed RFA of 2,660m² and 230 parking spaces. Planning permission was granted by the Secretary of state following a public inquiry in January 2010;
- **Tesco Superstore, Ware Road** A 300m² extension to the existing floor space was permitted in January 2010. No highway changes are anticipated in relation to this scheme;
- **The Former Police Station, Ware Road** this site is the subject of an as yet undetermined planning application (3/09/1728/FP) for Full Permission for the demolition of the existing police station buildings and construction of new mixed use development comprising 90 residential flats, 36 houses, 80 bed hotel, 80 bed nursing home, 2 small retail units and nursery, together with underground and off street parking for 247 cars and 107 cycle spaces. Some peak time congestion already occurs at this location on both Ware Road and Stansted Road. Any future development of the site will need to ensure access by sustainable modes is provided and junction improvements may also be necessary at the Stansted Road / Ware Road roundabout. Presently this area can cause delays for buses heading towards Hertford from Ware, and the potential for transfer from private car to bus could be improved if suitable schemes could be developed at this location and along the length of Ware Road;

- **Sovereign House, Pegs Lane** is an office development that is currently under-let and is expected to be re-developed in the future. This site is located close to other major employment sites within Hertford (East Herts Council and Hertfordshire County Council and newly relocated Police Station). Attractive access for pedestrians and cyclists would be key to ensuring the site does not generate significant travel demand by car, particularly given its location, close to the town centre. Severance issues caused by the A414 to access the town centre would need to be addressed to make it attractive;
- **David Lloyd Tennis Centre, Welwyn Road** was granted planning permission in February 2009, subject to a Section 106 agreement for a development including indoor tennis courts, pool, gym and outdoor facilities including outdoor pool, tennis courts and golf range. This is located on the edge of the town with limited access by non-car modes;
- **Balls Park, Mangrove Road** – Permission has been granted for 72 residential units at this location and the development is currently under construction and partially occupied. Permission was recently granted for conversion of the mansion to 27 apartments and the stable block to 12 apartments. The traffic generated by this development is likely to cause an impact on the A414 southbound queuing in the AM peak hour; and
- **Solatron House, Hale Road** - Permission has been granted for a change of use to a type 2 police station including parking, fencing and a new footpath on Hale Road. This development has been completed and in operation for some time, so any additional traffic generated by the scheme would already be using the local highway network.

Employment and Retail Facilities - Hertford Town Centre Issues

5.2.23 Hertford's primary shopping facilities are concentrated in St Andrew's Street, Fore Street, Market Street (one-way), Maidenhead Street, Bircherley Green (pedestrianised) and Parliament Square, with secondary shopping frontages at Mill Bridge, Old Cross, Railway Street, The White Hart, Salisbury Square, Post Office Walk, Castle Street, Evron Place, Green Dragon Yard, The Marquee, Warren Place and Bull Plain which provides access for residents and servicing to "Folly Island".

5.2.24 Pedestrian desire lines occur throughout the shopping area identified above and pedestrian facilities including speed tables, dropped kerbs and pedestrian refuge islands are provided throughout this area. However, some conflicts of a minor nature between pedestrians and traffic do occur and serious pedestrian accidents have occurred at Old Cross and South Street in the last 3 years and minor accidents involving pedestrians have occurred on the western end of Fore Street, on Bull Plain and at The Wash.

5.2.25 Maidenhead Street, a primary shopping frontage, although pedestrianised, has many exclusions for deliveries and access that it often has vehicles along it.

5.2.26 The streets on Folly Island (The Folly, Thornton Street, Oldhall Street and Frampton Street) are narrow and lined with parked cars on both sides of the road and on both footways due to the narrow width.

5.2.27 In many parts of the town centre it is not clear whether the pedestrians or the vehicular traffic have priority including: where the pedestrianised Maidenhead Street crosses Bull Plain into Railway Street via a raised speed table; and where the pedestrianised Railway Street crosses Market Street via a raised speed table.

5.2.28 At the junction of Mill Bridge, Old Cross and St Andrew's Street the traffic signals provide a pedestrian phase on all arms of the junction at the same time. The signal set-up means that some pedestrians will attempt to cross the roads before the pedestrian phase which can be hazardous. A serious accident involving a pedestrian has occurred at this location within the last 3 years.

5.2.29 Footpath 84 linking St Andrew's Street to Castle Street has limited lighting, is surrounded by high walls and is very narrow in some sections.

5.2.30 There are very few signalised pedestrian crossings within the town centre, most crossing points are uncontrolled and mainly on speed tables or include traffic islands.

5.3 TRANSPORT ISSUES IN WARE

High Street

5.3.1 Key congestion hotspots in Ware are mainly along the High Street and approaches to it, via Wadesmill Road and Watton Road in the west and Star Street and Viaduct Road in the east and south of the town. This in turn causes some rat running via the residential streets along The Bourne and Collett Road to bypass the busiest sections of the High Street particularly in the morning peak hour.

5.3.2 Often the main cause for the traffic congestion through the centre of Ware at any time of day is loading and unloading on the High Street or illegal parking of cars which restricts the two-way flow of traffic and causes congestion.

5.3.3 Much of the traffic congestion in Ware town centre, as with many places throughout Hertfordshire, is caused by journeys to school. Further measures will be investigated to provide better access to schools for pedestrians, cyclists and public transport users.

Ware Goods Yard Areas

5.3.4 There a range of industrial and warehousing sites adjacent and close to the railway in Ware with potential access issues, such as Crane Mead and Marsh Lane employment areas.

A602

5.3.5 The A602 to the north of Ware leading into the A10/B1004 junction has congestion and safety issues, identified in recorded accidents.

Hertford Regional College

5.3.6 Hertford Regional College has a main vehicle access in Scotts Road with the exit being in Walton Road. Overflow parking on nearby residential streets by college students has been identified as a problem of local concern, and a serious accident occurred on the A119 Hertford Road at the junction with Scotts Road within the last 3 years.

Passenger Transport Access Issues

Ware Rail Station

5.3.7 Pedestrian access to the railway station from the area to the north of Star Street is via Bridge Foot and Amwell End. This part of the town does not currently have much provision for pedestrians and cyclists to cross Star Street or Bridge Foot and is mainly traffic dominated. Cycle parking at the rail station is not under cover but nonetheless well used and further provision could be sought to encourage greater cycle use.

5.3.8 In addition, pedestrian access from Crane Mead is limited and could be improved via Viaduct Road.

Bus Stop Facilities

5.3.9 The main bus stops in Ware are located on the High street at Church Street and outside The Priory at the western end of the High Street. Buses also serve the railway station with the bus stops being located a short distance away from the railway station entrance. The environment and interchange outside the rail station in Ware could be improved to assist with access by pedestrians, cyclists and public transport users.

5.3.10 Bus stops are also provided on Ware Road outside Ware College which provide for the bus services which do not go through the centre of Ware, but remain on Ware Road to access destinations such as Hertford, Hoddesdon, Broxbourne and Waltham Cross.

Bus Services

5.3.11 Within Ware the bus routes mainly serve the residential areas in the east. There are relatively infrequent routes in the west. The southern parts of the town are only served by accessing Ware Road / Hertford Road. Some of these local bus routes are served by double decker buses travelling along relatively narrow residential streets which causes some concern for local residents.

Pedestrian and Cycle Access Issues

High Street

5.3.12 A number of years ago Ware High Street underwent some improvement work for pedestrians and buses which provided a significant betterment over the previous situation, most notably for pedestrians due to the provision of controlled crossing points, widened footways, dedicated parking bays and enhanced paving materials along the High Street. However, the High Street is still very much traffic dominated, particularly at its ends where there is a significant demand for pedestrian activity for access to Park Road and thence Chauncy School as well as Glaxo Smith Kline at the western end of the High Street,. At the eastern end of the High Street there is access to Amwell End, the rail station and Hertford Regional College.

Crane Mead

5.3.13 The residential and commercial elements of Crane Mead are now well established but access to the railway station by foot and cycle is not direct and requires crossing Viaduct Road rather than access under the bridge which would be more direct. Similarly, access to the riverside itself is excellent from this area but access across the river is currently only available via Bridge Foot towards Star Street. There is no pedestrian/cycle access under Bridge Foot to access the riverside path to Hertford. There is a potential land sale that could allow for improved pedestrian access to the rail station from Crane Mead using Viaduct Road.

Wodson Park

5.3.14 Wodson Park sports centre is located on the northern edge of Ware and is accessed via Wadesmill Road which is flanked by a relatively narrow pedestrian footway along one side of this busy road. Opportunities for alternative access to this important leisure facility will be investigated.

Access to Schools

Secondary Education

5.3.15 There are two secondary schools in Ware: Presdales School and The Chauncy School. Both of these schools serve a significant local population and access to them could be improved to encourage and promote access by modes other than the private car. Presdales School is accessed via a steep hill which does not lend itself to easy cycle access. Access for pedestrians is also steep and often via relatively secluded footpaths.

Major Development Sites in Ware

5.3.16 This are described below and shown in Appendix A.

- **Cintel Site, Watton Road** currently operates as an employment site but it is likely that the site will be the subject of future redevelopment. The future development of this site is likely to require access improvements on Watton Road for all modes of transport. It is understood that a planning application for a food store, 10 dwellings and the retention of a children's nursery was submitted in March 2010, although the application has yet to be determined;
- **Widbury Hill** – part of the employment area has been granted permission on appeal for a development involving commercial buildings (1880m²) and 76 dwellings and measures are included through this and there is no scope for additional schemes through the UTP;
- **GlaxoSmithKline on Park Road** This site benefits from the recent addition of a new research and development building, which is now occupied. The proposal included the diversion of a public footpath. Park Road is a no through route to the west and therefore all vehicles will likely approach from the east and exit to the east. The TA estimated a 3.2% to 4.8% increase in traffic along Park Road; however with all vehicles entering / exiting from the east the increase is likely to be between 5.1% and 6.5%.
- **GlaxoSmithKline on Priory Street** also has permission granted for a third storey extension to an existing building. HCC anticipate that the traffic impact of the proposed building extension would be minimal.

Employment and Retail Facilities - Ware Town Centre Issues

5.3.17 The town centre in Ware is centred on the High Street with primary retail frontages also located at Amwell End, Bridgefoot, East Street and West Street, whilst Church Street, Baldock Street and New Road also offer some secondary retail activity and employment. Pedestrian activity in the town centre is mainly centred along the High Street, Baldock Street, East Street, West Street and Amwell End.

5.3.18 GlaxoSmithKline are also the major employer in the town and are based to the west of the High Street.

5.3.19 Traffic speeds in the town centre area are generally low but some minor accidents involving pedestrians have occurred over the last 3 years and show a concentration at the western end of High Street and also along the central section. A serious accident involving a pedestrian has been recorded at the junction with New Road.

5.3.20 There are some small sections of on-street parking limited to 30 minutes which encourage pedestrian activity across the road rather than at the controlled crossing points.

5.4 LINKAGES BETWEEN HERTFORD AND WARE

5.4.1 Specific problems that have been identified in the areas that link the towns of Hertford and Ware are as follows:

- Peak time congestion on the A414, A119, A10 and Hoe Lane;
- Poor pedestrian provision between Hertford and Middleton, Pinewood and Presdales Schools;
- Bus reliability; and
- Inconsistent pedestrian and cycle provision along the River Towpath.

5.5 SUMMARY OF KEY ISSUES

5.5.1 All of the transport problems and issues which have been identified are summarised below in Table 5.10. A Key plan showing the location of these transport problems and issues within the study area is shown in Appendix B. These issues have been considered as part of the UTP process. The issues are indexed based on location and data source as follows:

- Issues pre-fixed with H are located within Hertford;
- Issues pre-fixed with W are located in Ware;
- Issues pre-fixed with SA are applicable to the entire Study Area, or affect linkages between Hertford and Ware or involve multiple areas within both Hertford and Ware;
- Issues identified with reference numbers beginning 1 e.g. H1.1 have been identified by Hertfordshire County Council or East Herts Council;
- Issues identified with reference numbers beginning 2 e.g. H2.1 or W2.22 have been identified as part of the transport network audit; and
- Issues identified with reference numbers beginning 3 e.g. SA3.2 have been identified by key stakeholders attending the first stakeholder workshop.

5.5.2 The issues are colour coded by mode as shown below.

Pedestrian/cycle
Pedestrian
Cycle
Passenger Transport
Freight
Motorised Vehicles
Parking
Multi-modal

Summary of Key Issues in Hertford

Problem Ref	Mode	Problems and Issues in Hertford
H 1.8a	Cycle	Poor cycle access links between the A414 and Hertford North station.
H 1.8b	Cycle	Poor cycle access between Foxholes Estate (Caxton Hill) to Simon Balle School
H 1.8c	Cycle	Poor cycle access along route from Hertford North to Hartham common.
H 2.34	Cycle	The cycle link from North Road along Cross Road which connects with Gascoyne Way is poor.
H 3.12	Freight	HGV route to County Hall via Hagsdell Road
H 1.16	Motorised Vehicles	Peak time congestion on the A119 Ware Road.
H 1.1a	Motorised Vehicles	Congestion on the A414 Westbound London Road
H 1.1b	Motorised Vehicles	Congestion on the A414 Eastbound and Westbound Gascoyne Way
H 1.1c	Motorised Vehicles	Congestion on the A414 / A10 (Rush Green) Roundabout.
H 1.1d	Motorised Vehicles	Congestion on the A119 North Road
H 1.1e	Motorised Vehicles	Congestion at Parliament Square
H 1.1f	Motorised Vehicles	Congestion on the A414 Hertingfordbury Road
H 1.2	Motorised Vehicles	Peak time congestion in Hertford town centre around Old Cross, Fore Street and Railway Street.
H 1.20	Motorised Vehicles	Vehicle speeds in Hertingfordbury
H 1.4	Motorised Vehicles	'Rat-running' through Lower Bengoe.
H 2.37	Motorised Vehicles	Key radial routes emanating from Hertford which connect to residential areas and outlying villages, employment, retail and leisure are heavily congested at peak times.
H 3.6	Motorised Vehicles	A414 'Bluecoats' traffic signals cause problems and delays for bus services.
H 1.18	Multi- modal	Congestion / Access Issues in the Mead Lane employment area
H 1.22	Multi- modal	Access issues / congestion at Hospital
H 1.5	Multi-modal	Improvements to pedestrian, cyclist and bus access and car parking at Hertford East and North stations.
H 2.19	Parking	Parking on the footway of Ware Road and roads to the south restricts pedestrian movement.
H 2.20	Parking	Parking on the footway of Bengoe Street and streets through Upper and Lower Bengoe restricts pedestrian movement.
H 1.19	Passenger Transport	East - West Rail connections between Hertford North and Hertford East Stations
H 1.6	Passenger Transport	Poor passenger experience and operational difficulties at Hertford bus station.
H 2.36	Passenger Transport	Traffic volumes in Fore Street and parked cars on Parliament Square make access for buses travelling out of Hertford difficult.
H 2.38	Passenger Transport	There is no suitable turnaround space for buses at the Council offices (County Hall and Wallfields).
H 2.39	Passenger Transport	The bus station layout has a lack of capacity for buses at peak times, no dedicated layover provision and provides a poor passenger waiting environment.
H 3.14	Passenger Transport	Restrict Mill Bridge to buses, taxis and cyclists only.
H 3.8	Passenger Transport	Improved bus priority, especially on Fore Street and Ware Road and other congested corridors.
H 1.21	Pedestrian	Welwyn Road - traffic flows relatively busy, narrow footways and issues with access to Sele Farm and local schools
H 2.1	Pedestrian	Indeterminate priority between pedestrians and motorists where Maidenhead Street crosses Bull Plain via a speed table.
H 2.10	Pedestrian	Crossing widths at the mini roundabout outside Hertford East railway station are very wide.
H 2.11	Pedestrian	There is no northern footway on Railway Street between Hertford East railway station and Holden Close. What footway is provided is of poor quality.

Problem Ref	Mode	Problems and Issues in Hertford
H 2.12	Pedestrian	Pedestrians travelling from Hertford bus station towards the river often use the service access for Waitrose, requiring them to walk across the car park exit.
H 2.13	Pedestrian	The pedestrian approach to Hartham Common and Leisure Centre from Cowbridge / Hartham Lane is poor quality and footways are narrow.
H 2.14	Pedestrian	The pedestrian approach to Hartham Common and Leisure Centre from Port Hill has no crossing facilities and has low visibility in both directions.
H 2.15	Pedestrian	There are no pedestrian crossing points on the A414 in the vicinity of Foxholes Business Park and there is no footway on the southern side.
H 2.16	Pedestrian	The eastern footway on Mangrove Road ends northbound at the frontage of Simon Balle School.
H 2.2	Pedestrian	Indeterminate priority between pedestrians and motorists where Railway Street crosses Market Street via a speed table.
H 2.3	Pedestrian	Pedestrians crossing outside of all-red pedestrian phase at Mill Bridge, Old Cross and St Andrew Street junction.
H 2.4	Pedestrian	Limited lighting and narrow sections of footpath 84 between St Andrew Street and Castle Street.
H 2.40	Pedestrian	Pedestrian safety on North Road
H 2.5	Pedestrian	No footway on either side of Mead Lane near the Business Park.
H 2.6	Pedestrian	No pedestrian crossing facilities around Mead Lane and Marshgate Drive junction, Marshgate Drive does not have a footway on the eastern side.
H 2.7	Pedestrian	The southern footway on Mead Lane has not been improved in line with that on the northern side.
H 2.8	Pedestrian	The eastern footway on Mill Road near Hertford East railway station is in poor condition.
H 2.9	Pedestrian	There are no pedestrian crossings along the Mill Road approach to Hertford East railway station.
H 1.3	Pedestrian/cycle	A414 severance issues, including dated underpasses.
H 1.7a	Pedestrian/cycle	Vulnerable road user access to Simon Balle School.
H 1.7b	Pedestrian/cycle	Vulnerable road user access to Richard Hale School.
H 2.17	Pedestrian/cycle	There is no crossing point provided outside Richard Hale School on Hale Road between the school and the Police station. A subway is provided at this location but it is subject to flooding.
H 2.18	Pedestrian/cycle	The A414 subways are too narrow for use by mounted cyclists, are perceived as unsafe at night and suffer from flooding.
H 3.1	Pedestrian/cycle	Quality and continuity of networks for pedestrians and cyclists, avoiding underpasses where applicable.
SA 1.8b	Cycle	Poor cycle access between key destinations across and between the towns (A119)
SA 3.4	Cycle	Improved access for cyclists to rail services.
SA 3.5	Cycle	Improved safety for cyclists at the towpath by Amwell End in Ware, west of Hertford Heath and along A414.
SA 3.10	Motorised Vehicles	Parked traffic / driving on pavements.
SA 3.9	Motorised Vehicles	Reduce speed limits in all residential areas to 20mph.
SA 3.18	Passenger Transport	Poor reliability of bus services
SA 1.17	Pedestrian	Poor pedestrian provision between Hertford and Middleton, Pinewood and Presdales schools.
SA 3.2	Pedestrian/cycle	Increased segregation of cyclists and pedestrians at crossing points and in busy areas to reduce conflicts and improve pedestrian safety.
SA 3.3	Pedestrian/cycle	Improved pedestrian and cycle linkage to schools via SRTS schemes.

Summary of Key Issues in Ware

Problem Ref	Mode	Problems and Issues in Hertford
W 2.35	Cycle	Many parts of Ware town centre including High Street are often congested and do not provide a safe environment for cyclists.
W 3.13	Freight	HGV use of Ware High Street.
W 3.16	Freight	Access and operational issues for goods yard areas adjacent to the railway in Ware
W 1.10	Motorised Vehicles	Poor interchange area and cyclist and pedestrian access at Ware railway station.
W 1.9a	Motorised Vehicles	Peak time congestion on High Street.
W 1.9b	Motorised Vehicles	Congestion on A1170 Baldock Street
W 1.9c	Motorised Vehicles	Congestion on A1170 Baldock Street/ B1004 Watton Road Roundabout
W 1.9d	Motorised Vehicles	Congestion on A1170 Amwell End
W 1.9e	Motorised Vehicles	Congestion on A1170 Bridge Foot
W 3.11a	Motorised Vehicles	Congestion on Stanstead Road from the A414 / A10 (Rush Green) Roundabout up to and including the approach onto Stanstead Road along Hoe Lane.
W 3.11b	Motorised Vehicles	Congestion on A1170 Viaduct Road
W 3.11c	Motorised Vehicles	Congestion on B1004 Star Street
W 3.11d	Motorised Vehicles	Congestion on B1004 Watton Road
W 3.11e	Motorised Vehicles	Congestion on A1170 Wadesmill Road between its junction with Baldock Street and Poles Lane
W 3.17	Motorised Vehicles	Congestion and operation of the A602
W 2.31	Parking	Parking on the footways of High Oak Road, Collett Road and New Road restricts pedestrian movement.
W 2.33	Parking	Overflow parking for Hertford Regional College on the surrounding residential streets
W 3.7	Passenger Transport	Bridgefoot right turning buses into Star Street, Ware.
W 2.21	Pedestrian	Pedestrian crossing facilities are not provided at the New Road / Bengeo Street junction.
W 2.22	Pedestrian	There is no footway on Trapstyle Road until just before the first cul-de-sac.
W 2.23	Pedestrian	Wengeo Lane has no footways, is narrow and unsurfaced in the middle segment and is unlit in parts.
W 2.24	Pedestrian	Improved crossing facilities on Westmill Road on the approach to the roundabout would assist pedestrians crossing this wide section of highway.
W 2.25	Pedestrian	Improved crossing facilities at Baldock Street would assist pedestrians travelling from the east of the town.
W 2.26	Pedestrian	There are no direct linkages for pedestrians to the north of the River Lea from Crane Mead as well as from Crane Mead towards the railway station under Viaduct Road.
W 2.27	Pedestrian	Visibility is poor for the pedestrian crossing at Bridgefoot / Viaduct Road.
W 2.28	Pedestrian	There is no footway on Hoe Lane on the approach to Presdales School and the access is up a steep flight of steps via a secluded wooded path.
W 2.30	Pedestrian	Wadesmill Road has no footway on the western side and only a narrow footway on the eastern in the vicinity of Wodson Park Sports Centre. There is no other pedestrian access available.
W 2.32	Pedestrian	The path adjacent to the cemetery to the rear of Rolleston Close and Wulfrath Way is muddy, narrow, sloping, overgrown and very secluded.
W 1.11	Pedestrian/cycle	Lack of safe pedestrian and cycle access to Chauncy and Presdales schools and Ware Regional College.

Problem Ref	Mode	Problems and Issues in Hertford
W 1.12	Pedestrian/cycle	All weather and all year use of the River Lea Corridor and crossing to link the north (Star Street) and south (Crane Mead) sides of the river.
W 1.13	Pedestrian/cycle	Lack of access provision for non-car modes to Wodson Park Sports Centre.
W 1.14	Pedestrian/cycle	Low priority for non-motorised transport along High Street.
W 1.15	Pedestrian/cycle	Poor provision for vulnerable road users at both ends of High Street.
W 2.29	Pedestrian/cycle	The access to Presdales School from Presdales Drive is via a secluded wooded area within the school grounds.
W 3.15	Pedestrian/cycle	Quality and continuity of networks for pedestrians and cyclists, avoiding underpasses where applicable.

Table 5.10: Summary of UTP Issues for Hertford and Ware

6 Local Targets and Objectives

6.1 INTRODUCTION

6.1.1 The Hertfordshire Local Transport Plan contains objectives and policies for the whole county to the year 2011, which are not site specific. The UTP therefore sets out aims and objectives specific to Hertford and Ware insofar as they relate to the County and District and builds on the LTP Objectives and Indicators.

6.1.2 The vision and objectives of the UTP need to accord with the wider policy framework as well as providing the context and direction specific to Hertford and Ware. The vision and objectives for the Hertford and Ware UTP have therefore been derived from:

- Policy documents including the East of England Plan, the Sustainable Community Strategy, the adopted Local Plan, and the emerging LDF, among others; and
- Consultation with stakeholders including East Herts Council, Hertford Town Council, Ware Town Council, and local people, among others.

6.2 UTP VISION

6.2.1 The UTP's vision for Hertford and Ware was proposed as:

*"To provide an **accessible** and **affordable** **integrated** transport system for all, making travel within the local area **sustainable**, **safe** and **efficient**."*

6.3 UTP OBJECTIVES

- 1. Transport should **support new development and facilitate economic prosperity** within Hertford and Ware;
- 2. Transport should be **integrated** and **reliable**, allowing **easy access** to employment, leisure and key facilities and services for all;
- 3. UTP Schemes should be as **safe and efficient** as possible and focus on **encouraging less car use and promoting sustainable and healthy travel choices**;
- 4. The UTP should deliver **value for money** to local people;
- 5. The UTP should improve the **quality of life** for residents and visitors alike; and
- The UTP programme should **improve the local environment** and **respect the heritage of the study area**.

6.4 LINKAGES TO LTP TARGETS

6.4.1 The UTP objectives have also been aligned with the overarching policies set out in the Hertfordshire LTP. The policy fit to the LTP is set out in Table 6.1 below.

UTP Objective	LTP Objective (fit shown in bold)
<i>Transport should support new development and facilitate economic prosperity within Hertford and Ware</i>	To ensure that the transport system contributes towards improving the efficiency of commerce and industry and the provision of sustainable economic development in appropriate locations To reduce the need for the movement of people and goods through integrated land use planning , the promotion of sustainable distribution and the use of telecommunication
<i>Transport should be integrated and reliable, allowing easy access to employment, leisure and key facilities and services for all</i>	To develop a transport system that provides access to employment, shopping, education, leisure and health facilities for all , including those without a car and those with impaired mobility. To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources.
<i>UTP Schemes should be as safe and efficient as possible and focus on encouraging less car use and promoting sustainable and healthy travel choices</i>	To manage the growth of transport and travel volumes across the county, and thereby secure improvements in the predictability of travel time . To improve safety for all by giving the highest priority to minimising the number of collisions and injuries occurring as a result of the transport system
<i>The UTP should deliver value for money to local people</i>	To obtain the best use of the existing network through effective design, maintenance and management. To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources .
<i>The UTP should improve the quality of life for residents and visitors alike</i>	To mitigate the effect of the transport system on the built and natural environment and on personal health To raise awareness and encourage use of more sustainable modes of transport through effective promotion, publicity, information and education.
<i>The UTP programme should improve the local environment and respect the heritage of the study area</i>	To mitigate the effect of the transport system on the built and natural environment and on personal health

Table 6.1: UTP policy fit to Existing LTP2 objectives.

7 Programme of Measures Required

7.1 INTRODUCTION

7.1.1 A range of measures have been developed during the UTP process which address specific problems identified in Hertford and/or Ware. The measures proposed in the UTP have been informed through consultation with officers, key stakeholders and members of the public. A review of the solutions suggested has been undertaken and additional schemes developed to identify any potential feasibility issues. The full range of schemes is presented at the end of this section.

7.1.2 Each scheme has been allocated an outline cost and potential funding streams have been identified either from the LTP or other local and national sources including developer contributions. Each measure has been scored against local objectives and allocated an indicative timescale for implementation (subject to funding availability) and relevant priority based on the LTP scoring in the Scheme Assessment Framework which is explained within this chapter.

7.2 METHODOLOGY FOR SCHEME SELECTION

7.2.1 Following the various stages of consultation, the Mead Lane area study work and the Bengeo modelling, a number of scheme options were proposed, so that each of the issues raised had at least one potential solution. In order to assess these schemes appropriately a scheme selection process was developed. This process is called the Scheme Assessment Framework (SAF) and is summarised in Figure 7.1 below.

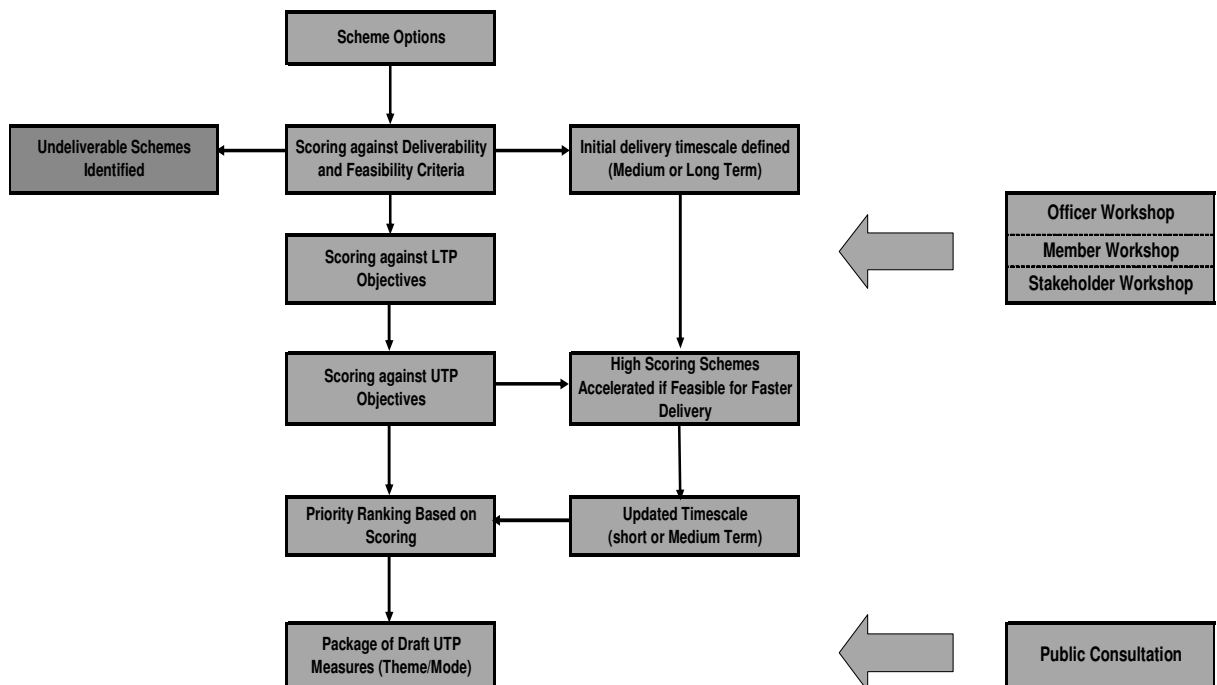


Figure 7.1: Scheme Assessment Framework Methodology

7.3 LONG LIST OF SOLUTIONS

7.3.1 As briefly explained above a long list of options was compiled to potentially tackle the problems identified earlier in the UTP. The full list of schemes that was proposed is shown in the Scheme Assessment Framework in Appendix C. In total there are approximately 130 schemes that have been considered for assessment within the UTP.

7.4 PRIORITISATION USING SCHEME ASSESSMENT FRAMEWORK

7.4.1 A key part of the Hertford and Ware UTP involved identifying, assessing and developing a suitable range of solutions to address specific transport issues and problems within the respective areas that have been identified above. Any potential solutions needed to go through a ranking process which scores each proposed measure against LTP and UTP objectives. Timescales for delivery of each scheme have been allocated based on criteria such as scheme deliverability and feasibility. This process has inevitably resulted in identifying several schemes which are not deliverable due to deliverability constraints and lack of policy support or because they do not deliver value for money.

7.4.2 Through discussion with HCC it was agreed that the LTP2 indicators, which are used to measure progress towards meeting the LTP objectives, have been used to assess and rank each scheme. The use of indicators was decided upon as this provides a direct link through to the funding streams that are in place through the HCC LTP process.

7.4.3 The scoring process was broken down in to 3 stages which are explained below.

Stage 1 – High Level Feasibility Assessment

7.4.4 A high level assessment has been used to shortlist the problems to be tackled by the UTP based on three criteria:

- The scheme would offer a tangible contribution towards delivering the UTP/LTP objectives;
- It would be feasible to solve the problem within the timescale of the UTP (i.e. over a five year period); and
- It would be feasible to justify allocation of funding for the scheme.

7.4.5 A score of one point was allocated for risk associated with each of these criteria. Issues achieving a scoring three points would be allocated a status of a high risk as it is unlikely that it would be possible to implement these within the five year UTP timeframe.

Stage 2 – Scoring Against LTP Objectives

7.4.6 Within the SAF, schemes have been scored against the LTP indicators excluding those relating to maintenance. The maximum score possible for each indicator is +3 which shows that a scheme contributes significantly towards a specific indicator; whereas a scheme which detracts from a given indicator significantly would be allocated a score of -3. It is important to note that safety is a secondary consideration for the UTP, so the maximum score achievable for safety indicators has been constrained to +1 or -1.

7.4.7 The maximum possible LTP score achievable is +56. However, it is unrealistic to expect a scheme to score +3 on all indicators, so the maximum score achieved within the SAF in this case is +33.

7.4.8 Where a scheme scores highly against an indicator, the corresponding LTP objective is selected as the main LTP funding stream for the scheme, although it may not be possible for all schemes to receive funding. In the event that a large number of schemes are identified for a given funding source or LTP objective, it is unlikely that all would receive funding. In the majority of cases a separate ranking system is used for allocation of LTP funding for each LTP objective.

7.4.9 Pedestrian, cycle and public transport schemes naturally score higher than motorised transport schemes as these tend to be more sustainable and have a better fit with policy. It is important to deliver improvements to these modes early on in the UTP timeframe so that a realistic alternative mode is available when work starts on larger scale schemes.

Stage 3 – Incorporating Local Objectives & Priorities and Fit to Overarching Policies.

7.4.10 A final assessment against the fit with the UTP objectives and local priorities to determine the overall desirability of each scheme option in comparison with other options. The contribution of the scheme towards UTP and LTP objectives was identified based on the feedback from consultation activities.

7.4.11 The UTP scoring is based on a scale of 0-6. Schemes which offer a good contribution towards meeting the UTP objectives can score a maximum of 6 points and those making no contribution score 0.

7.5 IDENTIFYING TIMESCALES FOR DELIVERY OF SCHEMES

7.5.1 The schemes have been classified into three relevant indicative timescales for delivery (subject to availability of funding) with those being:

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

7.5.2 The scoring within the SAF also incorporates a timescale allocation process. Schemes identified as high risk in the high level feasibility assessment (stage 1) are identified as long term schemes for the future (beyond the five year timeframe of the UTP).

7.5.3 All other schemes not classified as High Risk in the high level assessment were allocated a medium priority timescale of 3-5 years initially and options for tackling these issues would be subject to a desk-top design and costing exercise using the pro-forma included at Appendix G.

7.5.4 A secondary assessment has been undertaken to see if there is an urgent need to deliver any of the schemes within a shorter timescale or if it would be feasible to do so. The criteria for accelerating UTP schemes is based on contribution towards LTP and UTP indicators identified in stage 2 and 3 of the SAF and the feasibility of delivering the scheme within a shorter timescale and these are included in Appendix F.

7.5.5 Schemes which are identified for acceleration are either medium term schemes to be delivered within a short timescale (1-2 years) or long term schemes increasing to a medium timescale (3-5 years). However all timescales are subject to allocation of funding.

7.5.6 As shown in Table 7.4 a small number of schemes have been identified as not deliverable as they are high risk or unrealistic and may not represent reasonable value for money. In most cases, these schemes would not currently qualify for funding from the LTP or other funding sources and do not contribute sufficiently to delivering the objectives of the UTP or LTP.

7.5.7 However, it is acknowledged that some of the schemes classed as undeliverable do score reasonably well against the LTP objectives. These have been excluded from the UTP delivery packages due to feasibility constraints, for example third party land requirements, which would prevent the delivery of a scheme within the lifetime of the UTP.

7.6 SUMMARY OF SAF RESULTS

7.6.1 The final list of schemes that were taken forward for further assessment and packaging within the UTP is described below and shown in Table 7.1 through to Table 7.3, whilst undeliverable schemes are shown in Table 7.4. Scores and feasibility assessment for the schemes listed are provided in the SAF (Appendix C)

Cycle and Pedestrian	Smarter Choices
Pedestrian	Passenger Transport
Cycle	Car Parking
Freight	Highway
Mead Lane	Bengeo

Scheme Ref	Short Term UTP Schemes	LTP Score
CYC30	Cycle storage provision (Bluecoats)	30
PTM27	New Bus Interchange at County Hall	30
CYC33	Cycle storage provision (Wodson Park Leisure Centre)	26
CYC35	Cycle storage provision (Ware Priory)	26
PTM5a	Identify potential location for Park and Ride Facility as a pre-cursor to PTM5 (longer term) and area wide parking strategy (CPK1)	26
CPM8	Cycle and Pedestrian Route 8 (Hertford Castle footpath upgrade)	23
CPM7	Cycle and Pedestrian Route 7 (Hertford Town Centre)	23
CPM18	Cycle and Pedestrian Route 18 (Bengeo - Mead Lane)	21
CYC34	Cycle storage provision (Kibes Lane Ware)	20
CYC31	Cycle storage provision (Fore Street)	18
CPM14	Cycle and Pedestrian Route 14 (Ware Town Centre - Musley Hill - Tower Road)	18
CPM13	Cycle and Pedestrian Route 13 (Tower Road - Ware Town Centre)	18
CPM17	Cycle and Pedestrian Route 17 (Ware Town Centre - Widbury Hill , West Ware)	18
CPM3	Cycle and Pedestrian Route 3 (Hertford North Station - Bengeo - Hartham Leisure Centre - Mead Lane)	18
PTM14	High Street Ware bus priority scheme	16
CPM15	Cycle and Pedestrian Route 15 (Wadesmill Road - Bowling Road East - west route)	16
PED24	Shared surface mixed priority treatment (part of Walking Route 7) - Indeterminate priority between pedestrians and motorists where Railway Street crosses Market Street via a speed table.	14
CYC25	Cycle storage provision (Hertford North Station)	14
CYC26	Cycle storage provision (Ware Station)	14
CYC27	Cycle storage provision (Parliament Square)	14
CYC28	Cycle storage provision (Mill Bridge)	14
CYC29	Cycle storage provision (County Council Offices)	14
FRT1	Area Wide - Advisory Route Signs on Main Roads to implement HGV route strategy including updates to SATNAV providers on a frequent basis	13
CYC21	Toucan A414 (A414 London Road adjacent to Foxholes Business Park)	13

Scheme Ref	Short Term UTP Schemes	LTP Score
PED27	Install Footway (There is no footway on Trapstyle Road until just before the first cul-de-sac)	12
CPK1	Study area wide - Parking review and strategy to discourage long stay parking (linked to Park & Ride)	10
PED29	Provision of crossing - Watton Road in vicinity of Wengeo Lane / Page Hill	9
BEN3	Closure Option 2 - Do Nothing (Byde Street, Bengoe)	7

Table 7.1: Short Term UTP Schemes

Scheme Ref	Medium Term UTP Schemes	LTP Score
PTM11	A119 North Road / B1000 Welwyn Road Quality Bus Corridor	33
CPM10	Cycle and Pedestrian Route 10 (Hertford North Station - Hertford Town Centre – County Council Offices - Horns Mill Road - Brickenden Lane)	32
CPM2	Cycle and Pedestrian Route 2 (Pinehurst - Foxholes - Simon Balle School)	28
PTM22	More direct service of bus routes to County Hall (linked to PTM27)	27
MDL5	Level crossing improvements for cycle and pedestrian use (Mead Lane employment area)	25
CPM5	Cycle and Pedestrian Route 5 (Ware Town Centre - Westmill Road - Wodson Park Sports Centre)	25
CPM11	Cycle and Pedestrian Route 11 (Chauncy School - GSK - Ware Town Centre)	24
CPM4	Hertford East Station - A119 - Hertford Regional College - Ware Station - Crane Mead (underneath Viaduct Road)	24
HWY13	Signalise junction of Hertingfordbury Road (A414) with Campfield Road	23
PTM3	Hertford North Station Improvements (bus interchange)	23
PTM21	Area Wide – Real Time Passenger Information (RTPI) system	22
CPM9	Cycle and Pedestrian Route 9 (Ware station - Presdales School - Rush Green - Pinehurst - Stanstead Road)	21
CYC32	Cycle storage provision (Hartham Leisure Centre)	21
BEN1a	Closure Option 1 - Temporary Trial Closure of Byde Street	20
BEN1b	Enforcement of existing access restriction	20
HWY2	Amwell End - Station Road, Ware one way loop	19
MDL3	Sustainable Development on Mead Lane site - low car/ car free with shared emergency access and highway access fronting existing station building	19
CYC23	Improvements to the current pedestrian level crossing approaches to provide better access for cycles (via Rowley's Road) and pedestrians from areas of Hertford to the south.	19
CYC24	Cycle storage provision (Hertford East Station)	19
SMT4	Personalised Travel Planning (door-to-door advice) - Study Area Wide	19
CPM12	Cycle and Pedestrian Route 12 (Wodson Park Sports Centre - Ware Town Centre)	18
PED32	Provide TOUCAN Crossing (Gascoyne Way – Bluecoats Roundabout).	18
PED31	Provide TOUCAN Crossing (Gascoyne Way east of Hale Rd/Pegs Lane Roundabout)	18
PTM1	Hertford Bus Station improvements	17
PTM6	A119 Quality Bus corridor between Hertford and Ware including Bus Lane and Priority Gate on Ware Road	18

Scheme Ref	Medium Term UTP Schemes	LTP Score
PTM20	Improved bus priority at Parliament Square	18
PED22	Replacement with signals to improve crossing widths and also offer a greater degree of protection from HGVs (links to Mead Lane Master plan improvements) - Crossing widths at the mini roundabout outside Hertford East railway station are very wide.	16
PTM26	Comprehensive review of all bus routes (Area Wide)	16
MDL2	Improved general access via a new circulatory link from Mill Road to the north of the station on the siding land to create associated interchange facility (Mead Lane employment area)	16
PTM19	Improved bus priority on Fore Street Hertford	15
SMT5	Provide Sustainable transport information (maps/website etc) (Area Wide)	15
PTM9	Bus Route Diversion to Wodson Park Sports Centre, Ware.	14
SMT3	Car clubs (Area Wide)	13
PED36	Crossing point on Hale Road between the school and the Police Station	13
PTM4	Ware Station Improvements (improved access, cycle and bus interchange)	13
HWY20	UTC Control - linking signals (Hertford)	11
PTM8	Bus Route Diversion to Hertford East Station (linked to Mead Lane Masterplanning)	11
PTM10	Additional Bus Layover facilities in Hertford (either at Hertford East/Mead Lane or at proposed Park and Ride)	10
CPK2	Provide formal parking bays as there is space for this (Ware Road and roads to the south)	10
CPK3	Provide formal parking bays as there is space for this (Bengeo Street and streets through Upper and Lower Bengeo)	10
CPK4	High Oak Road, Collett Road and New Road - Parking improvements due to the residential nature of this area along with some narrowing of the carriageway or other traffic calming measures to reduce average speeds and make parking in the road safer where possible.	10
PED25	Part of Old Cross Junction Improvements to retain signalised junction and provide shared surface (minimal kerb upstand) to encourage pedestrian crossing/movement, slow traffic and follow DfT Mixed Priority route treatment to make part of town	9
SMT2	Study area car pool/car share scheme	9
MDL1	Mead Lane Masterplan	9
MDL4	Mead Lane car parking review	9
FRT4	Fore Street / Parliament Square loading restriction amendments	9
HWY19	Variable Message Signing (VMS) for Car Parking and other congestion issues	8
FRT5	Loading Restrictions on Ware High Street - restriction amendments to improve flow	7
HWY3	Closure of Hertford town centre streets to motorised traffic except buses, cycles, taxis, loading (at specific times) at Market Street/The Wash and Fore Street.	6
PED34	Refurbishment of under passes at Hale Rd to include better sight lines where possible	6
FRT6	Relocate road block to allow freight to access Caxton Hill via Foxholes Employment Area from A414, avoiding town centre junctions.	6
PTM25	Bus priority at signalised junctions (including Old Cross) - PROMPT/SPRINT hurry call (Area Wide)	3
PED21	Crossing improvements (part of CPM7) to resolve priority issues between pedestrians and motorists where Maidenhead Street crosses Bull Plain via a speed table.	3

Table 7.2: Medium Term UTP Schemes

Scheme Ref	Longer Term UTP Schemes	LTP Score
HWY17	Signalise Baldock Street junction with B1004 (linked to Bus Priority)	32
CPM1	Cycle and Pedestrian Route 1 (Bramfield Road - North Road - Hertford North Station – Hertingfordbury)	28
HWY4	Ware High Street - DfT style mixed priority route treatment	26
PTM5	Park and Ride Facility (including interchange for School Bus and Coach services, layover and drop off "kiss and ride" facility and act as hub between two towns). Would require appropriate associated bus priority (including Bus/HOV lanes on A414) and area wide parking strategy (CPK1)	26
PTM13	Rush Green Roundabout Bus Priority Scheme	24
PED37	Follow DfT Guidance shared surface mixed priority treatment (Ware High Street)	23
CPM6	Cycle and Pedestrian Route 6 (Welwyn Road - St Andrew's Primary - Sele School - Hertford North Station)	23
CPM16	Cycle and Pedestrian Route 16 (Hertford - Ware via river path)	23
CYC40	Cycle town-wide rental scheme (Area Wide)	22
PED38	Introduction of pedestrian crossing facilities next to the level crossing to the council car park (Amwell End – Ware)	17
PTM24	Bus Stop Improvements study area wide	17
PED28	Provision of foot ways (Wengeo Lane)	14
PTM12	Bus/HOV lanes Corridor Improvements at Baldock Street A1170	14
HWY10	Rush Green Roundabout - widen circulatory carriageways and tackle garage exit	11
PED23	Crossing facilities (The pedestrian approach to Hartham Common and Leisure Centre from Cowbridge / Hartham Lane is poor quality and footways are narrow).	10
HWY11	Traffic signals introduced at the roundabout of Parliament Sq/ Gascoyne Way/ Hale Road (Pegs Lane) to allow regulation of traffic exiting Parliament Sq and prevent excess queuing due to the predominant flow along A414 with signal bus priority to encourage mode shift	10
PTM2	Hertford East Station Improvements/bus interchange (linked to Mead Lane)	10
PED33	Refurbishment of under passes at St Andrew Street to include better sight lines where possible	9
HWY24	Traffic Calming/Speed limit review (Hagsdell Road, Hertford)	8
HWY25	Traffic Calming/Speed limit review (North Road, Hertford)	8
HWY26	Traffic Calming/Speed limit review (Welwyn Road, Hertford)	8
HWY27	Traffic Calming/Speed limit review (Railway Place, Hertford)	8
HWY28	Traffic Calming/Speed limit review (Hoe Lane, Ware)	8
HWY29	Traffic Calming/Speed limit review (Park Road, Ware)	8
PTM16	Improved bus corridor on A1170 Wadesmill Road / B1004 Watton Road / A602	7
CPK5	Introduction of peak hour Controlled Parking Zones (CPZ) - Area surrounding Hertford Regional College	5
PTM15	Star Street/Bridgefoot junction improvement/signalisation to allow buses to turn right	5
HWY21	Signalise to regulate traffic flows (Hertford A414 junction with B1197)	0
HWY22	Signalise to regulate traffic flows (Hertford A414 junction with Cross Lane)	0
HWY23	Signalise to regulate traffic flows (Hertford A414 junction with Thieves Lane)	0

Table 7.3: Longer Term UTP Schemes.

Scheme Ref	Undeliverable Schemes	Reason
PED19	Pedestrian Route 19 – Hertingfordbury to St Joseph's in the Park School	Land issues on Cole Green Way
PED26	New pedestrian crossing at the New Road / Bengoe Street junction.	Too close to existing signalised crossing immediately south of Bengoe Street junction with Tower Street
CPK6	Increased parking enforcement measures (Area Wide)	Insufficient resources and lack of funding opportunities for delivering this.
CPK7	Workplace parking levy (Area Wide)	Enforcement feasibility constraints
PTM7	New Rail Link between Hertford North and Hertford East	Buildings constructed along route
PTM23	Bus only through Port Vale road block	Insufficient road width for bus access and insufficient space for turning buses
SMT1	Workplace Travel Plans (Area Wide)	Difficult to impose on existing developments without planning applications. Therefore this can only be implemented for new developments only.
BEN2	Bengoe Residents TAG/ badge system	Not feasible to implement telemetry and enforcement system to support this
FRT2	Environmental Weight Limit on Hagsdell Road, Hertford	Already traffic calming in place
HWY1	Hertford Town Centre One Way system	Will restrict access to various destinations and lead to further journey distance, time and congestion
HWY6	Hertford Bypass	Lack of policy support, Environmental impacts of new road building, insufficient funding available for Compulsory Purchase of land
HWY7	New A10 GSK junction	Standards for junction separation distances on Primary Routes not achievable
HWY9	Close Mill Bridge to motor traffic except buses, cycles, taxis	No alternative route for vehicles and would prevent access to residential properties
HWY12	Widen A414 under rail bridge to remove pinch point on Hertingfordbury Road	Network rail land constraints and high cost for only marginal benefit
HWY15	Interactive signs in Hertingfordbury Village	No policy support
HWY16	Redesign Bluecoats Roundabout	Does not represent value for money and would simply shift queues to other junctions on A414
HWY18	Residential TAG Scheme (Ware)	Not feasible to implement telemetry and enforcement system to support this
HWY8	A414 tolling (A414 through Hertford)	No alternative route available

Table 7.4 Undeliverable Schemes

7.6.2 Further details of the feasibility and deliverability assessment for the above schemes which have been classified as undeliverable are provided in the SAF (Appendix C).

7.7 HERTFORD BYPASS

7.7.1 Whilst it is acknowledged that the A414 is a primary route that passes through the centre of Hertford, and there is peak time congestion associated with this road in the town, Hertfordshire County Council does not currently plan to construct a bypass. The UTP does, however, include a wide range of schemes and measures that will seek to help address the issue via the management of congestion and encouragement of walking, cycling and the use of passenger transport.

7.7.2 This UTP sets out short and medium term schemes over a five-year period but also includes longer term schemes up to 2021. Whilst a bypass is not included within this Plan as a longer term scheme, a review in five-years may involve revisiting potential bypass proposals. Should a bypass scheme gain support, implementation would be subject to funding and satisfactorily resolving other aspects such as establishing suitable routes and mitigating the impacts of any proposals.

7.8 BENGE0 TRAFFIC STUDY (SEE APPENDIX D FOR FULL REPORT)

7.8.1 The traffic modelling that has been undertaken has assisted in predicting what future traffic volumes will be. The conclusions of the modelling work are documented fully in Appendix D. A summary of the model results is provided below:

- The network is already congested in the study area in the peak hours, with queues of between 200m to 400m in length in the am peak along Port Hill;
- There is a slight increase in the queuing trend along Port Hill and Beng0 Street in the am peak period as a whole when Sainsbury's opens. The effect is more noticeable in the pm peak with increased queuing along St Andrews Street towards Old Cross. (Predicted traffic to Sainsbury's taken from HCC Development Control);
- There is large increase in queuing along Port Hill and Beng0 Street in the AM peak when Sainsbury's is open and Byde Street is closed of up to 700m in length, as well as along St Andrew's Street in the PM peak; and
- There is a slight benefit on the network due to the switch of shoppers between Tesco and Sainsbury's once it opens. Trips diverted off A414 for example.

7.8.2 However, the model represents the worst case that would like to be experienced, given the localised Paramics model does not take account of any wider network implications, i.e. where drivers alter their travel habits due to the increased congestion.

7.8.3 Furthermore, the Secretary of State acknowledged in the granting of permission for the Sainsbury's development that this is likely to result in additional congestion in the area. However, the individual merits of this particular proposal were considered sufficient to outweigh congestion impacts, especially when viewed in the context of the impact that alternative uses may have had on the area.

7.8.4 Therefore it is recommended that a way forward would be to firstly seek to reduce the congestion impacts in the vicinity of the Old Cross junction, to provide an improved streetscape to encourage a safer environment for pedestrians, such as by creating the affect of a shared area with greater priority and ease of pedestrians to be able to cross the road, whilst still accommodating vehicular traffic. This would be achieved through improvements in line with DfT Guidance on Mixed Priority Routes and best practice guidance on shared spaces. This is identified in the UTP as scheme PED25.

7.8.5 Whilst it is acknowledged that the closure of Byde Street would improve the residential amenity in Lower Bengoe, any such closure is subject to further consideration and will be dependent on the impact of Sainsbury's on traffic patterns in the area. During the consultation exercise a choice between scheme Ben1a and Ben3 was included in the questionnaire. As mentioned above the results from this question were too close to provide a clear course of action, but there were lots of requests for additional options or better enforcement of the access restrictions which are already in place. Therefore, Scheme Ben1b has been added to the UTP. These schemes are discussed below.

7.8.6 **Scheme BEN1a:** Byde Street closure is implemented, initially for a temporary period, to monitor the impacts. The temporary closure would only be put in place once the Sainsbury's superstore has opened and the full traffic impacts are known and below the 20% increase in queue length on Port Hill threshold. If the benefits outweigh any localised and wider implications the decision could be made to make the closure permanent.

7.8.7 The strengths and weaknesses of Ben 1a are summarised in Table 7.5 below.

Strengths	Weaknesses
Keeps through traffic on the primary route network	Potential impact on Waterford with more traffic seeking an alternative route
	Restricts access for local residents
Protect residents in Bengoe	Amenity for residents at Old Cross area and main routes will be reduced
Encourages sustainable travel through walking and cycling for short journeys and travel to school	Detriment to highway network (noting existing congestion)
	Reduces on street parking in the vicinity of the trial closure
Temporary closure allows impacts to be quantified and a final decision to be made	Possible delay to bus services
Decisions made once Sainsbury's traffic impacts are known.	Delays decision until after Sainsbury's opens

Table 7.5: Bengoe Strengths and Weaknesses of Proposed Option 1a

7.8.8 Alternatively to Ben1a Byde Street could be kept open. **Scheme BEN3** proposes no closure of Byde Street and therefore no changes are made to the road network. This scheme would be implemented if the increase in queuing on Port Hill caused by Sainsbury's is too large to allow either of the other two schemes (Ben1a & Ben1b) to be feasible.

7.8.9 Scheme Ben1b would be explored before the closure is considered; the scheme proposes to use a technological means of enforcing the access restrictions already in place. It should be noted that there are currently some feasibility issues surrounding this scheme. If these cannot be overcome the technological route will not be progressed and the other options will have to be considered. The strengths and weaknesses of this scheme are shown in Table 7.6.

Strengths	Weaknesses
No permanent fixed bollard required in Bye Street	Potential impact on Waterford with more traffic seeking an alternative route when restrictions are in operation
Access restrictions could be used for limited periods (eg. peak hours only)	Restricts access for residents living in Bengoe East
Access restrictions could be 'switched off' if there was a major incident on the highway network	Amenity for residents at Old Cross area and main routes will be reduced when restrictions are in operation
Does not exclude residents in Upper Bengoe from using Bye Street when the restriction is in operation	Possible delay to bus services when restrictions are in operation
Agreed strategy for tackling on-going issue	Delays decision until after Sainsbury's opens
Decision made once Sainsbury's traffic impacts are known	Wider impacts likely, such as on A414 or A119 as drivers seek alternative routes
	Enforcement and legal issues prevent this option being taken forward at present

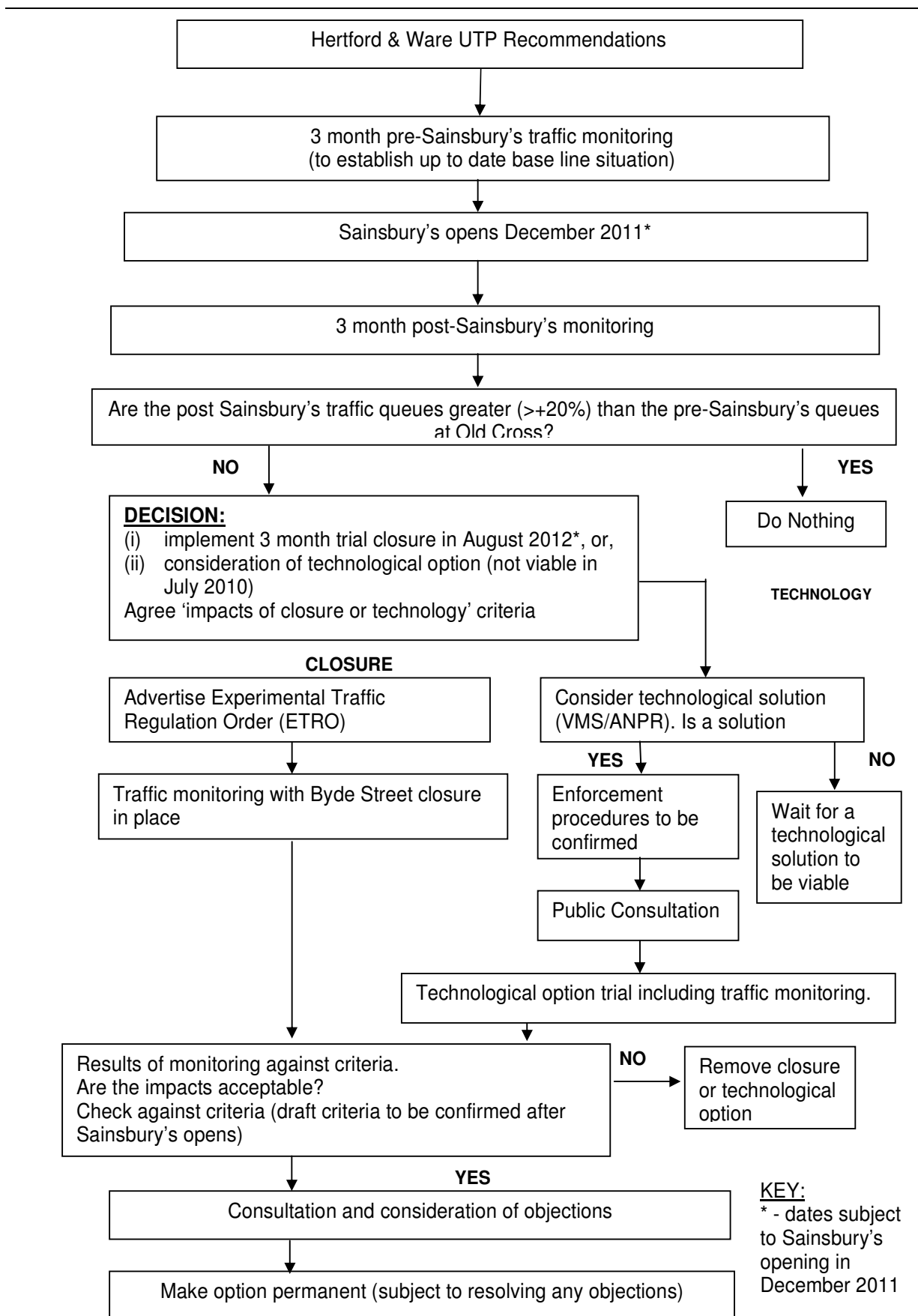
Table 7.6: Bengoe Strengths and Weaknesses of Proposed Option 1b

7.8.10 The Urban Transport Plan proposes schemes and projects to encourage more journeys by foot, bicycle and public transport to lessen the impact of a closure, if this option is included in the final plan.

7.8.11 Feedback on options for the closure of Bye Street has been investigated as part of the UTP and is summarised in Table 6.2 of Appendix D: Bengoe Traffic Modelling Study. The Bengoe measures are summarised in Table 7.7 below and further detail on the implementation strategy is given in the flow chart given on the next page.

Scheme Ref	Schemes	LTP Score
BEN1a	Closure Option 1 - Temporary Trial Closure of Bye Street	20
BEN1b	Enforcement of existing 'Access Only' restriction in Bengoe	20
BEN3	Closure Option 2 - Do Nothing	7

Table 7.7: UTP Bengoe Options



7.8.12 Based on the consultation there is not overwhelming support for either of the two options presented – to close Byde Street or to do nothing in Bengoe.

7.8.13 It is therefore recommended that a decision should be made on the way forward once the actual traffic impacts of the new Sainsbury's store are known. It is proposed that before and after monitoring should be undertaken in the form of traffic surveys in particular assessing queue length to ascertain the impact of the Sainsbury's store.

7.8.14 A threshold criteria has been specified for determining whether the traffic impact of Sainsbury's is unacceptable for a closure or technological option to proceed (ie. an increase in traffic queues greater than 20% of the before Sainsbury's counts). In the event that the criteria threshold is not exceeded, a 3-month temporary trial closure could be implemented or technological option taken forward or considered. It should be noted that the additional traffic generated by Sainsbury's is expected to be below this level.

7.3.4 As outlined above any closure or technological option would be subject to monitoring as well as understanding the pre-Sainsbury's and post Sainsbury's traffic situation. Therefore the decision will only be made once the traffic impacts of the Sainsbury's superstore are known.

7.3.5 The monitoring of the closure or the technological option would cover the following:

- Changes in traffic flows around this part of the town;
- Changes in queue lengths in the town (including other main routes into Hertford) and particularly at the Old Cross junction;
- Changes in journey times and delays (including impacts on bus services) at the Old Cross junction – using the data from the surveys; and
- Consideration of any modal shift from car to cycling and walking.

7.3.5 To determine the full impacts, the closure or technological option would need to be in place for at least 3-months. This is essential to enable changes in travel behaviour and patterns to be determined.

7.3.6 Exact criteria based on the monitoring would need to be established once the pre-Sainsbury's traffic counts have been completed. This is because the "base" situation would only be able to be determined once the Sainsbury's store has opened. Such criteria are likely to be related to the increases in delay, journey times and amount of modal shift and draft criteria (specific percentage figures still to be determined) are outlined below:

- Queue lengths increasing by more than 20% and/or journey time delay affected with flows significantly exceeding capacity at the Old Cross Junction;
- Traffic flows increasing by more than 5% through other residential areas/secondary routes, such as via Waterford;
- Bus Journey times increasing by more than 10%; and
- Modal Shift of 2.5% away from car to walking and cycling for local residents in Bengoe.

7.8.15 It has been established through the modelling that a 12% reduction in traffic to compensate for the closure of Byde Street would be required to achieve a situation where traffic is no worse than currently experienced. This could be achieved through a mode shift from car by improvements to walking and cycling measures and using smarter choices, such as personalised travel planning for local Bengoe residents. These are included within the UTP. However, a mode shift of 10-12% is at the higher end of what might be achieved.

7.8.16 It is also noted that the following schemes could be implemented irrespective of the Hyde Street closure or technological option moving forward or not.

- Improvements to parking across Bengoe on key junctions and near schools (Pro-forma CPK3), albeit it is noted that often parking acts as a natural traffic calming and may reduce the attractiveness of the through route;
- Old Cross Junction Improvements to retain signalised junction and provide shared surface (minimal kerb upstand) to encourage pedestrian crossing/movement, slow traffic and follow DfT Mixed Priority route treatment to make part of extended town centre with links to Sainsbury's (Pro-forma PED25); and
- Pedestrian and cycle improvements across Bengoe (including Pro-forma CPM18 and PED25).

7.8.17 Following the recommendations in this report as part of the Hertford and Ware Urban Transport Plan, the next steps are to undertake pre-Sainsbury's monitoring. This will be undertaken once the UTP is endorsed by members in advance of Winter 2011 when Sainsbury's is due to open.

7.5.2 During this time further investigation will be undertaken into using ANPR technology rather than fixed types of closure.

7.5.3 Only once the post-Sainsbury's traffic situation is known will a decision be made on a way forward.

7.9 MEAD LANE ACCESS MASTER PLAN STUDY (SEE APPENDIX E FOR FULL REPORT)

7.9.1 A full report of the Mead Lane study is provided in Appendix E. Following a workshop with East Herts Council (EHC) and Hertfordshire County Council (HCC), including Highways Development Control, it was agreed in principle that the Mead Lane site has the potential for further development beyond that already committed, in line with the aspirations of EHC for the area.

7.9.2 This was on the basis of the new development proceeding with sustainable credentials based on its central location and making best use of any freedom created on the highway network resulting from measures in the Urban Transport Plan for Hertford and Ware that seek to reduce car use. In addition, best use of any existing junction capacity through tidal flows in the peak periods related to different mixed uses should also be explored in determining a future Development Brief for the area.

7.9.3 Mead Lane is an urban brownfield site in close proximity to the town centre and Hertford East station. Due to its edge of centre location, it is possible that the development of this site may bring wider benefits over development in a less sustainable location. In considering the merits of development in the area, however, these benefits would need to be weighed against any potential congestion impacts. In certain circumstances, the benefits of development in a central location may be such that they are considered sufficient to outweigh any potential congestion impacts e.g. in the case of recent Sainsbury's appeal at Hartham Lane.

7.9.4 It is considered that a separate second point of general access into the Mead Lane site is not required. Manual for Streets and other recent guidance advocates that a separate access is not always required. Therefore, based upon current guidance, there is no longer a constraint on the number of units that can be accessed from a single point of access, subject to agreeing suitable segregated access for emergency services.

7.9.5 However, it is recognised that providing suitable emergency access is important to facilitate the future development of the site and has therefore been considered without the need for a second general point of access. Options have been identified and it is recommended that at least one of the options presented is satisfactory to maintain emergency vehicle access over the short stretch of Mill Road in front of East Hertford Rail Station without the need for a separate second point of access.

7.9.6 The proposals include the creation of a new loop utilising the vacant rail sidings land to the north of the station. This reduces the distance along which a second point of emergency access would be required to a relatively short section of carriageway and would not need to cover the full length of Mead Lane in its current format.

7.9.7 Schemes required to facilitate further development of the Mead Lane area which are included within the SAF have been packaged together as shown in Table 7.8 below.

Scheme Ref	Schemes	LTP Score
MDL5	Level crossing improvements for cycle and pedestrian use	25
MDL3	Sustainable Development on Mead Lane site - low car/ car free with shared emergency access and highway access fronting existing station building	19
MDL2	Improved general access via a new circulatory link from Mill Road to the north of the station on the siding land to create associated interchange facility	16
MDL4	Mead lane car parking review	9
MDL1	Mead Lane Masterplan	9

Table 7.8: UTP Mead Lane Measures

7.10 PACKAGING OF SCHEMES

7.10.1 The UTP aims to look at schemes that could address problems for all transport users across the network. If the schemes were viewed and assessed in isolation then the situation may arise that by implementing one solution another problem could be caused on the network for another user.

7.10.2 As a result, schemes proposed in the UTP were considered, where possible, in terms of a package of options to be delivered. Whilst any transport network has a capacity within which it can operate, compromises often have to be made to ensure that all transport users are given the appropriate level of priority within the system.

7.10.3 In order to inform how this packaging of options should be developed, a Route User Hierarchy was used to inform the process. The Traffic Management Act (TMA) 2004 sets out a hierarchy of road users and advocates a demand management approach which should facilitate the most sustainable and environmentally acceptable modes of transport, as follows:

- Pedestrians;
- People with mobility problems;
- Cyclists;
- Public transport users;
- Servicing and Freight traffic;
- Taxi users;
- Coach borne visitors;

-
- Powered two wheelers;
 - Car borne shoppers;
 - Car borne commercial/ business users;
 - Car borne visitors; and
 - Car borne commuters.

7.10.4 For the purposes of the Hertford and Ware UTP and using the TMA and LTP, as well as feedback from stakeholder workshops, the road user hierarchy is summarised as follows:

- Pedestrians and Mobility Impaired users;
- Cyclists;
- Passenger Transport – Rail and Bus (including community transport, taxis and Private Hire Vehicles);
- Freight (including loading facilities);
- Private cars and motorcycles (in order of shoppers, business users, visitors and commuters); and
- On-street parking.

7.10.5 Considering solutions for each of these main road user groups in turn has ensured that the UTP covers all transport modes and users, and allocates priority based on sustainability. Given that car modes are allocated the lowest priority with the above hierarchy, whilst car travel currently dominates the study area, this has generated objectives and targets which are challenging for the local authority to achieve but would deliver maximum value and potential for mode shift by making car travel comparatively less attractive than public transport, walking and cycling where possible.

7.10.6 The policies on sustainability that have emerged in the last decade have placed an emphasis on demand management rather than infrastructure provision. There is a substantial body of evidence that indicates that some trip reduction that can be achieved from smarter choices initiatives such as travel planning, car clubs or improved travel marketing. This is an important element in any transport strategy or plan as provision will need to be made for schemes which attempt to encourage a shift to more sustainable modes. The impact that might be expected of these schemes has been represented in the packaging process.

7.10.7 The schemes identified for delivery with the UTP are packaged into three layers which are additional and complimentary. The baseline UTP measures have been selected as the shorter term improvements to sustainable modes such as walking, cycling and public transport, so that alternative travel choices are available before more disruptive work begins on the public highway to tackle congestion more firmly. The second package of measures therefore offers a more targeted approach to delivering a step change in congestion.

7.10.8 All of these packages have been consulted upon within the public consultation which has provided an opportunity for members of the public to identify their level of support for the proposed UTP Baseline measures and to indicate whether they wish for the additional step change measures to be taken forward for implementation.

7.10.9 Packages of measures to tackle specific issues within the Mead Lane and Bengoe areas of Hertford which have been considered as separate workstreams within this study have been produced. The measures contained within each of the three packages are tabulated below. The final Bengoe package of schemes has been subject to public consultation.

Package 1: UTP Main Measures

7.10.10 All of the schemes which had been identified for improving the current transport situation in relation to walking, cycling, and public transport were tested to develop a set of schemes defined as 'UTP Baseline Measures'. These are the short and medium term Pedestrian, cycle, public transport and smarter choices measures identified within the SAF (Appendix C). This provides a foundation which has addressed most of the issues around the access and sustainable modes but has not necessarily dealt with the capacity and congestion related issues. It is important to note that all timescales quoted are indicative at this stage and subject to availability of funding.

7.10.11 The following schemes in Table 7.10 were assumed as part of the Package 1 in order to resolve a number of problems on the network, as well as adhering to the Route User Hierarchy explained above. It should be noted that the order in which the individual schemes are presented is not intended to be prescriptive or indicative of a dependency of schemes. All the package schemes could be delivered in isolation; however to address the full range of issues identified it would be necessary to implement all of these schemes.

Scheme Ref	Location	Scheme Description
CPK1	Study area wide	Parking review and strategy to discourage long stay parking (linked to PTM5 Park and Ride)
CPK2	Ware Road and roads to the south	Provide formal parking bays as there is space for this
CPK3	Bengoe Street and streets through Upper and Lower Bengoe	Provide formal parking bays as there is space for this
CPK4	High Oak Road, Collett Road and New Road	Parking improvements due to the residential nature of this area it maybe appropriate to undertake some narrowing of the carriageway or other traffic calming measures to reduce average speeds and make parking in the road safer.
CYC21	A414 London Road adjacent to Foxholes	Toucan A414
CYC23	Mead Lane Pedestrian Level Crossing	Improvements to the current pedestrian level crossing approaches to provide better access for cycles (via Rowley's Road) and pedestrians from areas of Hertford to the south.
CYC24	Hertford East Station	Cycle storage provision
CYC25	Hertford North Station	Cycle storage provision
CYC26	Ware Station	Cycle storage provision
CYC27	Parliament Square	Cycle storage provision
CYC28	Mill Bridge	Cycle storage provision
CYC29	County Council Offices	Cycle storage provision
CYC30	Bluecoats	Cycle storage provision
CYC31	Fore Street	Cycle storage provision
CYC32	Hartham Leisure Centre	Cycle storage provision
CYC33	Wodson Park Leisure Centre	Cycle storage provision
CYC34	Kibes Lane Ware	Cycle storage provision
CYC35	Ware Priory	Cycle storage provision
CPM2	Pinehurst - Foxholes - Simon Balle School	Cycle and Pedestrian Route 2

CPM3	Hertford North Station - Bengoe - Hartham Leisure Centre - Mead Lane	Cycle and Pedestrian Route 3
CPM4	Hertford East Station - A119 - Hertford Regional College - Ware Station - Crane Mead (underneath Viaduct Road)	Cycle and Pedestrian Route 4
CPM5	Ware Town Centre - Westmill Road - Wodson Park Sports Centre	Cycle and Pedestrian Route 5
CPM7	Hertford Town Centre	Cycle and Pedestrian Route 7
CPM8	Hertford Castle footpath upgrade	Cycle and Pedestrian Route 8
CPM9	Ware Station - Presdales School - Rush Green - Pinehurst - Stanstead Road	Cycle and Pedestrian Route 9
CPM10	Hertford North station - Hertford Town Centre - Council Offices - Horns Mill Road - Brickenden Lane	Cycle and Pedestrian Route 10
CPM11	Chauncy School - GSK - Ware Town Centre	Cycle and Pedestrian Route 11
CPM12	Wodson Park Sports Centre - Ware Town centre	Cycle and Pedestrian Route 12
CPM13	Tower Road - Ware Town Centre	Cycle and Pedestrian Route 13
CPM14	Ware Town Centre - Musley Hill - Tower Road	Cycle and Pedestrian Route 14
CPM15	Wadesmill Road - Bowling Road (Ware east - west route)	Cycle and Pedestrian Route 15
CPM17	Ware town centre - widbury hill (west Ware)	Cycle and Pedestrian Route 17
CPM18	Bengoe - Mead Lane	Cycle and Pedestrian Route 18
FRT1	Area Wide	Advisory Route Signs on Main Roads to implement HGV route strategy including updates to SATNAV providers on frequent basis
FRT4	Parliament Square	Fore Street / Parliament Square loading restriction amendments
FRT5	Ware High Street	Loading Restrictions on Ware High Street - restriction amendments to improve flow
FRT6	Foxholes to Caxton Hill	Relocate road block to allow freight to access Caxton Hill via Foxholes Employment Area
PTM1	Hertford Bus Station	Hertford Bus Station improvements
PTM3	Hertford North Station	Hertford North Station Improvements (bus and cycle interchange)
PTM4	Ware Station	Ware station Improvements (improved access, cycle and bus interchange)
PTM6	A119 between Hertford and Ware	A119 Quality Bus corridor between Hertford and Ware including Bus Lane and bus gate on Ware Road
PTM8	Hertford East Station	Bus Route Diversion to Hertford East Station (linked to Mead Lane Masterplanning)
PTM9	Wodson Park Sports Centre	Bus Route Diversion to Wodson Park Sports Centre, Ware
PTM10	Hertford East Station or P&R site	Additional Bus Layover facilities in Hertford (either at Hertford East/Mead Lane or at proposed Park and Ride)
PTM11	A119 North Road / Welwyn Road	A119 North Road / Welwyn Road Quality Bus Corridor
PTM14	Ware High Street	High Street Ware bus corridor scheme
PTM19	Fore Street Hertford	Improved bus priority on Fore Street Hertford
PTM21	Area Wide	RTPI system

PTM22	County Council Offices, Hertford	More direct service of bus routes to County Hall
PTM25	Area Wide	Bus priority at signalised junctions (inc Old Cross) - PROMPT/SPRINT hurry call
PTM26	Area Wide	Comprehensive review of all bus routes
PTM27	County Council Offices, Hertford	New Bus Interchange at County Hall
PED21	Where Maidenhead Street crosses Bull Plain via a speed table.	Crossing improvements (part of CPM7)
PED22	Crossing widths at the mini roundabout outside Hertford East railway station are very wide.	Replacement with signals to improve crossing widths and also offer a greater degree of protection from HGVs (links to Mead Lane Master plan improvements)
PED24	Indeterminate priority between pedestrians and motorists where Railway Street crosses Market Street via a speed table.	Shared surface mixed priority treatment (part of CPM7)
PED25	Mill Bridge, Old Cross and St Andrew Street junction.	Part of Old Cross Junction Improvements to retain signalised junction and provide shared surface (minimal kerb upstand) to encourage pedestrian crossing/movement, slow traffic and follow DfT Mixed Priority route treatment to make part of town
PED27	There is no footway on Trapstyle Road until just before the first cul-de-sac.	Install Footway
PED29	Watton Road near Wengeo Lane/Page Hill	Provision of crossing
PED31	Gascoyne Way east of Hale Road/Pegs Lane Roundabout	Provision of TOUCAN crossing
PED32	Gascoyne Way - Bluecoats Roundabout	Provision of TOUCAN crossing
PED34	Gascoyne Way - Hale Road Junction	Refurbishment of under passes at Hale Rd to include better sight lines where possible
PED36	Hale Road adj to School and Police Station	Crossing point on Hale Road between the school and the Police Station
SMT2	Study area wide	Study area car pool/car share scheme
SMT3	Study area wide	Car clubs
SMT4	Study area wide	Personalised travel planning (such as Mead Lane)
SMT5	Study area wide	Provide Sustainable transport information (maps/website etc)

Table 7.9: UTP Baseline Measures

Package 2: Step Change Measures to Tackle Congestion

7.10.12 Delivering a real step change in reducing congestion levels within the study area will require additional, longer term measures to influence people's decisions about when and how they travel. These solutions will need to strike the difficult balance between managing car use, while making other modes of transport easier and more convenient so that people can travel by the most appropriate means for their journey and take pressure off the road network.

7.10.13 Package 2 is aimed at tackling congestion and the measures recommended in Table 7.10 are intended to provide this extra level of impact to start reducing congestion within the study area.

Scheme Ref	Location	Scheme Description
CPK5	Area surrounding Hertford Regional College	Introduction of peak hour Controlled Parking Zones (CPZ)
CPM1	Bramfield Road - North Road - Hertford North Station - Hertingfordbury	Cycle and Pedestrian Route 1
CPM16	Hertford - Ware via river path	Cycle and Pedestrian Route 16
CPM6	Welwyn Road - St Andrew Primary - Sele School - Hertford North Station	Cycle and Pedestrian Route 6
HWY10	Rush Green Roundabout	Rush Green - widen circulatory carriageways and tackle garage exit
HWY11	Parliament Square	Traffic signals introduced at the roundabout of Parliament Square/ Gascoyne Way/ Hale Road (Pegs Lane) to allow regulation of traffic exiting Parliament Square and prevent excess queuing due to the predominant flow along A414 with signal bus priority to encourage mode shift
HWY21	Hertford A414 junction with B1197	Signalise to regulate traffic flows
HWY22	Hertford A414 junction with Cross Lane	Signalise to regulate traffic flows
HWY23	Hertford A414 junction with Thieves Lane	Signalise to regulate traffic flows
HWY24	Hagsdell Road, Hertford	Traffic Calming/Speed limit review
HWY25	North Road, Hertford	Traffic Calming/Speed limit review
HWY26	Welwyn Road, Hertford	Traffic Calming/Speed limit review
HWY27	Railway Place, Hertford	Traffic Calming/Speed limit review
HWY28	Hoe Lane, Ware	Traffic Calming/Speed limit review
HWY29	Park Road, Ware	Traffic Calming/Speed limit review
HWY13	Hertingfordbury Road	Signalise junction of Hertingfordbury Road (A414) with Campfield Road
HWY17	Baldock Street A1170	Signalise Baldock Street junction with B1004 (linked to Bus Priority)
HWY19	Hertford	Variable Message Signing (VMS) for car parking and other congestion issues
HWY2	Amwell End - Ware	Amwell End - Station Road, Ware one way loop
HWY20	Hertford	UTC Control - linking signals

Scheme Ref	Location	Scheme Description
HWY3	Hertford Town Centre	Close Hertford town centre streets to motorised traffic except buses, cycles, taxis, loading (at specific times) at Market Street/The Wash and Fore Street
HWY4	Ware High Street	Ware High Street - DfT style mixed priority route treatment
PTM12	Baldock Street A1170	Bus/HOV lanes or corridor improvements at Baldock Street A1170
PTM13	Rush Green Roundabout	Rush Green roundabout Bus Priority Scheme
PTM15	Star Street/ Bridgefoot	Star Street/Bridgefoot junction improvement/signalisation to allow buses to turn right
PTM16	Watton Road/Wadesmill Road/A602	Improved bus corridor on A1170 Wadesmill Road / B1004 Watton Road / A602
PTM2	Hertford East Station	Hertford East station Improvements/bus interchange (linked to Mead Lane)
PTM24	Area Wide	Bus stop improvements
PTM5 and PTM5a	Undetermined	Park and Ride Facility (including interchange for School Bus and Coach services, layover and drop off "kiss and ride" facility and act as hub between two towns). Would require appropriate associated bus priority (including HOV lanes on A414) and area wide parking strategy (CPK1). PTM5a is the study to determine a location.
PED23	The pedestrian approach to Hartham Common and Leisure Centre from Cowbridge / Hartham Lane is poor quality and footways are narrow.	New Crossing facilities
PED28	Wengeo Lane	Provision of footways
PED33	Gascoyne Way - St Andrew Street	Refurbishment of under passes at St Andrew Street to include better sight lines where possible
PED37	Ware High Street	Follow DfT Guidance shared surface mixed priority treatment
PED38	Amwell End - Ware	Introduction of pedestrian crossing facilities next to the level crossing to the Council car park

Table 7.10: UTP Step Change Measures to Tackle Congestion (Package 2)

Package 3: Mead Lane and Bengoe

7.10.14 The final package (Package 3) of UTP Measures addresses location specific issues within the Mead Lane and Bengoe areas of Hertford. These measures have been identified based on detailed studies and traffic modelling as documented in sections 7.8 and 7.9 above. The package 3 measures are shown in Table 7.11.

Scheme Ref	Scheme Location	Scheme Description
BEN1a	Bengoe	Byde Street Option 1 - Temporary Trial Closure
BEN1b	Bengoe	Enforcement of existing access only restriction
BEN3	Bengoe	Byde Street Option 2 - Do Nothing
MDL1	Mead Lane	Mead Lane Masterplan
MDL2	Mead Lane	Improved general access via a new circulatory link from Mill Road to the north of the station on the siding land to create associated interchange facility
MDL3	Mead Lane	Sustainable Development on Mead Lane site - low car/ car free with shared emergency access and highway access fronting existing station building
MDL4	Mead Lane	Mead lane car parking review
MDL5	Mead Lane	Level crossing improvements for cycle and pedestrian use

Table 7.11: UTP Mead Lane and Bengoe Measures for Package 3

8 UTP Delivery Programme

8.1 DELIVERY TIMESCALES

8.1.1 A number of measures listed in Chapter 8 are able to be delivered in the short term (i.e. feasible for implementation in the first two years of the UTP period subject to allocation of funding), and we have identified that these provide a beneficial contribution towards meeting LTP and UTP objectives.

8.1.2 Consideration of priority, feasibility and deliverability has been undertaken to identify measures which are likely to be delivered within the first two years of the UTP period. In addition, a number of other schemes have been identified which will need to be developed in the medium (potentially within 3 – 5 years) and longer term (5 years+). The majority of these medium and long term schemes have been included in the above timescale as it is not anticipated that they could be delivered within the first 2 years of the plan. However all timescales quoted are indicative at this stage and subject to funding availability.

8.2 FUNDING MECHANISMS

8.2.1 The measures set out in the UTP will be delivered through a variety of funding mechanisms. Depending upon the nature of the proposal it is possible that it could be funded from a variety of sources as described below. In many instances more than one of the funding sources would be applicable as indicated in the following tables.

- **HCC/EHC** - relates to funding from Council Budgets (capital or revenue). Alternatively funding could be obtained through growth funding, such as the Community Infrastructure Fund (CIF);
- **LTP (via HCC)** – relates to funding by a specific LTP target. NB schemes identified for potential funding via LTP target 14 (Mode Share for Journeys to School) and LTP targets 5, 6 and 7 (Safety Engineering) are subject to a separate ranking process undertaken by HCC;
- **Developer Contributions** – related to funds collected through Section 106 Agreements for which schemes are specific and related to the development concerned;
- **Partner Organisations** – this could include Sustrans, Train operators; and
- **Existing Employers** – relates to funding mainly for travel planning initiatives at the existing workplaces.

8.3 MEASURES FOR DELIVERY IN THE FIRST FIVE YEARS

8.3.1 The prioritised programme for delivery (subject to funding) over the next five years is shown by transport mode in Table 8.1 to Table 8.9 below. The short and medium term schemes have been identified with an indicative timescale (subject to funding) with an appropriate design and cost for implementing the scheme on the ground. The costs quoted in the tables below are preliminary outline costs only at this stage and are subject to further detailed checking during detailed scheme design and delivery.

8.3.2 Plans of Hertford and Ware showing the location of infrastructure schemes for each transport mode to be delivered as part of the UTP are contained in Figures 1 – 6 at the end of the report. Pro-formas providing further detail on each of the Short and Medium term schemes are also provided in Appendices F and G respectively.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
PED21	Crossing improvements where Maidenhead Street crosses Bull Plain (part of CPM7)	MEDIUM	£100,000	LTP14	
PED22	Mill Road junction Replacement with signals to improve crossing widths and also offer a greater degree of protection from HGVs (links to Mead Lane Master plan improvements)	MEDIUM	£250,000	LTP14	
PED24	Shared surface mixed priority treatment where Railway Street crosses Market Street (part of CPM7)	SHORT	£100,000	LTP14	
PED25	Old Cross Junction Improvements to retain signalised junction and provide shared surface (minimal kerb upstand) to encourage pedestrian crossing/movement, slow traffic and follow DfT Mixed Priority route treatment to make part of town	MEDIUM	£350,000	LTP14	S106
PED27	Install Footway on Trapstyle Road, Ware	SHORT	£75,000	LTP14	
PED29	Provision of crossing in vicinity of Watton Road and Wengeo Lane/Page Hill	SHORT	£100,000	LTP14	S106
PED31	Provide TOUCAN Crossing at Gascoyne Way east of Hale Rd/Pegs Lane Roundabout	MEDIUM	£350,000	LTP14	
PED32	Provide TOUCAN Crossing at Gascoyne Way adjacent to Bluecoats Roundabout	MEDIUM	£350,000	LTP14	
PED34	Refurbishment of under passes at Hale Rd to include better sight lines where possible	MEDIUM	£65,000	LTP14	
PED36	Crossing point on Hale Road between the school and the Police Station.	MEDIUM	£100,000	LTP14	

Table 8.1: Pedestrian schemes to be delivered in the first 5 years.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
CYC21	Install new Toucan crossing on A414 London Road adjacent to Foxholes, opposite Balls Park	SHORT	£300,000	LTP14	
CYC23	Improvements to the current pedestrian level crossing approaches to provide better access for cycles (via Rowley's Road) and pedestrians from areas of Hertford to the south. Mead Lane Pedestrian Level Crossing	MEDIUM	£25,000	LTP13	S106
CYC24	Cycle storage provision at Hertford East Station	MEDIUM	£20,000	LTP13	
CYC25	Cycle storage provision at Hertford North Station	SHORT	£15,000	LTP13	
CYC26	Cycle storage provision at Ware Station	SHORT	£15,000	LTP13	
CYC27	Cycle storage provision at Parliament Square	SHORT	£15,000	LTP13	
CYC28	Cycle storage provision at Mill Bridge	SHORT	£15,000	LTP13	
CYC29	Cycle storage provision at County Council Offices	SHORT	£15,000	LTP13	
CYC30	Cycle storage provision at Bluecoats	SHORT	£15,000	LTP13	
CYC31	Cycle storage provision at Fore Street	SHORT	£15,000	LTP13	
CYC32	Cycle storage provision at Hartham Leisure Centre	MEDIUM	£15,000	LTP13	
CYC33	Cycle storage provision at Wodson Park Leisure Centre	SHORT	£15,000	LTP13	
CYC34	Cycle storage provision at Kibes Lane Ware	SHORT	£15,000	LTP13	
CYC35	Cycle storage provision at Ware Priory	SHORT	£15,000	LTP13	

Table 8.2: Cycling schemes to be delivered in the first 5 years.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
CPM2	Pinehurst - Foxholes - Simon Balle School	MEDIUM	£320,000	LTP13	Sustrans/S106
CPM3	Hertford North Station - Bengoe - Hartham Leisure Centre - Mead Lane	SHORT	£150,000	LTP13	Sustrans/S106
CPM4	Hertford East Station - A119 - Hertford Regional College - Ware Station - Crane Mead (underneath Viaduct Road)	MEDIUM	£475,000	LTP13	S106
CPM5	Ware Town Centre - Westmill Road - Wodson Park Sports Centre	MEDIUM	£150,000	LTP13	Sustrans
CPM7	Hertford Town Centre	SHORT	£250,000	LTP13	S106
CPM8	Hertford Castle footpath upgrade	SHORT	£250,000	LTP13	
CPM9	Ware station - Presdales School - Rush Green - Pinehurst - Stanstead Road	MEDIUM	£650,000	LTP13, LTP14	Sustrans
CPM10	Hertford North station - Hertford Town Centre – County Council Offices - Horns Mill Road - Brickenden Lane	MEDIUM	£750,000	LTP13	Sustrans/S106
CPM11	Chauncy School - GSK - Ware Town Centre	MEDIUM	£250,000	LTP13, LTP14	Sustrans/S106
CPM12	Wodson Park Sports Centre - Ware Town centre	MEDIUM	£350,000	LTP13	Sustrans
CPM13	Tower Road - Ware Town Centre	SHORT	£100,000	LTP13, LTP14	Sustrans
CPM14	Ware Town Centre - Musley Hill - Tower road	SHORT	£150,000	LTP13, LTP14	Sustrans
CPM15	Wadesmill Road - Bowling Road east - west route	SHORT	£175,000	LTP13	
CPM17	Ware town centre - Widbury Hill (west Ware)	SHORT	£175,000	LTP13	
CPM18	Bengoe - Mead Lane	SHORT	£275,000	LTP13	S106

Table 8.3: Cycling & Pedestrian schemes to be delivered in the first 5 years

8.3.3 It is important to note that the combined cycle and pedestrian routes above are intended to link together the fragmented cycleway network and create an attractive environment for walking and cycling. Where possible, new on-road cycle lanes will be created and where there is insufficient road width, segregated cycle routes would be provided. The proposed network would not serve to encourage cyclists to cycle on the pavements and cause additional conflicts with pedestrians.

Scheme Ref	Scheme description	Timescale	Cost	LTP Objective	Other Potential Funding Source
PTM1	Hertford Bus station improvements	MEDIUM	£350,000	LTP8, LTP9, LTP10	S106
PTM3	Hertford North Station Improvements (bus and cycle interchange)	MEDIUM	£100,000	LTP8, LTP9, LTP10	TOC's
PTM4	Ware station Improvements (improved access, cycle and bus interchange)	MEDIUM	£100,000	LTP8, LTP9, LTP10, LTP13	TOC's
PTM5a	Identify potential location for Park and Ride Facility as a pre-cursor to PTM5 (longer term) and area wide parking strategy (CPK1)	SHORT	£10,000	LTP8, LTP9, LTP11	
PTM6	A119 Quality Bus corridor between Hertford and Ware including Bus Lane and Priority Gate on Ware Road	MEDIUM	£450,000	LTP8, LTP9, LTP10	S106
PTM8	Bus Route Diversion to Hertford East Station (linked to Mead Lane Masterplanning)	MEDIUM	£100,000	LTP8, LTP9, LTP10	S106
PTM9	Bus Route Diversion to Wodson Park Sports Centre, Ware	MEDIUM	£50,000	LTP8, LTP9, LTP10	
PTM10	Additional Bus Layover facilities in Hertford (either at Hertford East/Mead Lane or at proposed Park and Ride)	MEDIUM	£75,000	LTP8, LTP9, LTP10	S106
PTM11	A119 North Road / Welwyn Road Quality Bus Corridor	MEDIUM	£75,000	LTP8, LTP9, LTP10	
PTM14	High Street Ware bus priority scheme	SHORT	£65,000	LTP8, LTP9, LTP10	
PTM19	Improved bus priority on Fore Street Hertford	MEDIUM	£100,000	LTP8, LTP9, LTP10	
PTM21	Study area wide RTPI system	MEDIUM	£TBC	LTP8, LTP9, LTP10	
PTM22	More direct service of bus routes to County Hall	MEDIUM	£50,000	LTP8, LTP9, LTP10	
PTM25	Bus priority at signalised junctions (including Old Cross) - PROMPT/SPRINT hurry call	MEDIUM	£200,000	LTP8, LTP9, LTP10	
PTM26	Study area wide comprehensive review of all bus routes	MEDIUM	£50,000	LTP8, LTP9, LTP10	
PTM27	New Bus Interchange at County Hall	SHORT	£100,000	LTP8, LTP9, LTP10	HCC

Table 8.4: Public Transport schemes to be delivered in the first 5 years.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
HWY2	Amwell End - Station Road, Ware one way loop	MEDIUM	£150,000	LTP16, LTP17	
HWY3	Closure of Hertford town centre streets to motorised traffic except buses, cycles, taxis, loading (at specific times) at Market Street/The Wash and Fore Street	MEDIUM	£175,000	LTP16, LTP17	S106
HWY13	Signalise junction of Hertingfordbury road (A414) with Campfield Road	MEDIUM	£250,000	LTP11	
HWY19	Variable Message Signing (VMS) for Car Parking and other congestion issues	MEDIUM	£250,000	LTP12, LTP16	
HWY20	UTC Control - linking signalised junctions	MEDIUM	£500,000	LTP12, LTP16	S106

Table 8.5: Highway schemes to be delivered in the first 5 years.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
CPK1	Parking review and strategy to discourage long stay parking (linked to Park & Ride)	SHORT	£10,000	LTP12	EHC/HCC/S106
CPK2	Provide formal parking bays as there is space for this at Ware Road and roads to the south	MEDIUM	£75,000	LTP12	
CPK3	Improve parking at key junctions and possible conflict points in Upper and Lower Bengoe	MEDIUM	£50,000	LTP12	
CPK4	High Oak Road, Collett Road and New Road Parking improvements due to the residential nature of this area it maybe appropriate to undertake some narrowing of the carriageway or other traffic calming measures to reduce average speeds and make parking in the road safer.	MEDIUM	£200,000	LTP12	

Table 8.6: Car Parking schemes to be delivered in the first 5 years.

Scheme Ref	Scheme Description	Timescale	Cost	LTP Objective	Other Potential Funding Source
FRT1	Advisory Route Signs on Main Roads to implement HGV route strategy including updates to SATNAV providers on frequent basis	SHORT	£100,000	LTP12, LTP16, LTP17	
FRT4	Fore Street / Parliament Square loading restrictions amendments	MEDIUM	£17,500	LTP16, LTP17	
FRT5	Loading Restrictions on Ware High Street - restriction amendments to improve flow	MEDIUM	£10,000	LTP16, LTP17	
FRT6	Relocate road block to allow Freight to access Caxton Hill via Foxholes Employment Area	MEDIUM	£25,000	LTP16	

Table 8.7: Freight schemes to be delivered in the first 5 years

Scheme	Scheme	Timescale	Cost	LTP	Other
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Ref	Description			Objective	Potential Funding Source
SMT2	Study area car pool/car share scheme	MEDIUM	£50,000	LTP12, LTP16	S106
SMT3	Study Area Car club	MEDIUM	£50,000	LTP12, LTP16	S106
SMT4	Personalised Travel Planning (door to door advisors)	MEDIUM	£250,000	LTP12, LTP16	
SMT5	Provide Sustainable transport information (maps/website etc)	MEDIUM	£25,000	LTP18	

Table 8.8: Smarter Choices schemes and policies to be delivered in the first 5 years.

Option Ref	Option description	Timescale	Cost	LTP Objective	Other Potential Funding Source
BEN1a	Byde Street Option 1 - Temporary Trial Closure	MEDIUM	£20,000	LTP16, LTP17	S106
BEN1b	Enforcement of existing access only restriction	MEDIUM	£180,000	LTP16, LTP17	S106
BEN3	Byde Street Option 2 - Do Nothing	SHORT	£0		none required
MDL1	Mead Lane Masterplan	MEDIUM	£275,000	LTP8	S106
MDL2	Improved general access via a new circulatory link from Mill Road to the north of the station on the siding land to create associated interchange facility	MEDIUM	£200,000	LTP8	S106
MDL3	Sustainable Development on Mead Lane site - low car/ car free with shared emergency access and highway access fronting existing station building	MEDIUM	£275,000	LTP8	S106
MDL4	Mead lane car parking review	MEDIUM	£25,000	LTP8	S106
MDL5	Level crossing improvements for cycle and pedestrian use (see also CYC23)	MEDIUM	£25,000	LTP8	S106

Table 8.9: Bengeo and Mead Lane Measures

8.4 MEASURES FOR DELIVERY POST PLAN PERIOD

8.4.1 There are a number of measures that have been identified which will need to be included outside of the plan period. The full descriptions of all the long term schemes are included in Appendix C in the SAF. Those long term schemes which are recommended in the UTP are detailed in Table 8.9. Due to the fact that these schemes fall outside of the plan period they do not have an indicative cost attributed to them.

Scheme Ref	Scheme Location	Scheme Description	Timescale	LTP Objective
CPK5	Area surrounding Hertford Regional College	Introduction of peak hour Controlled Parking Zones (CPZ)	LONG	LTP12
CYC40	Area Wide	Cycle town-wide rental scheme	LONG	LTP13
CPM1	Bramfield Road - North Road - Hertford North Station - Hertingfordbury	Cycle and Pedestrian Route 1	LONG	LTP13, LTP11
CPM6	Welwyn Road - St Andrew Primary - Sele School - Hertford North Station	Cycle and Pedestrian Route 6	LONG	LTP13
CPM16	Hertford - Ware via river path	Cycle and Pedestrian Route 16	LONG	LTP13, LTP14
HWY2	Amwell End - Ware	Amwell End - Station Road, Ware one way loop	LONG	LTP16, LTP17
HWY3	Hertford Town Centre	Close Hertford town centre streets to motorised traffic except buses, cycles, taxis, loading (at specific times) at Market Street/The Wash and Fore Street	LONG	LTP16
HWY4	Ware High Street	Ware High Street - DfT style mixed priority route treatment	LONG	LTP16
HWY10	Rush Green Roundabout	Rush Green - widen circulatory carriageways and tackle garage exit	LONG	LTP17
HWY11	Parliament Square	Traffic signals introduced at the roundabout of Parliament Square/ Gascoyne Way/ Hale Road (Pegs Lane) to allow regulation of traffic exiting Parliament Square and prevent excess queuing due to the predominant flow along A414 with signal bus priority to encourage mode shift	LONG	LTP18
HWY13	Hertingfordbury Road	Signalise junction of Hertingfordbury Road (A414) with Campfield Road	LONG	LTP21
HWY17	Baldock Street A1170	Signalise Baldock Street junction with B1004 (linked to Bus Priority)	LONG	LTP21, LTP11
HWY19	Hertford	Variable Message Signing (VMS) for car parking and other congestion issues	LONG	LTP21, LTP11
HWY20	Hertford	UTC Control - linking signals	LONG	LTP21
HWY21	Hertford A414 junction with B1197	Signalise to regulate traffic flows	LONG	LTP21
HWY22	Hertford A414 junction with Cross Lane	Signalise to regulate traffic flows	LONG	LTP21
HWY24	Hagsdell Road, Hertford	Traffic Calming/Speed limit review	LONG	LTP16, LTP17, LTP8, LTP9, LTP10
HWY29	Park Road, Ware	Traffic Calming/Speed limit review	LONG	LTP16, LTP17
PTM2	Hertford East Station	Hertford East station Improvements/bus interchange (linked to Mead Lane)	LONG	LTP16, LTP8, LTP9, LTP11,

Scheme Ref	Scheme Location	Scheme Description	Timescale	LTP Objective
PTM5	Undetermined	Park and Ride Facility (including interchange for School Bus and Coach services, layover and drop off "kiss and ride" facility and act as hub between two towns). Would require appropriate associated bus priority (including HOV lanes on A414) and area wide parking strategy (CPK1)	LONG	LTP8, LTP9, LTP11
PTM12	Baldock Street A1170	Bus/HOV lanes or corridor improvements at Baldock Street A1170	LONG	LTP16, LTP8, LTP9, LTP11,
PTM13	Rush Green Roundabout	Rush Green roundabout Bus Priority Scheme	LONG	LTP8, LTP9, LTP11
PTM15	Star Street/ Bridgefoot	Star Street/Bridgefoot junction improvement/signalisation to allow buses to turn right	LONG	LTP8, LTP9, LTP11,
PTM16	Watton Road/Wadesmill Road/A602	Improved bus corridor on A1170 Wadesmill Road / B1004 Watton Road / A602	LONG	LTP8, LTP9, LTP10
PTM24	Area Wide	Bus stop improvements	LONG	LTP16, LTP8, LTP9, LTP11,
PED23	Hartham Common and Leisure Centre from Cowbridge / Hartham Lane	New Pedestrian Crossing facilities	LONG	LTP19
PED28	Wengeo Lane	Provision of footways	LONG	LTP19
PED33	Gascoyne Way - St Andrew Street	Refurbishment of under passes at St Andrew Street to include better sight lines where possible	LONG	LTP14
PED37	Ware High Street	Follow DfT Guidance shared surface mixed priority treatment	LONG	LTP14
PED38	Amwell End - Ware	Introduction of pedestrian crossing facilities next to the level crossing to the Council car park	LONG	LTP14

Table 8.10: Longer term schemes recommended through the UTP

9 Monitoring and Date of Plan Review

9.1 INTRODUCTION

9.1.1 Regular monitoring will enable assessment of the progress towards meeting the UTP objectives. It is a vital element in ensuring that measures proposed within the UTP are delivered at a rate that is in keeping with the priorities to address the problems identified. It also enables assessment of the effectiveness of schemes which have been delivered. Regular review of the plan allows it to be revised according to evolving demands and is an essential process in ensuring that the Plan remains relevant.

9.2 MONITORING FREQUENCY AND MECHANISM

9.2.1 A report on the schemes delivered and progress towards the local targets will be published annually. Monitoring involves two elements; output and outcome.

Monitoring Output

9.2.2 Output monitoring is essentially monitoring the progress of the delivery of schemes. This will be undertaken by reporting on the completeness of schemes which have been programmed for delivery and the expenditure related to individual schemes. This data will then be compared against the delivery programme.

Monitoring Outcomes

9.2.3 Monitoring outcomes will enable an assessment to be made on the effectiveness of schemes which are delivered through the UTP. Monitoring outcome should be in line with procedures already in place which allow local authorities to monitor against the LTP indicators and targets.

9.2.4 The following methods could be used to monitor outcomes:

- *Mode share surveys* could be obtained via the existing Travelwise programme for town centres. This would help to identify any increase in walking and cycling within the study area as a result of the UTP measures implemented.
- *Queue and delay surveys* to monitor congestion at key locations where clusters of UTP measures have been implemented, such as Old Cross junction, Hertford (if the Byde Street closure is implemented). Before and after surveys should be undertaken at selected key locations to provide evidence of improvement delivery and impact of measures implemented.
- *Patronage figures* to monitor uptake of bus and rail services in response to the UTP measures (and modal shift through comparison of previous data). Patronage figures should be collected for both bus and rail and across a range of services before and after the UTP measures are put in place.

9.3 DATE OF PLAN REVIEW

9.3.1 It is proposed that the plan is reviewed annually in line with the LTP2 and emerging LTP3 monitoring programmes (LTP3 will become the new plan as of April 2011). It is proposed that the first review take place in Nov 2011, approximately 18 months after the plan is finalised. This will provide an opportunity for schemes to begin being implemented and information about their impact gathered. It is likely that much of the information used to review the plan will be linked directly to the Travel Wise surveys and LTP monitoring that is already ongoing.

9.3.2 The plan will be reviewed in 2015/16 at the end of the life of this plan and a modified plan will be published. The five year review will allow for new targets to be added, if appropriate, and for the existing targets to be modified if there has been a change in circumstances.

9.3.3 As part of the Plan review, existing measures, and additional measures arising from assessment of unforeseen pressures, will be re-assessed. A new five year delivery programme will be produced to represent the measures to be delivered during the following five year period.

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