

SOUTH WEST HERTFORDSHIRE TRANSPORT PLAN

Review and Action Plan

November 2008



South West Hertfordshire Transport Plan Review and Action plan

November 2008
Produced for
Hertfordshire County Council

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Contents

Executive Summary	4
1 Introduction	7
1.1 Aim & Objectives of Review	7
1.2 Structure of Review	7
2 Background and Policy Context	9
2.1 Introduction	9
2.2 The Success of the SWHTS to Date	9
2.3 Key Policy Influences	10
2.4 National, Regional & Local Policy & Initiatives	11
3 Study Area Traffic & Trip Information	12
3.1 Road Infrastructure	12
3.2 Rail Infrastructure	12
3.3 Trips and Journey Purpose	13
3.4 Traffic Movements	14
3.5 Congestion Measurement	15
3.6 Travel by Bus	16
3.7 Rail and Underground Travel	17
3.8 Parking Facilities	18
4 Planned Developments and Infrastructure Improvements	19
4.1 Introduction	19
4.2 Watford Health Campus	19
4.3 M25 Widening / Integrated Demand Management	20
4.4 Croxley Rail Link ,Watford Junction Improvement & Abbey Line	21
5 Vision, Schemes & Initiatives	23
5.1 How to Meet the Transport Challenges Ahead	23
5.2 Defining a Forward Vision for SW Herts	23
5.3 Achieving the Forward Vision	24
5.4 Schemes and Measures to be taken forward	25
5.5 Legacy Schemes	25
5.6 New 'Themed' Schemes and Proposals	28
5.7 Cumulative Contribution of the above 'Themed' proposals	33
6 Appraisal and Prioritisation of Potential Future Schemes	34
7 Next Steps	35
7.1 Delivery Programme/ Funding	35
7.2 Looking Further Ahead	36
7.3 On Going Review Process	37

List of Figures

Figure 1.0 – South West Herts Study Area	4
Figure 1.1 – Boundaries	8
Figure 3.1 – Main Transport Hubs in Study Area	12
Figure 3.2 – Main Routes for Congestion Monitoring	15
Figure 4.1 – Major Schemes in Study Area	19
Figure 4.2 – M25 Junctions	20
Figure 5.1 – Legacy Schemes	25

List of Tables

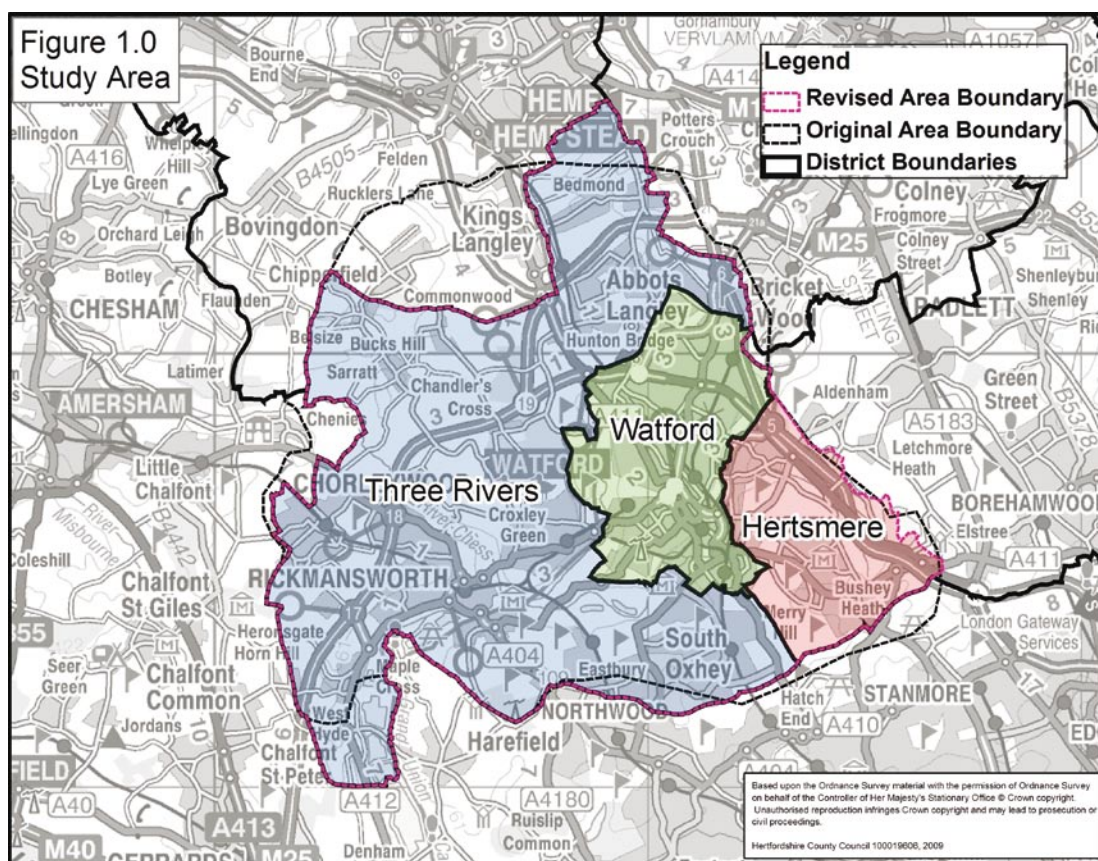
Table 3.1 - AM and PM Peak Period Traffic Flows on Major Roads in the Study Area 1996 and 2007	14
Table 3.2 – Public Bus Services within Study Area	16
Table 3.3 – Work Trips by Rail between Study Area and Elsewhere	17
Table 5.1 – Study Area Routes with Corridor Improvements	32
Appraisal of Schemes Example	Appendix 1
Action Plan	Appendix 2

Executive Summary

Introduction

This Review has been undertaken to refresh the original Transport Strategy for South West Hertfordshire (known as SW Herts), which was published some 12 years ago. The Review considers changes in Policy influences as well as the influence of new developments and changing traffic and travel patterns. It presents an Action Plan for measures to be advanced in the period 2008-2013.

A plan of the SW Herts area is shown in Figure 1.0. The area includes Three Rivers District Council, Watford Borough Council and the south western part of Hertsmere Borough Council.



Forward Vision

The Review provides a forward vision for the area which is in accordance with local and national policies, challenges and targets and the identified objectives for the South West Herts area. ¹

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The forward vision for SW Herts is:

“A sustainable, innovative transport system, that seeks to make travel within the SW Herts area easier through the full utilisation of different transport modes and the better management of the existing network.”

The forward vision seeks to take account of development pressures both within and external to the SW Herts area. Continuing economic and housing growth in particular give rise to increased trips and resultant congestion which run counter to the identified objectives for the SW Herts area.

This Review is intended as a strategic level document that provides a direction for future transport schemes and initiatives in the SW Herts area to follow to achieve the Forward Vision.

Success of the Original SW Herts Strategy

The success of the original SW Herts Transport Strategy is acknowledged, as a variety of schemes and improvements have been implemented since the original Plan which have brought significant environmental and safety benefits to the Area. The majority of schemes have been traffic calming and traffic management schemes, green zones and 20mph zones. Significant improvements have been made in the areas of cycle and walking provision as well. The introduction of decriminalised parking across much of the area has also brought significant benefits.

Current Pressures in SW Herts

However whilst the success of the original SWHTS has been significant in certain areas, it is clear that the focus of SWHTS needs readjustment to address the pressing congestion issues that are now dominant across SW Herts.

The area generally has enjoyed economic prosperity over recent years. Watford in particular has become established as a major attractor for employment, retail and leisure trips, both from within the SW Herts area and from much further afield. However, there are now clear signs that the area is suffering from its own success, with congestion potentially threatening Watford's role as a key centre and also future growth in the SW Herts area as a whole. This also impacts on the quality of the living environment for residents of the area.

The challenge is to address the issues of congestion, whilst continuing to support improved accessibility and sustainable development in the SW Herts Area.

How to meet the Challenges

To achieve the Forward Vision, and to continue to aspire to meet the original objectives of the SWHTS, a more holistic approach is required. The promotion of a full range of schemes, measures and initiatives that individually meet particular objectives but collectively deliver against the overall strategy is the recommended approach. Identification of a broad range of proposals allows an opportunistic approach to be taken; bringing specific proposals forward as funding streams and opportunities present themselves.

To this end, a detailed Action Plan has been prepared (see appendix 2), which sets out schemes and projects that could be delivered over the next 5 years and would assist in supporting the Forward Vision. This Action Plan comprises a combination of different infrastructure projects, training & education programmes, new initiatives and 'smarter choice' type proposals. Many of these schemes are already identified and committed in shorter term programmes, whilst others require studies and feasibility work before detailed projects emerge.

Monitoring and Review of this Plan

It is proposed that a Member Review Panel, comprising local County Council, Borough and District Members will lead an annual review of this document, to ensure that any emerging policies or changes in the SW Herts area have not significantly altered the direction set by the Action Plan. The Annual Review will also afford the opportunity to ensure that the most appropriate schemes, measures and proposals are being brought forward for consideration within the County's annual funding processes. In line with other Area Plans, the Review documentation as a whole will be updated every five years.

1 Introduction

1.1 Aim & Objectives of Review

- 1.1.1 The aim of this Review is to produce a refreshed Transport Plan for SW Herts that aligns all the viable proposals for improving the existing transport network and provisions in the area, and compiling these in an action plan. The Review covers the period 2008 – 2013.
- 1.1.2 The SW Herts area comprises Three Rivers District Council, Watford Borough Council and part of Hertsmere Borough Council. A study plan in Figure 1.1 shows the area boundary for SW Herts and the District Boundaries.

1.2 Structure of Review

- 1.2.1 The Review has the following structure -

Section 2 – Background and Policy Context - reviews the successes to date of the SWHTS and defines the new influences that shape the Forward Vision.

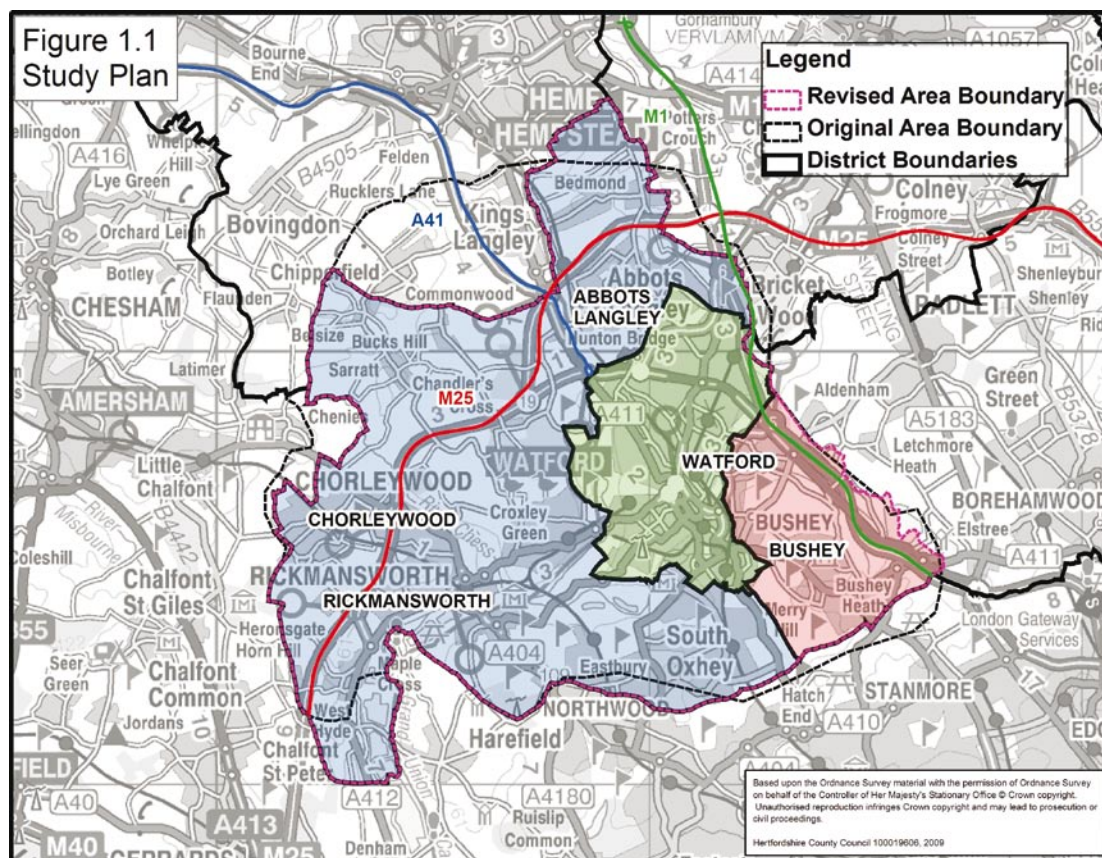
Section 3 – Study Area Traffic and Trip Information - looks at the study area and how traffic and trips in the area have changed since the original SWHTS.

Section 4 – Planned Developments and Infrastructure Improvements - looks at planned developments and infrastructure improvements in and around the SW Herts area.

Section 5 – Vision, Schemes and Initiatives - identifies the potential areas where future transport related proposals should be targeted to assist in achieving the vision for SW Herts and identifies currently unimplemented schemes from the original SWHTS and future initiatives.

Section 6 – Appraisal and Prioritisation of Potential Future Schemes - sets out a framework by which proposed schemes for the SW Herts area can be prioritised. It is anticipated that this framework can be utilised for prioritisation of future schemes.

Section 7 – Next Steps - considers the finance available for schemes currently and looks to a period beyond 5 years ahead to discuss potential ideas for securing funding for improvements in the medium to long term future. The future monitoring of the Review is also set out.



2 Background and Policy Context

2.1 Introduction

- 2.1.1 The SW Herts area includes the town of Watford and the influence of the town on the wider area is significant. The area generally has enjoyed economic prosperity over recent years. Watford in particular has become established as a major attractor for employment, retail and leisure trips, both from within the SW Herts area and from much further afield. The town centre is a retail centre of regional importance and has been designated a Key Centre for Development and Change (KCDC) within the London Arc. However, there are now clear signs that the area is suffering from its own success, with congestion potentially threatening Watford's KCDC role and also future growth in the SW Herts area. This also impacts on the quality of the living environment for residents of the area.

2.2 The Success of the SWHTS to Date

- 2.2.1 The prime objectives of the original SWHTS remain valid. Their aim was to develop a package of integrated transportation measures for the area which would:
- **improve the quality of life in areas where people live, work and play by addressing environmental issues relating to transportation**
 - **assist in maintaining the vitality and viability of the commercial centres of South West Hertfordshire**
 - **promote and develop a transport system in conjunction with land use patterns which provides for the movement of people and goods necessary for the economic and social well-being of South West Hertfordshire's residents**
 - **allow a proper assessment to be made of the impact of any future development proposals and address future movement demands**
- 2.2.2 Since the publication of the original Transport Strategy, a series of local area transport plans have been developed across SW Herts. As a result of these plans, a variety of schemes and improvements have been implemented which have brought significant environmental and safety benefits. The majority of schemes have been traffic calming and traffic management schemes, green zones and 20mph zones. Significant improvements have been made in the areas of cycle and walking provision as well.
- 2.2.3 Parking control is another key area of success. The first Decriminalised Parking Enforcement (DPE) operation was introduced in Watford in 1997. Enforcement and notice processing were contracted out and the lessons learned in setting up the process were shared with the other districts. The Watford operation was joined by Three Rivers District Council in 2001 and Dacorum Borough Council in 2003. The contract for external services is managed by Watford and there are separate legal agreements with Three Rivers and Dacorum, who share the costs. The operation has been successful and effective, as the partnership working between the three has led to a more efficient enforcement of the parking controls.

- 2.2.4 Whilst the success of the original SWHTS has been significant in certain areas, it is clear that the focus of SWHTS needs readjustment to address the pressing congestion issues that are now dominant across SW Herts. There is a need for new thinking and alternative approaches to transport provision to ensure the original objectives can continue to be addressed.

2.3 Key Policy Influences

- 2.3.1 There are a series of key policy influences that are shaping the direction of transportation in SW Herts. These are reviewed briefly below. -
- 2.3.2 **The East of England Regional Spatial Strategy (RSS)** - In essence, the RSS sets out substantial growth requirements for Hertfordshire to 2021, including 83,200 homes and 68,000 jobs, and defining five Key Centres for Development Change (KCDCs), including Watford, where growth is to be focused.
- 2.3.3 **Hertfordshire County Council Corporate Challenges & Local Transport Plan (LTP)** - The Corporate Challenge specific to Transport is to tackle the causes and impact of congestion, and this theme is carried through the LTP where dealing with congestion (by making best use of the network, managing transport growth and developing an enhanced transport system that makes best use of resources) is one of five key objectives. Congestion is a key issue in Hertfordshire and recent public surveys highlight it as a main concern of residents that needs to be dealt with. The LTP contains the Congestion Action Plan which acts as the cornerstone for tackling congestion in the County.
- 2.3.4 **The Emerging Joint Infrastructure and Investment Strategy for Hertfordshire** - This emerging Strategy will define the infrastructure requirements across Hertfordshire to meet the challenging targets set by the RSS. It will also provide a comprehensive, robust and transparent infrastructure funding model, whereby costed infrastructure investment requirements across the County can be matched with the means of funding them. As such, this SWHTS Review provides a key input to the development of the emerging Infrastructure and Investment Strategy and in the future the SWHTS Review can act as the source document to direct and target any funding that is secured back into the SW Herts area.
- 2.3.5 **Local Development Frameworks (LDFs)** - LDFs are a 'folder' or 'framework' of development documents, prepared by the district and borough councils, which outline the spatial planning strategy for the local area. These replace Local District and Borough Plans, which guided development but often took years to compile, consult on and adopt. LDFs will consist of a set of shorter, separate documents that can be produced independently of each other and reviewed when needed. The purpose of this change is to speed up the production of development plans and ensure community involvement is at the heart of the planning system.
- 2.3.6 For the SW Herts area, the LDFs being produced by Watford, Hertsmere and Three Rivers will shape the local development of the communities that make up SW Herts' infrastructure. They will include Core Strategy documents and Site Allocation documents, which will include details of proposed developments and key areas for growth. The anticipated programme for adoption of the Core Strategy documents is 2009 and of the Site Allocation documents is 2010.

2.4 National, Regional & Local Policy & Initiatives

- 2.4.1 The Supporting Information document contains a full list and detailed descriptions of national, regional and local policy & initiatives that have a potential influence on the SW Herts Area. The list includes:

National

- **DfT White Paper – The Future of Transport – A Network for 2030**
- **Planning White Paper – Major Planning Reforms for a Sustainable Future**
- **Traffic Management Act**
- **Local Transport Bill**

Regional

- **East of England/Economic Strategy/RSS**

Local

- **Hertfordshire's Sustainable Community Strategy**
- **Hertfordshire County Council Corporate Challenges**
- **Hertfordshire Local Transport Plan**
- **Hertfordshire County Structure Plan Review 1991-2011**
- **Local Development Frameworks and District Plans**
- **The Mayor's Transport Strategy**

- 2.4.2 It is proposed that a brief policy review is undertaken as part of the annual monitoring and review of this Strategy, to check the relevance and validity of known policy and initiatives and to identify emerging policy that may affect SW Herts at an early stage. Changes in national and regional transport policy, or emerging initiatives (such as the Community Infrastructure Fund (CIF) or Transport Innovation Funding (TIF)) can offer important funding opportunities where strategies are in place and flexible enough to react.

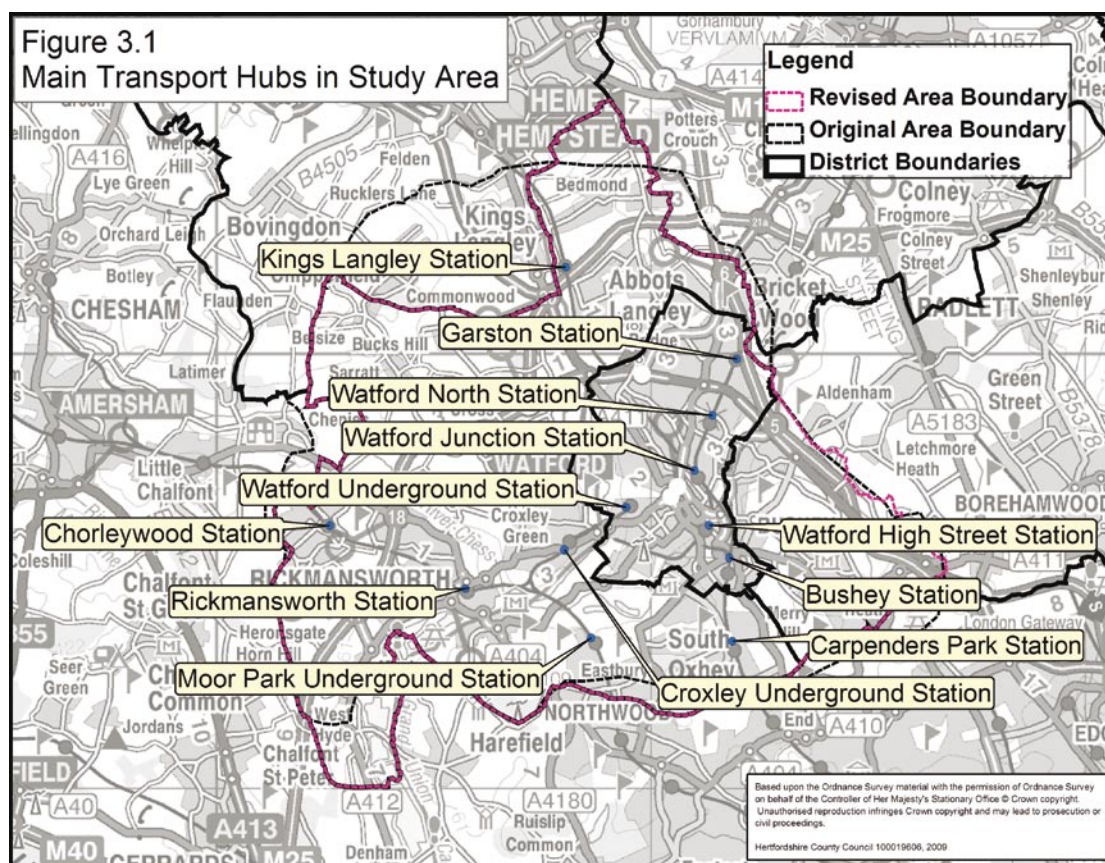
3 Study Area Traffic & Trip Information

3.1 Road Infrastructure

3.1.1 The study area is located to the south and west of the M25/M1 junction, one of the most important junctions on the motorway network. The main radial routes from central London are the A41 and the M1 through Watford and the A404 through Rickmansworth. The main orbital roads are the A412/A405 through Rickmansworth and Watford and the M25.

3.2 Rail Infrastructure

3.2.1 The study area, particularly around Watford, is well served by public transport and the main transport hubs are shown in Figure 3.1 below.



3.2.2 Mainline rail services operated by London Midland serve Bushey Station, Watford Junction, Watford High Street and Kings Langley Station, and London Midland also operate the St Albans Abbey Line, which stops at Garston and Watford North. Rickmansworth and Chorleywood are served by Chiltern Railways, and the Metropolitan tube line, which also serves Croxley and Watford. Virgin Trains also serve Watford Junction Interchange as do London Overground, which links Bushey, Watford High Street and Watford Junction.

3.3 Trips and Journey Purpose

- 3.3.1 In order to provide some comparisons in mode share with the original Transport Strategy, trip numbers and details were obtained from the 2001 census. Direct comparisons cannot always be made, because of the variance in information collected (census information relates to trips to work only) but the analysis does go some way to investigate modes of transport and numbers of trips, allowing comparison to the patterns reported in the 1996 Strategy.
- 3.3.2 The results show that in the period between the original Strategy in 1996, and the 2001 Census, the total number of trips has increased by just over 50%. In terms of mode split, the proportion of car trips has remained the same during the morning peak hour. However, the proportion of car passengers has significantly decreased (16% to 3%). The proportion of passengers using trains and underground has increased (from 6% to 16%), although this is broadly in line with general growth in rail travel. The proportions of those using public buses and school buses has decreased (from 8% to 3%). Although the proportion of cycle trips remains at 2%, the number of trips has increased by 70%. Contrary to this, the proportion of walking trips has reduced from 8% to 2%.
- 3.3.3 The 2001 Census information gives details about work trips into and out of the districts comprising SW Herts. The most popular mode for trips to SW Herts from outside the area is private car (84.4%), which includes passengers, followed by train (5.8%) and bus or coach (3.4%). Trips made by underground (2.3%) and by walking (2.2%) are next most popular, followed by motorcycles (1.1%), bicycles (0.6%) and taxis (0.2%).
- 3.3.4 For work trips leaving the SW Herts area to go elsewhere, the car driver and passenger proportion is 71.2%, while the underground proportion is 11.6% and the train proportion is 11.3%. The proportions using buses and coaches are 2% and motorcycles are 1.8%. The remaining trips are walking (1.3%), cycling (0.8%) and taxi trips (0.1%).
- 3.3.5 As the Census only asked the question about trips to work, there is no comparison with the 1996 Strategy in terms of journey purpose.
- 3.3.6 It is clear from this data that the more sustainable forms of travel –i.e. non-car modes, such as cycling, walking and public transport, are significantly underutilised for trips in the SW Herts area.

3.4 Traffic Movements

- 3.4.1 Recent count data from existing sites on major roads within the study area was collated. This was then compared with the previously recorded data, where available, to review how traffic movements have changed. The information obtained includes the AM peak and PM peak traffic flows, and some with the inter-peak flows.
- 3.4.2 Table 3.1 below shows the comparison of traffic movements for AM and PM peak periods in 1996 and 2007 for some of the major roads (A roads) within the study area. Flows on Stephenson Way, Rickmansworth Road and Sandy Lane have increased with almost 25%, 17%, and 9% respectively from 1996 to 2007 during the AM peak period. Flows on London Road, St Albans Road, and Vicarage Road have decreased by 3.3%, 22% and 7% from 1996 to 2007 during the AM peak period.
- 3.4.3 During the PM peak period, flows on Rickmansworth Road and Stephenson Way have increased by 29% and 0.7% from 1996 to 2007. Flows on Sandy Lane, London Road, St Albans Road and Vicarage Road have decreased by almost 17%, 12%, 3% and 11% respectively from 1996 to 2007.
- 3.4.4 This data provides some empirical evidence to support the experiences of travellers within the SW Herts area that , particularly at peak hours, levels of vehicular traffic on the highway network are at a level that increasing delay and congestion is experienced.

Table 3.1 –
AM and PM Peak Period Traffic Flows on Major Roads in the Study Area 1996 and 2007

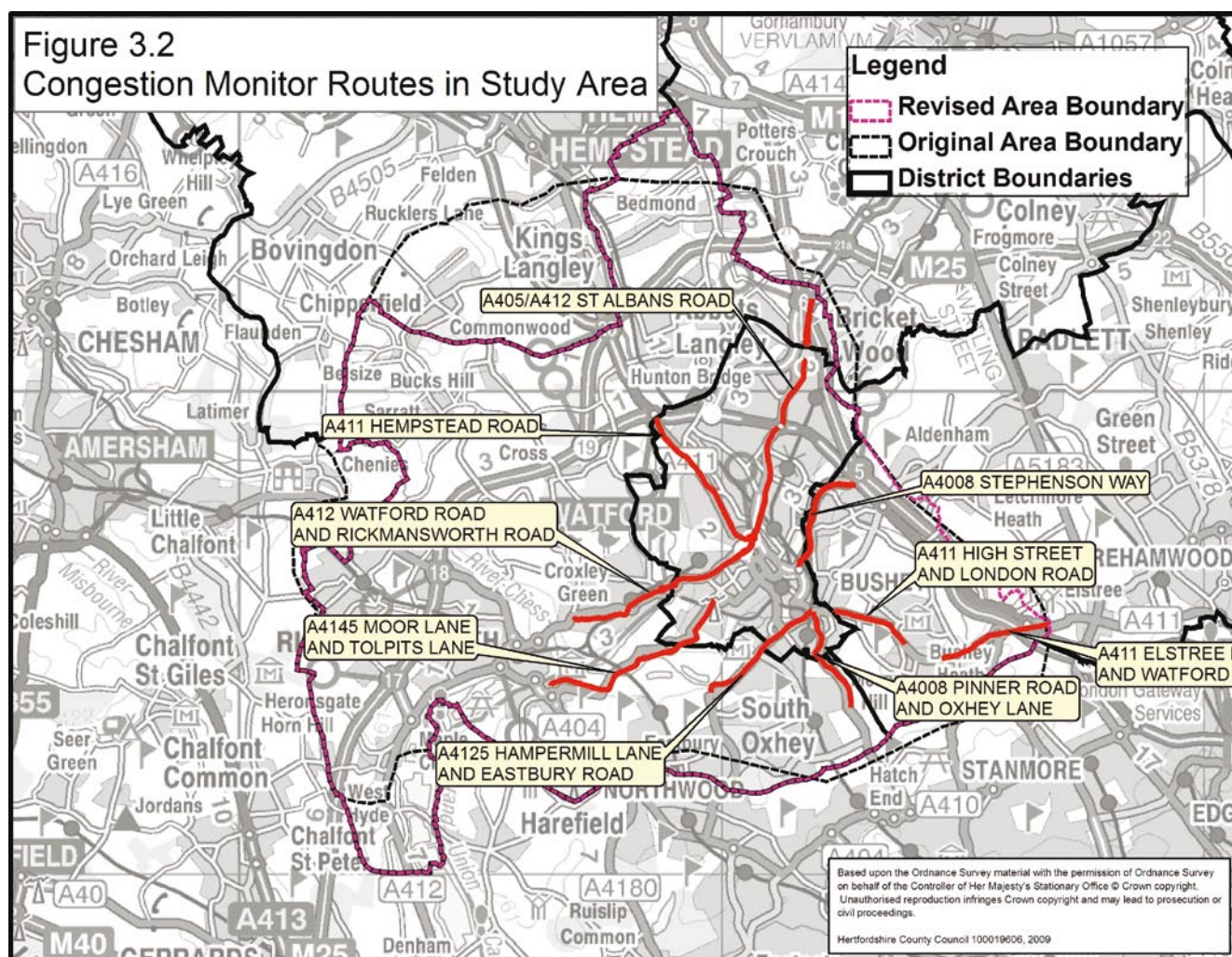
		1996		2007		Percentage variation %	
Road/Site No	Location	AM Peak Period	PM Peak Period	AM Peak Period	PM Peak Period	AM Peak Period	PM Peak Period
A4008	Stephenson Way	3,014	2,915	3,760	3,762	24.75	29.06
A404	Rickmansworth Road	1,434	1,692	1,675	1,704	16.81	0.71
A411	London Road, Bushey	1,230	1,467	1,191	1,257	-3.17	-14.31
A412	St Albans Road	1,414	1,527	1,186	1,366	-16.12	-10.54
A4125	Sandy Lane	932	1,073	1,015	1,046	8.91	-2.52
A4145	Vicarage Road	1,511	1,514	1,412	1,361	-6.55	-10.11

* AM Peak Period 07:00 – 10:00, PM Peak Period 16:00 – 19:00

3.5 Congestion Measurement

3.5.1 Congestion is being monitored in the study area, both nationally, as part of the ITIS study, and locally, as part of the LTP target monitoring. This involves a set of defined routes which are having traffic flows and journey times measured. The routes being monitored within the area are shown in Figure 3.2 and are listed below:

- A4145 Moor Lane and Tolpits Lane
- A412 Watford Road and Rickmansworth Road
- A405/A412 St Albans Road
- A411 Watford Road and Hempstead Road
- A411 High Street and London Road
- A4125 Hampermill Lane and Eastbury Road
- A4008 Pinner Road and Oxhey Lane
- A4008 Stephenson Way



- 3.5.2 In order to define a target for measuring congestion, a range of journey times along these routes, between key points, will be measured. Once a 'baseline' journey time is established, continual monitoring will provide the opportunity to measure the effectiveness of any measures introduced on the corridors to reduce delay and congestion. This data will be brought forward and feed into the annual review for this Plan.

3.6 Travel by Bus

- 3.6.1 For travel by bus, three-quarters of the trips in the study area begin from central Watford and most of the public bus services will either stop in Watford or will pass through it for other destinations. North Watford attracts about half as many trips and is also a main starting point of trips. Table 3.2 below shows the public bus services within the study area.

Table 3.2 –
Public Bus Services within Study Area

Route Number	Route or area served
500/500	Watford – Hemel Hempstead section via Kings Langley
352/R3/5	Hemel Hempstead – Watford via Bovingdon and Sarratt
W5/6	Hemel Hempstead – Maple Cross via Watford and Rickmansworth
W1	Watford – South Oxhey
321	Watford – Luton via St Albans and Harpenden
320	St Albans – Watford via Bricket Wood
724	Harrow – Heathrow Airport via Hertford, St Albans and Watford
W8/10	Abbots Langley and North Watford – Mount Vernon via Watford
R21	Uxbridge – Mount Vernon via Rickmansworth
R4/336	Amersham – Watford via Chorleywood and Rickmansworth
W7/9	Watford – Borehamwood via Bushey
W19/BB1/W12	Watford – North Bushey area
W20	Watford – Oxhey
W30	Watford Business Service
W50	Watford – South Oxhey via Carpenders Parks
142/258	Watford – Brent Cross or Harrow via Bushey
B1/2/3	Borehamwood area services
107/292	Borehamwood – Edgware or Barnet
602	Hatfield – Watford via St Albans Shenley/Radlett
	Airport Coach Services

3.7 Rail and Underground Travel

3.7.1 The 2001 Census Statistics show a breakdown for each district for all commuting work trips between the study area and elsewhere. The proportions for rail and underground are shown in Table 3.3 below as a proportion of all trips in the study area using these modes.

Table 3.3 –
Work Trips by Rail between Study Area and Elsewhere (Locations other than London)

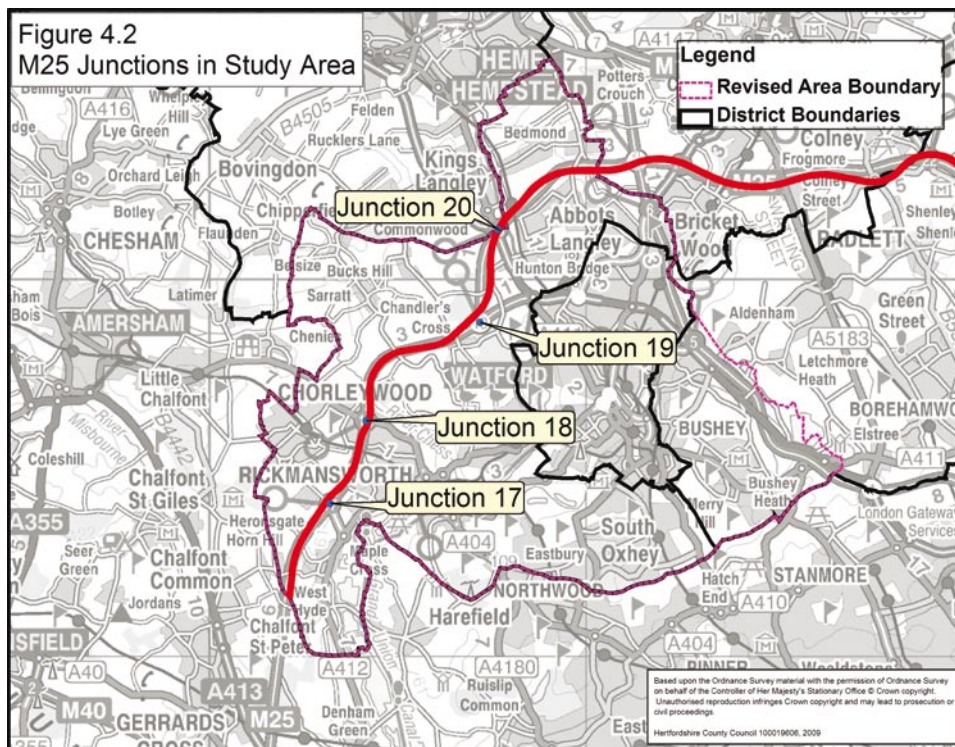
Work Trips from Study Area to and from Elsewhere (other than London)							
Station	Mode	From Study Area to Elsewhere			To Study Area from Elsewhere		
		Trips	% of Trips	Total % of Trips	Trips	% of Trips	Total % of Trips
Watford	Underground Trains	979 2,650	10 28	38.3	440 1,617	15 55	69.4
Three Rivers	Underground Trains	3,046 1,500	32 16	48	328 405	11 14	24.7
Hertsmere	Underground Trains	761 538	8 6	13.7	76 97	3 3	5.8
Total	-	9,474	100	100	2,963	100	100

3.8 Parking Facilities

- 3.8.1 As part of the detailed traffic survey in 1995, a parking survey was undertaken, which provided information about on street and off-street parking. For the Review, parking information was obtained from the districts and boroughs regarding parking spaces and costs and this is detailed below.
- 3.8.2 The majority of the 7,390 off street parking spaces within the study area are in Watford district (6,266). Seven of the town centre car parks are located around The Harlequin: three of these have direct access into the shopping mall (4,580 parking spaces), and three others are managed by the council (401 parking spaces). Watford Junction train station has 765 surface car park spaces.
- 3.8.3 Within the study area in Three Rivers district, Croxley Green, Rickmansworth and Chorleywood have about 884 parking spaces. In Hertsmere borough, Bushey has 240 parking spaces.
- 3.8.4 Most of the car parks within the study area in Three Rivers district are free or less than £3.00 for the day. Within the Bushey area, there are no charges for parking. The car parks controlled by the council within the Watford Borough Council area are less than £3.50 for the day. The Harlequin shopping centre sets the parking charges within its own car parks and at the time of writing charges are in the range of £3.50 to £13.00 dependent on length of stay. Car parking at the Watford Junction station is currently £7 per day, set by the car park operator.

4.3 M25 Widening / Integrated Demand Management

- 4.3.1 The Highways Agency (HA) is to widen approximately 102 km of the M25 by adding an extra lane in each direction to make a 4 lane motorway. This widening on the north side of London is to be undertaken between Junctions 16 (M40) and 30 (A13). These works will take place from 2009.
- 4.3.2 For the section of the M25 within the study area, (junctions 17 and 18) works are planned to be completed in 2012. A plan of this section of the road is shown in Figure 4.2.



- 4.3.3 The widening, from dual 3 lanes to dual 4 lanes, would make use of existing hard shoulders for the new lanes and would create new hard shoulders alongside these. When operational, it is anticipated by the HA, that this increased capacity on the motorway and trunk road network will reduce the number of traffic movements that currently occur through the SW Herts area (as a result of traffic seeking alternate routes on the County network to avoid congestion on the M25). The County Council and the districts/boroughs will seek close liaison with the HA during the planning and construction of the motorway widening scheme, to be reassured that potential delays on the M25 during construction do not result in traffic displacing onto the HCC network across the SW Herts area, but that measures to mitigate any such displacement, should it occur, are in place.

- 4.3.4 Integrated Demand Management (IDM) is currently being considered for the M25 Junctions 17, 18, 19 and 20 by the Highways Agency following the completion of the widening works. IDM potentially utilises access control measures to control the volume of traffic entering the motorway network. The aim is understood to be to achieve a target volume on the M25 of a 75% V/C (volume/capacity). The HA are using this approach to better manage traffic on their network, maintaining more even traffic flow and hence reducing journey times. However, the HA are aware that the consequences of IDM may have significant effects on the local highway network that links to the motorway and so have had discussions with HCC on the use of associated measures within the wider urban environment. HCC and the other local authorities within the SW Herts area would expect the HA to undertake full consultation and embark on a programme of collaborative working prior to any measures being introduced which could adversely impact on the County road network. The potential exists for this to be taken forward as a future traffic management measure within the SW Herts area, as a collaborative exercise between the HA and the local authorities.

4.4 Croxley Rail Link ,Watford Junction Improvement & Abbey Line

- 4.4.1 These projects have been identified as 'Major Projects' within the HCC LTP and as such are following the DfT Major Projects route, whereby funding is sought via a 'bid' to the Secretary of State for Transport. The projects, should they come to fruition, will have significant effects on travel opportunities and patterns in the SW Herts area, but their progression is not dependant on being promoted through this Plan process.
- 4.4.2 **The Croxley Rail Link**, promoted by HCC with the support of Transport for London (TfL), is a scheme to extend the London Underground Metropolitan line to Watford Junction. The project is currently awaiting a funding approval 'in principle' decision from the Secretary Of State. Once this is granted, HCC, as the lead promoter, will embark on a development programme to take the project through the necessary design, procurement and planning, and procedural steps to implementation. The current programme anticipates that the Link could be operational by late 2013 / early 2014.
- 4.4.3 The **Watford Junction Improvement Scheme** combines improved access for all modes to the station and Colonial Way Link Road. This scheme was identified as a Major Project within Hertfordshire County Council's Local Transport Plan. The scheme is currently being progressed through the necessary procedural steps toward a planning application. Subject to satisfactory completion of these processes, it is anticipated that the scheme could be implemented and operational by late 2011/12.

- 4.4.4 The Abbey Line (branch line connection between Watford and St Albans) has seen some success in increasing patronage following its achievement of Community Rail Link status. However, the proposals to increase the frequency of the service through installing a 'passing loop', which would allow two services to run on the line has not been successful, following the decision by DfT to withdraw their support for the passing loop and the enhanced service as not being viable under current operating conditions.
- 4.4.5 HCC still believe the Abbey Line to be a valuable asset for reducing road congestion. HCC are therefore committed to look again at the business case for an enhanced service and propose to fund future studies during 2008/09 to look at the environmental and socioeconomic justifications for improving the Abbey Line service to further bolster the business case. Further ahead, there is the intention to investigate the feasibility and cost implications of alternative options (during 2009-11) to providing a more frequent rail service. Options that may be considered include "tram trains" - vehicles that can operate on both tram and train tracks.

5 Vision, Schemes & Initiatives

5.1 How to Meet the Transport Challenges Ahead

- 5.1.1 Previous sections have highlighted the growth agenda for Hertfordshire generally and for SW Herts specifically; reviewed the existing travel patterns in the area; and looked at the development and infrastructure commitments that are affecting the SW Herts area. Consideration of these elements strongly suggests that current congestion levels are likely to increase. The challenge is to address the issues of congestion, whilst continuing to support improved accessibility and sustainable development in the SW Herts Area.
- 5.1.2 The HCC LTP Congestion Action Plan identifies that there is 'no single solution to the problem of congestion' and this Review follows that theme. The Highway Authority can utilise a range of measures to tackle congestion, through better managing the demand on the existing road network, but it is vital that reducing the need to travel is also addressed, as well as increasing travel choice.
- 5.1.3 Watford Borough Council, Hertsmere Borough Council and Three Rivers District Council, through their LDFs, are already supporting neighbourhood centres – local centres within each borough or district which act as focal points for local services (local Health centres, retail, leisure etc). By ensuring that all transport modes - especially public transport and walking and cycling routes - focus on serving these areas, the need to travel can be reduced and the opportunities for modal share and interchange increased.

5.2 Defining a Forward Vision for SW Herts

- 5.2.1 In defining the forward vision for SW Herts, consideration has been given to
- how travel patterns have changed over the last ten years
 - the current pressures on the transport network, and
 - how these are likely to increase as a result of continuing economic development and housing growth pressures.
- 5.2.2 In addition, any forward vision must remain aligned with the core SWHTS objectives and reflect current and emerging national, regional and local transport and land use policies. Support of these policies and development of proposals that help achieve the targets that emerge from them will be vital to ensure that the widest range of funding opportunities is available.

The forward vision for SW Herts:

“A sustainable, innovative transport system, that seeks to make travel within the SW Herts area easier through the full utilisation of different transport modes and the better management of the existing network”.

5.3 Achieving the Forward Vision

- 5.3.1 Production of a prescriptive list of schemes and measures that ‘must’ be introduced is neither practical nor feasible given the volatility of the development programme in SW Herts and the uncertainty of forward funding streams to deliver what might be a costly programme of transport related proposals. Any scheme proposals that are bought forward, particularly infrastructure changes, will require detailed development and study to ensure the investment made brings forth valuable returns in terms of moving towards achievement of the Forward Vision.
- 5.3.2 To achieve the Forward Vision, and to continue to aspire to meet the original objectives of the SWHTS, a more holistic approach is required. The promotion of a full range of schemes, measures and initiatives that individually meet particular objectives but collectively deliver against the overall strategy is the recommended approach. Identification of a broad range of proposals allows an opportunistic approach to be taken, bringing specific proposals forward as funding streams and opportunities present themselves.
- 5.3.3 To this end, a detailed Action Plan (see appendix 2) has been prepared, which sets out schemes and projects that could be delivered over the next 5 years and would assist in supporting the Forward Vision. This Action Plan comprises a combination of different infrastructure projects, training & education programmes, new initiatives and ‘smarter choice’ type proposals. Many of these schemes are already identified and committed in shorter term programmes, whilst others require studies and feasibility work before detailed projects emerge.
- 5.3.4 In addition, to assist in prioritising different schemes and measures that emerge in the SW Herts area in the future, an appraisal method has been developed by which the relative benefits of different proposals can be assessed in terms of how well they support the overall forward vision for the SWHTS Review. This is discussed in Section 6.

5.4 Schemes and Measures to be taken forward

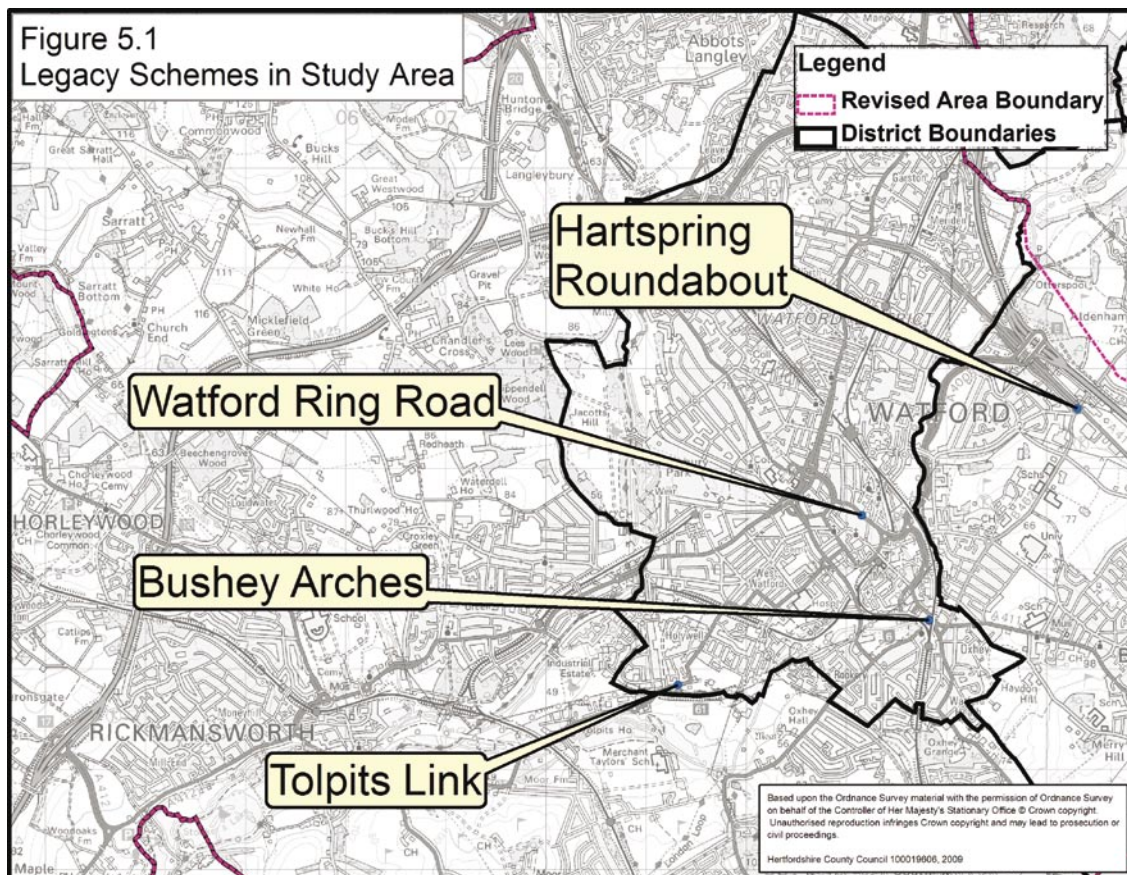
5.4.1 The Action Plan includes –

- **‘Legacy’ schemes** - schemes and measures that were identified in the original SWHTS (or subsequent local area plans) but remain unimplemented to date. Such ‘legacy’ schemes have been tested for their validity in continuing to contributing to achieving the Forward Vision for this refreshed Strategy.
- **New ‘themed’ scheme proposals and initiatives**, that reflect the current direction of transportation thinking to better address congestion issues

5.5 Legacy Schemes

5.5.1 Review of the original SWHTS and subsequently produced local area transport plans identified an extensive list of schemes and measures, a significant number of which remain unimplemented. Many of these schemes and measures seek to address local issues of safety and environment, and whilst they may continue to have some validity in addressing these very local issues, their overall contribution to reducing congestion issues the SW Herts area is not significant. Such schemes are not identified to be progressed through the SW Herts Strategy in the future.

5.5.2 A number of larger legacy schemes / measures that potentially have a greater contribution toward reducing area wide congestion issues were also identified. These included Tolpits Lane Bus Link, Bushey Arches junction, the Town Centre Ring Road modifications and Hartspring Roundabout, and their location is shown in Figure 5.1 below.



- 5.5.3 **Tolpits Lane Link** - Following the original SWHTS, a bus only link (later to include HGVs) was proposed for Tolpits Lane in Watford, to link Three Rivers and West Watford Industrial Estates. Although an initial design received planning approval from Watford Borough Council, no scheme was taken forward. Around 100 local businesses in Tolpits Lane Industrial Estate and West Watford Business Park have been contacted again recently to gauge current interest and support for the link in principle. Less than a third of the businesses locally responded, although most of those who did indicated support for the link.
- 5.5.4 There were previously concerns that the technological solutions to operate and control access to such a link - rising bollards etc - did not offer the reliability required for the link to operate effectively at an affordable cost. Technology has improved and the emerging HCC Intelligent Transport Systems Strategy may offer different solutions in the future. However, there is currently no empirical evidence to support the real need for a link - particularly in terms of a passenger transport demand in the area, and as such it will not be currently pursued through this Review.
- 5.5.5 The **Bushey Arches junction** has been repeatedly considered for major infrastructure change since the original SWHTS was published. Road capacity restrictions at the junction that result from the physical layout of the roads under the railway bridges result in extensive queuing on most approaches to the junction. A number of potential changes to the road layout and junction arrangements have been discussed in general terms since the original SWHTS. However, no specific proposals have been fully tested using traffic modelling. As such, as part of this review, the most recent (2003)scheme for improvements has been tested using a TRANSYT model (which model delays around the junction) and a SATURN traffic model (which looks a traffic patterns over a wider area)
- 5.5.6 The proposals tested looked at providing additional capacity through dualling between the Arches & River Colne, constructing a new structure to carry the dualled section of road over the river and some smaller scale junction alterations
- 5.5.7 Whilst the TRANSYT modelling indicated some marginal overall benefit across the junction area as a whole, there were some links / approaches that gained at the expense of others. Whilst an overall benefit could be recognised, given that the likely cost of the scheme was in the £millions, there were concerns as to how significant the value for money benefits would be. When the SATURN model was used to look at the wider area it became clear that increasing capacity at the junction would most likely draw more traffic onto the approaches for other areas - effectively 'filling up' any new capacity on the road network that was created.

- 5.5.8 As such the proposals for this area should focus more on information to road users and management of congestion. There may also be options for a contra flow bus lane, but this would have to be fully investigated. Minor local improvements in the functioning of certain junctions that feed into Bushey Arches should be investigated – for example at Chalk Hill/Aldenham Road and Pinner Road/Aldenham Road. Changes to the Dalton Way / Lower High Street Junction have been put forward as part of highway works associated with the development of the Watford Health Campus site, although the timescale for these improvements is yet to be established in detail. Opportunities for footway widening and pedestrian crossing improvement through the Arches area are also potentially feasible and should be investigated further. For passenger transport services in the area there is the potential for improvements in turning /waiting areas and better utilisation of available station forecourt and highway verge land to improve accessibility to services. These elements should be brought forward in a holistic overview of the junction area.
- 5.5.9 **Watford Town Centre Ring Road** similarly experiences congestion which on occasions, results in a 'grid lock' situation from specific combinations of events affecting the network (increased traffic levels at peak shopping times and associated with sporting events at Watford football club, weather, roadworks removing capacity from the network etc).
- 5.5.10 As with Bushey Arches, a proposal for the alteration of the ring road – to two way operation – was tested using the appropriate traffic model. The modelling suggests that whilst alteration of the ring road to operate in a two-way mode has some wider traffic implications, it appears to function well with no significant delays. An alteration to two-way operation would provide opportunities for significant improvements within the Town Centre core, and would improve bus priority and accessibility, especially from the west. It should be noted, however, that the modelling assumed that the Colonial Way Link Road, which provides a new link in the highways network between Colonial Way and St Albans Road was already in place. Without this link, the operation of the two way link road may have different implications on the highway network. Given that the Colonial Way Link, (which will be implemented as part of the Watford Junction Improvement scheme) is not scheduled for construction until 2011/12, proposals for the alteration of the two way link road should be considered in the medium term period.
- 5.5.11 **Hartspring Roundabout** was reviewed for possible geometric improvements (ie. improvements to the layout) and these were modelled using the SATURN model, as mentioned above. No significant benefits were identified as a result of the changes and therefore no highway improvement measures have been identified.

5.6 New 'Themed' Schemes and Proposals

5.6.1 The underlying **themes** of the Forward Vision are

- better management of existing network
- sustainability
- innovation
- accessibility / utilisation of all modes

("A sustainable, innovative transport system, that seeks to make travel within the SW Herts area easier through the full utilisation of different transport modes and the better management of the existing network")

5.6.2 The new schemes and measures to be brought forward as part of the continuing SWHTS must seek to contribute to these themes and thus assist in achieving the Forward Vision. A fuller description of the range of proposals is given in the supporting document. Listed below are the main types of proposals to be brought forward under each of the four themes above.

5.6.3 **Better Management of Existing Network** - Proposals here have strong links to the Highway Authority's duties under the Traffic Management Act and are centred around ensuring that appropriate traffic uses the appropriate parts of the highway network – e.g. traffic that is passing through the SW Herts area should be managed to ensure it utilises the route offered by the M25.

5.6.4 Schemes and measures thus include: -

- Area wide signing strategies
- Parking control – the availability of parking in an area has a significant influence on whether people choose to travel by car or other modes. The management of parking is not consistent across the SW Herts area, for example with Bushey having no parking charges and thus being 'out of sync' with on-street parking policies in other areas. A study as to how area wide management of parking may bring benefits, together with a transfer of best practice in decriminalised parking management should be considered.
- Congestion Action Plans on identified corridors / specific locations (linked to road space booking / permits to work on the highway)

The identified corridors where congestion action plans need to be developed should be focused on those 'reported Congestion Hotspots' within the SW Herts area, as identified in the HCC document "Tackling Congestion in Herts". Locations include –

- Bushey Arches
- Hampermill Lane / Eastbury Road
- Hagden Lane (approaching the Hornets)
- Hempstead Road
- Batchwood Heath Road / White Hill
- Moor Lane
- Watford Road

- Improved & optimised traffic signal control
- Variable Message Signing to pass information to road users
- Expansion & improvement of the existing Urban Traffic Control systems – linking traffic signal installations at key junctions to better manage traffic movement on the network.

5.6.5 **Sustainability** - Reducing the need to travel by car is the most effective way to achieve a more sustainable transport system. Watford Borough Council, Three Rivers District Council and Hertsmere Borough Council are seeking to support local neighbourhood centres through their emerging Local Development Frameworks, with the aim of reducing the need for people to make longer journeys by car when key services and facilities can be made available within walking and cycling distance.

5.6.6 **Cycling and Pedestrian** - Schemes and measures will be taken forward and the further development of existing cycle strategies within the SW Herts area will continue. Schemes and measures include the development of new cycle routes, parking facilities, as well as cycle training provision and the development of well maintained and safe pedestrian routes. An example of such an approach is already emerging, as Watford Borough Council with Three Rivers District Council submitted a bid to become a 'Cycling Demonstration Town'. This was part of an investment programme launched by DfT under the 'Cycling England' banner but unfortunately was unsuccessful. The area covered by the bid includes Watford, Rickmansworth, and Croxley Green amongst other areas.

5.6.7 **Other cycling proposals** include further expansion of the Greenways Strategy in Hertsmere, which has played an important role in the provision of non-motorised routes in the Bushey area. These routes play an important role in connecting Hertsmere residents to employment and services in the neighbouring Borough of Watford.

- 5.6.8 Pedestrian priority routes also need to be developed across the SW Herts area. Walking is a healthy and sustainable mode of transport which is appropriate for short journeys and can be combined with passenger transport to facilitate longer journeys. Ideally, priority routes should be comprehensive and connect all major destinations throughout towns and especially passenger transport facilities and schools. Indeed, a focus on pedestrian priority routes and thereby seeking to increase the 'status' of walking will assist in developing pedestrian routes for children to travel to and from schools with better personal and road safety in mind as part of the Safer Routes to School project
- 5.6.9 Identification of important pedestrian routes as 'priority routes' will assist in targeting the necessary improvements that are required to ensure that people are able to walk safely and in an attractive environment that will encourage more regular walking. Measures can include –
- New or wider footways (as part on new developments or improvement to existing corridors)
 - controlled and uncontrolled crossings including School Crossing patrols;
 - dropped kerbs and tactile paving;
 - improved lighting;
 - clear local destination signing;
 - benches, and
 - removing/moving obstructive street furniture.
- 5.6.10 Park and Ride - Park and Ride (P&R) schemes have previously been considered within the SW Herts area. However, no specific site is currently identified for such a scheme within the local authority policies and plans for the area. It should be recognised that there are varying levels of support for the principal of a P&R scheme within the Plan area, and indeed whilst P&R schemes can have benefits in reducing traffic movements within a defined area, it is not considered appropriate at this time to include a specific proposal to investigate the benefits of P&R as a solution in advance of the other initiatives and projects identified which may bring reductions in congestion.
- 5.6.11 Innovation and Smarter Choices - HCC is currently developing an Intelligent Transport Systems (ITS) Strategy which will set out the benefits that ITS systems – such as traffic signalling, electronic signing, using traffic data in different ways – can bring to improve the flow of traffic on Hertfordshires road network. The ITS Strategy will specify the requirements of an overall ITS system and then define the package of measures that would deliver these requirements, along with a long term deployment plan to put the systems in place.
- 5.6.12 Given the high levels of congestion experienced in the SW Herts area, many of the proposals that are expected to emerge from the ITS strategy are likely to be utilised in the SW Herts area at the beginning of the Strategy deployment programme.

5.6.13 ITS Schemes and measures include: -

- New Urban Traffic Management and Control (UTMC) systems to reduce congestion by increasing junction capacity and coordinating traffic lights over a wide area to keep traffic moving.
- Information provision, supplying route planning and other improved information about the state of the network direct to the public in a format that suits them, to improve accessibility to transport
- Directional signing that 'reacts' to live traffic information can also be delivered by ITS.

All of these measures would aim to change people's behaviour so that they choose to use their cars less.

5.6.14 Innovation as a theme will also include 'Smarter Choices'. DfT's 2004 report "Smarter Choices – Changing the Way We Travel", reviewed the effectiveness of 'soft' measures in the UK and concluded that:

"every £1 spent on well designed soft measures could bring about £10 of benefit in reduced congestion alone, more in the most congested conditions, and with further potential gains from environmental improvements and other effects".

For SW Herts, where high levels of congestion exist, with resulting poor environmental conditions, such as lower air quality and higher pollution, the potential offered by 'Smarter Choices' options should be investigated to the full.

5.6.15 Schemes and Measures thus include –

- **TravelSmart** – individualised travel marketing, offering tailor-made information and support, enabling people to walk, cycle and use public transport more often. A TravelSmart project commenced in April 2008 in Watford. Sustrans, the sustainable transport charity use an office based in Watford to promote walking, cycling and public transport to households in Watford over a 2 year period. This will involve household interviews and personalised journey planning. When this has been used in other areas, up to a 10% reduction in 'using car as driver' trips have been observed, alongside up to 20% increases in trips by sustainable modes within the target population.
- **Travel Plans** – already in place in parts of the SW Herts area. Green travel plans, school travel plans and business travels plans, alongside newer initiatives such as car clubs (see below), can all assist in achieving a measurable modal shift from the car to other modes, and to multiple occupancy of cars where they are used. To seek maximum benefit from the introduction of such measures, the aim must be to concentrate on major generators of cross-area movements (e.g. secondary schools, major employers) and actively encourage the implementation of such approaches once the initial Plan has been produced. This can be achieved through education, but in the case of new businesses, the development control process has a key role to play.

- **Supplying travel information** at key interchange / high travel demand points within neighbourhood centres ('transport hubs'). This allows people to make short initial journeys, by foot or cycle, to a location where they can get information and use different travel modes that coincide at that point – bus, taxi etc to continue their journey.
- **Car clubs** – schemes being devised to encourage car sharing. For example, Watford Borough Council has implemented www.watfordjourneyshare.com, a car and journey sharing partnership with eight other major employers in Watford town centre. Users can register on the website which matches them to potential car shares, thus reducing the number of private car journeys made.

5.6.16 **Passenger Transport** - The approach to increasing passenger transport patronage, particularly bus usage, is a complex one. Many of the proposals set out above will assist in shifting the balance toward passenger transport, and attracting new users. However, for people who currently regularly use bus services, those services need to be reliable, predictable in terms of journey time, and offer an acceptable level of service.

5.6.17 In order to try and address issues of network reliability and service experience, HCC has recently undertaken a Bus Network review and has taken a corridor based approach in the current set of Network Reviews. Within the 100 or so corridors identified, there are a number where there is potential to achieve significant improvements which would contribute to the objectives of the LTP. A total of 20 such corridors are identified, with 8 of these being within the SW Herts area.

5.6.18 The table below shows the routes in the SW Herts study area that will undergo corridor improvements. The improvements are proposed to start anytime between 2007 and 2011.

Table 5.1 Study Area Routes with Corridor Improvements

Route Number	Route or area served
500/500	Hemel Hempstead – Watford section
W5/6	Maple Cross – Watford – Hemel Hempstead
W8/10	North Watford – Watford – Northwood
W7/9	Watford – Bushey – Borehamwood
321	Watford – St Albans – Luton
320	Watford – St Albans – Harpenden
602	Hatfield – St Albans – Watford
724	Harlow – Heathrow Airport

5.6.19 The proposals for each corridor improvement will cover:

- Investment in either new or accessible vehicles to meet DDA requirements.
- Introduction of quality bus stop and shelter improvements at main stops to complement vehicle improvement.
- Package of marketing measures to increase awareness of the service and changes, and to market subsidised fares on offer to young people. Appropriate information is particularly key given the proximity of the Bushey / Watford areas of SW Herts to London, and the potential confusion over how Hertfordshire bus and train services relate to those run by Transport for London – passengers need to be fully informed to ensure they can benefit from the most appropriate fare.
- Where appropriate, corridors would be part of Quality Partnership, covering wider issues relating to reliability, punctuality and service delivery.
- Attention to customer service and driver training issues.
- Monitoring of performance by relevant partners to project.

5.6.20 This corridor improvement programme should be regarded as a core element in achieving the Forward Vision for the SW Herts area. Improvements to bus services along these key corridors, in conjunction with other proposals set out under the themes of better management of existing network, sustainability and innovation give the opportunity to facilitate a clear shift in the way travel mode priorities are set on the network, with passenger transport being brought much more to the fore.

5.7 Cumulative Contribution of the above ‘Themed’ proposals

5.7.1 Delivery and implementation of proposals outlined under the above themes will provide the maximum opportunity for the most appropriate mode of travel to be used for each particular journey. This management of the demand for travel in the area will deliver considerable benefits against the core SWHTS Objectives.

5.7.2 In addition, in order to move toward achievement of the Forward Vision, it is important that as the range of proposals and initiatives identified above are progressed, the linkages between them and the degree to which they contribute to the overall SWHTS is continually considered and reappraised.

6 Appraisal and Prioritisation of Potential Future Schemes

- 6.1.1 The available funding for schemes, projects and initiatives to improve transport provision is frequently less than the overall budget that would be required to implement all proposals. As such, this section sets out a **generalised appraisal framework** that has been developed to provide a method by which a wide range of different types of measures could be appraised and prioritised. The 'framework' allows different proposals to be appraised and assessed against each other, in terms of how well they support the overall forward vision for SW Herts.
- 6.1.2 The appraisal framework developed has utilised the DfT 'shared priorities' of **Safety, Congestion, Accessibility, Air Quality and Quality of Life**, and for each of these priority headings, a number of 'sub criteria' which have a particular relevance for SW Herts have been identified.
- 6.1.3 Any scheme to be appraised can then be scored against the sub-criteria headings under the 5 shared priorities using a five point scale **
- +2 Strong Positive Impact
 - +1 Moderate Positive Impact
 - 0 Neutral
 - 1 Moderate Negative Impact
 - 2 Strong Negative Impact
- 6.1.4 This basic methodology can be applied to schemes that are brought forward within the overall SW Herts Strategy now and at any point in the future, offering an objective initial appraisal and prioritisation tool, if required, where many schemes may be competing for limited funds.
- 6.1.5 It should be noted that HCC has specific targets defined within its Local Transport Plan and all schemes that are brought forward need to deliver against these targets to qualify for funding. The SW Herts appraisal framework can thus act as an initial objective appraisal and prioritisation tool, to set relative priorities within the SW Herts area, but each scheme will also need to deliver against the appropriate LTP target.
- 6.1.6 Appendix 1 of this Review sets out the detailed methodology for the Appraisal framework which will allow schemes, proposals and measures that are brought forward in the SW Herts area in the future to be objectively prioritised against each other.

** [Note - To reach a 'total' score for any individual scheme, the scores for each of the five shared priorities are totalled. Weighting factors have been applied to reflect the variable number of 'sub -criteria' for each of the shared priorities, such that all five contribute equally to the scheme total].

7 Next Steps

7.1 Delivery Programme/ Funding

- 7.1.1 An Action Plan has been prepared (see after page 43) which shows the anticipated range of scheme and measures expected to be delivered in the SW Herts area in the next 5 years. It also indicates, where possible, the potential funding sources that may be available for proposals of different types.
- 7.1.2 The major source of funding in the short to medium term remains the LTP - ongoing annual funding from Government that is determined by a formula based approach. LTP funding is, however, directed at schemes and measures that both demonstrate a contribution to countywide transport targets and have been prioritised on a countywide basis. There are a wide range of other funding sources that should be explored, and the supporting information document contains a review of the range of likely sources of finance that are available for local authority transport investment.
- 7.1.3 There is hence a need to identify additional funding sources and developer contributions will be an important contributor in SW Herts. Developer contributions ("Section 106" funds) are sought where new transport infrastructure or services are required to mitigate (partially or completely) any adverse performance of the existing transport network caused by the implementation of a new development. The SW Herts area has a high level of development pressure and as such, Section 106 contributions may be substantial in coming years.
- 7.1.4 It is thus important that the proposed schemes and measures identified in the Action Plan provide real and meaningful improvement for all users of the transport network in the SW Herts area, whatever mode they are utilising. Schemes identified must both support LTP targets and corporate challenges as well as contribute toward achieving the Forward Vision for Transport in SW Herts.
- 7.1.5 Where developments come forward that may have an impact on the existing transport network, and an appropriate Section 106 contribution is identified and agreed, if real and meaningful schemes already exist which will both mitigate the impact of development whilst supporting LTP targets and corporate challenges, these can be brought forward quickly and to the benefit of all parties.

7.2 Looking Further Ahead

- 7.2.1 Whilst the type of measures outlined in Section 5 will bring benefit, in terms of better control of traffic movement and increase in predictability of journey time, there will remain a concern as to whether they are capable of giving significant reductions to the expected increasing levels of congestion across SW Herts. Development pressures identified will only serve to increase travel demand in the Area. In the middle to longer term, therefore, it is appropriate that consideration should be given to **demand management** options for the most highly congested areas / roads in SW Herts.
- 7.2.2 There are a range of opportunities by which the demand for travel can be managed. Many of the wider “demand management” techniques available are referred to under separate headings in this Review – for example, cycle routes, bus lanes, pedestrianisation, traffic calming, parking control. At a strategic level, all demand management techniques seek to allow travellers free-flowing traffic and efficient public transport, as well as providing adequate space for walkers and cyclists. The aim is to assist in improving quality of life, particularly in urban areas, and to make travelling less stressful, healthier and more enjoyable. In terms of longer term demand management, in order for this to have a significant effect on congestion reduction, it is recommended that charge related techniques are considered as defined below.
- 7.2.3 “Charge related” demand management options comprise -
- Congestion charging - where drivers are charged for entering a charging zone
 - Workplace parking levy - where companies and organisations are charged for each parking space at their premises. Currently, up to 90% of people driving to work park for free when they get there. As a result there is no incentive to consider alternative forms of travel
 - Effective penalties and adequate enforcement to ensure drivers stick to the rules
- 7.2.4 Utilisation of these techniques can give opportunities for better usage of the areas where, say, congestion charging occurs –for example, identifying pedestrian areas or gated areas (which allow buses through to the centre of a town, but exclude cars). The major advantage of such price related schemes is of course that they provide a revenue stream which can then be invested into other transport and travel related measures, most obviously the improvement of passenger transport services.
- 7.2.5 At present, congestion charging as a concept has only been successfully implemented in the UK in London. The appropriateness of such a technique to a small, urban area such as, say the centre of Watford within the SW Herts area, would need to be carefully assessed. A sensible way forward would be to undertake a study of the available congestion charge-related demand management techniques available and test them for validity in this location.

7.3 On Going Review Process

- 7.3.1 It is proposed that a Member Review panel, comprising local County Council Borough and District Members will monitor changes and developments that may impinge on the original objectives of the Strategy, as well as update the Review with progress of developments within the study area. The panel will meet on at least an annual basis, expected to be in March of each year, to both review the Plan in general terms (in relation to new policy that may need to be considered) but more specifically to review the Action Plan to ensure that the most appropriate schemes, measures and proposals are being brought forward for consideration within the County's annual funding processes. In line with other Area Plans, the Review documentation as a whole will be updated every five years.

Appendix 1

Appraisal Framework Methodology

1 Appraisal and Prioritisation of Schemes

1.1 The Appraisal Framework

In many cases, the available funding for schemes, projects and initiatives to improve transport provision is frequently less than the overall budget that would be required to implement all proposals. As such, this section describes the methodology by which an appraisal framework has been developed to seek to allow a wide range of different types of measures to be appraised and prioritised. The intention is to have a consistent 'framework' by which the relative benefits of different proposals can be appraised and assessed against each other, in terms of how well they support the overall forward vision for the SWHTS Review.

The appraisal framework developed has utilised the DfT 'shared priorities' of **Safety, Congestion, Accessibility, Air Quality and Quality of Life**, and for each of these priority headings, a number of 'sub criteria' which have a particular relevance for SW Herts have been identified.

Any scheme, project and initiative can then be 'scored' against these sub-criteria to establish how well they match the key deliverables for the SWHTS.

1.2 Objectives and Evaluation Criteria

Any schemes to be appraised can be assessed against SW Herts focussed sub criteria under the headings of the five DfT Shared Priorities,

The 'scoring' scale utilised is between -2 and +2, where:

+2 Strong Positive Impact

+1 Moderate Positive Impact

0 Neutral

-1 Moderate Negative Impact

-2 Strong Negative Impact

1.3 Original SWHTS Objectives

To briefly recap, the original objectives of the SWHTS were to develop a package of integrated transportation measures for the area which will:

- improve the quality of life in areas where people live, work, and play by addressing environmental issues relating to transportation
- assist in maintaining the vitality and viability of the commercial centre of South West Hertfordshire
- promote and develop a transport system in conjunction with land use patterns which provides for the movement of people and goods necessary for the economic and social well-being of South West Hertfordshire's residents
- allow a proper assessment to be made of the impact of any future development proposals and address future movement demands.

1.4 Shared Priorities & Sub-Criteria

The 5 DfT "Shared Priorities" that the Highways Agency have to deliver are defined as:

- congestion,
- accessibility,
- safer roads,
- better air quality and
- quality of life.

For each of these a series of **sub-criteria** have been defined which are intended to act as sensible 'tests' against which any scheme or project can be assessed.

The original SWHTS objectives have been considered to define the 'sub-criteria' which have a particular relevance for the South West Herts area. The objectives have been considered, along with various objectives, indicators and targets contained within County, Borough and District strategic documents and policies.

1.4.1 Congestion

The LTP objectives for tackling congestion are:

- 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 country, 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 the best use of resources.

Five congestion sub-criteria have been defined to have an increased focus for SW Herts, namely :

- 1) Area Wide Reduction – potential to reduce SW Herts area wide congestion
- 2) Reduction on Congested Links – potential to address congestion on the specific key routes listed in Section 3
- 3) Reduction for Planned Developments – potential to remove congestion in, or as a result of, planned new developments
- 4) Impact on Network Management Duty – subjective judgement on the impact on the performance of the road network within the authority, based on the sub-criteria above
- 5) Modal shift from car – potential to affect, influence or facilitate a reduction in car modal split.

1.4.2 Accessibility

The accessibility objectives from the LTP are:

- 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

Again, five accessibility sub-criteria have been identified for SW Herts

- 1) Increased Public Transport Mode Split – potential to affect, influence or facilitate an increase in public transport mode split
- 2) Increased accessibility for Planned developments – potential to increase non-car mode connections for planned developments
- 3) Reduced Demographic Social Exclusion – potential to reduce social exclusion for demographic groups such as economically disadvantaged groups or for work/educational trips
- 4) Improved Disabled Accessibility – potential to improve disability accessibility based on likely time saving/impact and numbers of people affected
- 5) Enhanced Regeneration and Economic Growth – judgement based on improved links between employment, retail areas and residential areas.

1.4.3 Safer Roads

The LTP objective is 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.

Safety has not been grouped into any sub-criteria and has been assessed for each scheme overall based on scheme accident reduction, perceived accident reduction, accident reduction for key groups such as rural or urban conurbations, workplaces, speed management areas, motorcyclists, economically disadvantaged and children.

1.4.4 Better Air Quality

The LTP objective is to mitigate the effect of the transport system on the built and natural environment and on personal health.

3 sub-criteria have been identified for air quality:

- 1) Improved AQMA (Air Quality Management Area) – likely impact on AQMAs estimated using methodology for authority wide improvement. The AQMA sites that fall within SW Herts are:
 - a. St Albans Road
 - b. Farraline Road
 - c. Pinner Road
 - d. Chalk Hill
 - e. Horseshoe Lane/A405 junction
 - f. Properties around the M1
- 2) Furthering Air Quality Action Plans – potential to contribute to Air Quality Action Plans, based on judgement. For each AQMA site the transport issues have been determined and their potential solution put into an Action Plan (details are given below **).
- 3) Improved or Maintained Air Quality in key areas – judgement on impact in key areas such as residential areas or near sensitive sites such as schools or hospitals.

**AQMA sites and related action plans are as follows -

- a. St Albans Road – the main transport issues are high traffic volumes and slow moving traffic, the high number of HGV's and the high number of buses. The potential solutions within the draft Action Plan are possible re-routing of traffic, the North Watford signing scheme for HGV's and to continue discussions with bus operators.
- b. Farraline Road – the transport issue is the queue length at traffic signals. The potential solutions are for the gyratory system to be assessed on the Council's Forward Works Programme and investigate before and after reports on the traffic lights in the area.
- c. Pinner Road/Chalk Hill – the main transport related issues are bottleneck problems at Bushey Arches, the high volume of traffic and junction issues. The potential solutions are the dualling of the roads around Bushey Arches, reviewing the traffic flow modelling driven by the ring road dualling and junction simulations.
- d. Horseshoe Lane/A405 Junction – the main issue is the queue lengths due to stationary traffic at the junction. The potential solutions are to investigate the before and after outcome on the air quality of the scheme carried out on this junction to adjust pedestrian phases at the traffic lights, to investigate whether local schools have school travel plans, and if any safer routes to school schemes have been done in this area or are planned.

[Note – Further information regarding Air Quality Management areas can be viewed at www.hertsbedair.org.uk ,
<http://www.watford.gov.uk/ccm/content/ehl/east/-413.en>
<http://www.hertsmere.gov.uk/environmentplanning/pollution/pollutionair>
<http://www.threerivers.gov.uk/Default.aspx/Web/AirQuality>]

1.4.5 Quality of Life

The LTP objective is to raise awareness and encourage use of more sustainable modes of transport through effective promotion, publicity, information and education.

Four quality of life sub-criteria have been identified:

- 1) Spaces and Streetscapes
- 2) Personal Safety, Security and Crime
- 3) Healthy Communities – potential to encourage walking or cycling
- 4) Noise

Any scheme is thus scored against each of the focussed sub criteria under the headings of the five DfT Shared Priorities using the defined scale.

To reach a 'total' score for any individual scheme, the sub criteria scores for each of the five shared priorities are totalled. Weighting factors have been applied to reflect the variable number of 'sub –criteria' for each of the shared priorities, such that all five contribute equally to the scheme total.

1.4.6 Local Transport Plan Targets

The County Council has specific targets within its Local Transport Plan which all of the schemes and measures it brings forward have to deliver against. Whilst the above appraisal methodology can act as an initial objective appraisal and prioritisation tool for schemes in the SW Herts area, each scheme will also need to deliver against the appropriate LTP targets.

Appendix 2

Action Plan

South West Hertfordshire Transportation Strategy Review - Action Plan

Proposal / Scheme	LTP Targets <small>See LTP 2 for full definitions of LTP Target Performance Indicators</small>	Implementation Profile				Funding Source	Promotor	Comments
		2008	2009	2010	2011	2012		
Major Schemes								
Watford Junction Improvement Scheme (incl. Colonial Way Link Road)	LTP Major Project (Congestion, Passenger Transport, Accessibility)						DfT Major Scheme Bid / S106 / NR & Rail Industry	Interchange scheme facilitated by new link road. Scheme development processes mean earliest start is 2010/11
Watford Ring Road - 2 Way operation	Congestion - Peak period traffic flows	█	█				Main scheme - LTP Medium Term Core Programme / S106	Current feasibility work assumes new Colonial Way Link to be operational. Scheme likely to bring some decongestion benefits but will have important secondary benefits to Watford town centre accessibility
Croxley Rail Link	LTP Major Project (Congestion, Passenger Transport, Accessibility)						DfT Major Scheme Bid / TTL & other LA contributions / potential third party & developer	Scheme has been submitted to DfT for initial funding approval. Processes & procedures mean earliest start is 2011
Abbey Line Community Rail	Abbey Line (Annual Passengers)						LTP Medium Term Core programme / DfT / NR	DfT have withdrawn support for passing loop.

South West Hertfordshire Transportation Strategy Review - Action Plan

Proposal / Scheme	LTP Targets	Implementation Profile					Funding Source	Promotor	Comments
Better Management of Existing Network									
Committed Schemes									
Ovalline Safety & TM Scheme, Abbotts Langley	Safer Roads(casualty reduction & speed limit compliance) Cycling Trips	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	(2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Brookdene Ave Traffic Calming, Oxhey	Safer Roads (casualty reduction & speed limit compliance) Cycling Trips	<div>Prelim Design</div>	<div>Design / Works</div>				LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Bushey Hall Rd / Bushey Grove Rd	Safer Roads (casualty reduction & speed limit compliance) , Congestion	<div>Design</div>	<div>Works</div>				s106 (2007/8 IWP scheme)	HCC	Expected Implementation 2010/11 FY
Sydney Road Traffic Calming	Safer Roads (casualty reduction & speed limit compliance)	<div>Prelim Design</div>	<div>Design</div>	<div>Works</div>			LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Wiggenthall Rd / Farraline Rd - Ped Crossing	Safer Roads (casualty reduction & speed limit compliance)	<div>Design</div>	<div>Works</div>				LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Extension of Variable Message Signing, Watford Town Centre	Congestion - Peak period traffic flows	<div>Final design / works</div>	<div>Expansion of existing car park information signs by addition of 6 (boc) new signs</div>				LTP (2007/8 IWP scheme)	HCC	Expected Implementation prior to Calendar year end 2008
Strategy /Scheme Development									
Establish "Road User Hierarchy" in SW Herts area	Congestion - Peak period Traffic reduction & changes to area wide traffic mileage	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	N/A	HCC	Highway Authority obligation to develop hierarchy under Traffic Management Act - implementation through Watford Congestion Forum
Congestion / Traffic Management Study	Congestion - Peak period Traffic reduction & changes to area wide traffic mileage	<div>Apply principles to SW Herts network</div>	<div>Potential Pilot area</div>	<div></div>	<div></div>	<div></div>	N/A	HCC	Collation of emerging congestion and Journey time data to establish baseline data for key corridors in SW Herts Area
Utilise data from Congestion Study for development of local protocols / congestion plans for key areas Proposed Locations include – • Bushey Arches • Hampermill Lane • Hagden Lane (approaching the Hornets) • Hempstead Road • Batchwood Heath Road / White Hill • Moor Lane • Watford Road	Congestion - Peak period Traffic reduction & changes to area wide traffic mileage	<div>Data Collection / Analysis</div>	<div>Initial study</div>	<div></div>	<div></div>	<div></div>	N/A	HCC	Will contribute to Highway Authority obligations under Traffic Management Act - implementation through Watford Congestion Forum
Bushey Arches - Improvements in through routes for pedestrians & cyclists.	Safer Roads (casualty reduction) Rights of Way	<div></div>	<div>Analysis/ Design</div>	<div>Implementation</div>			LTP / s106	HCC	Holistic overview of issues req'd. Development of local improvements for peds, cyclists, Bus users. Undertake study to optimise performance of signal timings & junction arrangements. Interface with improved ITS in longer term to manage congestion / inform users
Bushey Arches - Review of existing junctions arrangements & Signal timings	Congestion - Peak period Traffic Flows	<div>Data Collection</div>	<div>Analysis/ Design</div>	<div>Implementation</div>				HCC	Route Hierarchy Review will identify specific signing strategies. Potential partnering with neighbouring authorities / Highways Agency
Area Wide Signing Strategy	Congestion - Peak period Traffic reduction & changes to area wide traffic mileage	<div></div>	<div>Review /Data Collection</div>	<div>Analysis/ Design</div>	<div>Implementation</div>		LTP	HCC	County wide VMS Strategy has been developed. Funding priorities to be determined once success (or otherwise) of DfT Cf2 bid is notified
VMS Information signing on Major routes	Congestion - Peak period Traffic reduction & changes to area wide traffic mileage	<div>Prelim design</div>	<div>Design /consultation</div>	<div>Works</div>			DfT Cf2 Bid - if successful or LTP funding		

South West Hertfordshire Transportation Strategy Review - Action Plan

Proposal / Scheme		LTP Targets		Implementation Profile				Funding Source	Promotor	Comments
Sustainable Transport & Accessibility										
Committed Schemes										
Cycling / Pedestrian	A41 Crossing	Cycling Trips						LTP (2007/8 IWP scheme)	HCC	Expected Implementation complete May 2009
	(National Cycle Route 6/61)	Cycling Trips						LTP (2007/8 IWP scheme)	HCC	Expected Implementation complete June 2009
	Town Hall Cycle Link	Cycling Trips						LTP (2007/8 IWP scheme)	HCC	Expected Implementation complete Sept 2009
	(Cassiobury Park to High Street)	Cycling Trips						LTP (2007/8 IWP scheme)	HCC	Expected Implementation complete Sept 2009
	Cowarch Cycle Link, Oxhey	Cycling Trips						LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
St Clements Danes School Cycling Facility, Chorleywood	Cycling Trips, Mode share of journeys to school							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
	Cycling Trips, Mode share of journeys to school							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Parmiters Cycle Path, Garston	Cycling Trips							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Aldenham Road Cycle Route	SR1-4 / ST4							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Wiggenhall Rd / Farraline Rd - Ped Crossing	Mode share of journeys to school							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Field Schools - Safer Routes to School	Mode share of journeys to school							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Strategy / Scheme Development										
"Bikeability" Training / Cycling Review Study								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Implementation	Cycling Trips, Mode share of journeys to school, changes to area wide Traffic mileage							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Pedestrian Needs - Study								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Implementation	Rights of Way, Safer Roads (Casualty reduction),							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Neighbourhood Centre Development & Travel Information Centres	Passenger Transport (Public Transport Patronage, PT Information User satisfaction), Cycling Trips							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
	Passenger Transport (Public Transport Patronage, PT Information User satisfaction), changes to area wide Traffic mileage							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
Transport Hubs								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
School Travel Planning	School Travel Plans							LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY
								LTP (2007/8 IWP scheme)	HCC	Expected Implementation 2009/10 FY

South West Hertfordshire Transportation Strategy Review - Action Plan

Proposal / Scheme		LTP Targets		Implementation Profile					Funding Source	Promotor	Comments
		See LTP 2 for full definitions of LTP Target Performance Indicators		2008	2009	2010	2011	2012	<i>if identifiable</i>		
Passenger Transport Proposals Committed / Planned Schemes											
Bus Corridor Improvements	Automatic Vehicle Location (enabling Real Time Passenger Information for buses)	Passenger Transport (Public Transport Patronage,PT Information User satisfaction, Bus Punctuality)	Prioritise corridors in area		Prelim design	Design /works	Works		LTP / s106	HCC	Key corridors identified in table 5.1 of Plan Review. Implementation dates for individual corridors tbc by HCC PTU. To be updated an specific schemes included within Action Plan at first Annual Review (March 2009)
		Passenger Transport (Public Transport Patronage,PT Information User satisfaction, Bus Punctuality)	Procurement		Fit equipment / Roll out in SW Herts area - specific routes tbc			Wider area roll-out	LTP	HCC in partnership with Bus Operators	AVL Project envisaged as authority wide but focus will be on roll out in S W Herts.
Innovation / Smarter Choices											
Initiatives											
TravelSmart'	Public Transport (Patronage, PT Information User Satisfaction), Cycling Trips		Data Collection		Analysis/ Design & Implementation	Monitoring			Travel Smart / LTP	Sustrans / HCC	Travel Smart project is focused in Watford at present. Dependant on success achieved, concept may be rolled across SW Herts area
Employer Travel Plans - develop Area wide programme to encourage Travel Planning	Congestion(Peak period Traffic reduction & changes to area wide traffic mileage), Passenger Transport (Patronage), Cycling Trips		Review current situation		Develop proposals / consultations	Implementation			LTP but joint funding sought from District and Borough Partners for Area wide programme. Employers would develop plans at own costs	HCC /WBC / TRDC / HBC	Best Practice of Watford Journeyshare project should be shared across SW Herts area. WBC and TRDC already seeking to implement joint working
HCC Intelligent Transport Systems Strategy	Congestion (Peak period Traffic reduction & changes to area wide traffic mileage)		Publish ITS Strategy		Develop detailed proposals	Implementation			LTP / s106	HCC	VMS Signing and AVL systems identified elsewhere as SWHerts specific local implementation of early ITS Strategy benefits. Range of ITS packages to be implemented will be specified in ITS Strategy. To be updated an specific schemes included within Action Plan at first Annual Review (March 2009)

South West Hertfordshire Transportation Strategy Review - Action Plan

Current IWR & Other Schemes	2008	2009	2010	2011	2012	
Berry Grove Rdabout A41 Casualty Reductions Phase 2	Prelim Study	Design/ Works				HCC
Stephenson Way A4008 Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
North Orbital Road A405 Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
Sarrat Road Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
Wiggenhall Road A4178 Casualty Reductions Phase 2	Prelim Study	Design/ Works				HCC
Dome Superstore Access Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
St Albans Road A412Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
Town Hall Rdabout Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
Lower High Street Casualty Reduction Proposals	Prelim Study	Design/ Works				HCC
Safer Roads - casualty Reduction						

Section 106 Funding							Comments	
	2008	2009	2010	2011	2012			
Hertfordshire County Council	Level of funding currently allocated to schemes in SW Herts area							
	£265,000	£378,000	tbc	tbc	tbc			
Watford Borough Council								
Hagden Lane	tbc	£36,000	tbc	tbc	tbc			
Whippendell Rd Scoot	£138,342	tbc	tbc	tbc	tbc			
TravelSmart Watford	£4,572	tbc	tbc	tbc	tbc			
Bushey Arches Impr	£40,000	tbc	tbc	tbc	tbc			
Exchange Rd enhancement	£20,000	tbc	tbc	tbc	tbc			
Feasibility study Mobihub	£28,200	tbc	tbc	tbc	tbc			
Hertsmere Borough Council								
Hillside	tbc	£32,000	tbc	tbc	tbc			
Bushey Hall	tbc	£57,000	tbc	tbc	tbc			
Aldenham Road	£33,689	tbc	tbc	tbc	tbc			
Three Rivers District Council								
Ovaline c76 scheme	tbc	£253,000	tbc	tbc	tbc			

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Support for carers
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