

# POTTERS BAR URBAN TRANSPORT PLAN

December 2011





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## Executive Summary

### Overview

Urban Transport Plans are produced by Hertfordshire County Council to set out a framework to focus transport improvements within a specific geographical area for the next 20 years. They are daughter documents of the Local Transport Plan which sets out the transport priorities for the whole of Hertfordshire. The aim of the Urban Transport Plans is to provide a clear definitive list of the transport issues for each area and where possible, the potential solutions and improvements proposed to address them.

This document presents the Urban Transport Plan for Potters Bar. The Hertfordshire town of Potters Bar is located in the southern part of the county in the district of Hertsmere just outside the Greater London urban area. Lying immediately north of the M25 and adjacent to the A1M, it is very well positioned for access to the national strategic road network and to central London. Potters Bar is also on the East Coast Main Line with direct train services to London, Stevenage and beyond. The London Underground network can be accessed at High Barnet (Northern line) or at Cockfosters (Piccadilly line) via existing bus routes (298 to Cockfosters and 84 to High Barnet).

Residents of Potters Bar are largely middle income earners with significantly higher than the national average levels of car ownership, with only 17% of households without access to a car, compared with 27% nationally. The main employment areas within Potters Bar are located in the High Street area, around Darkes Lane, and to the north of the town in the Cranborne Road industrial area. The rest of the town is predominantly residential, with education and leisure sites. The urban area is surrounded by agricultural land.

### This Document

This Urban Transport Plan sets out an analysis of the current travel patterns in Potters Bar that have informed the development of the key transport issues identified within the plan. The plan objectives are as follows:

- Promote a self-sustaining local economy, supporting the vitality of the two main commercial streets.
- Minimise the effect of congestion.

## Potters Bar Urban Transport Plan

- Manage levels and mitigate impacts of traffic.
- Maintain benefits of access to opportunities in London.
- Improve access to local major employers within and nearby the town.
- Improve access to key services for all residents, ensuring accessibility within the town.
- Improve access to nearby countryside, open spaces and leisure facilities.
- Encourage and support options to travel by sustainable modes, particularly for trips within the town.
- Encourage active modes of travel for all groups of residents.

The transport solutions and improvements are set out within the context of Hertfordshire County Council's overall transport objectives, particularly those set out within the Hertfordshire Corporate Plan, Sustainable Communities Strategy, and Local Transport Plan.

The process undertaken to develop the plan has included the consideration of a long-list of transport interventions developed to address the key issues identified. An assessment of this list of schemes against the plan objectives, Local Transport Plan funding criteria and deliverability criteria has also been undertaken that has led to the development of a list of schemes recommended for implementation. The interventions developed cover the following areas:

- **Urban Realm:** Improvements to the urban realm around Darkes Lane and the High Street to promote local usage.
- **Public Transport:** Improvements to station access; physical access improvements; and improved information provision and promotion.
- **Safety concerns and access:** Addressing speeding concerns; pedestrian and cycle crossings; footway quality and maintenance; provision of cycle lanes; parking restrictions; and signal phasing.
- **Non-motorised modes:** Increased and improved walking and cycling links; improved signage; crossing facilities; promotion; new access points to the cycle network; and improved drainage.
- **Congestion:** Improved traffic signals, including improved phasing.

- I Demand management** and travel choices: Including traffic, network management and freight strategies, promotion of integrated ticketing and Real Time Passenger Information for buses.

### Next Steps

The implementation plan included in this document sets out the schemes identified for implementation over the short, medium and long term and the indicative cost of each scheme.

The schemes identified for implementation over the short term are lower cost and more easily implemented; those recommended for funding over the medium term will require further design feasibility and consultation and those schemes identified for funding over the long term require substantial funding.



# 1 Introduction

### Background - Urban Transport Plans

- 1.1 Urban Transport Plans are daughter documents to the Hertfordshire Local Transport Plan and provide a long-term strategy for transport in Hertfordshire's main urban areas, accompanied by five-year implementation plans that are reviewed annually. Urban Transport Plans are integrated with wider policy and strategy documents, including the Hertfordshire Corporate Plan, Hertfordshire Sustainable Communities Plan, Local Area Agreements, emerging Local Development Frameworks, and other daughter documents of the Local Transport Plan amongst others. Consultation with Members and Officers at a district / borough and county level, as well as with local partners and communities, is central to the development of the plans.
- 1.2 At the time of writing, new Central and Local Government policy is emerging; and being developed largely in response to addressing the budget deficit in the short-term, and promoting economic growth and carbon reduction. It is acknowledged that any future changes to transport policy or local circumstances will require periodic review of the plan.

### The Potters Bar Urban Transport Plan

- 1.3 This Urban Transport Plan outlines interventions to address objectives and key issues relevant to Potters Bar. In consideration of the objectives and key issues, many modes (e.g. walking, cycling, bus and rail) and strategic areas for transport (e.g. accessibility, traffic management and parking) have been considered. The draft plan has been developed in conjunction with Hertsmere Borough Council and other local partners, in addition a public consultation event was held in July 2010 to help understand the issues of residents.

### *How the Plan is Presented*

- 1.4 Subsequent sections of this document set out the elements of the draft plan as follows:
- Section 2 provides the background to the plan area, including a description of the social demographic profile of the area and travel patterns of people who live or work in Potters Bar.
  - Section 3 describes the objectives for the plan and the Hertfordshire Local Transport Plan targets that this plan will support.

## **Potters Bar Urban Transport Plan**

- I** Section 4 summaries the transport key issues for the Potters Bar area which were identified in the first stage of the study.
- I** Sections 5 to 10 set out the key elements of the Urban Transport Plan.
- I** Section 11 describes the implementation plan to deliver these elements.
- I** Section 12 presents a summary of the recommended measures.



## 2 Background to the Plan Area

### Transport Connections and Demographics of Potters Bar

- 2.1 Potters Bar is located in the southern part of Hertfordshire just outside the Greater London urban area. Lying immediately north of the M25 Junction 24 and adjacent to the A1M Junction 1, it is very well positioned for access to the national strategic road network and to central London. The town is linked to the outer London boroughs of Barnet and Enfield by the A1000, the Great North Road, and A1005 respectively.
- 2.2 Potters Bar has excellent transport connections to central London, with typical journey times of 20 minutes by train (First Capital Connect) or 45 minutes by car. The London Underground network can be accessed at High Barnet (Northern line) or at Cockfosters (Piccadilly line).
- 2.3 As such, Potters Bar possesses commuter town characteristics with a limited amount of local industry within the town boundary. Just over a third of employed residents work within the town with around 40% commuting to Greater London, the largest number of these to the neighbouring London Borough of Barnet<sup>1</sup>.
- 2.4 At the time of the 2001 Census, Potters Bar had a resident population of approximately 21,600 people in 9,000 households<sup>2</sup>. The age structure of Potters Bar is similar to that of Hertfordshire and of England and Wales as a whole, which is shown in Figure 2.1 below. The largest proportion of people, 42%, lying in the 30-59 age range, which compares with 43% for the county and 41% nationally. There is a higher proportion of older people in Potters Bar compared with the national average, with 23% between the ages of 60-84 in Potters Bar, compared with 19% nationally.
- 2.5 Residents of Potters Bar are largely middle income earners with significantly higher than the national average levels of car ownership, with only 17% of households without access to a car, compared with 27% nationally<sup>3</sup>.

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<sup>1</sup> Potters Bar Data Report, January 2010

<sup>2</sup> 2001 England and Wales Census of Population

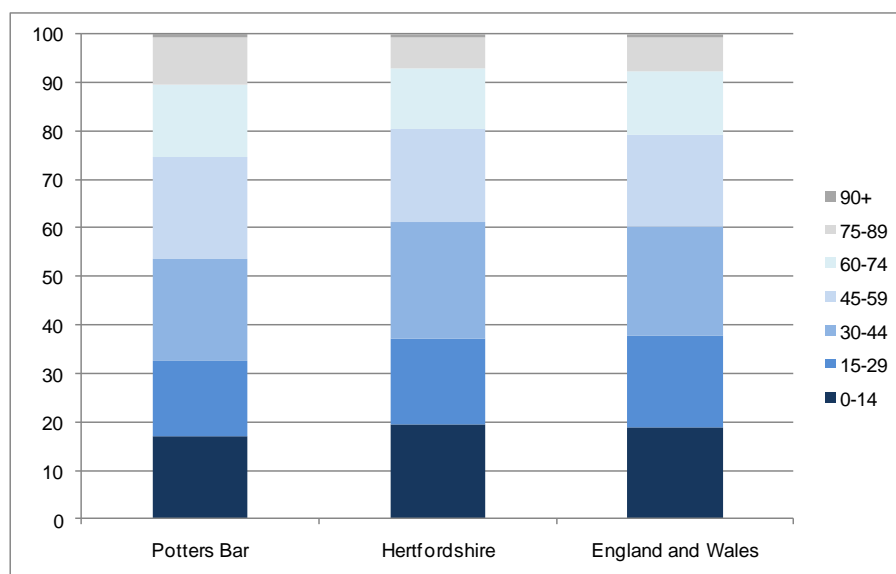
<sup>3</sup> HCC Potters Bar Data Report, January 2010

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## Potters Bar Urban Transport Plan

- 2.6 Potters Bar has two main thoroughfares, each providing their own retail offer in separate locations. Darkes Lane offers day-to-day shopping facilities and has multiple national retailer representation. High Street, running parallel to Darkes Lane in the east of the town, has a range of smaller shops for specialist requirements. Though the retail functions are differentiated and the two areas are not recognised as directly competitive, the dual high street effect does create problems when identifying the town centre and ultimately affects the function of the town in terms of movement across and through it.

**FIGURE 2.1 POPULATION AGE STRUCTURE OF POTTERS BAR**



- 2.7 The main employment areas within Potters Bar are located in the High Street area, around Darkes Lane, and to the north of the town in the Cranborne Road Industrial Estate. The rest of the town is predominantly residential, with education and leisure sites. The urban area is surrounded by agricultural land. Employment locations in the town are described in more detail below in the section which describes travel patterns.

### ***TravelStyle Analysis***

- 2.8 The type of transport used for travelling to and from work is driven by a range of factors, including a set of key lifestyle characteristics, or demographics. Analysis of these local demographic profiles allows the estimation of people's propensity to make journeys by each of the modes. Using the bespoke demographic profiling software 'TravelStyle', which uses population characteristics to predict potential

levels of rail travel, a profile of a local community's travel patterns can be forecast. Table 2.1 below summarises TravelStyle characteristics.

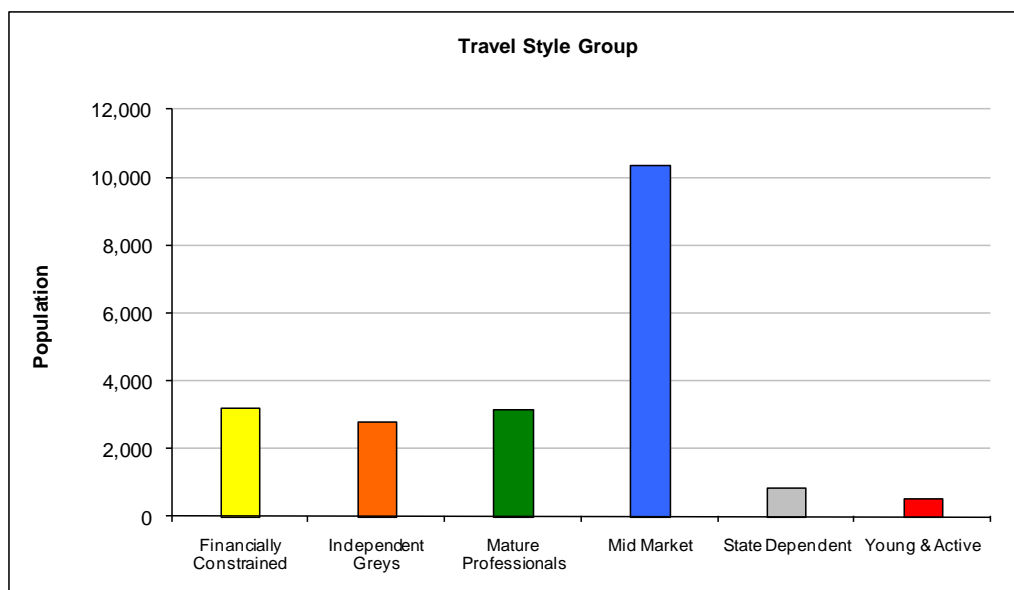
**TABLE 2.1 TRAVELSTYLE CHARACTERISTICS**

	Key characteristics (compared to general population)	Rail Use	Bus Use
Financial Constrained	Lower than average purchasing power and car ownership, more children at home.	Low	High
Independent Greys	Mid-range purchasing power, lower car ownership and fewer children at home.	Medium	Medium
Mature Professionals	Above average purchasing power and car ownership. Less children at home.	Very high	Low
Mid Market	Mid-range purchasing power, higher car ownership and more children at home.	Medium	Medium
State Dependent	Lower than average purchasing power and car ownership. Children at home average.	Very low	Medium
Young & Active	Mid-range purchasing power, lower car ownership and fewer children at home.	High	High

- 2.9 The TravelStyle profile for Potters Bar has been produced and is shown in Figure 2.2 and proportionally to Hertfordshire in Table 2.2 below. This analysis shows a largely middle income population dominated by the demographic category known as 'mid-market'. This demographic is characterised by people with mid-range purchasing power, relatively high car ownership and more children at home. This group tends to have quite "car dependent" lifestyles and uses alternatives only where there is a disincentive to drive. This is consistent with the analysis of the 2001 Census Journey to Work data shown later in this chapter, which shows high car use for both in and out commuting. The second largest population grouping in Potter Bar is the demographic group called 'financially constrained'. This group is characterised by lower income and high bus use due to low car ownership. This group is almost matched in number by the more affluent 'mature professionals', who have above average income, high car ownership but also a higher propensity to travel to London by rail.

## Potters Bar Urban Transport Plan

**FIGURE 2.2 TRAVELSTYLE PROFILE FOR POTTERS BAR**



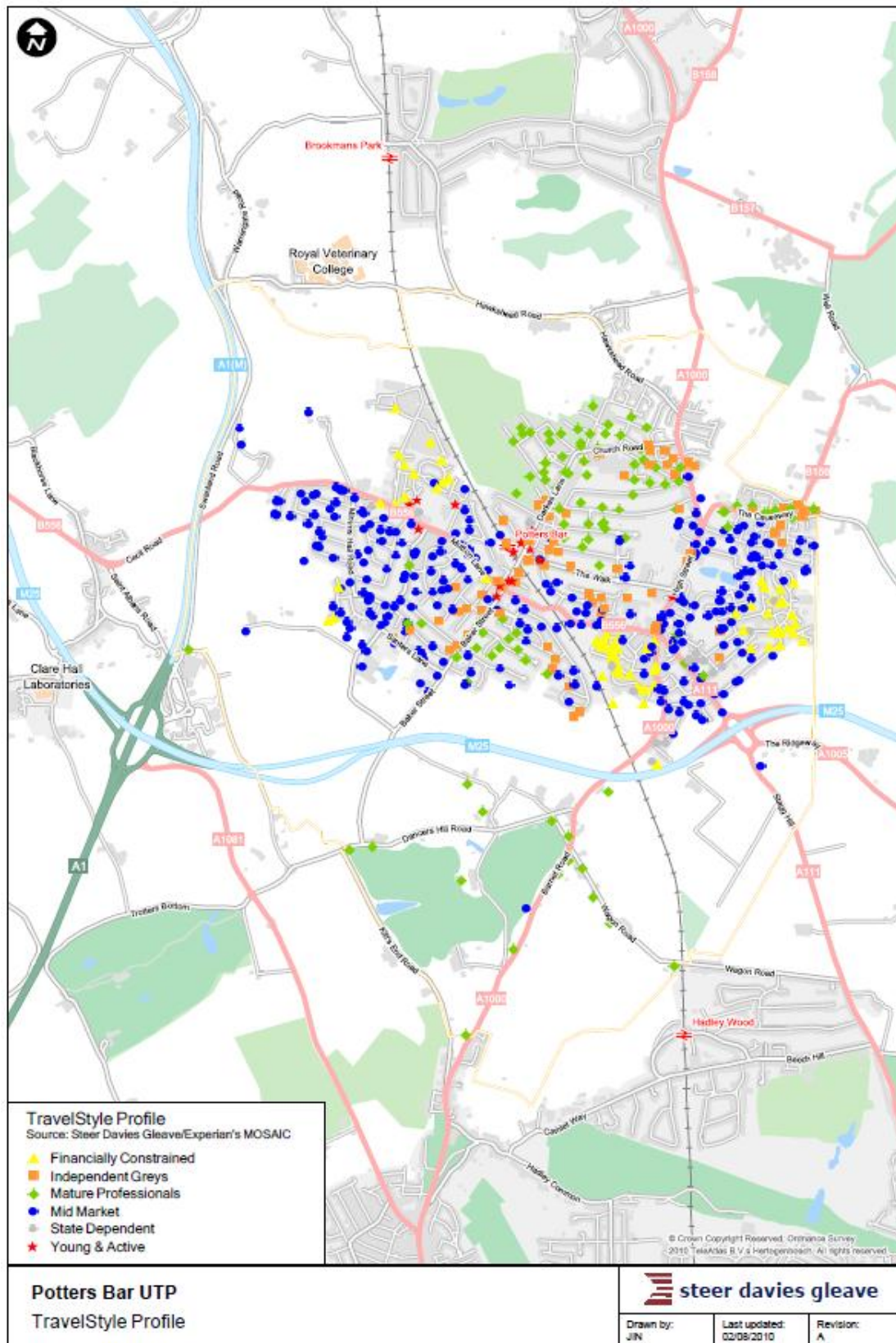
**TABLE 2.2 TRAVEL STYLE GROUPS FOR POTTERS BAR**

Travel Style	Potters Bar Population	Proportion Potters Bar	Proportion Hertfordshire
Mid Market	10,368	49.3%	32.0%
Financially Constrained	3,214	15.3%	21.0%
Mature Professionals	3,192	15.2%	23.0%
Independent Greys	2,803	13.3%	5.0%
State Dependent	879	4.2%	10.0%
Young & Active	554	2.6%	9.0%

- 2.10 'Mid-Market' and 'Independent Greys' account for a greater percentage of the Potters Bar total than the Hertfordshire total. Significantly lower percentages of 'Financially Constrained', 'Mature Professionals', 'State Dependent' and 'Young & Active' groups are found in Potters Bar compared to Hertfordshire.
- 2.11 Figure 2.3 shows the geographical spread of the different groups across the study area. The TravelStyle geography shows that the majority 'mid-income group is spread out across the whole study area, with greatest concentrations in the south. The more affluent 'mature professionals' population is scattered in the north and south. Lower income groups are located around the south east of the study area, while the 'young and active' group concentrates in the area around the town centre and railway station.

# Potters Bar Urban Transport Plan

**FIGURE 2.3 TRAVELSTYLE GEOGRAPHY OF POTTERS BAR**





## Travel Patterns

- 2.12 This section presents an overview of the general patterns of travel to, from and within, Potters Bar. It draws on 2001 Census Journey to Work data, local surveys and demographic profiling to examine the travel patterns of Potters Bar's residents and employees.

### *Travel to Work from Potters Bar*

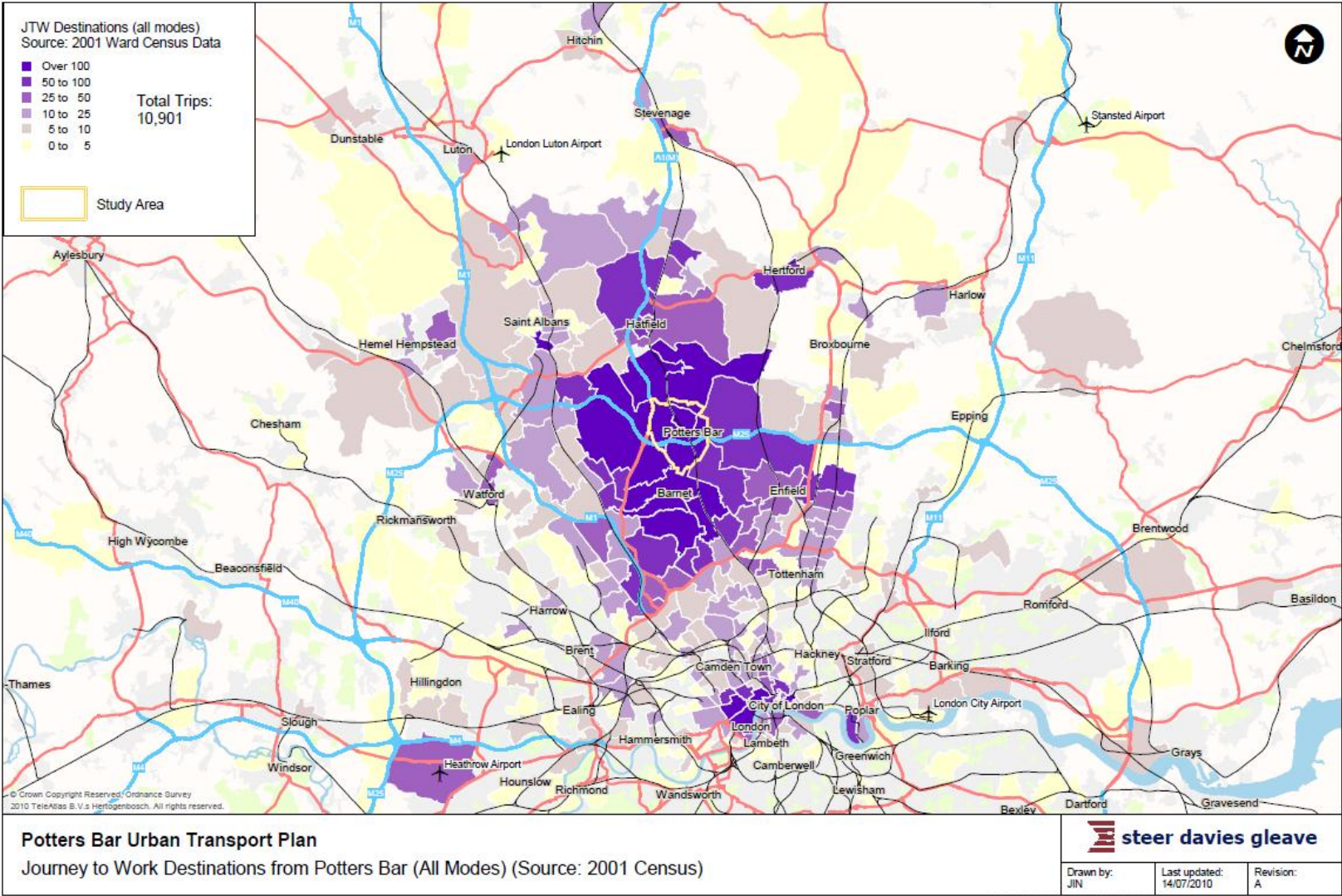
- 2.13 Potters Bar has an employed population of approximately 9,900 with around a third of these also working within the town. The largest numbers of out-commuters are to the Greater London area, roughly half of these to the northern, outer London boroughs and half to central and inner London. A further 20% travel to work in other parts of Hertfordshire, particularly Welwyn Hatfield. The numbers of trips to the most significant work destinations for Potters Bar residents are listed in Table 2.3 below.
- 2.14 The distribution of journeys to work for Potters Bar residents is shown in Figure 2.4 overleaf, which gives the number of trips to each ward. This map demonstrates the principal flows discussed above and particularly the large southbound flows into north and central London and north and west bound flows to other towns in Hertfordshire. As can also be seen from this map, good connections afforded by the M25 and other motorways enable travel to work further afield, for instance at Heathrow, Luton and Stevenage.

**TABLE 2.3 WORKPLACE DESTINATIONS**

<b>Largest Workplace Destinations</b>	<b>Volume of trips</b>	<b>Percentage of resident workforce</b>
Potters Bar	3,568	36.00%
Central & Inner London	1,876	18.90%
LB Barnet	1,144	11.50%
LB Enfield	539	5.40%
Rest of Outer London	391	3.90%
Welwyn Hatfield	585	5.90%
St. Albans	341	3.40%
Rest of Hertfordshire	1,050	11.60%
<b>Overall Total</b>	<b>9,917</b>	<b>100%</b>

Potters Bar Urban Transport Plan

FIGURE 2.4 WORK DESTINATIONS OF POTTERS BAR RESIDENTS



***Travel to Work into Potters Bar***

- 2.15 The daytime workplace population of Potters Bar is 9,726 which is almost the same as the number of residents in employment. This suggests that on average each working day there are as many people travelling into Potters Bar to work as there are leaving the town. Just over a third of the people working in Potters Bar are local residents, matching the figures described in the previous section. The largest proportion of people travelling into Potters Bar to work come from other parts of Hertfordshire (30%), particularly the neighbouring borough of Welwyn Hatfield. A significant proportion of people (21%) come from outer London, in particular the boroughs of Barnet and Enfield. The most significant origins are listed in Table 2.4 below.

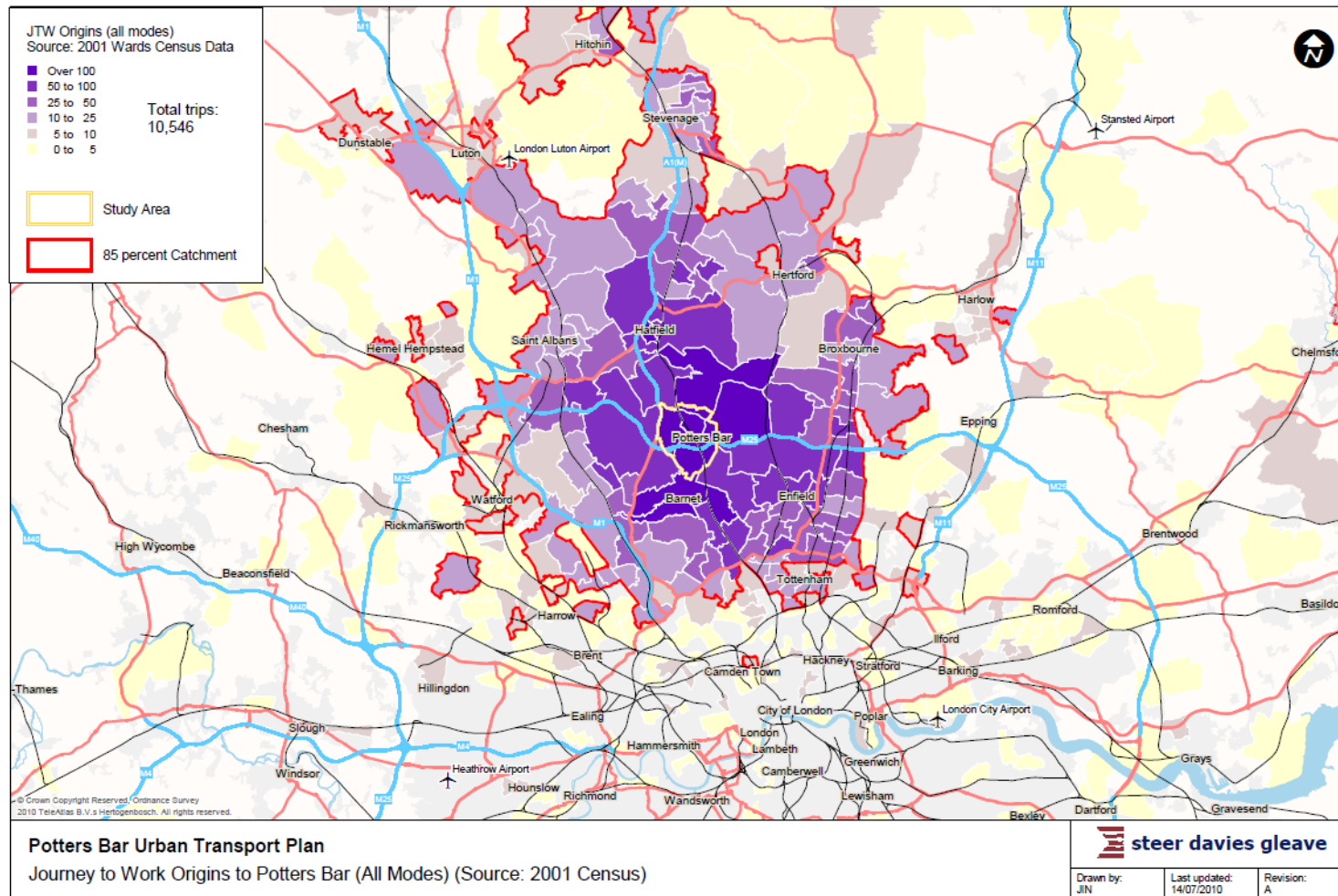
**TABLE 2.4 WORKFORCE ORIGINS**

<b>Largest Workplace Origins</b>	<b>Volume of trips</b>	<b>Percentage of employees</b>
Potters Bar	3,568	36.50%
London Borough of Barnet	902	9.20%
London Borough of Enfield	803	8.20%
Rest of Outer London	359	3.70%
Central and Inner London	341	3.50%
Welwyn Hatfield	1,023	10.50%
Broxbourne	450	4.60%
St Albans	340	3.50%
Stevenage	240	2.50%
Rest of Hertfordshire	924	9.40%
Essex	243	2.50%
Bedfordshire	207	2.10%
<b>Overall Total</b>	<b>9,967</b>	<b>100%</b>

## **Potters Bar Urban Transport Plan**

- 2.16 The distribution of origins for work journeys into Potters Bar is shown in Figure 2.5 overleaf, which shows the number of trips from each ward and the extent of the 85<sup>th</sup> percentile travel to work catchment for Potters Bar (i.e. the area within which 85% of all journeys to work originate). As can be seen when comparing this map with Figure 2.4, the trips into Potters Bar are more from the immediate surrounding area, more evenly dispersed and on average shorter than the work journeys out of Potters Bar.

**FIGURE 2.5 ORIGINS OF JOURNEYS TO WORK INTO POTTERS BAR**





## Potters Bar Urban Transport Plan

### ***Work Journey Destinations in Potters Bar***

2.17 More detailed analysis of the destinations of work trips within Potters Bar (from the 2001 Census) is shown in Figure 2.6 overleaf. This map also shows the location of the main employers in the town (i.e. those with more than 100 employees) which are identified in Table 2.5 below. As can be seen from this map the locations of the main employers correspond with the principal destinations identified by the 2001 Journey to Work data which suggests that, although it is now 10 years old, this data is still a reasonable indicator of current trip patterns. The main employment locations are:

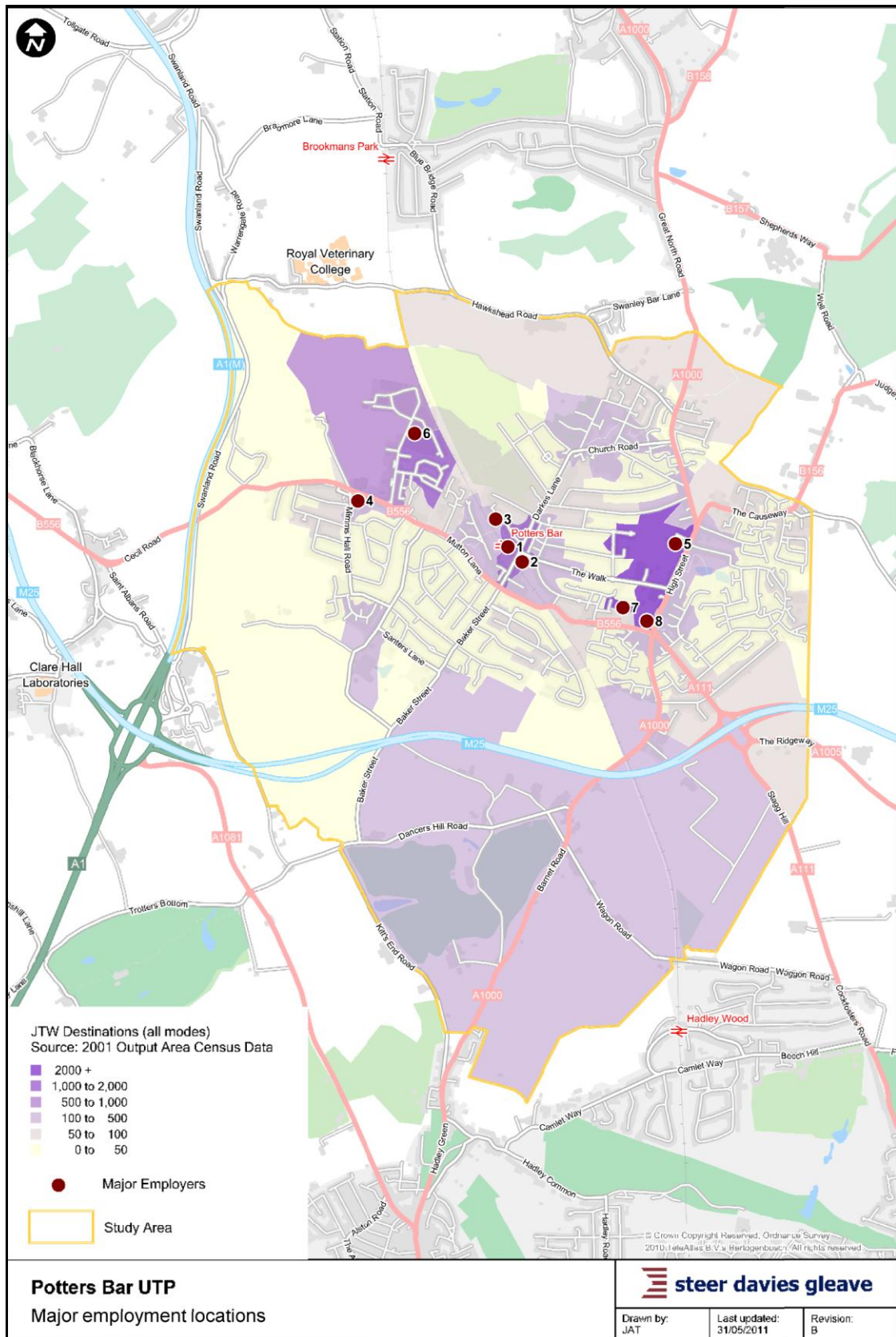
- High Street and specifically Maple House at the junction with Mutton Lane;
- Darkes Lane, near the railway station; and
- Cranborne Industrial Estate.

**TABLE 2.5 MAJOR EMPLOYERS IN POTTERS BAR**

ID	Company	Approximate number of employees
1	J Sainsbury Plc. (supermarket)	100-199
2	EDF Energy Plc. (energy supply)	200-499
3	Generics UK (pharmaceuticals)	200-499
4	Initial Security Services Ltd (security services)	200-499
5	Metroline Travel Ltd (passenger railway services)	200-499
6	Soundcraft Electronics Ltd (sound systems)	200-499
7	Tesco Plc. (supermarket)	200-499
8	Canada Life Ltd (life assurance)	500-999



**FIGURE 2.6 WORK DESTINATIONS AND MAJOR EMPLOYERS IN POTTERS BAR**

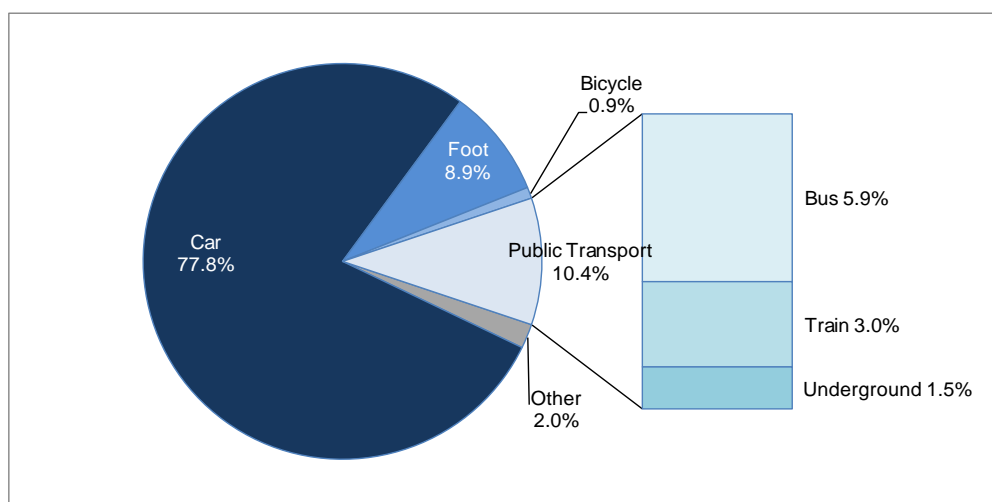


## Potters Bar Urban Transport Plan

### *Modal split for journeys to work in Potters Bar*

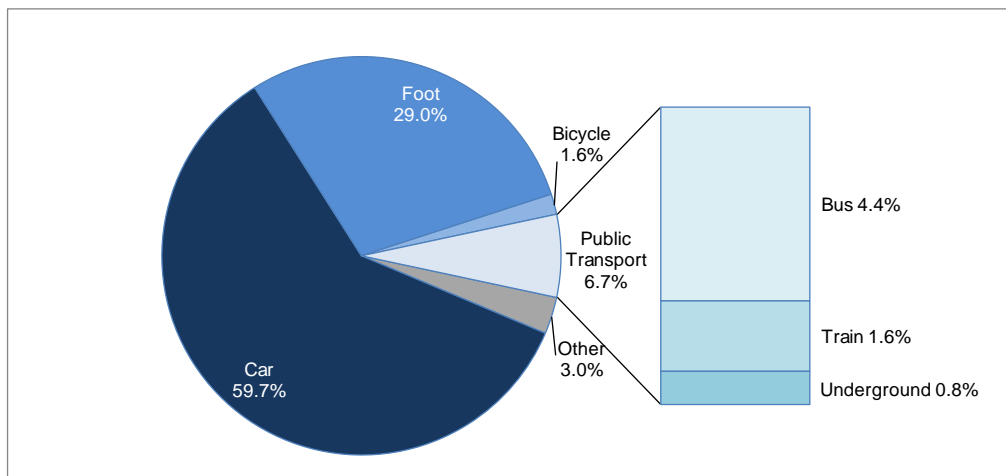
- 2.18 From 2001 Census data, the overwhelming majority, over three quarters, of journeys to work in Potters Bar are made by car, just over ten per cent are made by public transport, and just under ten per cent on foot or by cycle. The mode shares for all journeys to work in Potters Bar are shown Figure 2.7, below. The high number of people travelling by car to work is in part explained by the diverse catchment area for the 74% of commuters travelling from outside Potters Bar who are in general not well served by public transport. For instance, rail is only a viable option for commuters from London, Stevenage and intermediate stations, not those to the east and west of the town.

**FIGURE 2.7 MAIN MODE OF TRAVEL FOR ALL JOURNEYS TO WORK**



- 2.19 Note that there are some journeys recorded as being made by Underground which may appear initially to be inconsistent. It is likely that these journeys are people commuting from London who make part of their journey by London Underground services and complete the journey by another mode, most probably bus. These trips and those made by rail are for journeys starting from outside the town whereas those by bus will include a large proportion of internal trips.
- 2.20 Figure 2.8 shows the mode share for journeys to work for people who live and work in Potters Bar (i.e. those trips which take place completely within the town). A large proportion of these journeys are also being made by car, accounting for almost 60% of all these commuting trips. Walking journeys are more common for internal journeys, with 29% of commuting trips being made on foot, but only 1.6% of commuting trips within Potters Bar are made by bicycle.

**FIGURE 2.8 MODE OF TRAVEL FOR JOURNEYS TO WORK WITHIN POTTERS BAR**



### **Traffic Flows**

- 2.21 As part of the annual monitoring programme road traffic flows in Potters Bar are measured at four locations which cover the key flows through the urban area. Table 2.6 below gives the Annual Average Weekday vehicle flow (AAWD), for traffic flows in both directions, and the morning and afternoon peak hour flows by direction at each count point for 2009.
- 2.22 As the table shows flows inbound and outbound are relatively balanced but with a net in-flow during the morning peak from the south-west, along the A111 Southgate Road, and from the north along the A1000 Great North Road. This reflects the same pattern seen in the difference in the journey to work car mode share for people travelling out of Potters Bar to work and those travelling into the town.

**TABLE 2.6 TRAFFIC FLOWS IN POTTERS BAR (2009)**

Site	Location	AAWD	AM Peak Hour		PM Peak Hour	
			In	Out	In	Out
200	A111, Southgate Road	21,553	942	758	843	984
251	A1081, St Albans Road	12,038	532	517	642	511
246	A1000 Great North Road	14,860	820	635	603	766
327	B556, Cecil Road	10,914	474	455	528	408



### 3 Local Objectives and Targets

#### **Objectives**

3.1 Objectives for the Potters Bar Urban Transport Plan were derived from the following:

- the Hertfordshire Corporate Plan, the Second Hertfordshire Local Transport Plan, and consideration of the objectives of other local policy documents; and
- consultation with local members, officers, and the public.

3.2 In addition to identifying specific issues for the transport plan to address, the initial stakeholder meetings also sought to establish the most important areas for action in order to help define the local objectives and vision for the future for travel in and around Potters Bar. To do this a prioritisation exercise was undertaken with stakeholders identifying the top three priority areas in terms of level of impact. The responses were then collated, scored and ranked to produce the summary results presented in Table 3.1 below.

**TABLE 3.1 PRIORITY ISSUES**

Priority	Theme	Examples of issues identified
1	Active modes (walking and cycling)	Poor facilities for walking and cycling. Fragmented network for walking and cycling. Poor 'perception' of walk access in the town. Lack of cycle routes (and parking) to the station.
2	Traffic congestion	Congestion and misuse of the network.
3	Parking	Poor parking facilities, including lack of priority parking for health professionals (e.g. in Controlled Parking Zone(s)).
4	Public Transport	Need for further improvements to station access and interchange. Need for improvements to bus access to facilities and services in Potters Bar, including leisure, medical and community services. Poor connections to the south of Potters Bar.
5=	Safety	Poor (perceived) road safety for pedestrians, particularly on the shopping streets and on busy roads.
5=	Modal shift (from private motorised transport)	High levels of car use for short journeys. Poor sustainable travel information and no real time passenger information (RTPI) at stops. Need for increased use of smarter choices.

3.3 Table 3.1 also includes examples of the issues reported in this exercise. It is not presented as a complete picture, rather of the general themes which have been given highest priority. As the table

## **Potters Bar Urban Transport Plan**

shows the priority areas are to improve facilities to encourage people to walk and cycle more. The second highest priority is the associated theme of easing congestion for those who need to travel by car. Although Modal Shift from car was not identified as the highest single priority in its own right it is clear that higher levels of travel by active modes would involve mode shift from car which would also have a positive impact on the levels of congestion.

- 3.4 Table 3.2 below lists the objectives for the plan, as well as showing their objective fit with the key relevant strategies and plans.

### ***Indicators***

- 3.5 The indicators for this plan will be in line with the indicators of the current Hertfordshire Local Transport Plan 2006 - 2011. Once the third Local Transport Plan is submitted to the central government (by April 2011), the objectives and indicators used will be reviewed. Monitoring of indicators will be necessary and will be conducted on a scheme by scheme basis when delivered and as part of Hertfordshire County Council's on-going performance management data collection process.

**TABLE 3.2 STUDY OBJECTIVES AND HIGHER LEVEL OBJECTIVES**

Local Transport Plan Guidance Objectives	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire Local Transport Plan 2006 – 2011 Objectives	Potters Bar Urban Transport Plan Draft Objectives
1. Supporting economic competitiveness and growth	Support economic wellbeing	Support the growth and retention of existing businesses and encourage high value inward investment	To manage the growth of transport and travel volumes across the county, and thereby secure improvements in the predictability of travel time	Promote a self-sustaining local economy, supporting the vitality of the two main commercial streets.
		Bring about a step change in the provision, quality and use of public transport in Hertfordshire	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	Improve access to local major employers within and nearby the town
		Improve the reliability of journey times and improve East to West travel	To obtain the best use of the existing network through effective design, maintenance and management	Maintain benefits of access to opportunities in London
		Ensure effective long term management and maintenance of the transport network	To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources	Minimise the effect of congestion
2. Tackling climate change	Reduce carbon emissions	Meet the Government's targets for reducing Hertfordshire's carbon emissions	To reduce the need for the movement of people and goods through integrated land use planning, the promotion of	Encourage and support options to travel by sustainable modes,



## Potters Bar Urban Transport Plan

Local Transport Plan Guidance Objectives	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire Local Transport Plan 2006 – 2011 Objectives	Potters Bar Urban Transport Plan Draft Objectives
			sustainable distribution and the use of telecommunications.	particularly for trips within the town
		Reduce the need to travel and encourage the use of alternatives to the car	To raise awareness and encourage use of more sustainable modes of transport through effective promotion, publicity, information and education	
		Bring about a step change in the provision, quality and use of public transport in Hertfordshire	See other Local Transport Plan objectives	
3. Contributing to better safety, security and health	Promote safe neighbourhoods	Ensure children and young people have a healthy weight	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	Manage levels and mitigate impacts of traffic
		Improve the health and wellbeing of all our residents in the 20% most deprived wards	To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes	Encourage active modes of travel for all groups of residents

## Potters Bar Urban Transport Plan

Local Transport Plan Guidance Objectives	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire Local Transport Plan 2006 – 2011 Objectives	Potters Bar Urban Transport Plan Draft Objectives
		<p>best use of resources</p> <p>Improve access to services, including education and health no matter where you live</p> <p>Improve life chances and access to healthcare for all, especially those in areas of deprivation and those with learning disabilities</p> <p>Improve access to the countryside, open spaces and cultural activities for recreation and health</p> <p>Improve road safety</p> <p>Ensure effective long term management and maintenance of the transport network</p>	<p>See other Local Transport Plan objectives</p>	
4. Promoting greater equality of opportunity	<p>Maximise independent living</p> <p>Ensure a positive childhood and secure a good education for all</p>	<p>Help older people maintain their independence</p> <p>Ensure older people have the opportunities to be active members of our communities</p>	<p>To ensure that the 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</p> <p>To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources</p>	<p>Improve access to key services for all residents, ensuring accessibility within the town</p>

## Potters Bar Urban Transport Plan

Local Transport Plan Guidance Objectives	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire Local Transport Plan 2006 – 2011 Objectives	Potters Bar Urban Transport Plan Draft Objectives
	Be a leading council	Improve access to services, including education and health, no matter where you live		
5. Improving quality of life and promoting healthy natural environment	<div>Maximise independent living</div> <div>Ensure a positive childhood and secure a good education for all</div> <div>Be a leading council</div>	Improve access to the countryside, open spaces and cultural activities for recreation and health	To mitigate the effect of the transport system on the built and natural environment and on personal health	Improve access to nearby countryside, open spaces and leisure facilities

## 4 Local Issues

### Summary of the Key Issues

- 4.1 The consultation exercise undertaken as part of the first stage of the development of the Urban Transport Plan involved dialogue with the public, council officers and councillors and generated an extensive list of transport issues in Potters Bar which span all strategy areas of the study. An assessment of each of the issues raised was undertaken based on an analysis of available data and site inspection. This has allowed for key issues to be identified which have been taken forward as the basis for developing interventions and strategy options to help support Potters Bar's future vision. These key issues are presented in Table 4.1 below. The table also shows the interventions that have been developed to address the key issues. Key issues, where possible, have been mapped and illustrated in Figure 4.1 (after Table 4.1).

**TABLE 4.1 KEY ISSUES AND INTERVENTIONS**

Issue Ref.	Key Issue Summary	Scheme References
<b>Congestion Issues</b>		
Ci1	Movements through the junction of Southgate Road (A111), Mutton Lane (B556), Barnet Road and High Street (A1000). Particularly movements southbound from the High Street turning right into Mutton Lane to access the superstore.	RC1
Ci2	Movements, northbound and southbound, along High Street (A1000). Particularly through the junction with Hatfield Road, Cotton Road and The Causeway, and specifically movements into Cotton Road.	RC1, RC3, UR3, UR4
Ci3	Movements, northbound and southbound, along Hatfield Road (A1000), particularly at the junction with Church Road.	RC3
Ci4	Movements along The Causeway (B156) between High Street (A1000) and Coopers Lane Road.	RC1, S2
Ci5	Movements along Mutton Lane, particularly movements into and out of the superstore and into and out of the Furzefield Sports Centre.	RC1, UR3
Ci6	Movements southbound along Darkes Lane. Particularly near the station and through the junction with Mutton Lane (B556) and Baker Street.	RC2, PT2, PT1

## Potters Bar Urban Transport Plan

Issue Ref.	Key Issue Summary	Scheme References
Ci7	Movements along A111 Southgate Road, and approach from Stag Hill, particularly northbound in the morning peak and at the junctions with Hill Rise and Whaley Road.	S5
Ci8	Congestion off-slip road at M25 Junction 24 and the A111 roundabout.	Highways Agency responsibility
Ci9	Sawyers Lane approach to Baker Street during school start and end times.	DM5
Ci10	Diversion of traffic from strategic road network (M25 and A1 / A1(M)) when there are restrictions or incidents on these roads, overloads the local network through Potters Bar. This may be a particular issue during the forthcoming planned widening works for the M25.	DM2
<b>Parking Issues</b>		
Pi1	Parking in Cranborne Industrial Estate causing obstruction for pedestrian access.	DM4
Pi2	On street commuter and other parking in residential areas causing bus delays.	DM4
Pi3	Insufficient parking capacity at Potters Bar Community Hospital.	DM10
Pi4	Insufficient parking capacity at Potters Bar rail station.	PT1, PT2
Pi5	Improvements to the configuration of on-street parking on A1000 High Street where this constrains the quality of environment for pedestrians.	UR3
Pi6	Use of on-street parking facilities in Darkes Lane, including waiting for spaces and double-parking, is causing both congestion and limiting access to parking.	UR3, DM1
Pi7	Parking at junctions and on corners reducing visibility and leading to safety concerns.	UR1, DM1
Pi8	Service road on High Street not suitable for parking on both sides.	DM1, S4
Pi9	Parking congestion associated with school drop-off and pick-up trips.	DM1, UR3
Pi10	Parking congestion associated with employees of businesses in the Darkes Lane area, particularly on the Service Road.	DM1, DM5
Pi11	Parking congestion associated with employees of businesses in the High Street area.	DM1, UR1
Pi12	Insufficient signing to off-street car parking facilities.	UR1, DM1

## Potters Bar Urban Transport Plan

Issue Ref.	Key Issue Summary	Scheme References
<b>Accessibility Issues</b>		
Ai1	Congestion and on-street parking restricting reliability and frequency of bus services, particularly in High Street, The Walk, Mutton Lane and Oakmere Avenue.	DM1
Ai2	Perceived lack of integration with Transport for London bus services.	DM7
Ai3	Lack of integration between fare and ticketing systems.	DM7
Ai4	Lack of direct bus services to key retail and leisure destinations beyond the Potters Bar boundary.	DM7
Ai5	Poor penetration of bus routes into the south west of the town.	PT4
Ai6	Need for improved information services, including real time information in the town centre.	PT4
Ai7	Weaker evening and weekend services.	DM7
Ai8	Lack of direct and frequent services to local hospitals.	PT4
Ai9	Bus shelters on main routes do not provide hospitable waiting environment.	PT3
Ai10	Gaps remain in accessible bus network, particularly lack of (DDA) bus borders.	PT3 and national legislation
<b>Rail Issues</b>		
Ri1	Pedestrian access from both sides of the station including suitable road crossing points (e.g. junction of The Walk and Trafford Gate, island crossings on Darkes Lane, and in Station Close).	PT2, NM1
Ri2	Difficulties for access to and egress from main station forecourt arising from congestion near the station on Darkes Lane and in use of bus stands as passenger drop-off points.	PT1, PT2
Ri3	Improved facilities at the rear (west) of the station for passenger drop-off and collection.	PT1
Ri4	Improved quantity and quality of (covered and secure) cycle parking at station particularly on the western side of the station.	PT2
Ri5	Ramps to platforms are steep and difficult for wheelchair users to access.	PT2
Ri6	Oyster Pay As You Go is not available at Potters Bar rail station for journeys to or from London.	DM7
<b>Walking, Rights of Way and Quality of Life Issues</b>		
Wi1	Narrow footway on B156 The Causeway means pedestrians feel at risk from passing vehicles.	S2

## Potters Bar Urban Transport Plan

Issue Ref.	Key Issue Summary	Scheme References
Wi2	Improved pedestrian and cycle access needed for The Furzefield Centre.	NM4
Wi3	Improvements needed to pedestrian link from Potters Bar rail station to Royal Veterinary College site via Cranborne Industrial Estate.	NM1
Wi4	Increased number of recreational walking routes.	NM1
Wi5	Improved pedestrian crossing provision along strategic routes (High Street, Mutton Lane and Darkes Lane).	UR1
Wi6	Footpath / footway access to schools across the town.	RC1, RC2, DM5, S3
Wi7	Improvements needed to pedestrian environment on Darkes Lane to promote walking journeys to, through and around town centre.	UR1
Wi8	Improvements needed to pedestrian environment on High Street to promote walking journeys to, through and around town centre.	UR3, PT1
Wi9	Lack of signs to assist or encourage walking journeys in Potters Bar.	NM2, NM4
Wi10	Improvements to narrow footways, overgrown and unattractive footpaths.	NM5, NM6, NM7, UR2
Wi11	Safety concerns on A111 Southgate Road at junction with Park Avenue. Difficult for pedestrians to cross.	DM5
Wi12	Safety concerns on Park Avenue, Chase Avenue and Oakmere Lane particularly relating to inappropriate use of the network and high vehicle speeds.	S4
Wi13	Wash Lane underpass for M25 is narrow and often flooded.	S5
Wi14	Connection between the bridge on Cecil Road and Swanlands Road.	NM4
Wi15	Improved walking route required between Baker Street area and Potters Bar Community Hospital (Barnet Road).	DM10
Wi16	Poor pedestrian realm and perceived levels of safety and security in parks and green spaces, particularly Oakmere Park and Parkfield	S4
Wi17	Poor permeability from and in the south east of town.	DM6
Wi18	Improved walking access needed around South Mimms service area – existing rights of way are not continuous.	NM2
<b>Cycling Issues</b>		
Yi1	Improved access to station and secure / sheltered cycle parking facilities, particularly for the west side.	PT1, PT2



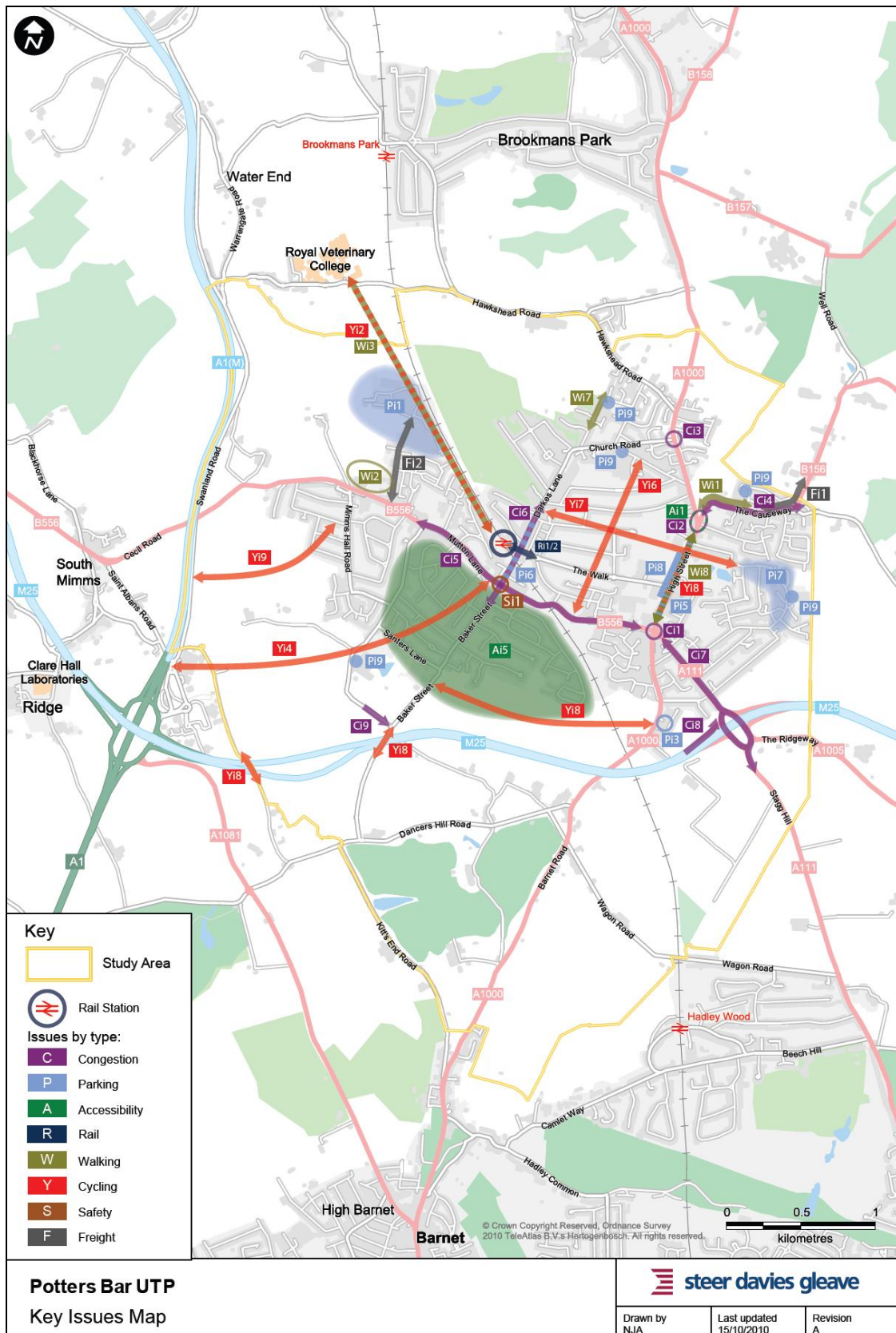
## Potters Bar Urban Transport Plan

Issue Ref.	Key Issue Summary	Scheme References
Yi2	Improved access from the station to the Royal Veterinary College and Brookmans Park.	PT2
Yi3	Improved links south toward London across the M25, particularly underpass on Baker Street and the poor condition of the underpass at Wash Lane.	S7
Yi4	Improved links from town centre / station via Dame Alice Owen School to South Mimms, the National Institute for Biological Standards and Control, and the Cancer Research Centre.	NM2
Yi5	Need for a complete and joined-up cycle network with improved signing and way-marking.	DM6
Yi6	Improved north-south connections away from two main streets.	UR1
Yi7	Improved east-west connections, particularly from/to Oakmere and between the two shopping streets, High Street and Darkes Lane.	UR1, UR2, UR3
Yi8	Improved east-west connections in south of town between Baker Street area and Barnet Road area.	UR1, UR2, UR3
Yi9	Improved access to near-by, high quality, leisure cycling routes, particularly National Cycle Network route 12 (Swanlands Road).	DM6
Yi10	Improved provision for cyclists travelling through and visiting the Darkes Lane shopping area.	DM6, UR2
Yi11	Improved provision for cyclists travelling through and visiting the High Street shopping area where the heavy levels of through motor traffic create a particularly poor environment for cyclists.	UR2
Yi12	Driver behaviour at pinch points on Darkes Lane/Church Road creates hazards and increases perception of vulnerability for cyclists.	UR1, UR2
Yi13	Improved access to The Furze field leisure centre.	NM4
<b>Safety Issues</b>		
Si1	Safety concerns on Darkes Lane, particularly relating to reduced levels of driver awareness.	UR2
Si2	Speeding concern on A1000 Barnet Road.	DM5, DM6, DM7, DM8
Si3	Other Hertfordshire Hazardous sites and Mass Action sites.	DM5, DM6, DM7, DM8
<b>Speeding Issues</b>		

## Potters Bar Urban Transport Plan

Issue Ref.	Key Issue Summary	Scheme References
Vi1	Speeding on Darkes Lane / Church Road.	S6
Vi2	Speeding on Mount Grace Road.	S8
Vi3	Speeding on Baker Street.	S7
Vi4	Speeding on The Causeway, near Stormont School.	S2
Vi5	Speeding on Hatfield Road (northbound).	S1
<b>Freight Issues</b>		
Fi1	Impact of the movements of large goods vehicles along the Causeway (B156).	S2, DM4
Fi2	Impact of the movements of large goods vehicles accessing Cranborne Industrial Estate.	DM3, DM3, DM4
Fi3	Weight, width and height restriction signing required at points where LGVs have opportunity to turn around, particularly from exit junctions from strategic road network (M25).	DM3, DM4
Fi4	Clearer signage and road markings required for freight and other vehicles at South Mimms services.	DM3, DM4

**FIGURE 4.1 KEY ISSUES IN POTTERS BAR**



## Potters Bar Urban Transport Plan

### Scheme Development

- 4.2 The schemes outlined in the next chapter have been developed in response to the identified key issues. Available data has also been utilised to further refine the schemes. The packages of short-listed schemes have been developed in response to both the performance of proposed interventions within the assessments process and also taking into account stakeholder feedback. The packages have also been developed to specifically contribute towards the key issues identified.

### Scheme Assessment

- 4.3 Each of the potential options included in a long-list of possible interventions have been assessed against the following criteria:
- the objectives of the Urban Transport Plan;
  - Local Transport Plan targets and fit with programme entry/funding criteria; and
  - deliverability criteria (i.e. public acceptability, funding / affordability, cost, feasibility, delivery risk).
- 4.4 Assessment against the Urban Transport Plan objectives resulted in a score between +3 and -3 depending on the contribution of the scheme towards each objective, similarly schemes were assessed against Local Transport Plan programme entry criteria. The deliverability assessment results in a score of low, medium or high, depending on the level of cost or risk for each scheme.
- 4.5 The Strategy consists of schemes developed to improve:
- **Urban Realm:** Improvements to the urban realm around Darkes Lane and the High Street.
  - **Public Transport:** Improvements to station access; physical access improvements; and improved information provision and promotion.
  - **Safety concerns and access:** Addressing speeding concerns; pedestrian and cycle crossings; footway quality and maintenance; provision of cycle lanes; parking restrictions; and signal phasing.
  - **Non-motorised modes:** Improved walking and cycling links; improved signage; crossing facilities and new access points to the cycle network.
  - **Congestion:** Improved traffic signals, including improved phasing.

- I Demand management** and travel choices: Including traffic and freight management strategies, promotion of integrated ticketing and Real Time Passenger Information for buses.

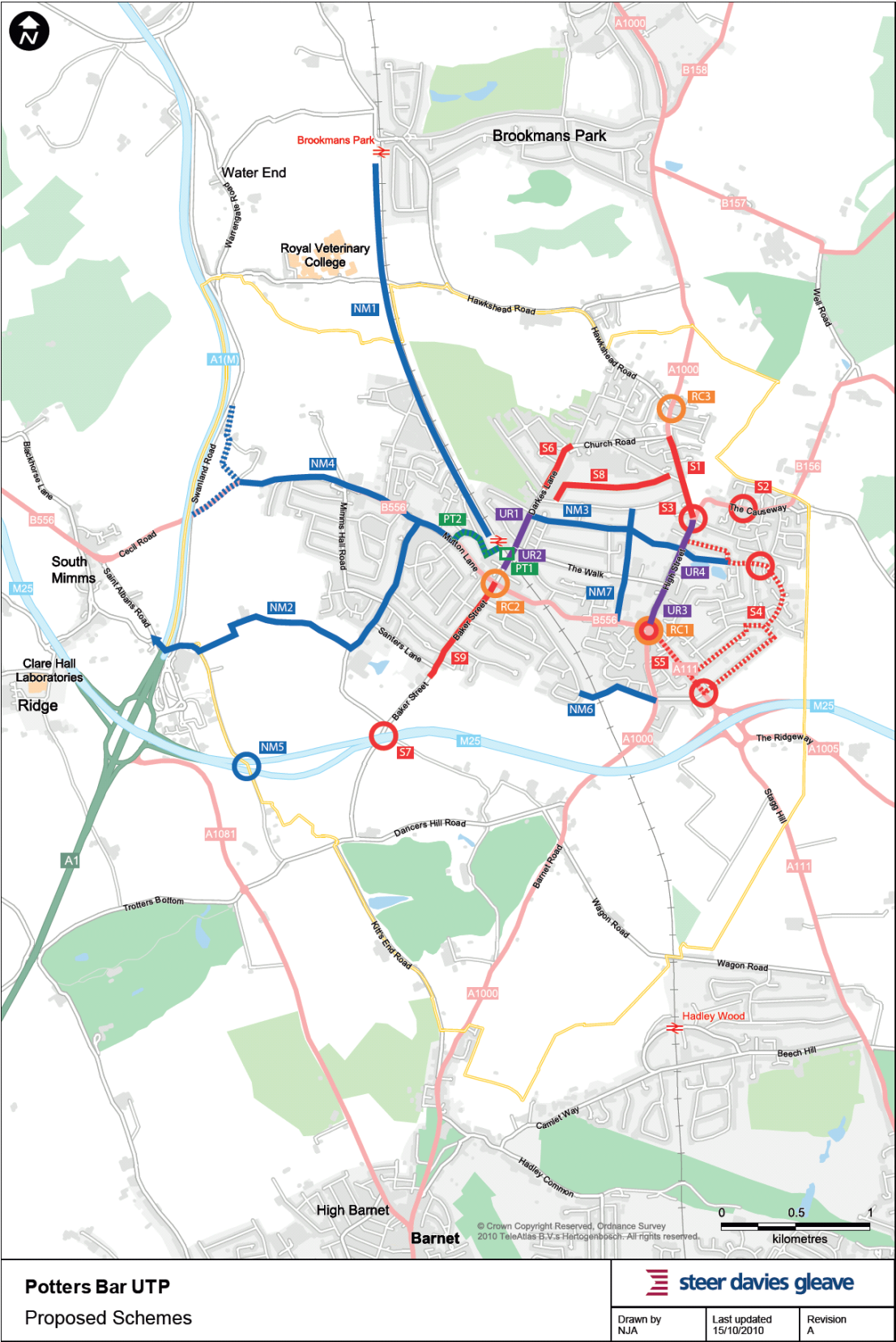
### ***Programme of Measures Required***

- 4.6 The schemes included in this section have been developed to contribute towards the key issues identified through consultation. These schemes are to be considered for implementation over the next 20 years. The implementation plan outlined in Section 6 covers the funding and implementation of each scheme for the next five years (2011/12 to 2016/17). The schemes developed take account not only of the existing supply of transport but also the future demand for transport. In particular we have developed schemes that offer high value for relatively low cost in the short term. Figure 4.2 illustrates the proposed schemes for this plan.



Potters Bar Urban Transport Plan

FIGURE 4.2 PROPOSED SCHEMES



# Potters Bar Urban Transport Plan

## Key Transport Issues Legend

### Urban realm improvement and integration schemes

- UR1** Darkes Lane Shopping Area (Manor Rd to The Walk)
- UR2** Darkes Lane Railway Bridge
- UR3** High Street (shopping section)
- UR4** High Street (north section)

### Public transport network improvements

- PT1** Access around station Forecourt / The Walk
- PT2** Access to Station from West
- \*PT3** Bus stops and shelters improvement
- \*PT4** Service Destinations / Timetabling

### Tackling safety concerns, speed limit compliance and walking issues

- S1** Hatfield Rd (Speeding, Narrow Fway, Bus Stop)
- S2** The Causeway / Cooper Lane (Ped Issues, inc Shuttle working lights)
- S3** High Street / Hatfield Rd
- S4** Oakmere Ave / Chace Ave / Oakmere Lane + Park Ave
- S5** A111 Southgate Road
- S6** Darkes Lane – Manor Road to Church Road
- S7** Baker St (M25 Underbridge)
- S8** Mount Grace Rd
- S9** Baker Street

\* Issue not shown on map

### Non motorised user network (pedestrians/cyclists/equestrians)

- NM1** Station - Hawkshead Line Path
- NM2** Station - Dame Alice Owen - South Mimms
- NM3** Oakmere - Parkfield Darkes Lane link
- NM4** Mutton Lane (Furze field Sport Centre) Darkes Lane to Swanland Rd
- NM5** Wash Lane
- NM6** Barnet Rd to Baker St link
- NM7** Billy Lows Lane - Mutton Lane cycle link

### Road congestion

- RC1** High St / Mutton Lane Junc
- RC2** Darkes Lane / Mutton Lane Junction
- RC3** Hatfield Rd / Church Lane

### Network demand management & travel choices

- \*DM1** Car Parking signing
- \*DM2** Strategic Route Diversion Strategy
- \*DM3** Freight Signing Plan
- \*DM4** Cranbourne Industrial Area
- \*DM5** Safer Routes To School
- \*DM6** Walking / Cycling Signing & Promotion Plan
- \*DM7** Service & Ticketing Integration
- \*DM8** Real Time Information Provision (ITS)
- \*DM9** Station Travel Plan
- \*DM10** Hospital Travel Plan
- \*DM11** Workplace Travel Planning





## 5 Urban Realm Improvement and Integration Schemes

### ***Overview of the Schemes in this Package***

- 5.1 Poor quality urban realm, heavy traffic and inconsiderate parking can be a significant deterrent to people wishing to walk or cycle. Improvements to the urban realm can greatly enhance people's journey experience and provide an environment in which there is a greater sense of security, increasing the propensity for people to walk and cycle and to access public transport services.
- 5.2 The schemes in this package seek to address some of the issues raised around the quality of urban realm in Potters Bar's main commercial centre (i.e. Darkes Lane and the High Street). The existing environment is dominated by congestion caused by high traffic flows and inconsiderate parking, some areas of poor pedestrian provision, and restricted access to the station.
- 5.3 Proposals include the relocation of a number of existing pedestrian crossings to better match pedestrian desire lines, improved cycle parking, improved landscaping and a rationalisation of on-street car parking with better promotion of the off-street facility.
- 5.4 When the schemes outlined reach the design and implementation stage they should be considered in accordance with Hertsmere Borough Council's Streetscape Manual, which will provide practical, local guidance for agencies, developers and other partnerships undertaking the work. Table 5.1 below records the Urban Realm Improvement and Integration Schemes and shows the key issues to which they relate.

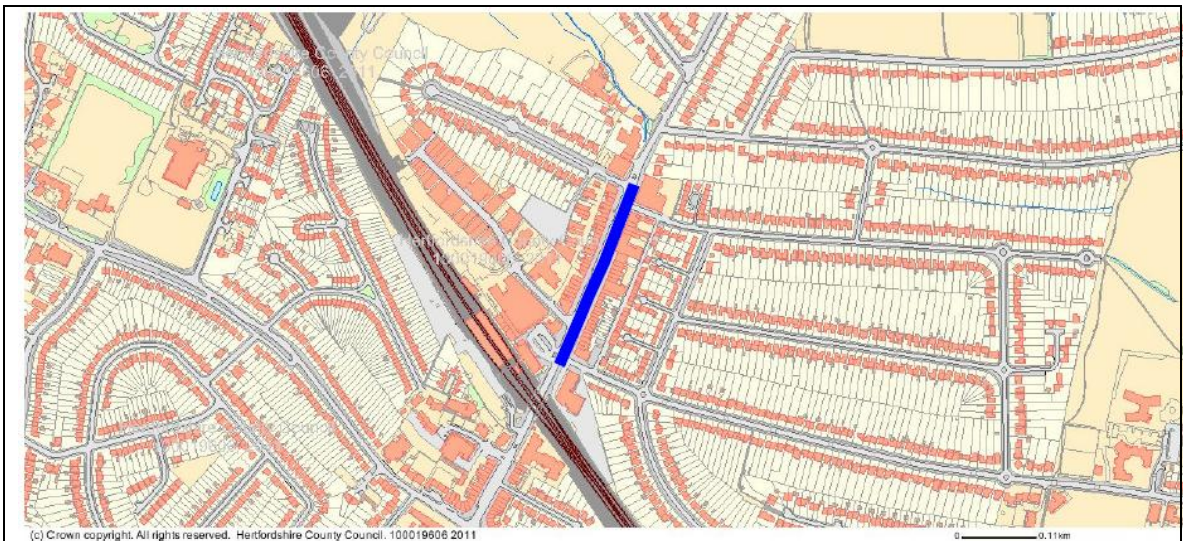
## Potters Bar Urban Transport Plan

**TABLE 5.1 URBAN REALM IMPROVEMENT AND INTEGRATION SCHEMES**





<b>Scheme Reference</b>	<b>Scheme Description</b>	<b>Key Issues Addressed</b>
UR1	New pedestrian crossings, including better access to the station, rationalisation of parking and urban realm improvements in the Darkes Lane Shopping Area. Landscaping and 'greening' of the area.	Wi5, Ci6, Pi6, Pi11, Pi12, Si1, Yi10
UR2	Darkes Lane railway bridge pedestrian and cycling improvements.	Wi7, Yi10
UR3	Urban realm improvements to the pedestrian environment along High Street shopping section including rationalisation of parking and new crossings. Landscaping and 'greening' of the area.	Ai1, Ci2, Pi5, Pi8, Wi5, Wi8, Yi11
UR4	Urban realm improvements along High Street (north) including new crossings and cycling provision.	Ai1, Ci2, Wi5, Yi7, Yi11

## Potters Bar Urban Transport Plan

Urban Realm Improvement and Integration Schemes		Scheme Ref : UR1
Scheme Name:	Darkes Lane Shopping Area (Manor Road to The Walk)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi5, Ci6, Pi6, Si1, Yi10	Quality of Life, Accessibility	DM1-Car Park Signing, DM6-Walking/Cycling Signing, UR2-Darkes Lane Railway Bridge



Location/General Description
<p>Darkes Lane is an unclassified local distributor road with a speed limit of 30mph. The 30mph section of Darkes Lane under investigation is highlighted in blue on <b>Figure 1</b>, and is approximately 260m in length. It extends from The Walk at its southern end to Manor Road at its northern.</p>  <p><b>Figure 1 - Site Location</b></p>
<p>Darkes Lane forms one of the main shopping areas in Potters Bar with a significant element of free on-street parking. An off-street car park is accessed via Manor Road with pedestrian access through to the western side of the shopping area. <b>Plate 4</b>. This pedestrian access is not well signed and would benefit from better promotion.</p>

## Potters Bar Urban Transport Plan

	
<p><b>Plate 1 – northbound view of Darkes Lane</b></p>	<p><b>Plate 2 – Darkes Lane from Byng Drive</b></p>
<p>Although the car park provides adequate parking, drivers frequently double park and wait for spaces causing congestion along Darkes Lane. This has an impact on the quality of the environment for other road users and causes congestion. This area has also historically suffered from vehicles, particularly delivery vehicles, parking on footway areas and causing damage to block paving.</p> <p>Parking to the south of the station is laid out as echelon parking and has been observed to work well. Consideration could be given to extending this layout to parts of this length of Darkes Lane as part of a review of current parking provision.</p> <p>Parking control is the responsibility of Hertsmere Borough Council. Any improvements to streetscape, including parking, will be subject to further discussion with Hertsmere Borough Council.</p>	
	
<p><b>Plate 3 –drivers waiting for on-street parking</b></p>	<p><b>Plate 4 – pedestrian cut-through to Manor Road car park</b></p>
<p>Access to the station for pedestrians is fairly restricted. There is a formal pedestrian crossing (PELICAN) south of the station between the forecourt and the access to the station car park. This is off the pedestrian desire line for those accessing the station from the eastern side of Darkes Lane (The Walk). <b>Plate 4.</b> For pedestrians taking the northern approach to the station from the eastern side there are a number of central refuges. <b>Plates 5 &amp; 6.</b> A number of these lack dropped kerbs on both sides of the footway and are not located on pedestrian desire lines.</p>	

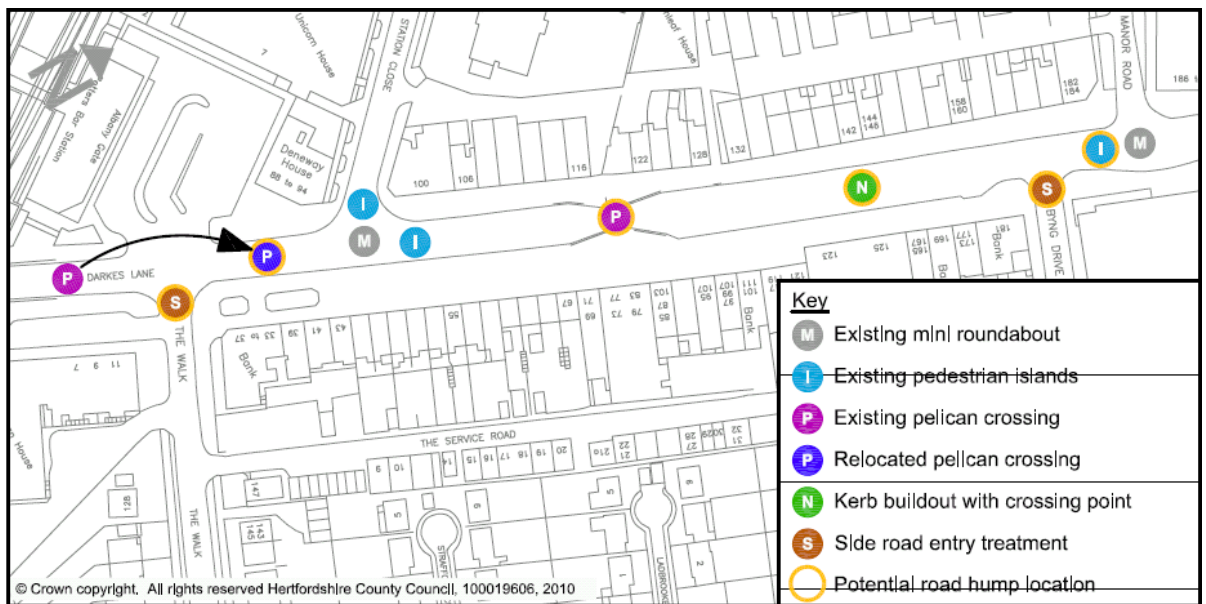


## Potters Bar Urban Transport Plan

	
<p><b>Plate 5 –Darkes Lane pedestrian crossing</b></p>	<p><b>Plate 6 –Darkes Lane central refuge north of the station</b></p>

To further improve the environment for pedestrians along the whole length of Darkes Lane consideration could be given to entry treatments across side roads and flap top speed table crossing areas along the main corridor.

Pulling all of these improvements together could be undertaken as a town centre enhancement type scheme undertaken as a complete scheme or in phases. These improvements may be more palatable to users if introduced in conjunction with a 20mph limit. **Figure 2** illustrates.



**Figure 2 - Potential Interventions**

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	RELOCATE EXISTING PELICAN CROSSING (Figure 2)	The existing pelican crossing at the southern end of Darkes Lane could be relocated to the north of The Walk so it more closely matches the pedestrian desire line, subject to a review of pedestrian flows. This new crossing could incorporate a speed table and would act as an entry feature for the southern approach to the shopping area.	£100,000- £150,000



## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-2	<p>SHOPPING AREA ENHANCEMENT (<b>Figure 2</b>)</p> <p>The Walk – Manor Road</p>	<p>The existing environment is dominated by congestion caused by drivers waiting for spaces which impacts on all road users.</p> <p>Existing pedestrian crossing areas could be improved through relocation to pedestrian desire lines and incorporating flat top kerb to kerb speed tables so that pedestrians can cross without a level difference.</p> <p>A kerb to kerb speed table could be incorporated into the existing formal crossing mid-way along Darkes Lane. Additional kerb to kerb speed tables could be placed at the northern end of Darkes Lane as an entry feature for the northern approach and an additional humped pedestrian refuge could be located midway.</p> <p>This is a main bus corridor and this will need to be taken into consideration in the design of any vertical carriageway features.</p> <p>Speed table entry treatments could also be added across side roads to provide level crossing areas for pedestrians.</p> <p>Other improvements should include cycle parking, street furniture and landscaping. These additional features would enhance the attractiveness of the area whilst deterring drivers from parking on the footways.</p> <p>Trees and planting could be used to prevent service vehicles using the footway for loading.</p> <p>A 20mph zone/limit in this area will complement these enhancements and will help to smooth the traffic flow along this stretch.</p>	£350,000-£500,000

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-3	REVIEW CURRENT PARKING PROVISION (Figure 2)	<p>The current parking configuration needs to be improved. Drivers waiting for on-street parking bays cause congestion and delay (Plate 3).</p> <p>Echelon parking works well to the south of the station and this could be considered for this section of Darkes Lane. This would visually narrow the carriageway whilst maximising the number of on-street parking spaces.</p> <p>There is sufficient off-street parking facilities accessed via Manor Road. There is a pedestrian cut-through from the car park to the shopping area (Plate 4) however this is not well advertised. This could be better promoted to encourage use of the off-street parking facility and should be undertaken in conjunction with car parking signing to promote car parking availability in the off-road facilities (Scheme DM1).</p>	£50,000- £100,000

## Potters Bar Urban Transport Plan

Urban Realm Improvement and Integration Schemes		Scheme Ref : UR2
Scheme Name:	Darkes Lane Railway Bridge	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi7, Yi10	Quality of Life, Cycling	UR1-Darkes Lane Shopping Area

### Location/General Description

The railway bridge across Darkes Lane effectively divides the two shopping areas along this road. The route under the bridge is dark and unattractive to cyclists on carriageway and for pedestrians using the footways on either side.



Figure 1 - Site Location

Although the carriageway remains the same width under the bridge the change of level can be intimidating for cyclists. **Plate 2.** Measures need to be undertaken to improve the attractiveness of this area to encourage walking and cycling along this corridor.

## Potters Bar Urban Transport Plan



***Plate 1 – Northbound view of western footway underneath the rail bridge***



***Plate 2 – Northbound view of carriageway underneath the rail bridge***

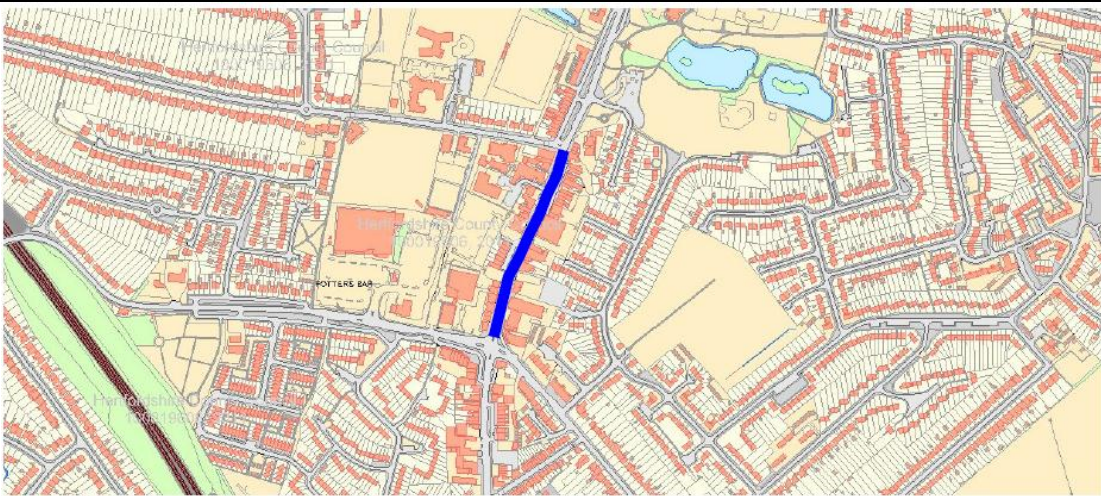
## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
2-1	IMPROVING ATTRACTIVENESS OF BRIDGE	The existing lighting is not pedestrian specific but for the carriageway. The existing environment is dark and unattractive to pedestrians and cyclists and may discourage journeys along this route. Measures could be undertaken to improve and enhance this environment, such as upgrading the lighting and painting the underside of the bridge.	£40,000 - £50,000
2-2	PROMOTION OF ON-ROAD CYCLE FACILITY	<p>Although the carriageway width under the bridge does not reduce the current environment is intimidating for cyclists as it gives the feeling of being enclosed.</p> <p>By removing the central hatching, on-road advisory cycle lanes could be implemented which would increase the presence of cyclists in this section of Darkes Lane. This would subsequently enforce cycle usage and increase confidence of cyclists.</p> <p><b>This is the preferred option.</b></p>	£20,000 - £25,000
2-3	PROMOTION OF OFF-ROAD CYCLE FACILITY	If the on road cycling option is not possible then as an alternative to Option 2 the existing footway widths (4m) would be appropriate for conversion to shared-use.	£20,000 - £25,000



## Potters Bar Urban Transport Plan

Urban Realm Improvement and Integration Schemes		Scheme Ref : UR3
Scheme Name:	High Street (shopping section)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai1, Ci2, Pi5, Pi8, Wi5, Wi8, Yi11	Quality of Life, Accessibility	DM1-Car Park Signing, DM6-Walking/Cycling Signing, UR4-High Street, RC1-High Street/Mutton Lane

Location/General Description
<p>High Street is a principle 'A' classified main distributor road with a 30mph speed limit. The 30mph section of High Street under investigation is highlighted blue on <b>Figure 1</b> and is approximately 320m in length. It extends from Mutton Lane at its southern end to The Walk at its northern.</p>
 <p>Figure 1 – Site Location</p>
<p>The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been eight injury accidents – two serious and six slight. This is a Mass Action Site, ranked 197.</p>

A number of issues have been raised with regard to this section. These include congestion and on-street parking as well as poor pedestrian provision along this route. There are a number of redundant crossover areas which cause level differences for pedestrians as well as large expanses where vehicles may cross over creating potential for conflict. **Plate 1** illustrates.



***Plate 1 – example of redundant vehicle crossovers***

The existing on-street parking is haphazard and detracts from the quality of the environment for pedestrians. **Plate 2** illustrates.




***Plate 2 – on-street parking***



## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost Estimate
3-1	PUBLIC REALM IMPROVEMENTS TO IMPROVE PEDESTRIAN ENVIRONMENT	<p>Improvements to be considered should include:</p> <ul style="list-style-type: none"> <li>▪ Rationalisation of parking arrangements, including removal of on-street parking in Kemble Parade.</li> <li>▪ Improvements to pedestrian routes across junctions/vehicle crossovers.</li> <li>▪ Reversal of traffic flow on Princes Parade to enable crossing distance at entrance to petrol station to be reduced.</li> <li>▪ Investigation of pedestrian link to Tesco</li> <li>▪ General maintenance/enhancement of footways.</li> <li>▪ Provision of trees and planting to improve streetscape.</li> </ul>	<p>£100,000 - £150,000</p> <p>£40,000 - £50,000</p> <p>£10,000</p> <p>£200,000 - £300,000</p>

Urban Realm Improvement and Integration Schemes		Scheme Ref : UR4
Scheme Name:	High Street (north section)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai1, Ci2, Wi5, Yi7, Yi11	Quality of Life, Accessibility	UR3-High Street, RC3-Hatfield Road/Church Lane, NM3-Oakmere-Parkfields Link

Location/General Description
<p>High Street is a principle 'A' classified main distributor road with a 30mph speed limit. The 30mph section of High Street under investigation is highlighted blue on <b>Figure 1</b> and is approximately 480m in length. It extends from The Walk at its southern end to Hatfield Road/Cotton Road at its northern.</p>  <p><b>Figure 1 – Site Location</b></p>
<p>The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been four slight injury accidents. This is a Mass Action Site, ranked 197.</p> <p>A number of issues have been raised with regard to this section. These include congestion and on-street parking as well as poor pedestrian and cyclist provision along this route. A number of improvements could be considered to address these concerns.</p>

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
	PUBLIC REALM IMPROVEMENTS	A number of improvements should be considered to improve the public realm in this area for pedestrians and cyclists:	
4-1		<ul style="list-style-type: none"> <li>Improve environment and pedestrian facility across the entrance/exit to the bus station.</li> </ul>	£30,000 - £50,000
4-2		<ul style="list-style-type: none"> <li>Provision and promotion of cycle routes along service road.</li> </ul>	£20,000 - £30,000
4-3		<ul style="list-style-type: none"> <li>Upgrading of puffin crossing by Oakmere Park to a toucan crossing (links with Scheme NM3). Toucan crossings allow cyclists to cross the road without having to dismount. They are designed for pedestrians and cyclists to use at the same time - 'two can cross'. It is current best practice to upgrade existing crossings to toucan crossings on established cycle routes.</li> </ul>	£50,000 - £60,000
4-4		<ul style="list-style-type: none"> <li>Redesign of junction with Oakmere Lane and associated service road to improve pedestrian crossing movements and traffic flow.</li> </ul>	£30,000 - £50,000

## 6 Improvements to the Public Transport Network

### *Overview of the Schemes in this Package*

- 6.1 Potters Bar has excellent transport connections to central London, with typical journey times of 20 minutes by train. Building on these connections, there are opportunities to increase the take up of public transport and reduce the general dominance of the car for local trips.
- 6.2 Potters Bar station has recently benefited from improvements to the station environment and forecourt yet there are further opportunities to make it a more attractive option for travellers. Access to the station can be restricted and there are issues with the location of cycle storage.
- 6.3 While the focus of public transport tends to focus on the corridor to London, there are gaps in the bus network, with a lack of connectivity to the south west of the town, to local retail and leisure destinations and to the local hospitals.
- 6.4 Although very close to London there is a perceived lack of integration with Transport for London bus services, while better integration of bus fares and ticketing and passenger information would also make the services more attractive and encourage use.
- 6.5 The schemes proposed in the following sections will go some way to improving existing public transport services, while also alleviating some of the related issues incurred through the local dominance of the car.

**TABLE 6.1 SCHEMES TO IMPROVE THE PUBLIC TRANSPORT NETWORK**

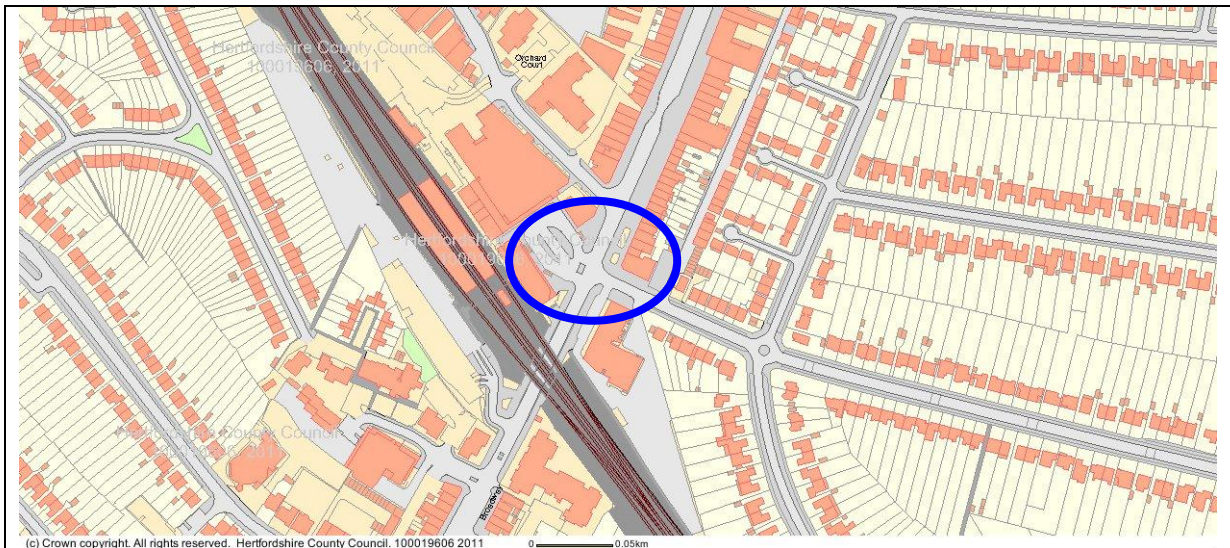
<b>Scheme Reference</b>	<b>Scheme Description</b>	<b>Key Issues Addressed</b>
PT1	Minor improvements to the station forecourt, including better cycle storage and pedestrian access.	Ri1, Ri2, Wi5, Wi7, Ci6
PT2	Revised cycle parking and new pedestrian access from the west.	Ci6, Ri1, Ri3, Ri4, Yi1
PT3	Bus stops and shelters which are not currently compliant with DDA standards to be identified for inclusion in the countywide Quality Bus Stop Improvements programme	Ai9, Ai10
PT4	Promotion of existing community transport and liaison with operators and TfL on potential revision to services.	Ai4, Ai5, Ai7, Ai8

## Potters Bar Urban Transport Plan

Public Transport Network Improvements		Scheme Ref : PT1
Scheme Name:	Access around Station Forecourt/The Walk	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ri1, Ri2, Wi5, Wi7, Ci6	Passenger Transport, Accessibility	UR1-Darkes Lane Shopping Area, UR2-Darkes Lane Railway Bridge, PT2-Access to Station from West

### Location/General Description

Potters Bar Station has recently benefited from improvements to the station environment and the forecourt. Enhancements within the forecourt area include a bus turning area, cycle stands, disabled parking bays and drop-off area.



**Figure 1 – Site Location**

A number of areas have been raised as issues. The improvements to the station forecourt include a clearly highlighted pedestrian route across the forecourt. **Plate 2**. However, for pedestrians not accessing the station, the new bus access/egress is a wide area to cross and is not demarcated.

**Plate 1** illustrates



## Potters Bar Urban Transport Plan

		
<p><b>Plate 1 – View across station entrance</b></p>		<p><b>Plate 2 – View across station forecourt</b></p>

Although there is good cycle storage provision at the front of the station, these appear to be under-utilised. This is possibly due to their isolated position leading to perceived security risk. In contrast, there is over-spill cycle parking at the rear of the station in the station car park.

The potential interventions proposed are designed to complement the recent improvements and resolve new or remaining issues. It will be important to work closely with Network Rail and the local Train Operating Company to identify potential funding sources as it is unlikely that the funding would be available from the National Rail's National Station Improvement Programme .

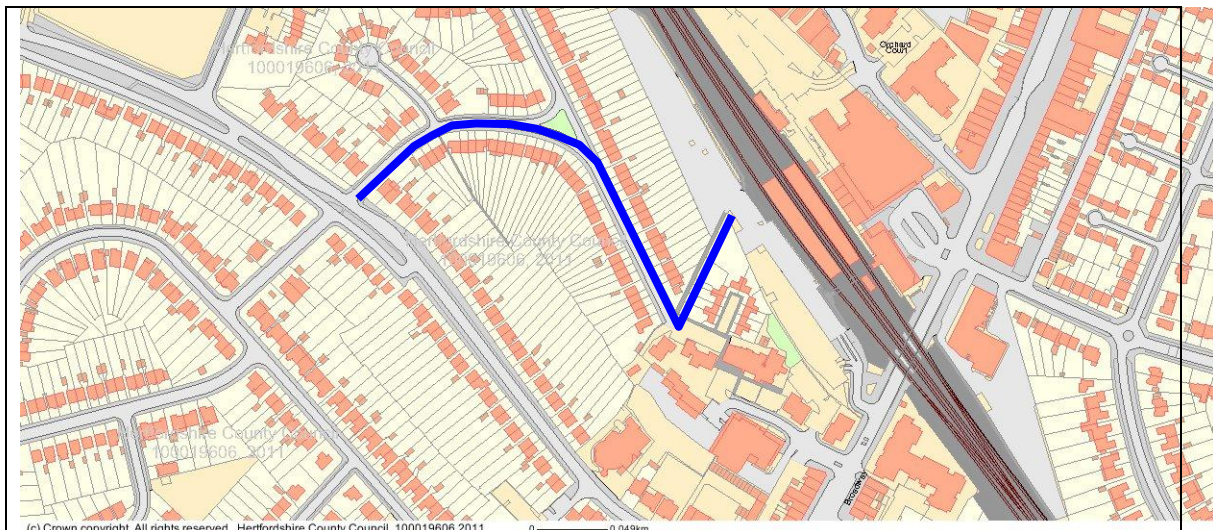
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	STATION FORECOURT IMPROVEMENTS	The pedestrian route across the station forecourt is a wide crossing area for pedestrians (Plate 1). This could be improved by highlighting the area in the same way the pedestrian route across the forecourt itself has been (Plate 2).	£10,000 - £15,000
1-2	ALTERNATIVE USE FOR EXISTING CYCLE PARKING	The existing cycle stands at the front of the station are under-utilised. If a better facility is provided in the station car park area then new uses for this space could be considered; for example, a third party could be appointed to install and maintain a local cycle hire scheme.	£5,000 - £10,000

## Potters Bar Urban Transport Plan

Public Transport Network		Scheme Ref : PT2
Scheme Name:	Access to Station (from west)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci6, Ri1, Ri3, Ri4, Yi1	Passenger Transport, Accessibility, Cycling	UR1-Darkes Lane Shopping Area, UR2-Darkes Lane Railway Bridge

### Location/General Description

The car park serving Potters Bar Station is sited at the rear of the station. It provides ad-hoc parking spaces for 205 vehicles and has 62 spaces for permit holders only.



**Figure 1 – Site Location**

Access to the station from the west is less than ideal with limited facilities for cycle parking and pedestrians have to cross the station car park entrance.



Station forecourt improvements included cycle stands however, these are limited and are under-utilised. In contrast, overspill cycle parking takes place in the station car park at the rear, attached to the railings (see **Plate 2**).

This is obviously felt to be a more secure and convenient location for cyclists and would benefit from improvements such as covered and secure cycle parking facilities.

The station car park can be directly accessed from Laurel Avenue via an existing footpath, as highlighted in blue on **Figure 1**, which exits onto the station car park highlighted by a dummy zebra crossing (see **Plate 1**). This provides a convenient route for pedestrians and cyclists avoiding the main route along Darkes Lane although it is not well promoted.



## Potters Bar Urban Transport Plan

	
<p><b>Plate 1 – footpath access from station car park leading to Laurel Avenue</b></p>	<p><b>Plate 2 – overflow cycle parking at rear of station</b></p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
2-1	PROVISION OF CYCLE PARKING IN STATION CARPARK	<p>The overflow cycle parking in the station car park is alongside existing premier car park spaces. If demand for cycle parking is sufficient, these premier car park spaces could be converted to formal secure and covered cycle parking.</p> <p>Any reduction in car parking spaces will be subject to analysis of demand, and should be accompanied by improvements to car park signage to ensure best use of available capacity.</p>	£30,000 - £40,000
2-2	PROMOTION OF KEY PEDESTRIAN & CYCLE ROUTE Laurel Avenue	The existing path linking Laurel Avenue to the station car park could be improved where appropriate and promoted as a key walking and cycling route.	£15,000 - £20,000

## Potters Bar Urban Transport Plan

Public Transport Network Improvements		Scheme Ref : PT3
Scheme Name:	Bus Stops and Shelter Improvements	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai9, Ai10	Passenger Transport, Accessibility	PT4-Service Destinations and Timetabling

Location/General Description
<p>Hertfordshire is already investing in improving accessibility to the most important bus stops through the countywide Quality Bus Stop improvement programme which is partly funded through the Local Transport Plan. In some locations the provision and upgrade of bus shelters can be funded in partnership with private companies. This approach will continue to be an appropriate and attractive option.</p> <p>Just under half of the 45 bus stops in the Potters Bar area are already DDA* compliant, including stops at the station and all stops served by Transport for London services. These stops have built up kerbing to ease boarding of buses and most also benefit from provision of a shelter (Plate 1).</p> <p>There remain a number of gaps in the accessible bus network where bus stops and shelters have not yet been upgraded. Particularly in Darkes Lane, Church Road, Barnet Road, Hatfield Road, Mutton Lane, Cranborne Road and Oakmere Avenue. There are also streets on 'Hail &amp; Ride' bus routes without any boarding facilities: Shillitoe Avenue, Rushfield, Elmfield Road, Baker Street, and The Walk.</p> <p>The Department for Transport's 'Inclusive Mobility' (2005) guidelines include:</p> <ol style="list-style-type: none"> <li>1) timetables and route maps should be displayed at eye-level and should include embossed lettering so that they can be read by blind and visually impaired people;</li> <li>2) whenever maintenance work is carried out, highway authorities should take the opportunity to lift kerbs and provide a raised bus boarding area; and</li> <li>3) seating should be provided where possible.</li> </ol> <p>Improving the DDA compliance of bus stops and shelters should be implemented in coordination with improving bus access to hospitals and key destinations (Scheme PT3). This will ensure that all users will have access to these improved services.</p> <p><small>*DDA (Disability Discrimination Act) defines standards for the ease of use of public infrastructure and services by wheelchair users and others with restricted mobility. These standards cover public transport vehicles and infrastructure, including bus stops.</small></p>



**Plate 1 – upgraded bus stop with shelter and RTI**

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
3-1	<p>DDA BUS STOP UPGRADES</p> <p>Bus stops and shelters which are not currently DDA should be identified for inclusion in the Quality Bus Stop Improvements programme which is being carried out countywide. Review timetabling provision at stops and potential provision of stop specific timetables at busy stops. Ensure appropriate balance of electronic and paper timetable provision.</p>	<p>Improve access for all bus users but importantly will extend the range of destinations accessible to people with restricted mobility.</p>	<p>£10,000 to £15,000 per bus stop</p>

## Potters Bar Urban Transport Plan

Public Transport Network Improvements		Scheme Ref : PT4
Scheme Name:	Bus Service Destinations and Timetables	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai4, Ai5, Ai7, Ai8	Passenger Transport, Accessibility	DM7-Service and Ticketing Integration

Location/General Description
<p>This package of work would seek to improve access by bus both within Potters Bar and to hospitals and to key retail and leisure destinations. The aim being, where possible:</p> <ul style="list-style-type: none"> <li>to establish direct bus services from Potters Bar to Barnet General Hospitals and the Lister Hospitals;</li> <li>within the town, to improve access for residents in the south west of the town to the town centre; and</li> <li>to liaise with Transport for London and local commercial operators about changes to routing and scheduling to accommodate the relevant trips.</li> </ul>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
4-1	Promotion of existing community transport provision to Barnet General and Lister Hospitals.	Community transport offers a good opportunity to provide access to hospitals for people who may not be able to travel by car or existing bus services.	< £5,000
4-2	Investigate with operators the extension of coverage of services within the south west of the town	Increasing people's options to travel by bus would encourage their greater use.	< £5,000
4-3	Investigate role for community transport services within the south west of the town – to give connections to town centre and Potters Bar Hospital.	Community transport offers an opportunity to provide access to key destinations for people who may not be able to travel by car or existing bus services.	< £5,000

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
4-4	Liaise with Transport for London and local commercial operators about changes to routing and scheduling to accommodate the relevant trips. It is recognised that key destinations may change over time, and, where possible, Hertfordshire County Council will work with local commercial operators to ensure essential destinations continue to be served by existing or new bus services.	Increasing people's options to travel by bus would encourage their greater use.	< £5,000



## 7 Tackling Safety Concerns, Speed Compliance and Walking Issues

### ***Road Safety***

- 7.1 Hazardous Sites are identified on an annual basis by Hertfordshire County Council in the Hazardous Sites Report. This provides ranking of sites against the following criteria:
- Six or more injury collisions, any severity, in the previous three year period, in a 75m circle.
  - Four or more injury collisions, any severity, in a one year period, in a 75m circle.
  - Three or more child KSI collisions, in the previous three year period, in a 75m circle.
  - Three or more KSI collisions, in the previous three year period, in a 75m circle.
  - Two or more KSI collisions, in a one year period, in a 75m circle.
  - Three or more injury collisions, any severity, in the previous three year period, in a 75m circle, with a contributory factor identified as a bend, dark conditions, wet conditions, or skidding (Mass Action).
  - Three or more injury collisions, any severity, in the previous three year period, in a 75m circle, with a contributory factor of misjudged speed, inappropriate speed or too fast for conditions.
  - Three or more injury collisions, any severity, in the previous three year period, in a 75m circle, with a contributory factor of excessive speed.
- 7.2 Ranking of these sites uses a weighting system that places a greater emphasis at locations where the collision has been either fatal or serious. The weighting process uses the Department for Transport annual Highways Economic Note that calculates the costs to the community of the different severities of collisions. The calculation provides a point scoring system for slight, serious or fatal collisions.
- 7.3 Before selection of a scheme, a cost-benefit analysis is carried out using the Highways Economic Note data on the average cost of an injury accident that enables a calculation to be made on the first year economic return of rate to ensure the costs of the scheme do not outweigh the benefits. These are sites which the County Council would consider as having a safety issue and are founded on data collected by the police.
-



## Potters Bar Urban Transport Plan

- 7.4 Collision and casualty data is run annually to provide the Hazardous Sites list used for site selection. Similar activity provides data for potential safety camera enforcement sites. All sites are ranked within the countywide Hazardous Sites ranking list report that is produced annually in July each year. Subject to finance available, the top 30 ranked sites are targeted for further investigation and entered into the IWP. Collision investigation reports are then prepared for each site using confidential data. The results of the studies are provided for members and the public as part of the consultation process but cannot provide details on individual collisions.
- 7.5 A number of sites identified in the plan correspond to Hazardous Sites. These are recorded below.

**TABLE 7.1 HAZARDOUS SITES**

Pro forma	Location	Site Type	Ranking (2010)
RC2	B556 Mutton Lane, Potters Bar	SINGLE SITE (6 or more accidents in 3 years)	117
		MASS ACTION (3 or more accidents in 3 years (dark, wet, skid or bend only)	108
S9	Baker Street, Potters Bar	MASS ACTION (3 or more accidents in 3 years, dark, wet, skid or bend only)	167
UR3/4	A1000 High Street, Potters Bar junction with The Walk	MASS ACTION (3 or more accidents in 3 years, dark, wet, skid or bend only)	197
NM4	B556 Mutton Lane, Potters Bar	MASS ACTION (3 or more accidents in 3 years, dark, wet, skid or bend only)	385

- 7.6 There are many sites residents consider to be dangerous due to speeding, inappropriate driver behaviour and parking. These issues have not typically been addressed directly by the plan, because they

## **Potters Bar Urban Transport Plan**

have not been identified as Hazardous Sites. These may be addressed elsewhere in the plan if they meet other Local Transport Plan funding area criteria. In addition, the County Council works with Hertfordshire Constabulary to identify priority sites for the use of Speed Indicator Devices (SIDs) to help monitor and control speed compliance.

- 7.7 Hazardous Sites in Potters Bar are shown in Figure 7.1 overleaf.

# Potters Bar Urban Transport Plan

### FIGURE 7.1 HAZARDOUS SITES IN POTTERS BAR



**Overview of the Schemes in this Package**

- 7.8 Perceived safety concerns and speeding traffic can act as a real barrier to walking and cycling. Some simple improvements to reduce perceived safety concerns can encourage people to take up the more sustainable modes and reduce the impact of the car on the local environment and vulnerable road users.
- 7.9 The proposed schemes focus on improving the environment for vulnerable road users, pedestrians and cyclists. They include new and improved road crossings, cycle lanes and footway improvements as well as physical measures to reduce vehicle speeds in targeted areas. A summary of schemes is presented in Table 7.2 below.

**TABLE 7.2 SAFETY, SPEED COMPLIANCE AND WALKING SCHEMES**

Scheme Reference	Scheme Description	Key Issues Addressed
S1	Hatfield Road. Relocation of bus stop away from narrow section of footway and new pedestrian crossing.	Vi5, Ai10, Wi5
S2	Footway maintenance and new crossing facility.	Ci4, Vi4, Wi1, Wi6
S3	High Street/Hatfield Road, new crossing facilities.	Ci2, Wi5
S4	Oakmere Avenue/Chace Avenue/Oakmere Lane/Park Avenue parking restrictions.	Pi7
S5	A111 Southgate Road review existing traffic signal phasing and consider new crossing.	Ai1, Pi2, Wi12
S6	Reconfigure the road layout to include cycle lanes to increase driver awareness of more vulnerable road users.	Vi1, Yi12
S7	Baker Street (M25 Underbridge) cycle lanes.	Yi3
S8	Mount Grace Road traffic calming.	Vi2
S9	Baker Street traffic calming.	Vi3

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Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S1
Scheme Name:	Hatfield Road, The Causeway and Quakers Lane	
UTP Key Issues	LTP Targets	Links to Other Schemes
Vi5, Ai10, Wi5	Accessibility, Speed Limit Compliance, Quality of Life	N/A

### Location/General Description

Hatfield Road is classified as a Principle 'A' main distributor road with a speed limit of 30mph. The 30mph section of Hatfield Road under investigation is highlighted in blue on **Figure 1**, and is around 560m in length.



**Figure 1 – Site Location**

Speed surveys undertaken in October 2010 showed 85<sup>th</sup> percentile speeds of approximately 37.0mph northbound and 39.0mph southbound.



The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been three slight injury accidents.

Issues raised here included the identification of gaps in the accessible bus network, particularly a lack of DDA bus borders. High speeds (northbound) were also of concern.

There is an existing footpath (FP001), **Plate 2**, on the eastern side which provides access to the open area however there is lack of connectivity from the western side of Hatfield Road to this area. The footway along the eastern side is also very narrow and overgrown by vegetation (**Plate 1**).



## Potters Bar Urban Transport Plan

	
<p><b><i>Plate 1 – view southbound from Quakers lane towards location of existing southbound bus stop opposite Billy Lowes Lane showing narrowness of footway on eastern side</i></b></p>	<p><b><i>Plate 2 – existing access to FP001 opposite Quakers Lane</i></b></p>

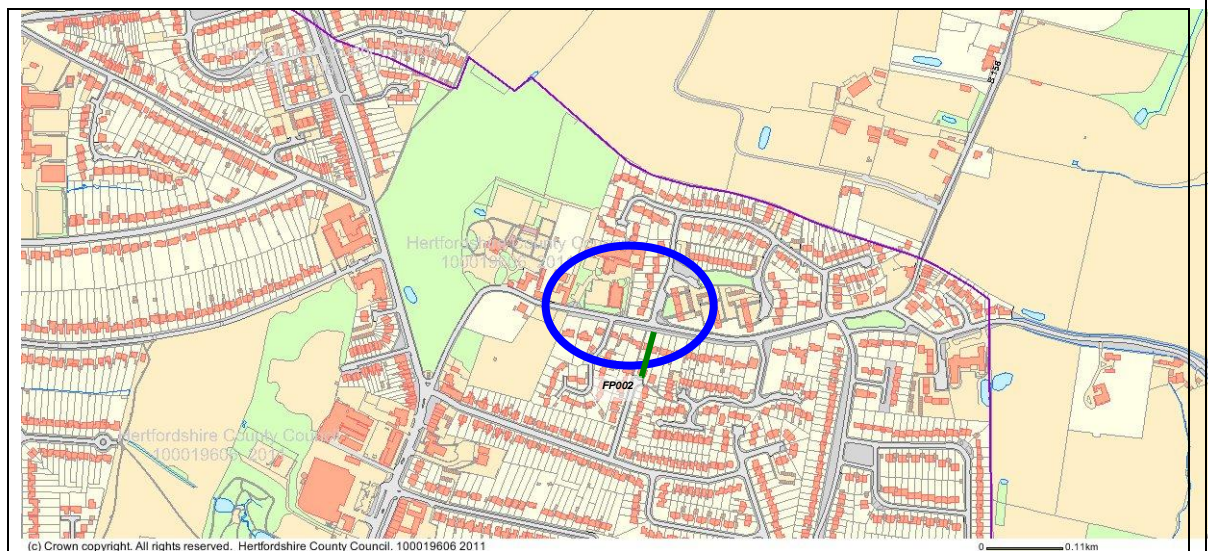
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	BUS STOP RELOCATION	Consideration should be given to the relocation of the existing southbound bus stop on the eastern side of Hatfield Road to a point north of Quakers Lane where the footway is wider and a shelter can be provided.	£20,000 - £30,000
1-2	NEW PEDESTRIAN CROSSING FACILITY	There is presently lack of connectivity from the western side of Hatfield Road, the bus stop on the eastern side and the area of common land between Hatfield Road and The Causeway on the eastern side. A new puffin crossing at Quakers Lane would provide a formal pedestrian crossing facility to these areas. As part of this improvement the existing footway on the eastern side should be improved through siding out of the footway and vegetation trimming to maximise the width.	£130,000 - £140,000

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Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S2
Scheme Name:	The Causeway/Cooper Lane	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci4, Vi4, Wi1, Wi6	Accessibility, Mode Share of Journeys to School	N/A

### Location/General Description

The Causeway is a 'B' classified secondary distributor road with a 30mph speed limit. The area under investigation is highlighted in blue in **Figure 1**.



**Figure 1 – Site Location**



The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been three injury accidents – two slight and one serious.

This road provides direct access to Stormont School which is located on its northern side.

A number of issues have been raised concerning pedestrian safety due to the narrowness of the footway and speed of vehicles along this route.



## Potters Bar Urban Transport Plan

		
<p><b><i>Plate 1 – eastbound view along The Causeway from Stormont School entrance</i></b></p>		<p><b><i>Plate 2 – westbound view from Stormont School entrance</i></b></p>

There is an existing footpath (FP002) opposite Thaynesfield and any improvements in this area would improve pedestrian access to and from Stormont School and the residential area on the southern side of The Causeway.

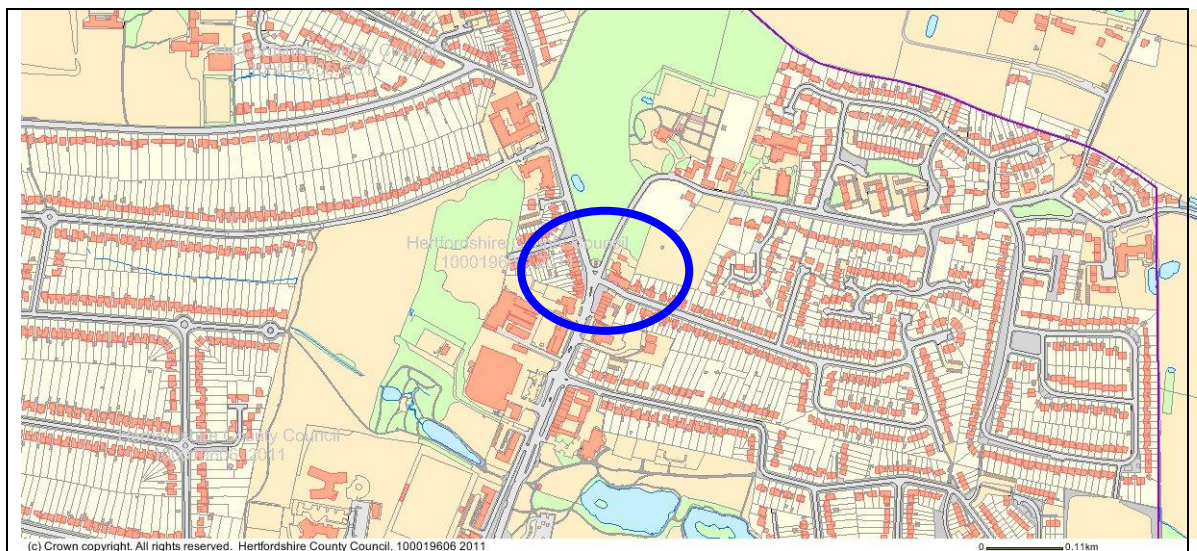
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
2-1	NEW PEDESTRIAN CROSSING FACILITY	Consider provision of new puffin crossing for Stormont School between Morvan Close and Thaynesfield. This would tie-in to the existing footpath (FP002) on the southern side of The Causeway.	£120,000 - £130,000
2-2	FOOTWAY MAINTENANCE/VEGETATION TRIMMING	The narrow footway makes pedestrians feel at risk from passing vehicles. The footway cannot be widened as the carriageway is already narrow and therefore maintenance and vegetation trimming should be undertaken to maximise the available footway width.	<£5,000

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Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S3
Scheme Name:	High Street/Hatfield Road	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci2, Wi5	Quality of Life, Accessibility	N/A

### Location/General Description

High Street/Hatfield Road is a principle 'A' class main distributor road with a speed limit of 30mph. The area under investigation is circled in blue on **Figure 1** and forms a signalised junction with Cotton Road and The Causeway which is a 'B' classified secondary distributor road. There are cycle Advanced Stop Lines on each arm.



**Figure 1 – Site Location**

The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been no injury accidents.

Congestion has been an on-going issue at this junction which has previously been modelled. Improvements, which included Advance Stop Lines for cyclists, were implemented a number of years ago and further improvements to improve capacity at this junction are not feasible.

Pedestrian provision at this junction is limited to a pedestrian phase across the High Street arm of the junction. There are dropped kerbs across Cotton Road however they are not aligned and tactile paving is not present. There is also lack of connectivity from the eastern side of High Street/The Causeway to the open area of land on the western side. The northern most footpath access (**Plate 2**) has restricted visibility both for pedestrians and drivers and measures should not be implemented at this location to promote crossing at this location. However, at the southernmost footpath access (**Plate 1**) visibility is improved and vehicle speeds are reduced as drivers are slowing for the signals.

## Potters Bar Urban Transport Plan

	
<p><b>Plate 1 – Footpath access outside police station</b></p>	<p><b>Plate 2 –High Street/Causeway showing footpath access and restricted visibility</b></p>

All the Advance Stop Lines have stubs on their approaches due to the available widths of the carriageway at this junction. On the western side of the junction there is a shelter parking bay for a few vehicles. **Plate 3** illustrates.

It may be possible to review the current parking arrangements at this location so that the length of the approach stub to the Advance Stop Line on this arm of the junction could be extended. **Plate 4** shows a typical layout of a cycle lane approach stub.

	
<p><b>Plate 3 – northbound view of junction showing ASLs on Hatfield Road and sheltered parking</b></p>	<p><b>Plate 4 – Example of an Advanced Stop Line with cycle lane approach stub</b></p>

## Potters Bar Urban Transport Plan

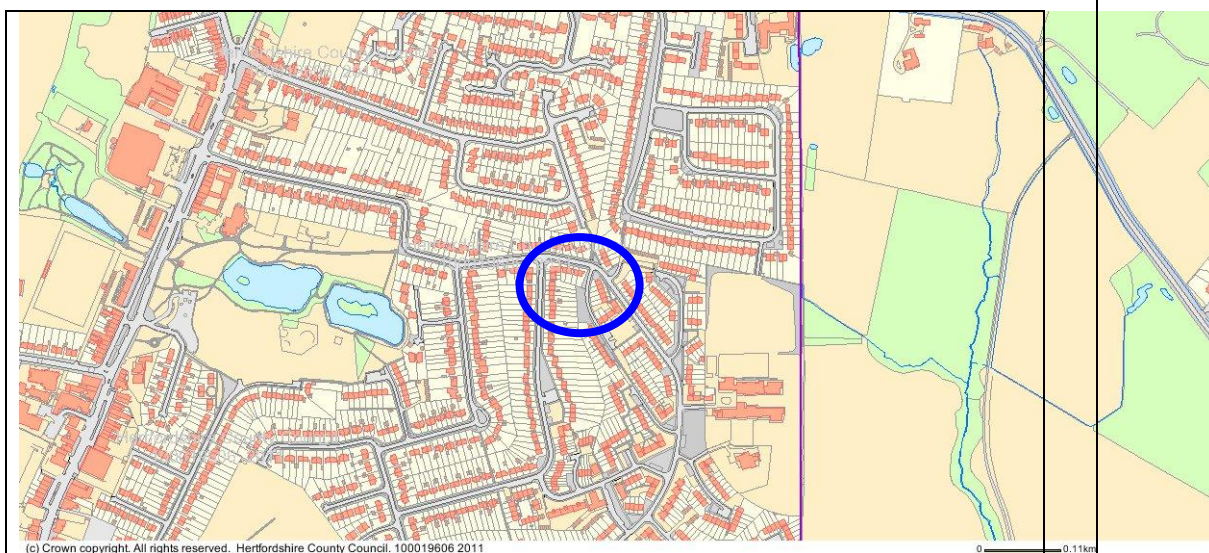
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
3-1	IMPROVEMENTS TO EXISTING CROSSING FACILITY	Works should be undertaken to improve the existing informal crossing facility across Cotton Road.	£5,000 - £10,000
3-2	IMPLEMENT A NEW INFORMAL CROSSING FACILITY	Works to be undertaken to implement a new informal crossing facility to link the area immediately outside the police station to the open space opposite on High Street.	£10,000 - £15,000
3-3	REVIEW LANE WIDTH AND PARKING TO FACILITATE FEEDER LANE LEADING TO CYCLIST'S ADVANCED STOP LINE	The current sheltered parking arrangements on the western side of this junction could be reviewed to ascertain whether cyclist access to the Advance Stop Line could be improved through the implementation of a longer stub approach.	£ 5,000 (Review only)



Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S4
Scheme Name:	Oakmere Avenue/Chace Avenue/Oakmere Lane/Park Avenue	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai1, Pi2, Wi12	Quality of Life, Accessibility	N/A

## Location/General Description

Oakmere Avenue/Chase Avenue is an unclassified local distributor road with a speed limit of 30mph. The section of road under investigation is highlighted in blue on **Figure 1**.



**Figure 1 – Site Location**

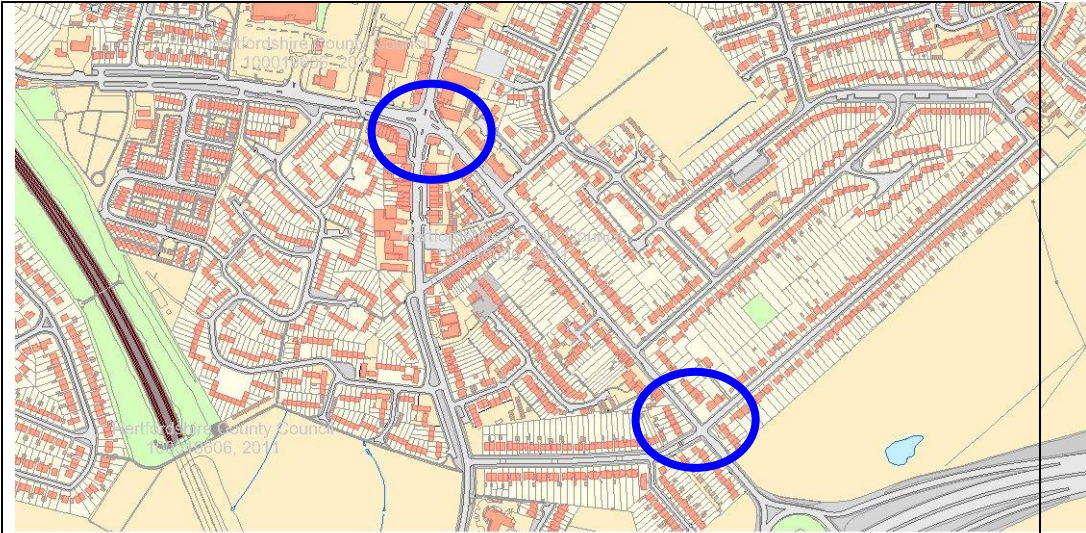
A number of issues have been raised regarding on-street parking along this road particularly at the junctions with Forbes Avenue and Bowmans Close which are both classified as local access roads. Parking in these areas causes issues with buses along this route.

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
4-1	PARKING RESTRICTIONS – CHASE AVENUE/FORBES AVENUE	An element of parking at and close to the junction of Chase Avenue with Forbes Avenue causes congestion and delays to the bus service. Parking restriction in this area would prevent parking at this location.	< £5,000
4-2	PARKING RESTRICTIONS – CHASE AVENUE/BOWMANS CLOSE	An element of parking at and close to the junction of Chase Avenue with Bowmans Close causes congestion and delays to the bus service. Parking restriction in this area would prevent parking at this location.	< £5,000

## Potters Bar Urban Transport Plan

Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S5
Scheme Name:	A111 Southgate Road	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci7, Wi11	Congestion, Quality of Life	DM3-Freight Signing Plan, RC1-High Street/Mutton Lane

Location/General Description
<p>Southgate Road is classified as a principle 'A' main distributor road with a speed limit of 30mph and extends for a length of around 750m.</p>  <p><b>Figure 1 – Site Location</b></p> <p>Issues have been highlighted in two areas along this road – difficulty for pedestrians to cross in the vicinity of Park Avenue and northbound congestion.</p>



## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
5-1	REVIEW EXISTING TRAFFIC SIGNAL TIMINGS/PHASING	Traffic signal timings and phasing should be reviewed to ascertain whether additional capacity can be achieved at the Mutton Lane junction.	£ 5,000 (review only)
5-2	NEW PEDESTRIAN CROSSING FACILITY	A new puffin crossing could be considered on Southgate Road north of Park Avenue to assist pedestrians crossing at this location. As this area is covered by a controlled parking zone, displaced parking will not be an issue. Careful consideration of location is needed due to safety cameras.	£ 130,000 - £140,000

## Potters Bar Urban Transport Plan

Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S6
Scheme Name:	Darkes Lane – Manor Road to Church Road	
UTP Key Issues	LTP Targets	Links to Other Schemes
Vi1, Yi12	Speed Limit Compliance Cycling Trips	UR1-Darkes Lane Shopping Area



### Location/General Description



**Figure 1 – Site Location**

On the northern section of Darkes Lane and running through to Church Road, where the road is more open than the shopping area, there is poor speed limit compliance, with surveys showing speeds significantly above the 30 mph limit. This is particularly so for vehicles heading north, away from the town centre. Driver behaviour at pinch-points on this section of road is also creating hazards and increases perception of vulnerability for cyclists. This is particularly the case travelling uphill (northbound from the Darkes Lane shopping area) where cyclists would naturally be moving more slowly and the speed difference with passing motor traffic is higher.

## Potters Bar Urban Transport Plan

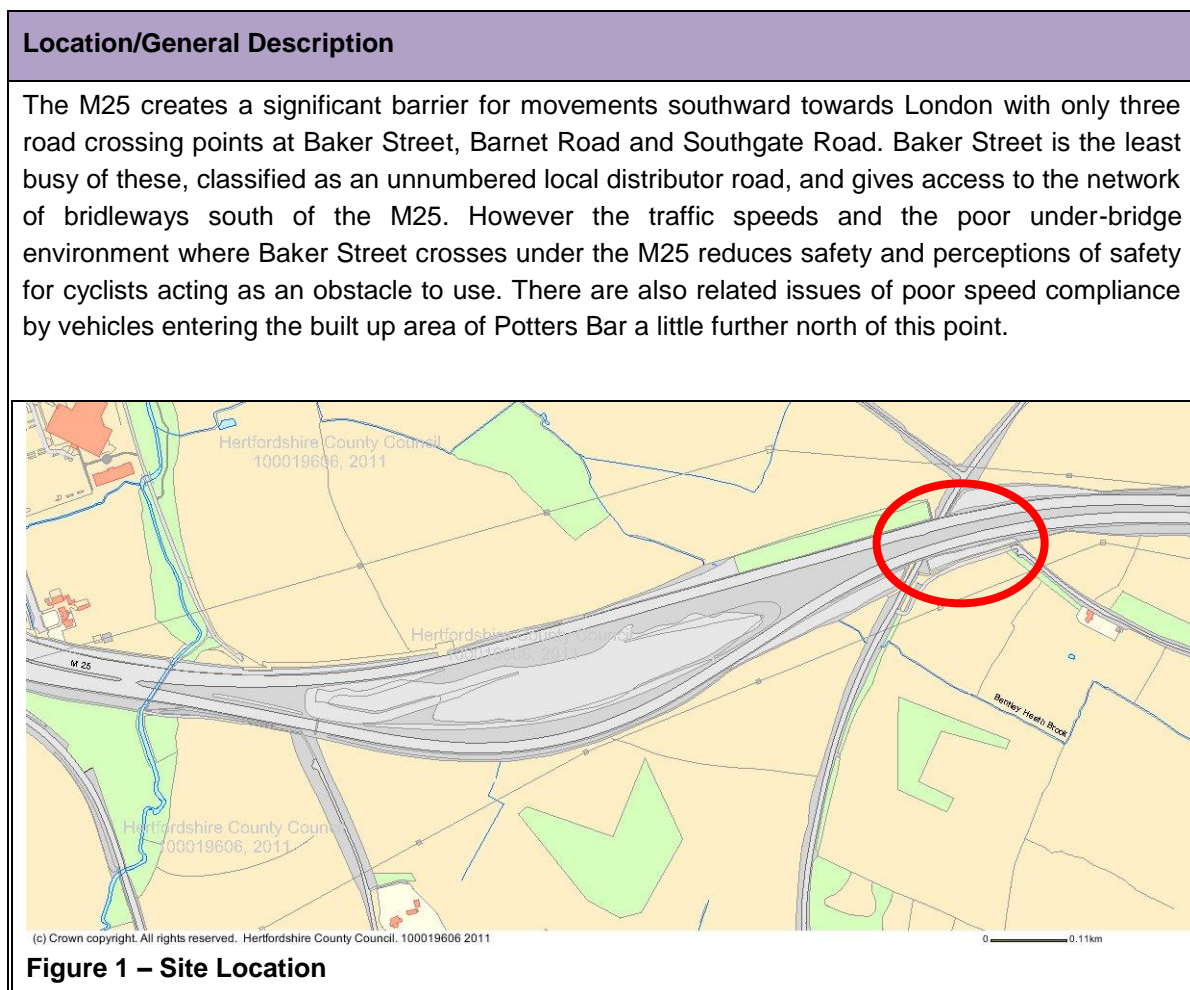
	
<b>Plate 1 – southbound view of Darkes Lane</b>	<b>Plate 2 – northbound view of Darkes Lane</b>

Central hatching and traffic islands separating the two directions of traffic flow run along most of this section and the road is generally sufficiently wide to consider reconfiguring the layout to include cycle lanes to increase driver awareness of more vulnerable road users, which will help to improve speed limit compliance, and to give added protection for, and confidence to, cyclists.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
6-1	<b>RECONFIGURE ROAD SPACE</b>  Reconfigure the road layout to reallocate road space from central hatching to provide on-road cycle lanes	The road is generally sufficiently wide to consider reconfiguring the layout to include cycle lanes for this section.	£50,000 - £60,000
6-2	<b>REMOVAL OF CENTRAL PEDESTRIAN REFUGE</b>  Where an improved configuration can be achieved by removing a central pedestrian refuge, consider alternative arrangements to facilitate pedestrians crossing the road.	The central pedestrian refuge currently creates a pinch point when drivers wish to overtake cyclists. Removing the central pedestrian refuge reduces this pressure and facilitates a reconfiguration of road space to allow for cycle lanes on either side of the carriageway.  If this option is progressed then alternative pedestrian crossing facilities will be considered.	£15,000 - £20,000

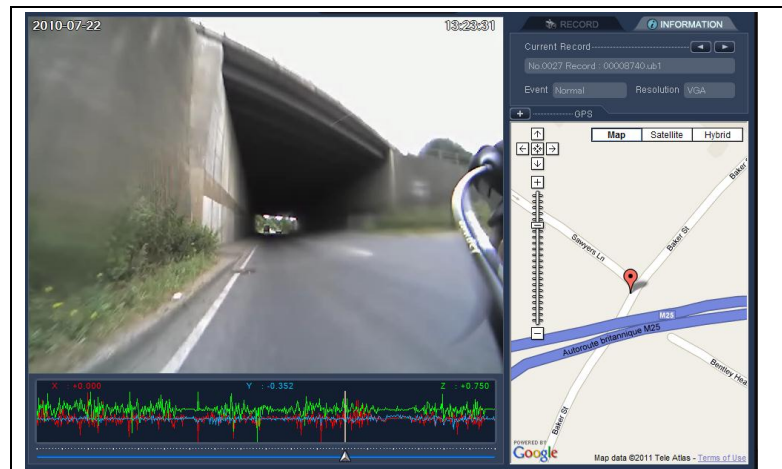
## Potters Bar Urban Transport Plan

Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S7
Scheme Name:	Baker Street (M25 Underbridge)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Yi3, Vi3	Cycling	S9-Baker Street, DM6-Walking/Cycling Signing



Improving the environment for cyclists with the introduction of cycle lanes under the bridge would encourage more use of this route and provide connections to links towards London. This would also have the benefit of acting as a signal to drivers approaching Potters Bar that they are entering the urban area and help address the issues of speed compliance where the 30 mph restrictions begin slightly to the north.

## Potters Bar Urban Transport Plan



**Plate 1 – Cycle audit : view southbound of Baker Street bridge under M25**

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
7-1	CYCLE LANES	Provision of cycle lanes in the vicinity of the bridge would help to raise driver awareness of cyclists. If this is not feasible then cycle symbols or edge lines could be used.	£60,000 - £70,000
7-2	LIGHTING IMPROVEMENTS	Subject to available connections to power, provide lighting in the bridge under the M25 and improve the environment to make cyclists more visible.	£15,000 - £20,000

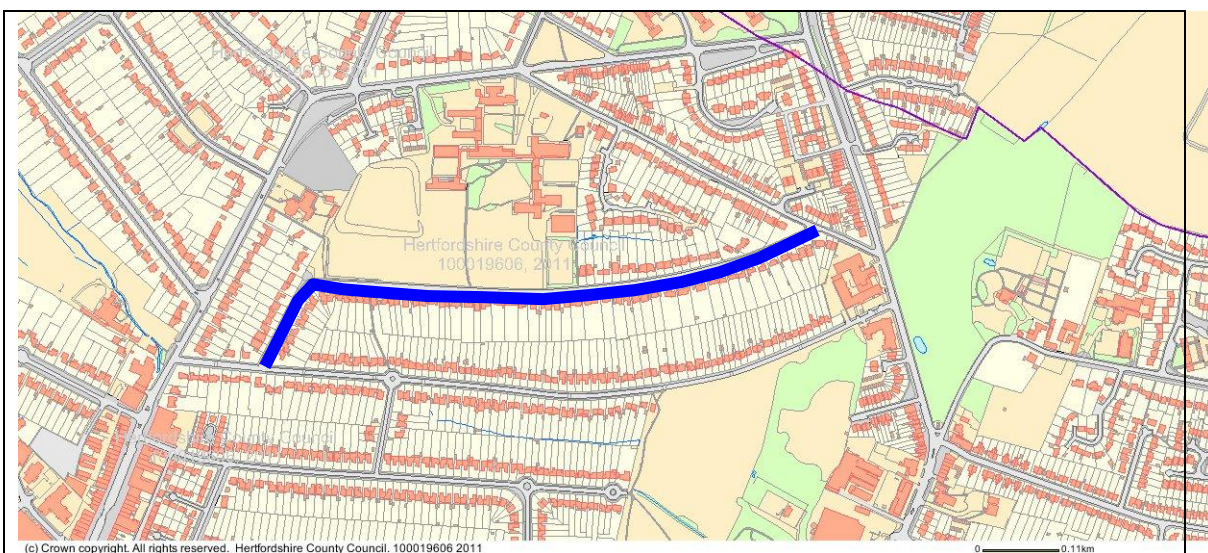


## Potters Bar Urban Transport Plan

Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S8
Scheme Name:	Mount Grace Road	
UTP Key Issues	LTP Targets	Links to Other Schemes
Vi2	Speed Limit Compliance	N/A

### Location/General Description

Mount Grace Road is an unclassified local access road with a 30mph speed limit. The 30mph section of Mount Grace Road under investigation is highlighted blue on **Figure 1**, and is around 850m in length.



**Figure 1 – Site Location**

It has a single yellow line parking restriction along its whole length which restricts parking between 2:00pm and 3:00pm Monday to Friday. There are also intermittent parking bays for residents and permit holder only for use Monday – Friday 2:00pm to 3:00pm.

The accident data for the three year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there has been one slight injury accident.

When Mount Grace Road is assessed against the Speed Limit Framework in the Hertfordshire County Council Speed Management Strategy it is debatable whether the whole length meets the criteria for a 30mph speed limit.



## Potters Bar Urban Transport Plan

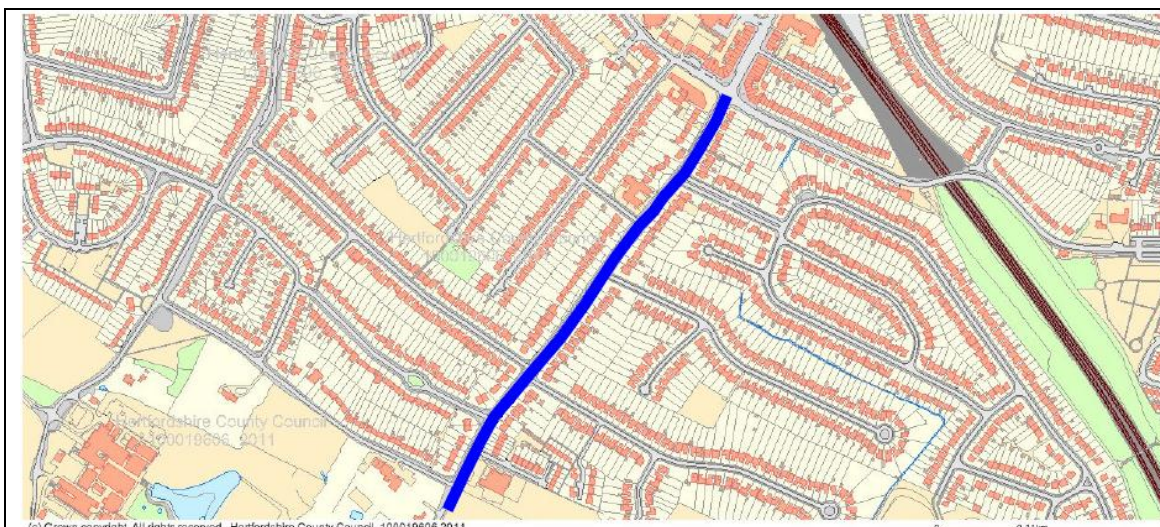
Options/Variations			
Ref.	Potential Interventions	Assessment of suitability	Cost Estimate
8-1	TRAFFIC CALMING MEASURES – Vertical features	Additional intervention in the form of traffic calming measures should be considered to reinforce the current 30mph speed limit. As this is not a bus route, it would be feasible to consider the implementation of flat top kerb to kerb speed tables to achieve a speed reduction to approximately 30mph.  Care will need to be taken to locate the features away from private driveways.	£180,000 - £200,000
8-2	TRAFFIC CALMING Horizontal features	Additional sheltered parking bays could be considered along the length of this road.	£40,000 - £50,000

## Potters Bar Urban Transport Plan

Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref : S9
Scheme Name:	Baker Street	
UTP Key Issues	LTP Targets	Links to Other Schemes
Vi3	Speed Limit Compliance	S7-Baker Street (M25 Under-bridge)

### Location/General Description

Baker Street is an unclassified local distributor road with a speed limit of 30mph. The 30mph section of Baker Street under investigation is highlighted in blue on **Figure 1**, and is approximately 784m in length.



**Figure 1 – Site Location**

Speed surveys undertaken in October 2010 showed 85<sup>th</sup> percentile speeds of approximately 36.1mph northeast bound and 38.1mph southwest bound. The accident data for the 3 year period from 1<sup>st</sup> November 2007 up to and including October 2010 shows that there have been 6 injury accidents – 4 slight and 2 serious. This site is identified as a Mass Action site, rank 167.

## Potters Bar Urban Transport Plan

		
<p><b><i>Plate 1 – View towards junction with Mutton Lane/Darkes Lane</i></b></p>		<p><b><i>Plate 2 – Southwest bound view of Baker Street</i></b></p>

The whole length of Baker Street has a number of intermittent parking bays for residents and visitors permit holders only for use Monday – Saturday 8am – 6.30pm. These mean that there are long stretches of carriageway which are unobstructed where speeds are unrestricted.

When Baker Street is assessed against the Speed Limit Framework in the Hertfordshire County Council Speed Management Strategy it is debatable whether the whole length meets the environment criteria for a 30mph speed limit. As can be seen in **Plates 1** and **2** above there is limited on-street permit holder parking allowed only in allocated bays for residents and visitors.

This type of setting is not naturally conducive to reducing vehicle speeds due to driver's perception of the environment.

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
9-1	<b>SIGNAGE &amp; ROAD MARKINGS</b> Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds	Road markings could be renewed, and consideration given to the use of edge lines to visually reduce the carriageway along with more prominent centre lines at junctions and 'SLOW' markings at key hazards. Coloured anti-skid surfacing could be provided on the approaches to the existing pedestrian crossing facility to highlight its presence.	£25,000 - £35,000
9-2	<b>SHELTERED PARKING SCHEME</b>	The existing parking restrictions mean that the majority of the road length is left unobstructed which can lead to an increase in speeds. To restrict speeds along Baker Street parking could be reintroduced along the road by means of a shelter parking scheme. This would break up the unobstructed length of carriageway and help to reduce speeds.	£50,000 - £60,000
9-3	<b>TRAFFIC CALMING</b> Vehicle Activated (VA) sign	It should be investigated whether the current accident history had involved speed as a contributory factory. If this is the case a VA sign may be appropriate.	£20,000 - £30,000



## 8 Improvements to the Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)

### *Overview of the Schemes in this Package*

- 8.1 This set of proposed schemes will deliver improvements to the 'Non-Motorised User Network' which includes paths, tracks and other links for pedestrians, cyclists and equestrians which are not part of the road network. These proposed schemes support the on-going improvement programmes being taken forward by Hertfordshire County Council and Hertsmeire Borough Council, particularly with respect to the Rights of Way Improvement Programme (RoWIP), the County Cycling Strategy and the Watling Chase Greenways Strategy.
- 8.2 The schemes will improve the connectivity and continuity of existing walking and cycling network around the town with key destinations such as the two shopping streets, the railway station and the leisure centre, encouraging more people to cycle and help reduce town centre congestion. They will also provide better access to key employment/educational destinations near Potters Bar.
- 8.3 The proposed package of accessibility improvements to the railway station together with the cycle routes proposed as part of this package will help to improve the number of people who consider cycling to the rail station - particularly the improved, secure and sheltered cycle parking facilities on the west side of the station (see Schemes PT1 and PT2).
- 8.4 Provision of additional cycle parking in Potters Bar town centre near to key destinations such as shops and the library will also help to increase use of these facilities and will help to address existing local road congestion issues by encouraging more people to make shorter journeys by bike (see Schemes UR1 and UR3).
- 8.5 The travel planning included as part of the Demand Management and Travel Choices package of schemes will help to provide people with more information about their journey options and will help to ensure that the improvements introduced as part of this package are well used.
- 8.6** Table 8.1, below, gives a brief description of each of these scheme and the key issues they will address. Further details of each scheme including a description of options are presented in the following tables of this section.



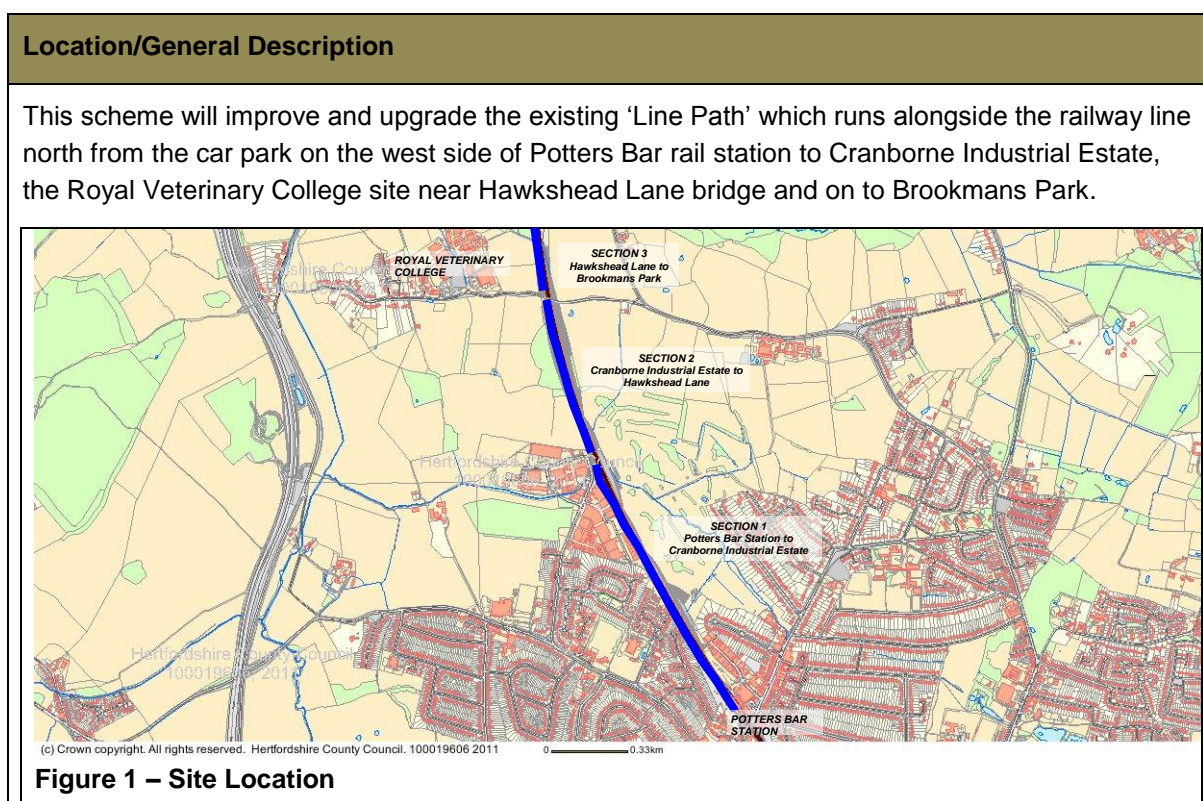
## Potters Bar Urban Transport Plan

**TABLE 8.1 SCHEMES TO IMPROVE THE NON-MOTORISED USER NETWORK**

<b>Scheme Ref.</b>	<b>Scheme Description</b>	<b>Key Issues Addressed</b>
NM1	Improve and upgrade the Line Path from Potters Bar Station to Royal Veterinary College and Brookmans Park. Add lighting to the section from Cranborne industrial estate and residential area to improve safety and access to the station.	Wi3, Yi2
NM2	Improved links from town centre and the station via Dame Alice Owen School towards the Cancer Research Centre (CRC) and National Institute for Biological Standards and Control (NIBSC), important employment sites and South Mimms. It will also give access to the National Cycle Network at Swanland Road (NCN12).	Wi18, Yi4, Wi6
NM3	Improved links (east-west) from Oakmere area to Darkes Lane shopping area and station, via Oakmere Park and Parkfield. Including improved crossing of the High Street.	Yi7
NM4	Improved access into the station by cycle from west and south-west of the town and access from the centre of Potters Bar to The Furzefield Leisure Centre. Completion of this route and establishing a connection between Cecil Road bridge and Swanlands Road would also provide access to National Cycle Network leisure cycling route (NCN12).	Wi2, Wi14, Yi9, Yi13
NM5	Improvements to the condition of the Wash Lane underpass of the M25 to address the problems of flooding and the poor surface.	Wi13, Yi3
NM6	Improve and upgrade the Cherry Tree Lane path between Sunnybank Lane and Barnet Road to provide a cycle link over the rail line allowing east-to-west connections in the south of the town.	Wi15, Yi8

## Potters Bar Urban Transport Plan

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM1
Scheme Name:	Watling Chase Greenways Line Path from Potters Bar Station to Royal Veterinary College and Brookmans Park	
UTP Key Issues	LTP Targets	Links to Other Schemes
Yi2, Wi13	Cycling Trips Rights of Way	DM6-Walking/Cycling Signing



The first part of the path (Potters Bar Footpath 009) provides access to the station for residents of the Cranborne area, and to/from the Cranborne industrial estate, however inadequate lighting along the path creates safety issues. The path is quite narrow in places and of varying quality. There are currently no signs to indicate the entrance to the path in the station car park. Beyond the industrial estate the path leads to a track (Potters Bar Footpath 009 & North Mimms Footpath 080) to Hawkshead Lane which is an un-made surface. This track continues from Hawkshead Lane to Brookmans Park (North Mimms Footpath 011 & 009). Upgrading the path will allow access to the Royal Veterinary College and Brookmans Park for cyclists as well as pedestrians, giving a much more direct alternative for access than the road journey. This path is the subject of a Rights of Way Improvement Programme scheme to upgrade to bridleway and is a longstanding Watling Chase Greenways proposal.

*It is important to note that the routes proposed in this pro-forma are aspirational and will be subject to the various land owners agreements / permissions.*

## Potters Bar Urban Transport Plan

	
<b>Plate 1 – Line Path – first section to residential area</b>	<b>Plate 2 – Line path - section to Cranborne Industrial Estate</b>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	SECTION 1 – Potters Bar Station to Cranborne Industrial Estate  IMPROVEMENTS TO PATH & LIGHTING	Widening existing path and improving surface from Potters Bar Station to Cranborne Industrial Estate.	£50,000 - £100,000
1-2	SECTION 2 – Cranborne Industrial Estate to Hawkshead Lane  IMPROVEMENTS TO EXISTING UNMADE PATH  Existing path linking the Cranborne Industrial Estate with Hawkshead Road	This length of path would benefit from being surfaced to make it more appropriate for use by cyclists.	£30,000 - £40,000
1-3	SECTION 3 – North of Hawkshead Lane  CONVERSION OF EXISTING FOOTPATH TO CYCLE ROUTE (BRIDLEWAY)	Conversion of this footpath to a bridleway between Hawkshead Road and Brookmans Park, would enable use by cyclists.	£10,000 - £15,000
1-4	ROUTE SIGNAGE  Whole route	This key pedestrian/cycle corridor is not currently signed from the station car park or along the route.  Suitable signage should be provided as appropriate in keeping with the surrounding	£10,000- £15,000

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
		area.	
1-5	MINOR IMPROVEMENTS	In order to improve the route minor improvements could be undertaken in the form of dropped kerbs across road accesses. These locations would include those within the industrial area/Cranborne Crescent/Hawkshead Road.	£20,000 - £30,000



## Potters Bar Urban Transport Plan

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM2
Scheme Name:	Potters Bar Station to Dame Alice Owen School and South Mimms	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi18, Yi4	Cycling Trips Rights of Way	DM5-Safer Routes to School, DM6-Walking/Cycling Strategy, NM4-Mutton Lane, NM5-Wash Lane, PT2-Access to Station from West

### Location/General Description

This scheme will improve links from the town centre and the station towards the Cancer Research Centre (CRC) and National Institute for Biological Standards and Control (NIBSC), important employment sites South Mimms, also via Dame Alice Owen School. This will provide improved options for Potters Bar residents to access these two key employers and to the National Cycle Network (along Swanland Road). It will also link in Dame Alice Owen School to improve the link from the station and town centre for pupils and staff.



**Figure 1 – Site Location**

The cycle and walking route to South Mimms has been recently upgraded in places but existing rights of way are not continuous and several obstacles remain, particularly in the vicinity of South Mimms service area. There are also sections with poor quality of the road surface. The route from the west side of the station through the car park to Laurel Avenue (see Scheme PT2 highlighted purple dashed line on **Figure 1**) and Mutton Lane (**NM4** highlighted as blue dashed line) provides access via Dugdale Hill Lane to Dame Alice Owen school. There is an existing link via Bridgefoot Lane to Swanland Road (near South Mimms service area) and St Albans Road. Access from the junction of Wash Lane to St Albans is currently difficult for both pedestrians and cyclists, particularly the lack of

## Potters Bar Urban Transport Plan

footway and crossing of Swanland Road, shown in **Plates 1** and **2** below.



***Plate 1 – northbound view of Swanland Road north of roundabout with St Albans Road***



***Plate 2 – southbound view from St Albans Road with Swanland Road on left arm of roundabout***

*It is important to note that the routes proposed in this pro-forma are aspirational and will be subject to the various land owners agreements/permissions.*



## Potters Bar Urban Transport Plan

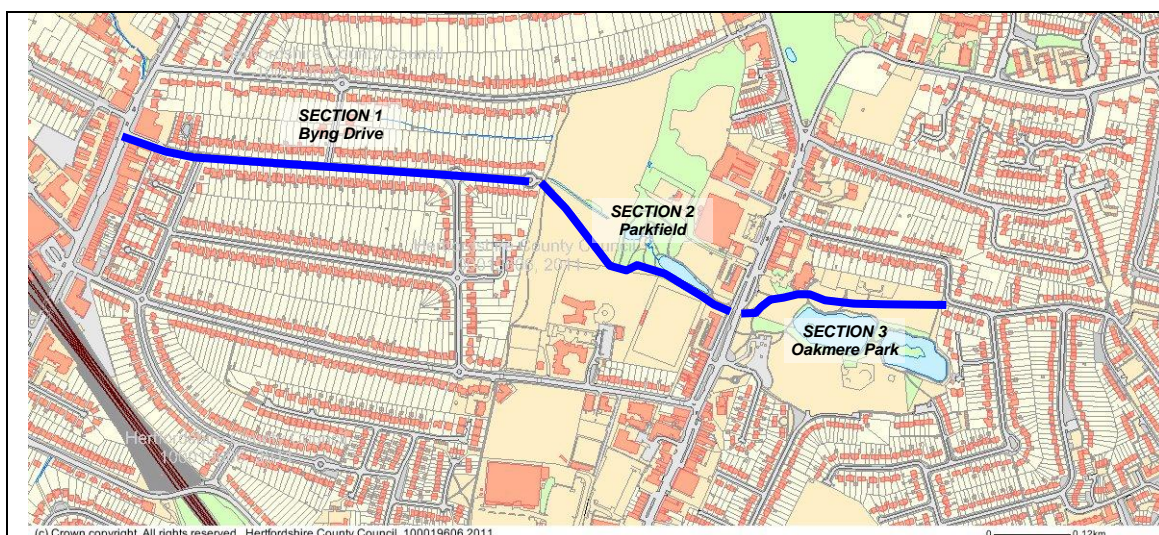
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
2-1	<b>SIGNING</b> Signing along route for South Mimms, CRC, NIBSC etc., e.g. from Sawyers Lane and Bridgefoot Lane.	Suitable signage should be provided as appropriate in keeping with the surrounding area.	£10,000 - £15,000
2-2	<b>FOOTPATH IMPROVEMENTS</b> Improve path surface from end of Bridgefoot Lane to Wash Lane	Subject to any necessary permissive agreements to allow cycling, this length of path would benefit from being surfaced to make it more appropriate for use by cyclists.	£10,000 - £15,000
2-3	<b>FOOTPATH IMPROVEMENTS</b> Improve surface along Blanche Lane to Cancer Research Centre.	Subject to any necessary permissive agreements to allow cycling, this length of path would benefit from being surfaced to make it more appropriate for use by cyclists.	£20,000 - £30,000
2-4	<b>NEW FOOTWAY</b> Provision of a new footway between Wash Lane & St Albans Road.	Subject to any necessary permissive agreements.	£25,000 - £35,000
2-5	<b>IMPROVMENTS TO PEDESTRIAN/CYCLE INFRASTRUCTURE WITHIN SERVICE AREA</b>	Improved pedestrian / cycle facilities and signage to and within the Service Area (Bignalls Corner) could create a safer and more accessible area for all.	£25,000 - £50,000

## Potters Bar Urban Transport Plan

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM3
Scheme Name:	Oakmere – Parkfield – Darkes Lane link	
UTP Key Issues	LTP Targets	Links to Other Schemes
Yi7	Cycling Trips	UR4-High Street, DM6-Walking/Cycling Signing

### Location/General Description



It is currently not easy for residents of the Oakmere area and the east side of town to get to Darkes Lane shopping area and the station by bicycle, particularly getting across the busy High Street.



**Figure 1 – Site Location**

Establishing a route through Oakmere Park with enhanced crossing facilities over the High Street, continuing through Parkfield and Byng Drive provides a good opportunity to improve east-west connections between the two shopping streets on quiet and lightly trafficked roads that would encourage less confident cyclists and families with younger cyclists. Cycling is currently not permitted through these two park areas and the needs of other park users should be taken into consideration and promoted through publicity and communications establishing priority for pedestrian users and promoting considerate use of shared spaces as have been successfully introduced elsewhere. Once completed the route would be publicised through the Walking and Cycling Promotion Plan, including mapping/ route leaflets and promotional events to make people aware of the new opportunities the route offers. The Parkfield Link Scheme which addressed Section 2 from the High Street to Byng Drive is currently being progressed as part of the Greenways programme.

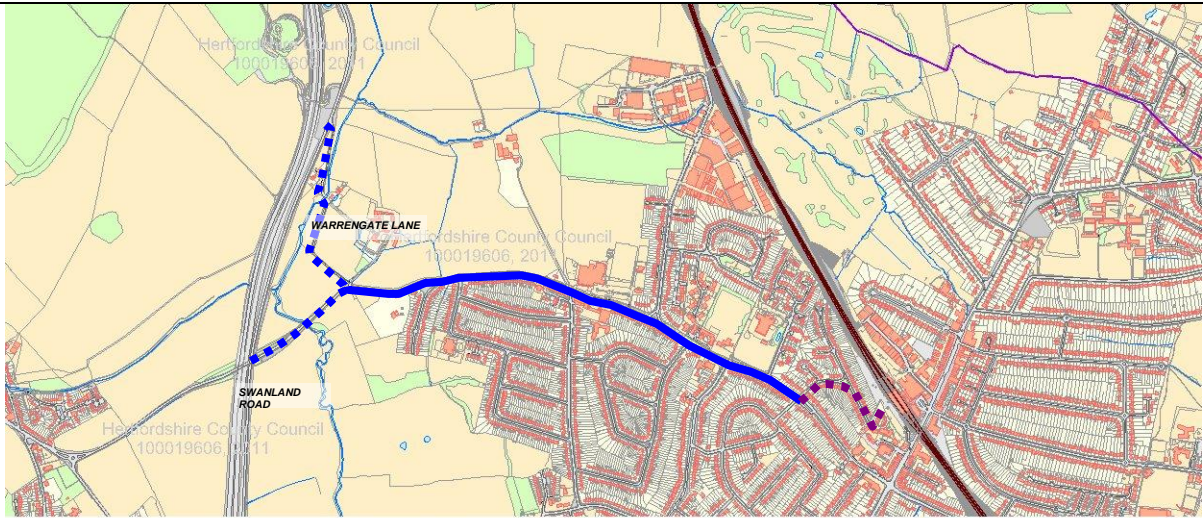
## Potters Bar Urban Transport Plan

	
<p><b>Plate 1 – entrance to Parkfield from Byng Drive</b></p>	<p><b>Plate 2 – westbound view along Byng Drive from Parkfield</b></p>
<p><i>It is important to note that the routes proposed in this pro-forma are aspirational and will be subject to the various land owners agreements/permissions.</i></p>	

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
3-1	Signed Cycle Route between Oakmere (Oakmere Avenue/ Tempest Avenue/Highview Gardens) and Darkes Lane via Byng Drive.	Permissive agreement will need to be sought to allow cycling on the footpaths through Parkfield and Oakmere Park between Oakmere Avenue and Byng Drive.	£5,000 - £10,000
3-2	Enhancement of crossing facilities at High Street between Oakmere Park and Parkfield Park.	The existing pelican crossing on High Street could be converted to a TOUCAN crossing which would be more appropriate for use by pedestrians and cyclists.	£50,000 - £60,000
3-3	Considerate shared-use publicity campaign to promote consideration of other users through parks and other shared use (pedestrian/cycling) areas.	Important element of this scheme which will avoid potential issues and promote acceptability and help realise full benefits of the investment. This element to be delivered as part of the Walking and cycling promotion plan DM6.	£5,000 - £10,000

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Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM4
Scheme Name:	Link from Potters Bar Station via Mutton Lane to Furzefield Leisure Centre and Swanland Rd	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi2, Wi14, Yi9, Yi13	Cycling Trips Rights of Way	DM6-Walking/cycling Signing, NM2-Station to South Mimms, PT2-Access to Station from West

Location/General Description
<p>This scheme will provide improved access into the station by cycle from west and south-west of the town and will also provide improved access from the centre of Potters Bar to The Furzefield Leisure Centre.</p>
 <p>(c) Crown copyright. All rights reserved. Hertfordshire County Council. 100019606 2011</p>
<p><b>Figure 1 – Site Location</b></p>
<p>Mutton Lane and Cecil Road form the principal access to Potters Bar from the West and can carry a lot of fast moving traffic so can be off putting for less confident cyclists. The residential access roads and wide verges running alongside the road offer an opportunity to provide a largely segregated cycle route that would encourage families and less confident cyclists to access the leisure centre by bicycle. A link for pedestrians between Cecil Road bridge and Swanland Road is currently provided by a set of steps and a short path (see <b>Plates 1 and 2</b>).</p>



## Potters Bar Urban Transport Plan

This scheme would tie into the upgrading of the existing footpath from the station to Laurel Avenue (**PT2** in purple on **Figure 1**) and would allow a direct, low traffic route to Mutton Lane for cyclists avoiding the busy junction of Darkes Lane and Mutton Lane. Upgrading the existing pelican crossing on Mutton Lane near the junction with Laurel Avenue to a Toucan crossing would provide a link to the residential access road on the south side of Mutton Lane and connect with the route to Dame Alice Owen School and the Bridgefoot Lane route to South Mimms (see Scheme **NM2**).

		
<b>Plate 1 – Path leading from Swanland Road</b>		<b>Plate 2 – steps connecting path and Cecil Road</b>

There is also potential, in conjunction with the Leisure Centre, to improve cycle access paths and provide high quality sheltered and secure cycle parking within the leisure centre grounds, which would further encourage people to make more regular trips to the centre by bicycle. Further links into the Leisure centre, for example from Cranborne Road, should also be investigated to consider, where practical, allowing alternative cycle access routes.

Completion of this route and establishing a connection between Cecil Road bridge and Swanlands Road would also provide access to National Cycle Network leisure cycling route (NCN12).

This site (Mutton Lane) is identified as a Mass Action site, rank 385.

*It is important to note that the routes proposed in this pro-forma are aspirational and will be subject to the various land owners agreements/permissions.*

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
4-1	<p>SEGREGATED CYCLE ROUTE</p> <p>Mutton Lane/Cecil Road (from PT2 Laurel Avenue to edge of residential area – Windmore Avenue)</p>	<p>The current verges/footways are fairly wide which should enable the implementation of an off road shared un-segregated cycle path.</p>	£300,000 - £400,000
4-2	<p>CYCLE ROUTE CONNECTION TO SWANLAND ROAD</p> <p>Connecting into Cycle Network leisure cycling route (NCN12)</p> <p>Option via steps from Cecil Road Bridge</p>	<p>From the edge of the residential area there are two alternative options to allow cyclist access to Swanland Road.</p> <p>At the edge of Cecil Road there is access down to Swanland Road via a set of steps and short length of path. A wheeling ramp would be required to enable cyclists to wheel their bikes up/down the steps.</p>	£5,000 - £10,000
4-3	<p>CYCLE ROUTE CONNECTION TO SWANLAND ROAD</p> <p>Connecting into Cycle Network leisure cycling route (NCN12)</p> <p>Option via Warrengate Lane</p>	<p>From the edge of the residential area there are two alternative options to allow cyclist access to Swanland Road.</p> <p>An alternative route could be provided via Warrengate Lane which joins Cecil Road on its northern side.</p> <p>Both options would require further investigation to agree which would be most appropriate.</p>	£50,000 - £100,000
4-4	<p>ENCOURAGE FURZEFIELD CENTRE TO PROMOTE CYCLING</p>	<p>Discussions could be entered into with the Furzefield Centre and the car park operators (Hertsmere Borough Council) to encourage the installation of high quality sheltered parking and secure cycle facilities within the grounds of the leisure centre.</p>	<£5,000



## Potters Bar Urban Transport Plan

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM5
Scheme Name:	Wash Lane	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi13, Yi3	Cycling, Rights of Way	S8-Mount Grace Road

### Location/General Description

National Cycle Network 12 runs along Wash Lane from its junction with Swanland Road. Wash Lane is an unclassified local access road which provides the only link in the Non-Motorised User Network to cross the M25 and is an important link to the network of paths and bridleways south of the M25. The road route passes under the M25 in a tunnel which has poor surface and is liable to flooding making it difficult to use for both pedestrians and cyclists.

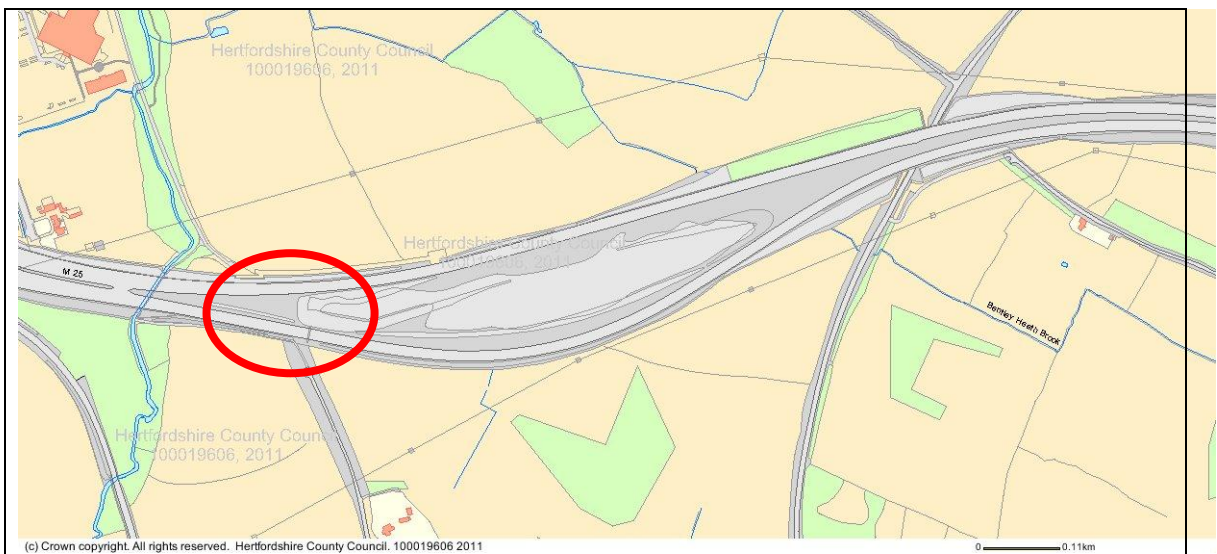


Figure 1 – Site Location

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
5-1	<p><b>SURFACE IMPROVEMENTS</b></p> <p>Wash Lane approaches – inc Dancers Lane</p>	The condition of the surfacing of Wash Lane/Dancers Lane varies along its length and would benefit from improvements.	£20,000 - £30,000
5-2	<p><b>IMPROVED DRAINAGE</b></p> <p>Investigation into drainage issues</p>	The area of the underpass frequently floods preventing all users from passing under the M25 at this location. A full investigation would be required to ascertain the reasons for this and to establish what measures are required to prevent further occurrences of flooding.	£5,000  INVESTIGATION ONLY
5-3	<p><b>RAMPS TO THE UNDERPASS TO AVOID PART OF FLOODED AREA</b></p>	While not resolving completely the problem of flooding, this potentially offers a lower cost more deliverable alternative intervention to Option 2 to partly mitigate the problem.	£10,000 - £20,000

## Potters Bar Urban Transport Plan

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref : NM6
Scheme Name:	Cherry Tree Lane Path (Baker Street - Barnet Road)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Yi8, Wi15	Cycling Trips, Rights of Way	DM6- Walking/Cycling Signing

### Location/General Description

The railway line currently creates a barrier to east-west movements in the south of Potters Bar, particularly between the residential areas around Barnet Road and Baker Street, where the Potter Bar Community Hospital is situated. Upgrading the existing Cherry Tree Lane footpath over the entrance to the railway tunnel would provide an improved link for pedestrians and cyclists between these two areas.



**Figure 1 – Site Location**

Once completed the route would be publicised through the Working and Cycling Promotion Plan, including mapping/ route leaflets and promotional events to make people aware of the new opportunities the route offers.

*It is important to note that the routes proposed in this pro-forma are aspirational and will be subject to the various land owners agreements/permissions.*

## Potters Bar Urban Transport Plan

	
<p><b>Plate 1 – eastbound view</b></p>	<p><b>Plate 2 – westbound view</b></p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
6-1	<p><b>SIGNED ROUTE</b></p> <p>Signed walking and cycling route between Sunnybank Lane and Barnet Road via Cherry Tree Lane. Remove barriers and establish full width of path, upgrading surface where required.</p>	<p>Provides a direct link avoiding longer journey by car. Improvements will tackle barriers to use.</p>	£40,000 - £50,000
6-2	<p><b>PUBLICITY CAMPAIGN</b></p> <p>Coordinate completion and publicising of upgrade with a considerate shared-use publicity campaign to promote awareness and consideration of other users along pedestrian and cyclist shared use path.</p>	<p>This option will help avoid any potential hazards and conflicts by raising awareness of needs of other users along the path.</p>	<£5,000



## 9 Schemes to Alleviate Road Congestion

### *Overview of the Schemes in this Package*

- 9.1 The Urban Transport Plan is not proposing new infrastructure to provide additional highway capacity. Rather the proposals put forward seek to manage congestion by focussing on optimising traffic flows through junctions and mitigating traffic impacts through pedestrian phases and advanced stop lines for cyclists.
- 9.2 These schemes should be viewed in the wider context of the Urban Transport Plan and its intention to promote active modes and public transport, to improve efficiency of the transport network and reduce dependence on and dominance of, the private car. A summary of schemes is recorded in Table 9.1 below.

**TABLE 9.1 SCHEMES TO ALLIEVIATE ROAD CONGESTION**

<b>Scheme Reference</b>	<b>Scheme Description</b>	<b>Key Issues Addressed</b>
RC1	High Street/Mutton Lane junction. Review existing traffic signal timings, provide pedestrian phases and advance stop line for cyclists.	Ci1, Wi5
RC2	Darkes Lane/Mutton Lane Junction. Review existing traffic signal timings. Pedestrian phases and advanced stop line for cyclists.	Ci6, Si3, Wi5
RC3	Hatfield Road/Church Road. Improvements to existing traffic signals. Right turn lane, pedestrian phases, advanced stop line and bus priority.	Ci2, Ci3

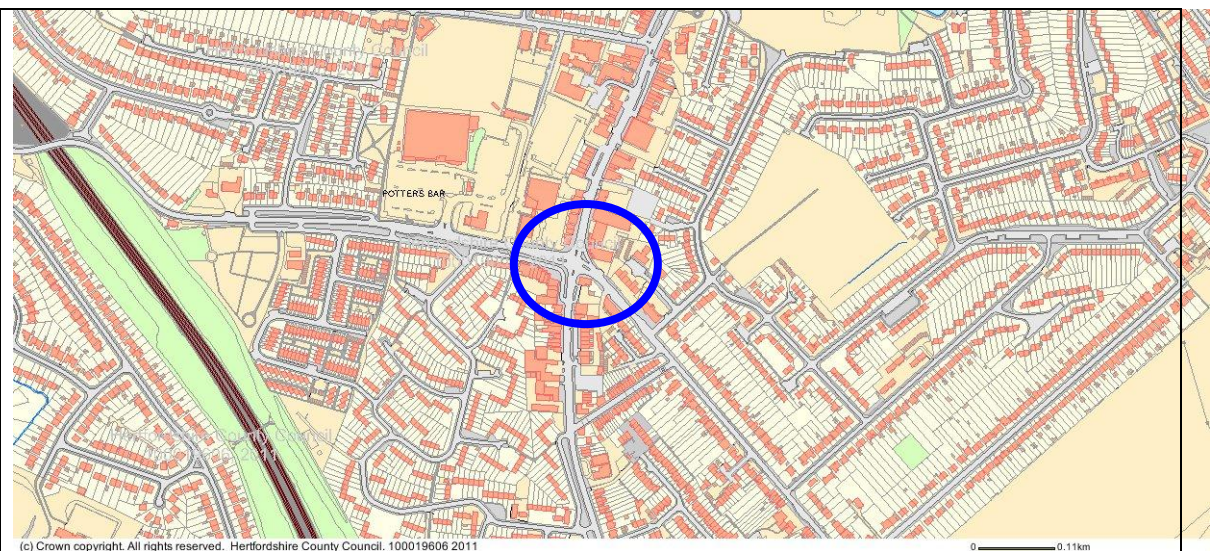


## Potters Bar Urban Transport Plan

Road Congestion		Scheme Ref : RC1
Scheme Name:	High Street/Mutton Lane Junction	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci1, Wi5	Congestion, Quality of Life	UR3-High Street, S5-A111 Southgate

### Location/General Description

This junction is signal controlled (S046) with pedestrian phases on the eastern and western arms (Southgate Road and Barnet Road).



**Figure 1 – Site Location**

Vehicular movements through the junction are currently slow and pedestrian crossing facilities on the northern (High Street) and southern (Barnet Road) arms are not provided for.

There is currently a PELICAN crossing (S385) on the eastern arm approximately 100m from the junction which is not linked into the signal controlled junction. The operation of this often conflicts with the signal timings causing congestion.

Bus Priority is not included in the current signal equipment. The benefits of including this is any signal timing/phasing review could be considered.

## Potters Bar Urban Transport Plan

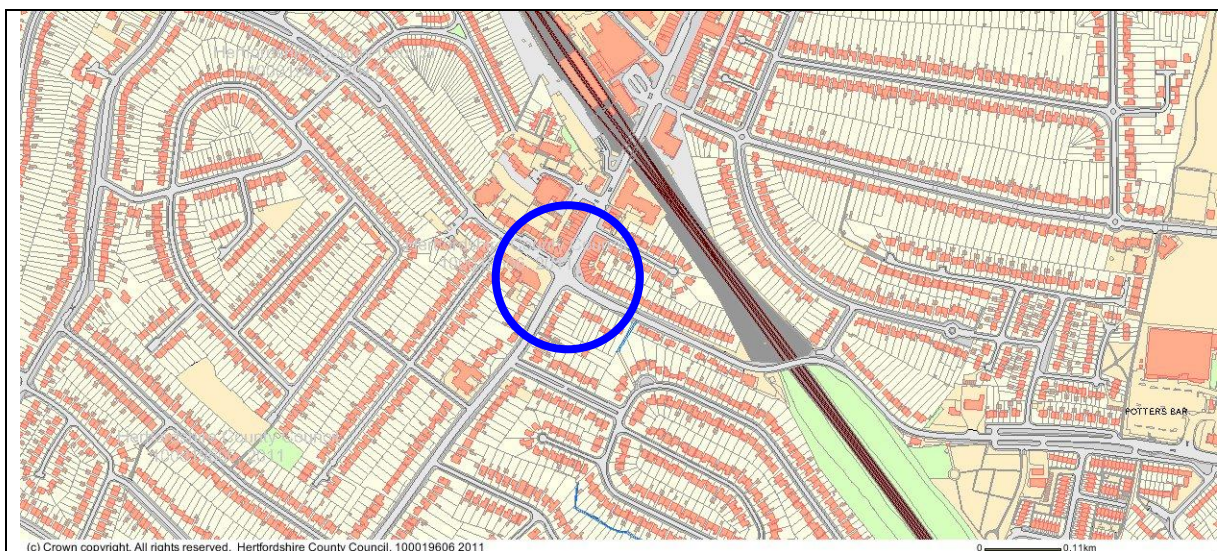
Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	<p>REVIEW EXISTING TRAFFIC SIGNAL TIMINGS/PHASING</p> <p>It is known that this junction is already running at full capacity. The introduction of any additional measures would have a negative impact on congestion at this location. However, a number of improvements have been identified and are listed with associated implementation costs. All of these improvements would be subject to the outcome of the review.</p>	Junction modelling to review the existing traffic signal timings/phasing.	£5,000 - £10,000 REVIEW ONLY
		Improve right-turn from High Street into Mutton Lane.	£25,000 - £50,000
		Improve traffic flow on A111 Southgate Road.	£25,000 - £50,000
		Provide pedestrian phase across Barnet Road.	£60,000 - £70,000
		Provide pedestrian phase across High Street.	£60,000 - £70,000
		Widen pedestrian islands on Barnet Road and High Street.	£20,000 - £30,000
		Provide Advance Stop Lines for cyclists.	£10,000 - £15,000

## Potters Bar Urban Transport Plan

Road Congestion		Scheme Ref : RC2
Scheme Name:	Darkes Lane/Mutton Lane Junction	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci6, Si3, Wi5	Safety, Congestion, Air Quality	UR2-Darkes Lane Railway Bridge

### Location/General Description

This junction provides direct access to Potters Bar Station via Darkes Lane. It is signal controlled with pedestrian facilities on each arm.



**Figure 1 – Site Location**

Southbound movements from Darkes Lane through the junction are particularly slow. Bus Priority is not included in the current signal equipment. The benefits of including this in any signal timing/phasing review could be considered. This site is identified as an Hazardous Site, rank 108 and a Mass Action site, rank 117.

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1	<p>REVIEW EXISTING TRAFFIC SIGNAL TIMINGS/PHASING</p> <p>It is known that this junction is already running at full capacity. The introduction of any additional measures would have a negative impact on congestion at this location. However, a number of improvements have been identified and are listed with associated implementation costs. All of these improvements would be subject to the outcome of the review.</p>	Junction modelling to review the existing traffic signal timings/phasing.	£5,000 - £10,000 REVIEW ONLY
		Improve southbound traffic from Darkes Lane.	£25,000 - £50,000
		Provision of advance stop lines for cyclists.	£10,000 - £15,000

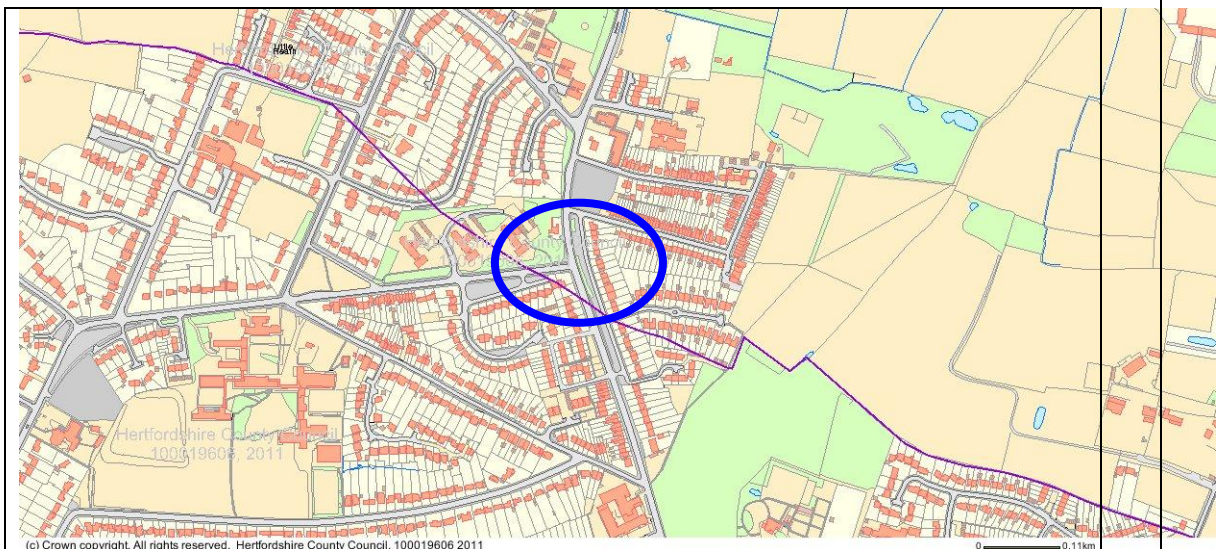


## Potters Bar Urban Transport Plan

Road Congestion		Scheme Ref : RC3
Scheme Name:	Hatfield Road/Church Road	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci3	Congestion, Quality of Life	S1-Hatfield Road

### Location/General Description

Hatfield Road forms a signalised T-junction where it meets with Church Road on the western side and straddles the Welwyn/Hatfield boundary. Church Road is an unclassified local distributor road which extends approximately 630m in length. There is a pedestrian refuge on the southern arm however the junction does not have a pedestrian phase.





**Figure 1 – Site Location**

The footway along the eastern side is narrow however it runs adjacent to a service road which is separated by a length of landscaping. The junction incorporate a right-turn lane however it is narrow and vehicles using it frequently block the straight-on movement.

Bus priority and Advance Stop Lines for cyclists are not included in the current signal equipment. The benefits of including these in any signal timing/phasing review could be considered.

## Potters Bar Urban Transport Plan

		
<b>Plate 1 – southbound view of Hatfield Road</b>		<b>Plate 2 – northbound view of Hatfield Road</b>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
3-1	IMPROVEMENTS TO EXISTING TRAFFIC SIGNALS	Consideration should be given to installing a right-turn lane. This could be achieved by widening the carriageway on the western side.	£250,000- £350,000 Installing MOVA at this junction would achieve all of the improvements
		Introduce an on-demand pedestrian crossing phase on the southern and western arms.	
		The provision of ASLs should be considered wherever feasible to improve the environment for cyclists.	
		The provision of Bus Priority equipment should be considered wherever feasible to improve the environment for buses.	





## 10 Network Demand Management and Travel Choices

### ***Overview of the Schemes in this Package***

- 10.1 The Demand Management packages will help to tackle identified issues of localised traffic congestion, including managing lorry traffic, improve people's understanding of the journey options available to them and also improve their journey experience.
- 10.2 Improved signing for off-street parking will help to give information about location, convenience and availability of parking spaces and encourage more people to use the off-street facilities as an alternative to parking on-street.
- 10.3 Consultation with the Highways Agency will begin to manage traffic diverting from the strategic road network when incidents occur or planned roadworks are in operation, and complementary measures such as Freight Partnerships and weight, width and height restrictions will mitigate the impact of freight traffic.
- 10.4 Hertfordshire County Council will use Intelligent Transport Systems (ITS) to work towards safe, efficient, environmentally friendly and affordable multi-modal transport facilities and choices that allow access for all to everyday activities. It is envisaged that in the near future Hertfordshire will have an integrated transport system and improved traffic and travel information for all those using the road and rail networks. This will enhance the mobility and transport of people and goods on Hertfordshire's road network to the benefit of individuals and businesses alike. Potters Bar is included in the strategy and will receive, subject to funding, a system of variable message signs to help manage the network.
- 10.5** The introduction of workplace travel plans for key employers will help to ensure that people will have access to better information about their journey options. On-going encouragement of the uptake of Safer Routes to Schools initiatives will help to ensure that teachers, governors, pupils and parents are aware of safe, sustainable travel options for journeys to school. These measures are complemented by the promotion of integrated ticketing and simplified fare schemes such as Oyster. The roll out of Real Time Passenger Information will improve people's journey experience and promote and encourage greater bus use. A summary of schemes is recorded in Table 10.1 overleaf.

## Potters Bar Urban Transport Plan

**TABLE 10.1 NETWORK DEMAND MANAGEMENT & TRAVEL CHOICES SCHEMES**

<b>Scheme Reference</b>	<b>Scheme Description</b>	<b>Key Issues Addressed</b>
DM1	Improved signing for off-street parking to help to give information about location, convenience and availability of parking spaces and to encourage more people to use the off-street facilities as an alternative to parking on-street.	Pi12, Pi5, Pi6
DM2	Work with the Highways agency to develop a strategy for managing traffic diverting from the strategic road network when incidents occur or planned roadworks are in operation.	Ci10
DM3	Review of freight weight, width and height restrictions and improve signing with signs at more appropriate locations, particularly at the exits from the M25 and A1(M).	Fi3
DM4	Establish Freight Partnership to address issues with businesses in the area.	Pi1, Fi2
DM5	Promotion of Safer Routes to School Programmes.	Ci9, Pi9, Wi6, Wi10
DM6	Develop and implement as Walking and Cycling Signing and Promotion Plan.	Wi4, Wi9, Wi10, Wi16, Wi17, Yi5
DM7	Work with Transport for London, the train operator of local rail services at Potters Bar, and local bus operators to extend the range of Oyster PAYG tickets to services in Potters Bar.	Ai2, Ai3, Ri6
DM8	Provision of 'Real Time Information' of services to encourage more people to use bus and rail services as they will have better information about the bus services available.	Ai6
DM9	Station Travel Plan.	Pi4, Ri4, Yi1
DM10	Hospital Travel Plan	
DM11	Travel Planning. A series of travel plans will encourage greater take up of sustainable transport modes.	Pi12, Pi5, Pi6

Network Demand Management and Travel Choices		Scheme Ref : DM1
Scheme Name:	Car Park signing	
UTP Key Issues	LTP Targets	Links to Other Schemes
Pi12, Pi5, Pi6	Congestion	UR1-Darkes Lane Shopping Area, UR3-High Street

Location/General Description
<p>There are both on-street and off-street parking facilities at or close to both the main shopping streets of Potters Bar, High Street and Darkes Lane. However, while the off-street parking is not fully utilised, heavy use of on-street parking in both areas is causing congestion and impacts on the quality of the environment for other road users, particularly pedestrians. An important factor in drivers opting to park on-street is that they are not immediately aware of the availability of off-street parking spaces. Improvements in off-street car park signage would help to improve visitors' awareness of car parking availability.</p> <p>Signing could include real time information about the availability of spaces and could be broadened to include both Hertsmere Borough Council and other privately operated car parks, where required. An example of a real time information sign is shown opposite.</p> <p>Improvements to signing of off-street parking will support the improvements to be made to the streetscape for Darkes Lane (Scheme UR1) and for the High Street (Scheme UR2). Particularly improvements to the visibility and the quality of the pedestrian access to the Manor Road car park (Scheme UR1) to increase the attractiveness and convenience of this option.</p>



## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
1-1	<p>Street direction signing and information boards presenting the location and capacity of car parks in the vicinity of :</p> <ul style="list-style-type: none"> <li>• Darkes Lane</li> <li>• High Street</li> </ul>	Would better manage car park utilisation and reduce on-road parking.	£5,000-£10,000
1-2	Real time information signs showing the number of car parking spaces available.	Would improve utilisation and reduce number of vehicles circulating to find free car parking spaces.	£60,000

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM2
Scheme Name:	Strategic Route Diversion Strategy	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci10	Congestion	UR1-Darkes Lane Shopping, UR3-High Street

Location/General Description
<p>When there are restrictions or incidents on the strategic road network, the M25 and A1 / A1(M), traffic diverts from these roads and overloads the local network through Potters Bar worsening the problems of congestion and journey time reliability. This may become a particular issue during the forthcoming planned widening works for the M25.</p> <p>To tackle this problem this stream of work would involve Hertfordshire Highways engaging with the Highways Agency to develop a plan for how diverting traffic is managed when roadworks are in place or incidents occur. This might, for example include alternative routing and managed system of variable message signs (through the County Council's Intelligent Transport Systems (ITS) strategy).</p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
2-1	Work with the Highways agency to develop a strategy for managing traffic diverting from the strategic road network when incidents occur or planned roadworks are in operation.	Would reduce use of inappropriate roads by lost or diverting traffic.	N/A



## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM3
Scheme Name:	Freight Signing Plan	
UTP Key Issues	LTP Targets	Links to Other Schemes
Fi3	Congestion Quality of Life	DM2-Strategic Route Diversion Strategy

Location/General Description
<p>Drivers of Large Goods Vehicles coming into Potters Bar need to be made aware of weight, width and height restrictions on roads through the town at points where they have an opportunity to turn around or take an alternative route. At present some restriction signing of 7.5T limits occurs at points where it is difficult for large vehicles to be turned around. Signing at appropriate locations on the roads into Potters Bar, for example from junctions of the strategic road network, M25 and A1(M), will help drivers avoid difficulties at the points where the restrictions come into effect. This will also help relieve congestion pressures in peak times and avoid un-necessary fright movements through the town.</p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
3-1	<p>Review of freight weight, width and height restrictions and improved signing with signs at more appropriate locations, particularly at the exits from the M25 and A1(M).</p> <p>Hertfordshire County Council will continue to work with satellite navigation manufacturers to ensure that routes unsuitable for freight are reported as such and are reflected in mapping and route suggestions in future.</p>	Would reduce inappropriate use of residential roads by freight vehicles.	£40,000- £60,000

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM4
Scheme Name:	Cranborne Industrial Estate	
UTP Key Issues	LTP Targets	Links to Other Schemes
Pi1, Fi2	Quality of Life, Congestion	DM2-Strategic Route Diversion Strategy

Location/General Description
<p>The Cranborne Industrial Estate is a key local economic asset providing employment in the area. However there are associated issues with goods traffic accessing the site, often through residential and commercial areas. Parking problems in Cranborne Industrial Area cause obstructions for pedestrians and create a hazardous environment for vulnerable road users, while HGV traffic accessing the Cranborne Industrial Estate adversely impacts on the surrounding neighbourhood.</p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
4-1	Establish Freight Partnership to address issues with businesses in the area.	Would reduce inappropriate use of residential roads by freight vehicles and begin to address issues with inappropriate employee parking.	N/A

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM5
Scheme Name:	Safer Routes to Schools	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci9, Pi9, Wi6, Wi10	Mode Share of Journeys to School	All Walking/Cycling link improvements

Location/General Description
<p>Safer Routes to Schools projects take a holistic approach and can include a package of measures such as training in road safety skills for cyclists and pedestrians, initiatives such as walking buses, incentives and promotional activities, curriculum work, highway improvements and the provision of facilities such as cycle parking and waiting shelters. This intervention will encourage the take up of Safer Routes to Schools and on-going support for local schemes funded through the programme.</p> <p>The Safer Routes to School target group have developed a countywide ranking list. All schools are ranked on a number of criteria, including the number of children of school age living within one mile of the school, whether the school has an adopted/active school travel plan, whether the school participates in green travel initiatives and whether an existing Right of Way can be improved. These ranking lists are run and analysed annually, from which schemes and initiatives are selected. For School Travel Plans, the aim is to ensure that all schools have a current plan, and therefore, prioritisation is primarily based on the willingness of the school to be part of the programme.</p> <p>Safer Routes to Schools initiatives could include:</p> <ol style="list-style-type: none"> <li>1) road safety skills training;</li> <li>2) walking buses;</li> <li>3) highway improvements; and</li> <li>4) provision of cycle parking and waiting shelters.</li> </ol> <p>Safer Routes to School should be promoted at the same time as the promotion of sustainable modes (Scheme DM6) and the promotion of the cycle network. This will ensure that as well as receiving information about Safer Routes to School, that parents are aware of the rest of the walking and cycling network. This will encourage them to make more journeys (especially journeys to school) by walking and cycling.</p>

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM6
Scheme Name:	Walking and Cycling Signing and Promotion Plan	
UTP Key Issues	LTP Targets	Links to Other Schemes
Wi4, Wi9, Wi10, Wi16, Wi17, Yi5	Cycling Trips Quality of Life Accessibility Mode Share of Journeys to School	All Walking/Cycling link improvements

Location/General Description
<p>In addition to the physical barriers to walking and cycling created by busy roads, there are other barriers which discourage people from travelling on foot or by cycle. These include areas of poor quality environment, such as where footpaths are overgrown or unattractive, and poor perceptions of safety and personal security on paths, parks and green spaces.</p> <p>There is a need for an increased number of recreational walking routes. There is also a lack of signing to assist and encourage walking and, if people are to be encouraged to use their bike to move around Potters Bar, there is also a need for a complete and joined-up cycle network. The increased provision of information about walking and cycling will help to ensure that the improvements to facilities proposed as part of other schemes are well publicised and achieve the maximum benefit. In particular, improved information will help to ensure that people are aware that a complete and joined up network exists to allow them to walk and cycle about the town in safety and comfort. It will help to encourage people to walk or cycle more often, particularly for short journeys. A cycling network map of routes and facilities has been produced as part of a cycle audit of the town. This identifies Bikeability* skill level required for each part of the network. This scheme will also promote and raise awareness of the map amongst local residents and visitors to Potters Bar. The walking and cycling map would link to improved directional signing and way-marking at key places/footpath junctions in the town. The promotion plan would include:</p> <ol style="list-style-type: none"> <li>1) Publication of the walking and cycling map and ensuring that copies are available at the rail station, library, other key destinations and relevant shops in Potters Bar.</li> <li>2) Installing the map in prominent positions at the train station and at key decision points in the town centre.</li> <li>3) Organising cycle rides to help raise awareness of local cycle routes, particularly those which give access to the surrounding countryside.</li> <li>4) Stalls at public events to promote walking and cycling in Potters, make residents and visitors aware of the improvements programmed in and around the town, and to distribute the map and other materials.</li> </ol> <p><i>*Bikeability is the national standard cyclist training scheme</i></p>

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
6-1	Mapping of walking and cycling route network to communicate the existence of a complete joined-up network across the town linked to signs on the ground.	Promotion of schemes will encourage greater take up of cycling.	£20,000
6-2	Promotion campaign co-ordinated around delivery of improved links, mapping and scheduled Bikeability delivery in the town etc.	Promotion of schemes will encourage greater take up of cycling.	£10,000-£20,000
6-3	Improved way-finding signing at key locations. Showing time on foot and by cycle to key town destinations, such as the station, Darkes Lane and High Street shopping areas, parks, leisure centre etc.	Increased awareness of the advantages of the cycle options will encourage people to cycle more.	£10,000-£15,000
6-4	Bikeability cycle training course for adults.	Training will give confidence to the less confident cyclists and encourage them to make more trips by bike.	£100,000
6-5	Events and led rides to launch improvements to walking and cycling facilities.	Will increase awareness and give the less confident confidence. Will seek support from local groups.	£0 - £50,000
6-6	Consider shared-use publicly campaign to promote awareness and consideration of all other users through shared use (pedestrian/cycling) areas such as parks, paths and bridleways.	Increased awareness of the advantages of the cycle options will encourage people to cycle more.	£10,000-£20,000

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM7
Scheme Name:	Service & Ticketing Integration	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai2, Ai3, Ri6	Passenger Transport Accessibility	PT4-Service Destinations and Timetabling, DM8-Real Time Passenger Information


Location/General Description
<p>Bus and rail passengers in Potters Bar suffer from the lack of integration between fare and ticketing systems on routes operating out of London by Transport for London (TfL) and other commercially operated and Hertfordshire County Council supported routes. Some services accept Oyster while others accept Intalink Explorer tickets. In addition Oyster Pay-As-You-Go (PAYG)* is not available at Potters Bar rail station for journeys to or from London. Potters Bar station being the first station out of London on the East Coast Main Line which does not cater for PAYG passengers. For many this inability to buy a single travel card adds to the perception of lack of integration with TfL bus services.</p> <p>The Mayor of London has recently announced plans to promote the take up of Oyster PAYG at suburban rail stations beyond Greater London. TfL is also working with bus companies outside London to arrive at a position where Oyster may be accepted on bus services more widely.</p> <p>* Oyster 'Pay As You Go' is Transport for London's stored value SMART card ticketing system available on all Transport for London rail, tube, tram and bus services in Greater London.</p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
7-1	Work with Transport for London, First Capital Connect - the train operator of local rail services at Potters Bar - and local bus operators to extend the range of Oyster 'Pay As You Go' tickets to services in Potters Bar.	Simplification of fare structure and ease of payment will encourage greater take up of public transport.	N/A



## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM8
Scheme Name:	Real Time Passenger Information Provision (ITS)	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ai6	Passenger Transport Accessibility	PT4-Service Destinations and Timetabling, DM7-Service and Ticketing Integration

Location/General Description
<p>Real time bus service information for passengers is available at the bus stops in the station forecourt. However there is a need for improved information services, including real time information, at other location across the town. The scheme would provide 'Real Time Information' of services to encourage more people to use bus and rail services as they will have better information about the bus services available.</p> <p>Hertfordshire County Council has committed to rolling out Real Time Passenger Information (RTPI) provision with part-funding from developer contributions (through Section 106 funding). Improvements in RTIP can either take the form of bus stop flag indicators that provide information on the next bus to arrive (see <b>Plate 1</b>) or more sophisticated systems that also provide information the routes served and other information including journey planning.</p> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;">  </div> <div style="flex: 2; padding-left: 20px;"> <p>In addition to providing better information to existing passengers, RTPI will help to encourage more people to use bus services as they will be able to see how long they would have to wait for the next bus. RTIP via the internet or text services can also increase the appeal to a broader demographic encouraging use of bus services. The provision of RTPI should be implemented in coordination with ensuring that bus services and shelters are DDA* compliant (Scheme PT3). This will help to encourage more people to use bus services and to ensure that services are accessible to all.</p> </div> </div> <p><b>Plate 1 – Example of bus stop flag RTI</b></p> <p>* DDA (Disability Discrimination Act) compliant bus stops and shelters include facilities, such as extended and raised kerbs, to aid wheelchair users and others with restricted mobility to get and off buses.</p>

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
8-1	Roll out Real Time Passenger Information (RTPI) provision at bus stops across Potters Bar	RTPI will help to encourage more people to use bus services and provide better quality of service to existing users.	N/A

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM9
Scheme Name:	Station Travel Plan	
UTP Key Issues	LTP Targets	Links to Other Schemes
Pi4, Ri4, Yi1	Passenger Transport Accessibility	PT4-Service Destinations and Timetabling, DM7-Service and Ticket Integration

Location/General Description
<p>A Station Travel Plan would provide information about the current means of accessing the station which will be used to help determine the most appropriate interventions to encourage sustainable access to the station by walking, cycling, bus and car sharing and help manage the travel generated by the station, as well as promote rail usage.</p> <p>The travel plan would provide information to residents and users of the station about alternative ways of accessing the station including the local bus service timetables, as well as station facilities and interchange opportunities.</p> <p>Best practice shows that promoting improvements as part of the package of measures at the station will maximise the benefits of the improvements for the town more widely, as well as for meeting study objectives and maximising the benefit for the train operating company.</p> <p>The station travel plan should be implemented at the same time as the improvements to the station access (Schemes PT 1 and PT2) and the travel plans for major employers (Scheme DM11). This will ensure that the travel plans all adopt a consistent approach and that the station travel plan takes account of the improvements to station access planned.</p>

## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
9-1	Station Travel Plan	Provides information about the current means of accessing the station to encourage sustainable access to the station by walking, cycling, bus and car sharing and help manage the travel generated by the station, as well as promote rail usage.	£50,000

## Potters Bar Urban Transport Plan

Network Demand Management and Travel Choices		Scheme Ref : DM10
Scheme Name:	Hospital Travel Plan	
UTP Key Issues	LTP Targets	Links to Other Schemes
Pi4, Ri4, Yi1	Passenger Transport Accessibility	PT4-Service Destinations and Timetabling, DM7-Services and Ticketing Integration

Location/General Description
<p>Hospital Travel Plans would provide information about the current means of accessing the local hospitals which will be used to help determine the most appropriate interventions to encourage sustainable access by walking, cycling, bus and car sharing and help manage the travel generated by them.</p> <p>The travel plan would provide information to employees and patients about alternative ways of accessing the hospital including the local bus service timetables.</p>

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
10-1	Hospital Travel Plans.	Provides information about the current means of accessing the hospitals to encourage sustainable access by walking, cycling, bus and car sharing and help manage the travel generated by the hospitals.	£50,000 - per hospital.

Network Demand Management and Travel Choices		Scheme Ref : DM11
Scheme Name:	Travel Planning	
UTP Key Issues	LTP Targets	Links to Other Schemes
Ci1, Ci8	Accessibility	DM6-Walking/Cycling Signing

Location/General Description
<p>This scheme proposes engaging with local employers as well as the public to deliver a series of travel plans that will encourage greater take up of sustainable transport modes.</p> <p>A Workplace Travel Plan is a strategy for an organisation seeking to deliver sustainable transport objectives through action and is articulated in a document that is regularly reviewed. A Travel Plan involves identifying an appropriate package of measures aimed at promoting sustainable travel, with an emphasis on reducing reliance on single occupancy car journeys. Hertfordshire County Council has a process for engaging with employers and developers through the development control process. Existing Travel Plans should be revisited to monitor progress towards car mode share reduction targets. Where no development control requirement is in existence major employers should be encouraged to develop a Travel Plan on a voluntary basis. Planning controls should be exercised for any future developments to ensure mandatory workplace Travel Plans are secured and are associated with planning consent for the site(s).</p> <p>The workplace travel plans for major employers should be implemented at the same time as the station travel plan (Scheme DM9) as this will help to ensure a consistent approach across all travel plans.</p> <p>Personal Travel Planning (PTP), is focused on the individual and typically is a conversation with a member of the public, where current travel patterns are discussed and where possible, practical, easy alternatives are suggested by a Travel Advisor. This conversation may be followed up with personalised information based on the household's current lifestyle and travel patterns, enabling more informed decisions about travel to be made in the future. PTP works by suggesting something different. There are no compulsory measures involved – people are free to continue with what they were doing if the alternative is not for them. At an individual level it can assist with reducing travel costs, developing and maintaining independence for younger and older members of society as well as contributing to a sense of place and a feeling of being a part of a local community. The emphasis can be placed on any one or number of these issues, whether it be improving local air quality for residents, or improving access to employment for staff or job seekers at a large employment site. The effectiveness of PTP is well documented and studies have shown significant change in travel patterns in favour of sustainable methods of travel.</p>



## Potters Bar Urban Transport Plan

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost Estimate
11-1	Development of Travel Plans for major employers. Promotion of Personalised Travel Planning for local residents.	The travel plans will help to manage levels of traffic entering potters Bar in the morning peak.	£50,000 per plan

## 11 Delivery Programme

- 11.1 This chapter sets out an implementation plan for the schemes recommended in Sections 5 to 10. Whilst the schemes are anticipated for delivery over a 20 year period, the implementation programme covers the actions and funding required over the five year delivery programme.

### **Implementation Plan**

- 11.2 The Implementation Plan is presented in Table 11.1. It records the schemes identified for implementation over the short, medium and long term and the indicative cost of each scheme.
- 11.3 The schemes identified for implementation over the short term (Years 1 and 2) are lower cost and easily implemented; those recommended for funding over the medium term (Years 3, 4 and 5) will require further design feasibility and consultation and those schemes identified for funding over the long term (5 years and longer) will require additional funding.
- 11.4 Two delivery areas have their own implementation processes separate to the plan. These are Safer Routes to Schools and Road Safety. Safer Routes to Schools encourages schools to participate in identifying and delivering interventions to promote increased levels of walking and cycling to schools as well as safety improvements in accessing schools. Schools apply to Hertfordshire County Council annually, and are then assessed and selected to be Safer Routes to Schools. With regards to road safety, Hertfordshire County Council rank sites where collisions have occurred and been reported to the police, and rank sites based on the number and severity of collisions at a single site. These 'Hazardous Sites' are ranked and then addressed based on their ranking. The list is reviewed annually. If Hazardous Sites that have not been given top priority or other site specific safety concerns are to be addressed, then other funding sources are required.




### **Monitoring and Date of Plan Review**

- 11.5 The Implementation Plan will be reviewed annually. The Urban Transport Plan as a whole may need to be updated periodically if local circumstances or policy significantly change, for example, through a change in local or national guidance.

## **Potters Bar Urban Transport Plan**

- 11.6 Individual schemes will be subject to post-evaluation once delivered and this will be carried out in accordance with Hertfordshire County Council's guidance. There will also be annual monitoring carried out in Potters Bar as part of the Local Transport Plan and Urban Transport Plan monitoring process and county-level performance management monitoring.

## TABLE 11.1 IMPLEMENTATION PLAN

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost						Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery	
			Short Term		Medium Term		Long Term							
UR1 - Darkes Lane Shopping Area (Manor Rd to The Walk)	UR1-1	Relocate existing pelican crossing			£100,000-£150,000					HCC	Hertsmere BC	LTP	UR2	None
	UR1-2	Shopping area enhancement						£350,000-£500,000		HCC	Hertsmere BC	Section 106 (S106)/ Community Infrastructure Levy (CIL)		None
	UR1-3	Review and optimise current parking provision		£50,000-£100,000						Hertsmere BC	HCC	District/HCC		None
UR2 - Railway Bridge	UR2-1	Cosmetic improvements to the railway bridge	£40,000-£50,000							Network Rail	HCC	S106/CIL	UR1	Network Rail buy-in
	UR2-2	On-road cycle facility		£20,000-£25,000						HCC	Hertsmere BC	LTP		None
	UR2-3	Off-road cycle facility			£20,000-£25,000					HCC	Network Rail	LTP		Network Rail buy-in
UR3 - High Street (shopping section)	UR3-1	Rationalisation of parking		£100,000-£150,000						Hertsmere BC	HCC	Hertsmere BC/developer	DM1, DM6, UR4,RC1	None
	UR3-2	Improvements to pedestrian routes across junctions\vehicle crossovers			£100,000-£150,000					HCC		LTP		None
	UR3-3	Reversal of traffic flow on Princes Parade					£40,000 -£50,000			HCC		S106/CIL		Subject to more detail tra modelling
	UR3-4	Investigation of pedestrian link to Tesco	£10,000							HCC	Tesco	S106/CIL		Tesco buy-in
	UR3-5	General maintenance\enhancement of footways	£200,000-£300,000							HCC		HCC		None
	UR3-6	Provision of trees and planting to improve streetscape		£200,000-£300,000							HCC			S106/CIL
UR4 - High Street (north section)	UR4-1	Improve environment and pedestrian facility at station entrance/exit			£30,000-£50,000					Network Rail/Operator	HCC	Network Rail/Operator	UR3, RC3, NM3	Network Rail buy-in
	UR4-2	Promotion of cycle routes	£20,000-£30,000							HCC		LTP		None
	UR4-3	Upgrade of PUFFIN crossing to TOUCAN		£50,000 - £60,000						HCC		S106/CIL		None
	UR4-4	Redesign of junction with Oakmere Lane and associated service road to improve pedestrian crossing movements			£30,000-£50,000					HCC		LTP		None

# Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost						Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery
			Short Term		Medium Term		Long Term						
PT1 - Access around station Forecourt / The Walk	PT1-1	Station forecourt improvements	£10,000-£15,000						TOC/HCC	TOC	Network Rail	UR1, UR2, PT2	Network Rail buy-in
	PT1-3	Alternative use for existing cycle parking				£5,000-£10,000			Network Rail/TOC	TOC	Network Rail/TOC		Network Rail buy-in
PT2 - Access to station from west	PT2-1	Provision of cycle parking in station car park			£30,000-£40,000				Network Rail/TOC		Network Rail /TOC	UR1, UR2	Network Rail buy-in
	PT2-2	Promotion and improvement of key pedestrian and cycle route	£15,000-£20,000						HCC	Network Rail/TOC	LTP		None
PT3 - Bus stops and shelters improvement	PT3-1	DDA bus stop upgrades		£10,000 - £15,000 per bus stop					HCC	Local operators	LTP	PT4	None
PT4 - Bus service destination and timetables	PT4-1	Promotion of existing community transport to Barnet General and Lister hospitals	< £5,000						HCC	NHS	LTP	PT3	None
	PT4-2	Investigate with operators strengthening services within the south west of Potters Bar	< £5,000						Local operators		Local operators	DM7	Operator buy-in. Lack of demand.
	PT4-3	Investigate role for community transport within south west of Potters Bar	< £5,000						Hertsmere Community Transport		LTP	DM7	None
	PT4-4	Liaise with Transport for London and local operators to review routing and timetabling options to meet relevant demand	< £5,000						TfL		TfL	DM7	TfL buy-in. Lack of demand
S1 - Hatfield Rd (Speeding, Narrow Footway, Bus Stop)	S1-1	Bus stop relocation		£20,000-£30,000					HCC/local operators		LTP	N/A	Operator buy-in, availability of suitable site
	S1-2	New pedestrian crossing and footway improvement			£130,000-£140,000				HCC		S106/CIL		None
S2 - The Causeway / Cooper Lane (Pedestrian Issues, inc Shuttle working lights)	S2-1	New pedestrian crossing			£120,000-£130,000				HCC		S106/CIL	N/A	None
	S2-2	Footway maintenance	< £5,000						HCC		LTP		None
S3 - High Street / Hatfield Rd	S3-1	Improvements to existing crossing of Cotton Road			£5,000-£15,000				HCC		LTP	N/A	None
	S3-2	New formal crossing				£10,000-£15,000			HCC		S106/CIL		None
	S3-3	Review lane widths and parking	£5,000						HCC		LTP		None

# Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost							Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery
			Short Term		Medium Term			Long Term						
S4 - Oakmere Ave / Chace Ave/ Oakmere Lane / Park Avenue	S4-1	Parking restrictions Chase Avenue/Forbes Avenue		< £5,000						Hertsmere BC		S106/CIL	N/A	Public acceptability
	S4-2	Parking restrictions Chase Avenue/Bowmans Close		< £5,000						Hertsmere BC		S106/CIL		Public acceptability
S5 - A111 Southgate Road	S5-1	Review signal timing	£5,000							HCC		LTP	DM3, RC1	Subject to more detailed traffic modelling
	S5-2	New pedestrian crossing			£130,000-£140,000					HCC		LTP		Subject to more detailed traffic modelling
S6 - Darkes Lane – Manor Road to Church Road	S6-1	Reconfigure road space to provide on-road cycle lanes			£50,000-£60,000					HCC		LTP	UR1	None
	S6-2	Removal of central pedestrian refuge		£15,000-£20,000						HCC		LTP		None
S7 - Baker St (M25 Underbridge)	S7-1	Cycle lanes in Baker Street underpass			£60,000-£70,000					HCC/Highways Agency		LTP	S9, DM6	Highways Agency buy-in
	S7-2	Lighting improvements under bridge			£15,000-£20,000					HCC/Highways Agency		LTP		Highways Agency buy-in
S8 - Mount Grace Rd	S8-1	Traffic calming - vertical features				£180,000-£200,000				HCC		LTP	N/A	Public acceptability
	S8-2	Traffic calming - sheltered parking bays			£40,000-£50,000					HCC		LTP		Public acceptability
S9 - Baker Street	S9-1	Signage and road marking		£25,000-£35,000						HCC		LTP	S7	None
	S9-2	Sheltered parking			£50,000-£60,000					HCC		LTP		None
	S9-3	Traffic calming - vehicle activated sign		£20,000-£30,000						HCC		LTP		None



## Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost						Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery
			Short Term		Medium Term		Long Term						
NM1 - Line path from Potters Bar station to Royal Veterinary College and Brookmans Park	NM1-1	SECTION 1 – Potters Bar Station to Cranborne Industrial Estate. Improvements to lighting		£50,000-£100,000					HCC		S106/CIL	DM6	Land owner permissions
	NM1-2	SECTION 2 – Cranborne Industrial Estate to Hawkshead Lane. Improvements to existing unmade path			£30,000-£40,000				HCC		S106/CIL		Land owner permissions
	NM1-3	SECTION 3 – North of Hawkshead Lane conversion to bridleway				£10,000-£15,000			HCC		S106/CIL		Land owner permissions
	NM1-4	Route signing		£10,000-£15,000					HCC		LTP		None
	NM1-5	Minor improvements to path access	£20,000-£30,000						HCC		LTP		None
NM2 - Potters Bar station to Dame Alice Owens school and South Mimms	NM2-1	Signing along route for South Mimms	£10,000-£15,000						HCC		S106/CIL	DM5, DM6, NM4 NM5, PT2	None
	NM2-2	Footpath improvement between Bridgefoot Lane to Wash Lane		£10,000-£15,000					HCC		S106/CIL		Land owner permissions
	NM2-3	Surface improvements		£20,000-£30,000					HCC		S106/CIL		Land owner permissions
	NM2-4	Provision of a new footway between Wash Lane & St Albans Road			£25,000-£30,000				HCC		S106/CIL		Land owner permissions
	NM2-5	Improvements to pedestrian/cycle infrastructure within service area				£25,000-£50,000			Land /leaseholder		Business		Land owner permissions
NM3 - Oakmere - Parkfield - Darkes Lane link	NM3-1	Signed cycle route between Oakmere and Darkes Lane		£5,000-£10,000					HCC		S106/CIL	UR4, DM6	Land owner permissions
	NM3-2	Enhancement of crossing between Oakmere Park and Parkfield Park			£50,000-£60,000				HCC		S106/CIL		None
	NM3-3	Publicity campaign for shared use pedestrian/cycle links through parks	£5,000-£10,000						HCC		LTP		None

# Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost						Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery	
			Short Term		Medium Term			Long Term						
NM4 - Link from Potters Bar station via Mutton Lane to Furzeffield Leisure centre	NM4-1	Segregated cycle route			£300,000 - £400,000					HCC		S106/CIL	DM6, NM2, PT2	Land owner permissions
	NM4-2	Cycle route connection to Swanland Road / via Cecil Road bridge		£5,000-£10,000						HCC		LTP		Land owner permissions
	NM4-3	Cycle route connection to Swanland Road / via Warrengate Road			£50,000-£100,000					HCC		LTP		Land owner permissions
	NM4-4	Encourage Furzeffield centre to promote cycling	£5,000							Furzeffield		LTP		Land owner permissions
NM5 - Wash Lane	NM5-1	Surface improvements - Wash Lane and Dancers Lane		£20,000-£30,000						HCC		LTP	S8	Land owner permissions
	NM5-2	Review options for improved drainage	£5,000							HCC		LTP		Land owner permissions
	NM5-3	Ramps to underpass		£10,000-£20,000						HCC/Highways Agency		LTP		Land owner permissions
NM6 - Baker Street to Barnet Road link	NM6-1	Signed route		£40,000-£50,000						HCC		S106/CIL	DM6	None
	NM6-2	Publicity campaign	< £5000							HCC		LTP		None
RC1 - High Street / Mutton Lane Junction	RC1-1	Junction modelling to review signal timing	£5,000-£10,000							HCC		LTP	UR3, S5	Subject to more detailed traffic modelling
	RC1-2	Improve right turn into Mutton Lane			£25,000-£50,000					HCC		S106/CIL		
	RC1-3	Improve traffic flow on A111 Southgate Road			£25,000-£50,000							LTP		
	RC1-4	Provide pedestrian phase across Barnet Road			£60,000-£70,000					HCC		S106/CIL		
	RC1-5	Provide pedestrian phase across High Street			£60,000-£70,000					HCC		S106/CIL		
	RC1-6	Widen pedestrian islands				£20,000-£30,000				HCC		S106/CIL		
	RC1-7	Provide Advanced Stop Lines for cyclists				£10,000-£15,000 per ASL				HCC		LTP		

# Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost							Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery
			Short Term		Medium Term			Long Term						
RC2 - Darkes Lane / Mutton Lane Junction	RC2-1	Junction modelling to review signal timing	£5,000-£10,000							HCC		S106/CIL	UR2	Subject to more detailed traffic modelling
	RC2-2	Improve southbound traffic from Darkes Lane			£25,000-£50,000					HCC		LTP		
	RC2-3	Provide Advanced Stop Lines for cyclists			£10,000-£15,000 per ASL					HCC		LTP		
RC3 - Hatfield Road / Church Road	RC3-1	Introduce MOVA at junction			£250,000 - £300,00					HCC		LTP	S1	Subject to more detailed traffic modelling
DM1- Car Park Signing	DM1-1	On street signing	£5,000-£10,000							HCC		LTP	UR1, UR3	None
	DM1-2	Real time information on off-street parking		£100,000						HCC/local operators		LTP		None
DM2 -Strategic Route Diversion Strategy	DM2-1	Work with Highway Agency to develop strategy	None							HCC/Highways Agency		LTP	UR1, UR3	None
DM3 -Freight Signing Plan	DM3-1	Review freight weight, width and height restrictions on key roads and improve signing	£10,000-£15,000							HCC		LTP	DM2	None
DM4 -Establish freight partnership	DM4-1	Freight partnership with key businesses	None							HCC/businesses		LTP	DM2	Stakeholder buy-in
DM5 - Safer Routes to School	DM5-1	Continuation of Safer Routes to Schools programme.	Rollout of existing programme							HCC	Schools	LTP	All walking/cycling	Requires school's buy in
DM6 - Walking and cycling signing and promotion	DM6-1	Mapping and publication of walk and cycle network	£20,000							HCC		LTP	All walking/cycling	None
	DM6-2	Promotion campaign	£10,000-£20,000							HCC		LTP		None
	DM6-3	Improved way-finding		£10,000-£15,000						HCC		LTP		None
	DM6-4	Bikeability training for adults		£100,000						HCC		LTP		None
	DM6-5	Events and led rides		£50,000						HCC		LTP		None
	DM6-6	Shared use publicity campaign	£10,000-£20,000							HCC		LTP		None

## Potters Bar Urban Transport Plan

Scheme		Scheme Location/Description/Options	Phasing/Timescale/Cost							Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other Schemes	Key Risks to Technical / Feasibility / Delivery
			Short Term		Medium Term			Long Term						
DM7 - Service and Ticket integration	DM7-1	Liaise with Transport for London and local operators to extend range of Oyster	None							HCC/TfL		LTP	PT4, DM8	Tfl/operator buy-in
DM8 - Real Time Passenger Information provision	DM8-1	Roll out of Hertfordshire RTIP	Included in County-wide RTIP							HCC/local operators	Operators	LTP	PT4, DM7	None
DM9 - Station Travel Plan	DM9-1	Station Travel Plan		£50,000						HCC	TOC/Network Rail	TOC/Network Rail	PT4, DM7	Stakeholder buy-in
DM10 - Hospital Travel Plan	DM10-1	Hospital Travel Plan		£50,000						HCC	NHS	NHS	PT4, DM&	Stakeholder buy-in
DM11 - Travel Plans	DM11-1	Work place Travel Plans and Personal Travel Planning		£50,000						HCC	Businesses	Businesses	PT4, DM&	Stakeholder buy-in



## 12 Summary

- 12.1 With its excellent transport connections to London and self-contained commercial centre, Potters Bar is both a thriving self-contained local centre and attractive commuter town. Like most centres of its nature, local travel patterns are dominated by car use and providing improved opportunities for more active and sustainable modes will go some way to mitigating the negative impacts car use brings. Public realm improvements will both provide a more attractive environment for existing users and encourage more residents to make use of the retail offer, travelling to it using sustainable modes.
- 12.2 This Urban Transport Plan sets out an analysis of the current travel patterns in Potters Bar that have informed the development of the key transport issues identified within the plan. The plan objectives are as follows:
- Promote a self-sustaining local economy, supporting the vitality of the two main commercial streets.
  - Minimise the effect of congestion.
  - Manage levels and mitigate impacts of traffic.
  - Maintain benefits of access to opportunities in London.
  - Improve access to local major employers within and nearby the town.
  - Improve access to key services for all residents, ensuring accessibility within the town.
  - Improve access to nearby countryside, open spaces and leisure facilities
  - Encourage and support options to travel by sustainable modes, particularly for trips within the town.
  - Encourage active modes of travel for all groups of residents.
- 12.3 The transport solutions and improvements are set out within the context of Hertfordshire County Council's overall transport objectives, particularly those set out within the Hertfordshire Corporate Plan, Sustainable Communities Strategy, and Local Transport Plan.
- 12.4 The focus within this Urban Transport Plan has been on developing and recommending schemes that address the key issues identified, contribute towards the plans objectives, and represent low cost / high value investments. Quick win schemes that can be delivered in the short term have also been identified within the Implementation Plan.



## Potters Bar Urban Transport Plan

### Schemes Recommended

- 12.5 The schemes recommended for further consideration have been developed in response to key issues identified in consultation with the local community. The schemes recommended have been assessed against the Second Local Transport Plan programme entry / funding criteria, Urban Transport Plan objectives, and deliverability criteria.
- 12.6 The process undertaken to develop the plan has included the consideration of a long-list of transport interventions developed through consultation with the community to address the key issues identified. An assessment of this list of schemes against the plan objectives, Local Transport Plan funding criteria and deliverability criteria has also been undertaken that has led to the development of a list of schemes recommended for implementation. The interventions developed cover the following areas:
- **Urban Realm:** Improvements to the urban realm around Darkes Lane and the High Street including improved cycle and walking links.
  - **Public Transport:** Improvements to Potters Bar station access; physical access improvements; and improved information provision and promotion.
  - **Safety concerns and access:** Addressing speeding concerns; pedestrian and cycle crossings; footway quality and maintenance; provision of cycle lanes; parking restrictions; and signal phasing.
  - **Non-motorised modes:** Increased and improved walking and cycling links; improved signage; crossing facilities; promotion; new access points to the cycle network; and improved drainage.
  - **Congestion:** Improved traffic signals, including improved phasing to smooth traffic flow.
  - **Demand management** and travel choices: Including traffic, network management and freight strategies, promotion of integrated ticketing and Real Time Passenger Information for buses.

### Conclusion

- 12.7 The schemes set out within this Urban Transport Plan will help to deliver the objectives for Potters Bar set out in Section 3 and will address the key issues set out in Section 4. These schemes will help to encourage more people to travel by more sustainable modes, especially for shorter journeys. Safety concerns of all road users have

also been a key theme amongst the issues identified within this Urban Transport Plan. The schemes developed will help to ensure that speed compliance and the safety concerns of vulnerable road users are addressed within the community.

- 12.8 The five year delivery plan outlined in Section 11 suggests a number of schemes that could be progressed over the short and medium term. Given the current funding pressures on all Local Authorities, the schemes that have been identified for development over the short term are also relatively low cost and easy to implement in terms of delivery and technical feasibility.
- 12.9 In order to achieve success, the strategy will require Hertfordshire County Council to work with multiple delivery partners and key stakeholder including schools and businesses together with local residents and cycle groups to ensure that the schemes set out in the Urban Transport Plan are delivered.



## CONTROL SHEET

Project/Proposal Name      Potters Bar Urban Transport Plan

Document Title              Urban Transport Plan – Consultation Version

Client Contract/Project No.      4500046483/1001

SDG Project/Proposal No.      22299101

## ISSUE HISTORY


Issue No.	Date	Details
V1.0	23 <sup>rd</sup> March 2011	Draft UTP for Consultation
V5.0	3 <sup>rd</sup> June 2011	Draft UTP for Consultation
V6.0	6 <sup>th</sup> June 2011	Draft UTP for Consultation
Final	14/11/2011	Final Strategy

## REVIEW

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Review by:                      Print              Steven Bishop

Sign                              

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