HODDESDON AND BROXBOURNE
URBAN TRANSPORT PLAN

March 2012

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Hoddesdon and Broxbourne Urban Transport Plan

Report

March 2012

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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.

The Hoddesdon and Broxbourne Urban Transport Plan area is bounded by the study areas for the Urban Transport Plans in Ware and Hertford to the north and Waltham and Cheshunt in the south. There will be cross-cutting issues associated with these areas that will require a whole area approach to the development of the plans.

This document presents the Urban Transport Plan for Hoddesdon and Broxbourne. The Hertfordshire towns of Hoddesdon and Broxbourne are located approximately 20 miles to the north of Central London in the Lee Valley. The adjacent towns have very distinct characteristics. Hoddesdon, to the north is the main town with a local commercial and industrial centre, while to the south is Broxbourne, a largely affluent residential community, which is to some degree, defined by its large commuting population. Hoddesdon has a more self-contained population centred on its town centre and industrial estates. Typical of most towns in the UK, travel patterns in the borough are dominated by the use of the car with all the associated problems that brings. However, the area has many under-used assets and much potential for greater take up of more sustainable modes and this plan attempts to build on these.

This Document

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

- supporting the economic vitality of local shops and businesses;
- reducing CO_2 emissions;
- providing a safer environment in which to live, work and visit;
- promoting healthy and active lifestyles;
- improving access to key services; and
- maintaining the high quality of life enjoyed by most.

Multiple site visits have also been undertaken to provide further confirmation of the key issues that need to be taken into account in the development of proposed interventions within this Urban Transport Plan. The transport solutions and improvements are set out within the context of Hertfordshire County Council's overall transport objectives, particularly those set out within Hertfordshire's 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:

- making more use of the area's natural assets, **the River Lee and New River**, for pedestrian and cycling access to the stations, local centres, employment areas, countryside and the towns of Cheshunt and Waltham Cross;
- **improvements to pedestrian and cycling facilities along the A1170**, through the heart of the borough;
- **accessibility improvements to and at the rail stations** including improved pedestrian and cycle links, cycle parking and better provision for buses;

- **promotion of bus services** through the roll out of Real Time Passenger Information, better signing and promotion of integrated ticketing;
- **improved pedestrian and cycle access to Hoddesdon town centre** and a new internal traffic circulation with contra-low cycle lanes;
- **speed compliance** including physical measures in roads where speed compliance issues have been identified as a concern and verified, and;
- **management of transport demand, improving sustainable transport and smarter choices** which includes review of parking, encouraging greater uptake of Safe Routes to Schools, developing travel plans for the major employers and active promotion of sustainable travel modes.

The plan acknowledges the potentially significant increases in traffic, particularly on the A10, associated with the proposed developments in the corridor. Hertfordshire County Council has produced a report to identify potential highway infrastructure schemes to mitigate against the additional traffic anticipated from Local Development Framework development on the A10 in Waltham Cross and Cheshunt. The findings should be taken into account when establishing planning requirements for taking developments forward in the A10 corridor. This could be in the form of an A10 Route Management Study that has been recommended by Broxbourne Borough Council in their Core Strategy, to consider the wider impacts on the A10 and identify a strategy for delivery. It is anticipated that this study will be developed by Broxbourne Borough Council in partnership with the Highways Agency and Hertfordshire County Council.

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 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 will require additional funding.

1 Introduction

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, 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. The Urban Transport Plans focus on developing local transport solutions for local transport problems.

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 Hoddesdon and Broxbourne Urban Transport Plan

1.3 This Urban Transport Plan outlines interventions to address objectives and key issues relevant to Hoddesdon and Broxbourne. 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 plan has been developed in conjunction with Broxbourne Borough Council and other local partners, and through public consultation, and further to the issues gathering exercise, will be consulted upon with the public. There are a number of existing proposals and policies, outlined below, that are particularly relevant and are considered by this plan.

1.4 The plan acknowledges the potentially significant increases in traffic, particularly on the A10, associated with the proposed developments in the corridor. Hertfordshire County Council has produced a report to identify potential highway infrastructure schemes to mitigate against

the additional traffic anticipated from Local Development Framework development on the A10 in Waltham Cross and Cheshunt. The findings should be taken into account when establishing planning requirements for taking developments forward in the A10 corridor. This could be in the form of an A10 Route Management Study that has been recommended by Broxbourne Borough Council in their Core Strategy, to consider the wider impacts on the A10 and identify a strategy for delivery. It is anticipated that this study will be developed by Broxbourne Borough Council in partnership with the Highways Agency and Hertfordshire County Council.

Broxbourne Local Development Framework Core Strategy

1.5 The Core Strategy is a planning document which sets out a vision for the future of Broxbourne as a prosperous and sustainable community. It explores the unique features of the Borough and identifies the main challenges and key drivers of change over the next 15 years. It then sets out ambitious but realistic plans to guide new development, regenerate neighbourhoods, improve services and facilities and protect the environment. The key policies of the Core Strategy are:

- to regenerate neighbourhoods by building high quality homes in urban areas, small edge-of-urban sites and/or large green belt sites where they are well connected to services and facilities by public transport, walking and cycling;
- to build 240 dwellings per year;
- Greater Brookfield will be developed for retail and leisure and about 300 dwellings as well as major transport improvements. Hoddesdon and Waltham Cross town centres will remain popular destinations for food shopping, non-food shopping, eating/drinking and community events;
- existing employment areas will continue to be a focus for job creation and will be complemented by new retail and leisure jobs at Greater Brookfield and high-value jobs at Park Plaza;
- all development will be designed to enhance its surroundings and to reduce its impact on climate change. The green belt, Lee Valley Regional Park and other important open spaces, landscapes and historic areas will continue to be protected and enhanced;
- appropriate infrastructure such as rail services, buses, utilities, schools and healthcare centres will be brought forward to support

regeneration and growth and an A10 Route Management Strategy will be prepared to minimise road congestion; and

- sense of community and sense of place will be enhanced by promoting unique assets such as the Olympic Lee Valley White Water Centre and Lee Valley Regional Park.

Hoddesdon Town Centre Strategy

1.6 Broxbourne Borough Council has recently produced a town centre strategy for Hoddesdon in which they set out a number of measures they would like to introduce to improve the vitality of the town centre including a variety of highway proposals that will influence traffic movements in the town centre. The purpose of this strategy is to revitalise Hoddesdon town centre and provide a framework for the council and partner agencies to implement the strategy. The key transport issues the strategy is aiming to address are:

- To make it easier for people to access the town centre, by all means of transport;
- To create more attractive gateways into the town centre; and
- To improve links with nearby green space such as Barclay Park and the Lee Valley Regional Park.

Tower Centre Development

1.7 The redevelopment proposals for the Tower Centre in Hoddesdon are emerging and will be subject to planning application shortly. The proposals involve the demolition of much of the existing Tower Centre and construction of a new food store and the revitalisation of the area around the clock tower. The plans include better integration of the site with the town, with general improvements to pedestrian permeability through it.

1.8 The proposals were subject to a public exhibition on 20th of April 2011 where it is understood feedback received showed largely favourable public opinion.

1.9 The development proposals will be monitored as they progress so that the plan can consider them fully in its own proposals.

Structure of the Plan

- Section 2 provides a background to the plan area, considering the socio-demographic fabric of Hoddesdon and Broxbourne and travel patterns;

- Section 3 states the local objectives for Hoddesdon and Broxbourne and county level Local Transport Plan targets that delivery of this Plan will contribute towards;
- Section 4 summarises transport issues, organised by Local Transport Plan target and funding areas;
- Section 5 is the strategy for transport in Hoddesdon and Broxbourne;
- Section 6 contains the implementation plan for delivering the strategy; and
- Section 7 presents a summary of the measures recommended.

2 Background to the Plan Area

Introduction

2.1 Hoddesdon and Broxbourne are located approximately 20 miles to the north of London in the Lee Valley. Close to the A10 and M25 and served by the West Anglia Main Line, Hoddesdon and Broxbourne benefit from good transport links to London, with typical journey times to Central London of approximately an hour by car in uncongested conditions or half an hour by train. Whilst north-south rail links are good, east-west rail links are poor and there is greater reliance on the car for these trips. The two urban centres of Hoddesdon and Broxbourne have quite different characteristics. Hoddesdon is a market town with a distinct central commercial and retail offer and local industry based in the Essex Road industrial estate and other local business parks. Broxbourne to the south, has excellent rail links to London, and tends to act more as a dormitory town, with many residents commuting to Central London. Both towns benefit from local green space, with the Lee Valley Regional Park and Broxbourne Woods close by, while further retail and leisure opportunities are also provided by neighbouring Cheshunt and Waltham Cross. The study area for this Urban Transport Plan is shown overleaf in Figures 2.1 (wider context) and 2.2 (with land use).

2.2 Hoddesdon and Broxbourne are middle income towns with low levels of unemployment. There is higher than average car-ownership, with only 15% of households not having access to a car compared with 27% nationally and nearly half of all residents (44%) having access to two or more cars. Despite the excellent rail links from Broxbourne and dominance of London for commuters from Broxbourne, car is still very much the mode of choice, with three quarters of all journeys to work outside the area made by car.

FIGURE 2.1 HODDESDON AND BROXBOURNE STUDY AREA WIDER CONTEXT

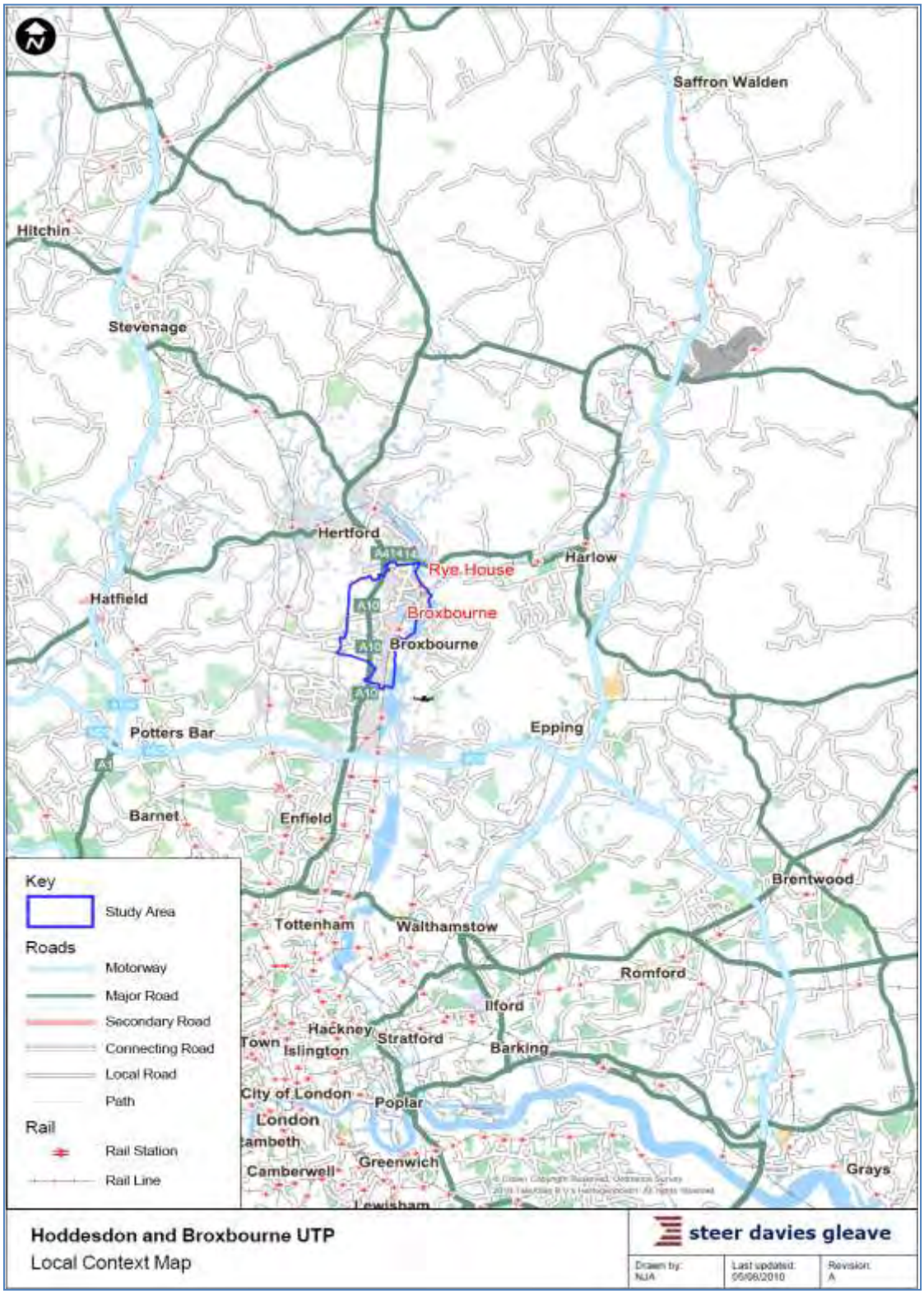
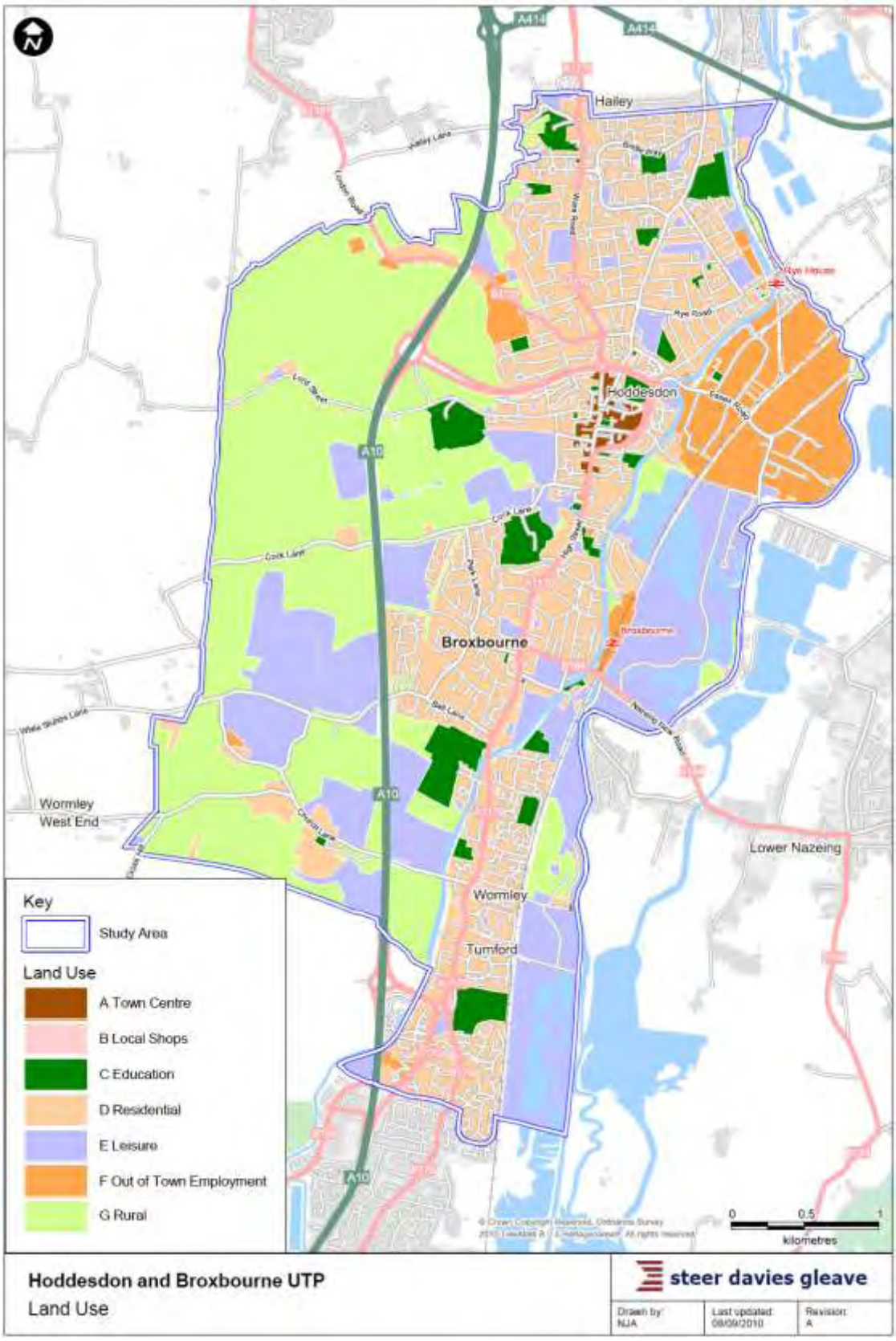


FIGURE 2.2 HODDESDON AND BROXBOURNE DETAILED STUDY AREA



Travel Patterns in Hoddesdon and Broxbourne

2.3 Drawing on 2001 Census data, local surveys and demographic profiling, the travel patterns of Hoddesdon and Broxbourne's residents and employees have been examined. The contributions of the individual modes of transport (i.e. walking, cycling, bus, rail and car) are discussed later while the following analysis presents an overview of the general pattern of travel in the area. The data reveals the dominance of the car for commuting and while the following analysis is based on existing data available on people's journey to work patterns, it is recognised that the towns of Hoddesdon and Broxbourne while relatively self-contained, have no major shopping or health facilities. While public transport links to these can be improved, access is still likely to be dominated by the car.

2.4 The 2001 Census data is currently the latest such data available, and will eventually be superseded by the 2011 Census once the data has been processed in the near future. It is recognised that many individual travel patterns and flows will have changed since then, however the data is used solely to give local context. No scheme feasibilities have been based on it in the production of this plan. Further fresh data collection and analysis of travel patterns would be carried out where appropriate for any schemes that are taken forward.

Census Journey to Work 2001

2.5 The 2001 Census indicated that there are 17,600 employed residents in the study area with the majority (65%) working outside Hoddesdon and Broxbourne. The single largest employment draw is London (27%). For those commuting to work places outside Hoddesdon and Broxbourne, the dominant mode is car with a 76% mode share. Rail is next with a 16% mode share, reflecting the importance of rail based trips to London, while bus and cycle use is low with just 2% and 1% share respectively.

2.6 Table 2.1 records these mode shares for commuters from Hoddesdon and Broxbourne.

TABLE 2.1 OUT-COMMUTING BY MODE

Mode	Proportion (%)
Car	75.7
Train	15.8
Walk	2.1
Bus	1.9
Cycle	1.1
Motorcycle	1.5
Other	1.9
Total	**100**

Source: 2001 UK Census

2.7 The 2001 Census indicated that around 13,000 people work in the study area with 60% commuting from outside Hoddesdon and Broxbourne. The vast majority commute from close neighbouring areas. Despite good train links running north and south through Hoddesdon and Broxbourne, *in-commuting* is more car-oriented than *out-commuting*, with approximately 80% arriving by car and only 2% using the train. This split is largely driven by high car ownership, the dispersed origin locations of *in-commuters*, good local road links, and relatively cheap off-street and on-street car parking (including high levels of private parking) within the borough.

2.8 Analysis of journey to work distances for car travel actually shows a predominance of trips in the one kilometre to eight kilometre bracket, for both *in*-commuting and *out*-commuting. Shorter distance trips such as this would suggest there is a large potential market to switch to bus, cycling and walking. Figure 2.3 and Figure 2.4 illustrate.

FIGURE 2.3 CAR COMMUTING DISTANCES TO HODDESDON AND BROXBOURNE

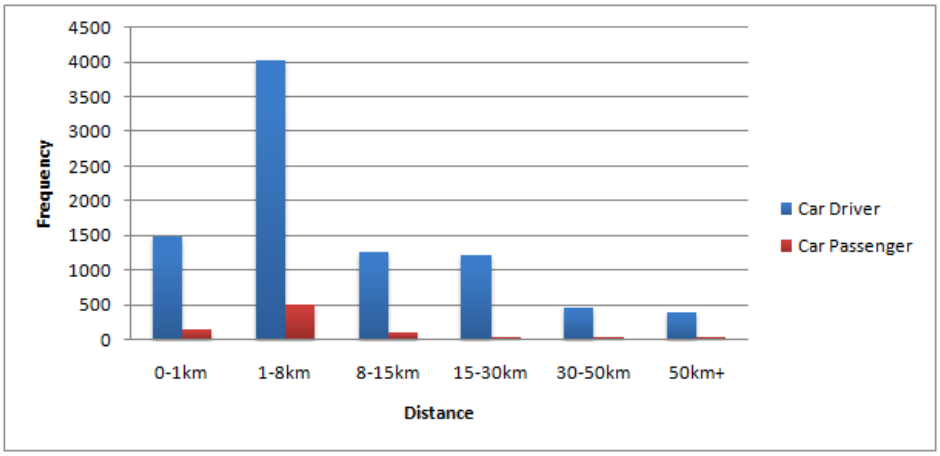
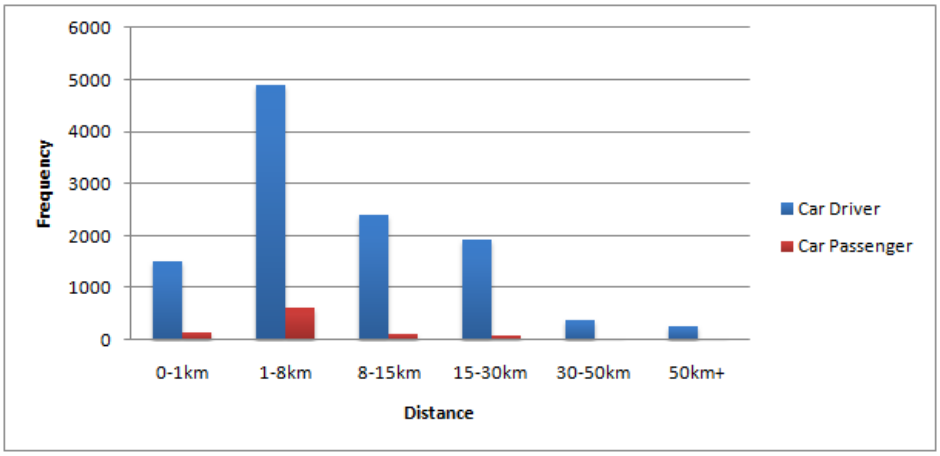


FIGURE 2.4 CAR COMMUTING DISTANCES FROM HODDESDON AND BROXBOURNE



TravelStyle

2.9 People's choice of mode of transport for their commute is driven by a range of factors, including population characteristics. Analysis of the local demography using the bespoke demographic profiling software 'TravelStyle', has been used to estimate people's propensity to use different modes of transport. Figure 2.5 overleaf illustrates the TravelStyle profile for Hoddesdon and Broxbourne. Figure 2.6 overleaf shows the accompanying characteristics associated with these individual groupings. Figure 2.7 following shows the geographical spread of each grouping across the study area together with the highway and bus networks.

2.10 The TravelStyle geography for Hoddesdon and Broxbourne comprises a majority of middle income groups distributed evenly throughout the area. The largest '*mid market'* group is characterised by middle income households with high car ownership. This group tends to have high levels of car dependency and tends only to use alternative modes of transport when there is a disincentive to drive. The higher income '*mature professionals*' group are concentrated in Broxbourne. This group has high car ownership and a higher propensity to travel by rail, particularly to London.

2.11 There are distinct pockets in the north and south of the study area of lower income groups. The second largest grouping is '*financially constrained*'. This group is characterised by lower income households with a high propensity for bus use due to low car ownership.

FIGURE 2.5 TRAVELSTYLE PROFILE

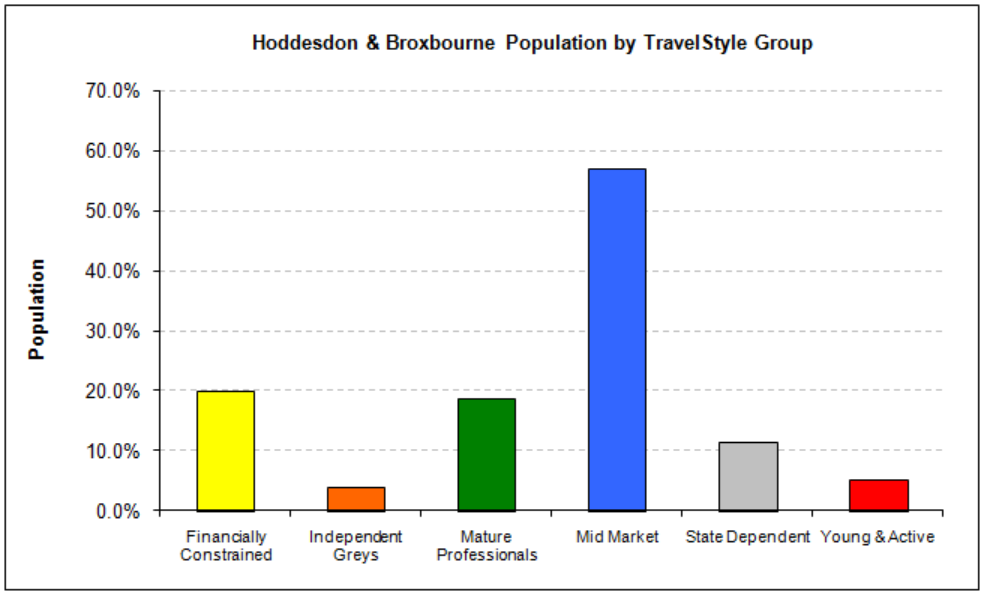
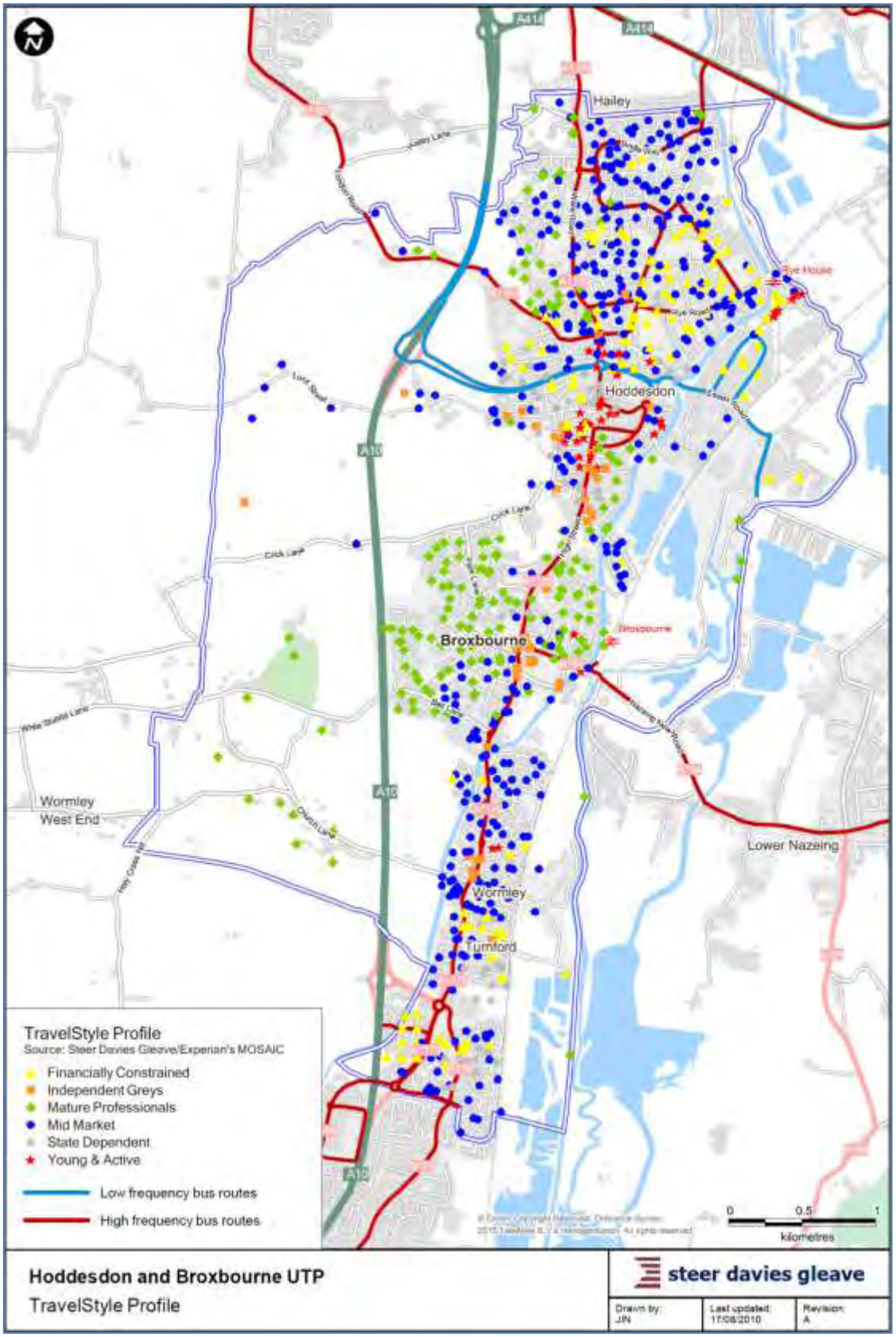


FIGURE 2.6 TRAVELSTYLE CHARACTERISTICS

	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

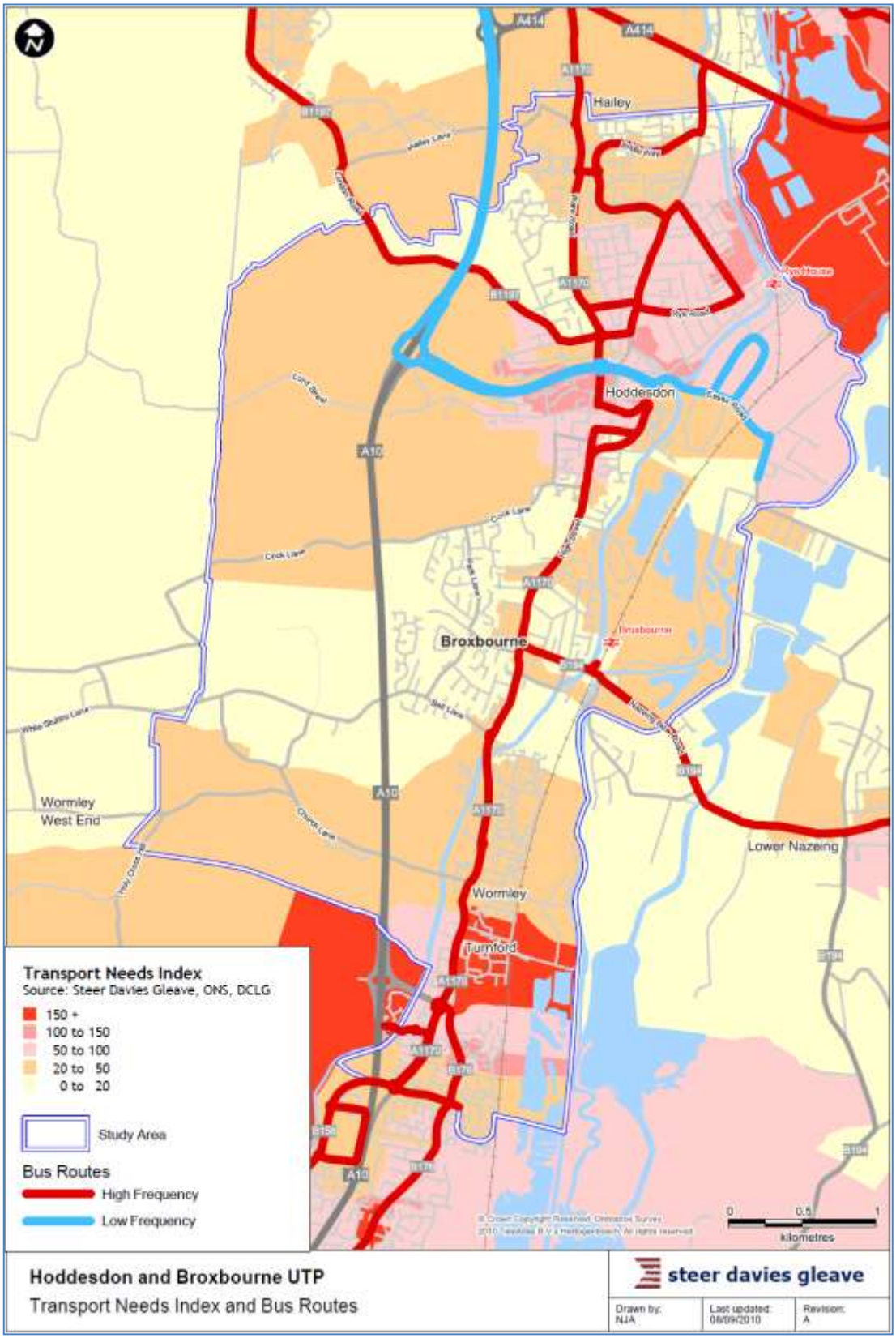
FIGURE 2.7 TRAVELSTYLE GEOGRAPHY



Transport Needs Index

2.12 The Transport Needs Index is another tool developed to assess the relative 'need' for affordable public transport services using population data on levels of car ownership, income, and a measure of rurality. Figure 2.8 overleaf displays the analysis for Hoddesdon and Broxbourne. There are a small number of areas with a relatively high need for public transport (identified by above average scores of 100 or more) in Turnford, Hoddesdon town centre, and near Rye House railway station, as well as further northeast outside the study area. Combined with mapping the current availability of public transport, these areas can be used to highlight 'unmet' need. Inspection of the bus network shows that bus services do penetrate these areas of higher need, with the exceptions being an area just to the west of Hoddesdon town centre around Lord Street and Langton Road, and parts of Turnford furthest east from the A1170. It should be noted that the bus services mapped overleaf in Figure 2.8 represent *Monday to Saturday peak* service frequencies. Services C3 and 323A which run through Rye Park (Old Highway Road) do not run on Sundays or public holidays leaving a significant gap in provision. Future developments – subject to the usual planning process – in areas of current public transport deficit would benefit from developer contributions to support new bus links. Moreover, the plan will recognise that accessibility to many essential services and opportunities, such as health, education and retail that lie outside the immediate study area, and/or are not well served by buses will still be dominated by car access.

FIGURE 2.8 TRANSPORT NEEDS INDEX



TravelWise

2.13 The dominance of the car for travel in Hoddesdon and Broxbourne is shown in the TravelWise cordon survey traffic counts, undertaken for the County Council on a three year cycle. These surveys are based on travel on the main highway routes into and out of the town centre during the morning peak period (0700 to 1000 hours). Between 1999 and 2008 the peak period modal split between private and public transport has been relatively stable with around 89% of journeys into and out of Hoddesdon and Broxbourne made by car or motorcycle, 5% by bus and 5% walking. Cycling share is low at less than 1%. Table 2.2 illustrates.

TABLE 2.2 CHANGE IN MODE SHARE - TRAVELWISE CORDON SURVEY

Year	Car (%)	Bus (%)	Walk (%)	Cycle (%)	Motorcycle (%)
1999	88.6	5.9	4.0	0.6	0.9
2002	89.5	4.4	4.5	0.8	0.9
2005	86.9	5.3	5.9	0.9	1.0
2008	87.4	5.5	5.8	0.6	0.7

TravelSmart

2.14 As part of the TravelSmart initiative carried out in 2010, a survey was carried out to provide a comprehensive database on personal travel behaviour among residents of Broxbourne Borough. The survey target area comprised the Hoddesdon Town, Broxbourne, Wormley & Turnford, Cheshunt North, Cheshunt Central, Rosedale, Bury Green, Theobalds and Waltham Cross wards of Broxbourne Borough.

2.15 The data collected during the travel behaviour survey give a representative picture of day-to-day travel patterns of residents of the urban areas of Broxbourne Borough. Headlines from the detailed analysis shows:

- The share of walking was higher during the week than at weekends, however cycling levels increased at the weekend.
- Levels of walking were highest for education trips (51% of such trips) and lowest for work-related business (4%). Cycling accounted

for 4% of leisure trips and 2% of shopping trips, but was below the average level of 2%t for all other trip types.

- The mode share for car-as-driver trips was highest for work-related business and work, accounting for 84% and 65% of all trips in these categories respectively.
- Public transport use was highest for work and was also above the all-trips average of 9% for education (10%).
- Employed people made the majority of their trips by car-as-driver and made least use of sustainable travel modes (walking, cycling and public transport).
- In general, those in education, unemployed people and pre-school children made the greatest use of sustainable travel modes.

2.16 The research also reveals the importance of short, local trips:

- One fifth of all trips by Broxbourne Borough residents were no further than one km and 44% were no further than three kilometres. 59% were shorter than five km and another 14% were between five and 10 km. Over a quarter of all trips were over 10 km.
- A large share of car trips were relatively short: more than a quarter were no further than three km; and just under half were no further than five km.
- For the majority of all trips (58%), residents remained within their own local area, and of these trips more than half were undertaken by car either as driver (38%) or passenger (22%). 35% of the trips within Broxbourne Borough were undertaken by foot.

2.17 These figures suggest a significant potential for change away from car use and towards greater use of sustainable modes if Broxbourne Borough residents are provided with the appropriate information, support and encouragement.

3 Local Objectives and Targets

3.1 This Urban Transport Plan outlines interventions to address transport objectives and key issues that have been identified through local consultation and data collection and analysis. The transport solutions and improvements also need to be within the context of the County Council's overall transport objectives, particularly those from the Hertfordshire Local Transport Plan. Table 3.1 overleaf provides the hierarchy of objectives that have helped inform the local objectives for this plan. Consideration has been given to; the Hertfordshire Corporate Plan, Hertfordshire Sustainable Communities Strategy, Hertfordshire Local Transport Plan, Broxbourne Local Development Framework Core Strategy 2010, the Broxbourne Sustainable Community Strategy 2010-2021 and the Broxbourne Economic Development Strategy 2010-2013; under five overarching themes. The local objectives which flow from these documents are as follows:

- support the economic vitality of local shops and businesses;
- reduce CO_2 emissions;
- provide a safer environment in which to live, work and visit;
- promote healthy and active lifestyles;
- improve access to key services; and
- maintain the high quality of life enjoyed by most.

3.2 The goals and challenges from the Hertfordshire Local Transport Plan can be found overleaf (Table 3.1). Rather than setting locally specific targets, it is towards these county-wide targets and any subsequent targets set that the Urban Transport Plan should contribute.

TABLE 3.1 HIERARCHY OF OBJECTIVES

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne 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.	Support economic development and planned dwelling growth.	1.1 Keep the county moving through efficient management of the road network to improve journey time, reliability and resilience and manage congestion to minimise its impact on the economy.	Hoddesdon town centre will remain popular destinations for food shopping, non-food shopping, eating/drinking and community events.	Support the economic vitality of local shops and businesses.

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Bring about a step change in the provision, quality and use of public transport in Hertfordshire.		1.2 Support economic growth and new housing development through delivery of transport improvements and where necessary enhancement of the network capacity.	Existing employment areas (such as Essex Road) will continue to be a focus for job creation	
		Improve the reliability of journey times and improve East to West travel.				

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Ensure effective long term management and maintenance of the transport network.				
2. Tackling climate change.	Reduce carbon emissions.	Meet the Government's targets for reducing Hertfordshire's carbon emissions.	Reduce transport's contribution to greenhouse gas emissions and improve its resilience.	5.1 Reduce greenhouse gas emissions from transport in the county to meet government targets through	All development will be designed to enhance its surroundings and to reduce its impact on climate change. The	Reduce transports contribution to CO_2 emissions.

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Reduce the need to travel and encourage the use of alternatives to the car.		the reduction in consumption of fossil fuels.	green belt, Lee Valley Regional Park and other important open spaces, landscapes and historic areas will continue to be protected and enhanced.	
		Bring about a step change in the provision, quality and use of public transport in Hertfordshire.				

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
3. Contributing to better safety, security and health.	Promote safe neighbourhoods.	Ensure children and young people have a healthy weight.	Improve safety and security for residents and other road users.	4.1 Improve road safety in the county reducing the risk of death and injury due to the traffic accidents.	Appropriate infrastructure such as rail services, buses, utilities, schools and healthcare centres will be brought forward to	Provide a safer environment in which to live, work and visit Promote healthy and active lifestyles.

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Improve the health and wellbeing of all our residents in the 20% most deprived wards.		3.2 Improve the health of individuals by encouraging and enabling more physically active travel and access to recreational areas and through improving areas of poor air quality which can affect health.	support regeneration and growth and an A10 Route Management Strategy will be prepared to minimise road congestion.	

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Improve access to services, including education and health no matter where you live.		4.2 Reduce crime and the fear of crime on the network to enable users of the network to travel safely and with minimum concern over safety so that accessibility is not compromised.		
		Improve life chances and access to healthcare for all, especially those in areas of deprivation and those with learning disabilities.				

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
		Improve access to the countryside, open spaces and cultural activities for recreation and health.				
		Improve road safety.				
		Ensure effective long term management and maintenance of the transport network.				

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
4. Promoting greater equality of opportunity.	Maximise independent living.	Help older people maintain their independence.	Improve transport opportunities for all and achieve behavioural change in mode choice.	2.1 Improve accessibility for all and particularly for non-car users and the disadvantaged (disabled, elderly, low income etc.).	To regenerate neighbourhoods by building high quality and sustainable homes in urban areas, small edge-of-urban sites and/or large green belt sites where they are well connected to services and facilities by public transport, walking and cycling.	Improve access to key services for all.
	Ensure a positive childhood and secure a good education for all.	Ensure older people have the opportunities to be active members of our communities.		2.3 Achieve further improvements in the provision of public transport (bus and rail) to		

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
	Be a leading council.	Improve access to services, including education and health, no matter where you live.		improve accessibility, punctuality, reliability and transport information in order to provide a viable alternative for car users.		
5. Improving quality of life and promoting healthy natural environment.	Maximise independent living.	Improve access to the countryside, open spaces and cultural activities for recreation and health.	Enhance quality of life, health and the natural, built and historic environment for all Hertfordshire	3.1 Improve journey experience for transport users in terms of comfort, regularity and reliability of	Sense of community and sense of place will be enhanced by promoting unique assets such as the Lee Valley Regional Park.	Maintain the high quality of life enjoyed by most.
	Ensure a positive childhood and secure a good education for all.					Promotion of local green spaces.

Local Transport Plan Guidance Objectives Themes	Hertfordshire Corporate Plan Objectives	Hertfordshire Sustainable Communities Strategy	Hertfordshire 3rd Local Transport Plan Goals	Relevant Hertfordshire 3rd Local Transport Plan Challenge	Broxbourne Core Strategy Objectives	Hoddesdon & Broxbourne Urban Transport Plan Draft Objectives
	Be a leading council.		residents.	service, safety concerns, ability to park and other aspects to improve access.		

4 Local Issues

Introduction

4.1 The key issues outlined in this chapter have been identified through consultation with the local community. These issues have then been further examined and developed based on available evidence, including policy and strategy statements from lead officers, site visit observations and the Route User Hierarchy.

4.2 The Route User Hierarchy seeks to identify the priority that should be afforded to the different categories of user (i.e. pedestrians, cyclists, mobility impaired, public transport, car and HGV) on different parts of the network. It has been designed to enable the transport interventions developed for the Urban Transport Plan to be seen in the strategic context of the network and help to ensure that interventions are targeted to routes where they are most appropriate.

4.3 The key issues are presented in this section by Local Transport Plan target area and other relevant transport areas (i.e. parking and freight) which are:

- congestion;
- accessibility and Bus;
- rail;
- cycling;
- rights of way and quality of life (including walking);
- road safety;
- speed limit compliance;
- parking; and
- freight.

Local Issues Identified

4.4 To support the wider policy goals it will be important for the Urban Transport Plan to support the economic vitality of local shops and businesses; improve access to key services such as the rail stations; provide a safer environment; promote healthier and more active lifestyles; reduce carbon emissions; and maintain the high quality of life enjoyed by most residents. However, existing transport constraints are, and will continue to, impede this future vision unless addressed. Many of these stem from the very high levels of car use and associated traffic levels on the A1170 together with the low take up of sustainable modes of transport.

4.5 Subject to the normal legislative and funding constraints and the respective remits of Hertfordshire County Council and Broxbourne Borough Council; there are opportunities to be exploited, however, with potential new cycling and pedestrian links along the New River and, Real Time Passenger Information for buses complementing the excellent rail connections to London. Transport therefore has a key role to play in delivering this future vision, not only through overcoming the constraints listed above, but by supporting Hoddesdon and Broxbourne's vision.

4.6 The main opportunities for achieving this future vision, around which the strategy will be focused, are through:

- making more use of the area's natural assets, **the River Lee and New River**, for pedestrian and cycling access to the stations and local centres;
- **improvements to pedestrian and cycling facilities along the A1170**, through the heart of the borough,
- **accessibility improvements to and at the rail stations** including improved pedestrian and cycle links, cycle parking and better provision for buses;
- **promotion of bus services** through the roll out of Real Time Passenger Information, better signing and promotion of integrated ticketing;
- **improved pedestrian and cycle access to Hoddesdon town centre** and a new internal traffic circulation with contra-flow cycle lanes;
- **speed compliance** including physical measures in roads where speed compliance issues have been identified as a concern and verified;
- ensuring that **freight access to Essex Road** uses appropriate roads; and
- **management of transport demand, improving sustainable transport and smarter choices** which includes review of parking, encouraging greater uptake of Safe Routes to Schools, developing travel plans for the major employers and active promotion of sustainable travel modes.

Congestion

4.7 While London is the single largest employment draw, and rail the preferred method of commuting to the capital, the private car is still by far the dominant form of transport for commuting for residents and employees in Hoddesdon and Broxbourne. The employment locations for local residents are dispersed across the county and wider region, although there are key local destinations in Hoddesdon and Essex Road and other local industrial estates. Furthermore, analysis of local commuting patterns indicates that the majority of trips into the area are of fairly short length.

4.8 There are relatively high traffic flows on the A1170, the main artery through the study area, in the peaks, and queuing traffic often builds up behind right turning traffic at priority junctions and signals. While the congestion is evident from site visits, and obviously an important issue for the local community, at a county level the A1170 is not classified as a designated urban route for congestion monitoring within the current Local Transport Plan. The inclusion of the following key issues has therefore been considered in the context of further evidence and cumulative impacts on other Local Transport Plan target areas.

4.9 The following key issues were identified through public consultation and were subsequently confirmed by site visits.

Key Issues

Ci01 High car mode share and dependency.

Ci02 Inappropriate use of residential road by HGVs; rat-running and SATNAV due to mis-assignment of Essex Road in SATNAV databases.

Ci03 Congestion along A1170 during the peak, including commuter and local school traffic.

Ci04 Congestion along Essex Road and Dinant Link Road during the peak.

Ci05 Sporadic traffic queuing behind traffic tuning right along A1170 at signalised and priority junctions in particular conflicts from northbound traffic turning right from High Street into Esdaile Lane.

Ci06 Congestion along Station Road Broxbourne during the peak due to temporary lack of parking at Broxbourne station.

Ci07 Congestion at junction of High Street with Charlton Way and Amwell Street at the Sun roundabout during the peak.

Ci08 Congestion at roundabout at junction of Bell Lane and High Road Broxbourne (A1170) during the peak.

Ci09 Congestion along A1170 High Road in Turnford at New River Arms roundabout during the peak.

Accessibility and Bus Patronage

4.10 Improving access to key services is a Hertfordshire County Council and Broxbourne Borough Council, objective, although Hoddesdon and Broxbourne are not identified in the Local Transport Plan as specific areas that have accessibility issues, as measured by walking and public transport journey times. However, areas around Rye House have limited services, particularly in the evenings and weekends when few or no bus services run and on-street parking reduces carriageway width and prohibits the operation of bus services. Furthermore, while north-south bus connections are strong, the east to west axis is less well served and in particular, travelling to local hospitals by scheduled public transport involves multiple changes and takes much in excess of an hour. The A1170 is the main road running north to south through the area, and while subject to a 30 mph and 40 mph speed limit, acts as a barrier to east-west pedestrian permeability, particularly as it winds around the east of Hoddesdon Town Centre, running as dual carriageway with a 40 mph section. Access to the town from the residential areas to the east is via subways, the poor condition and environment of which, has been raised as an issue. The following key issues were identified through public consultation and were confirmed by site visits.

Key Issues

Ai01 Lack of east-west (and hinterland) public transport / bus connectivity.

Ai02 Poor bus services to Essex Road Industrial Estate.

Ai03 Weaker evening and weekend services.

Ai04 Poor bus information in local centres and lack of real time information.

Ai05 Increased enforcement of bus priority in Hoddesdon needed to reduce through traffic in town centre.

Ai06 Poor pedestrian access at Rye House Rail Station across the railway bridge.

Ai07 Poor rail to bus timetable coordination at Broxbourne.

Ai08 Lack of pedestrian crossing on Burford Street between the war memorial and the Clock Tower and poor location of bus stop on Amwell Street.

Ai09 High traffic volumes and wide carriageways of Charlton Way produce a severance effect on access to town centre.

Ai10 High traffic volumes and speeds, plus wide carriageways of the A1170 Dinant Link Road produce a severance effect on the town centre

Ai11 Traffic volumes on the A1170 produce intimidating environment for vulnerable road users and create severance effect on local communities.

Ai12 Poor pedestrian and cycle access to Essex Road industrial estate across New River. To be addressed as part of Broxbourne Borough Council's Gateway development brief. Links to Wi04.

Ai13 Poor accessibility to local hospitals, Chase Farm, QE2, Lister, Princess Alexandra and Cheshunt Community hospital, by public transport.

Ai14 Unattractive underpasses to Hoddesdon town centre.

Ai15 Lack of continuity of footpath on Charlton Way.

Rail

4.11 The Urban Transport Plan area is served by two rail stations at Broxbourne and at Rye House. London is the main destination for rail commuters, facilitated by frequent services with quick journey times to the capital, particularly from Broxbourne. Rye House also serves a number of in-commuters, being conveniently located for the Essex Road Industrial Estate. While popular, both stations suffer from access problems. Rye House station is accessed from Hoddesdon side via a narrow bridge with limited footway. Broxbourne suffers from peak queuing of cars waiting to exit onto Station Road in the evening peak. Both stations could be better signed from the local centres and pedestrian access could be improved.

4.12 Improved integration of public transport is a key objective of Hertfordshire County Council and Broxbourne Borough Council and

there is a desire to see the extension of the OYSTER pay as you go scheme extended to the local rail stations.

Key Issues

Ri01 Poor mobility impaired access to platforms at Broxbourne station. (Now addressed by Network Rail).

Ri02 Poor lighting on bridge to Rye House rail station.

Ri03 Lack of parking at Rye House rail station.

Ri04 Poor pedestrian access to Rye House rail station. Narrow bridge.

Ri05 Poor signage Hoddesdon town centre to Rye House rail station.

Ri06 Poor layout of Broxbourne station car park with poor bus access and queuing cars exiting in the evening peak due to junction layout.

Cycling

4.13 Despite the area's position in relation to the strategic cycle network, cycle use is limited. Opportunities exist for schools, workplaces and local operators to work with the district, county councils and agencies such as Thames Water, to promote cycling (and walking), and provide additional infrastructure, new signage and routes along the River Lee and New River, and providing cycle stands at key locations and at the rail stations. Analysis of commuting patterns has shown that the majority of trips are of short length and could easily be made by cycling.

4.14 The following key issues concerning cycling were primarily identified through public consultation, and were confirmed following cycle audits and analysis of the Route User Hierarchy. The County Cycling Strategy supports addressing such issues through the Urban Transport Plan.

4.15 The following key issues were identified through public consultation and were subsequently confirmed by site visits.

Key Issues

Yi01 On-street parking on A1170 opposite St Cross School blocks the cycle lane during pick up/ drop off.

Y0i2 Lack of quality and continuity of cycle route on along A1170.

Yi03 Lack of secure cycle parking in Hoddesdon town centre and at local centres along the A1170.

Yi04 Lack of permeability of Hoddesdon town centre for cyclists.

Yi05 Pinch points for cyclists at Old Nazeing Road / Station Road over the railway bridge, and at the humpback bridges on Rye Road at Rye House rail station.

Yi06 Cycling prohibited on New River path.

Yi07 Poor condition of, and access to, River Lee towpath between Dobbs Weir and Old Nazeing Road in Essex.

Yi08 Poor level of cycle parking at Rye House rail station.

Yi09 Poor and low levels of cycle parking at Broxbourne rail station. (Network Rail updating cycle storage).

Rights of Way and Quality of Life (including Walking)

4.16 Despite analysis showing that a significant proportion of commuting trips are short in length, the barrier effect of the A1170, particularly around Hoddesdon, high traffic levels and inconsiderate parking all act as disincentives to walking, which is reflected in the low level (2%) share for walking shown in the 2001 Census Journey to Work data. The following key issues were identified through public consultation and were subsequently confirmed by site visits.

Key Issues

Wi01 Lack of clarity on priorities and road layout creates confusing environment for pedestrians wishing to cross between the war memorial and the Clock Tower in Hoddesdon town centre.

Wi02 Poor pedestrian /cycle environment on Rye House rail station bridge.

Wi03 Poor pedestrian realm in underpass on Charlton Way and general low permeability for pedestrians wishing to access the town from the east and north.

Wi04 Poor pedestrian environment at Essex Road / River Walk due to HGVs. To be addressed as part of Broxbourne Borough Council's Gateway development brief.

Wi05 Poor way finding to and from the New River.

Wi06 Motorcycles using Bramble Lane.

Speed Limit Compliance

4.17 Speed limit compliance was identified as an issue at multiple sites across Hoddesdon and Broxbourne during consultation. Surveys were conducted to measure speed limit compliance in locations flagged by members of the public. Where 85% of vehicles were in excess of 10% plus 2mph, above the speed limit (currently measured on roads with a 30mph speed limit), consideration was given to options to bring traffic inside the speed limit, or where appropriate, consider amending the speed limit. The roads where speed compliance was found to be an issue and where the observations have been supported by the survey data have been included as key issues.

Key Issues

Vi01 Ware Road, Hoddesdon.

Vi02 Park Lane, Hoddesdon near Copthorn Avenue.

Vi03 Bell Lane in Broxbourne.

Vi04 A1170 High Street in Hoddesdon.

Vi05 A1170 High Road in Broxbourne.

Vi06 A1170 Charlton Way/Dinant Link Road and Amwell Street in Hoddesdon.

Vi07 Cock Lane.

Vi08 Baas Lane.

Vi09 Pindar Road.

Vi10 B1197 Hertford Road.

Vi11 Hundred Acre Estate, including Bridleway South.

Parking

4.18 When private car is the dominant method of travel, there will always be associated issues with parking. The issues raised by the community in Hoddesdon and Broxbourne focus more on inconsiderate parking than capacity.

Key Issues

4.19 The key issues identified below were primarily identified through public consultation and have been taken forward or prioritised where there is a demonstrable link to other focus areas.

Pi01 Obstructive parking on footways and at junctions.

Pi02 Parking reducing carriageway width inhibiting two-way operation. For example Wharf Road Wormley where traffic blocks back and obstructs pedestrians.

Pi03 On-street commuter parking on streets around Broxbourne rail station.

Pi04 Illegal parking around schools.

Pi05 Clarity of parking restrictions along Station Road. (Now resolved).

Pi06 Clarity of parking restrictions along Hoddesdon High Street. (Now resolved).

Pi07 On-street parking around Rye House rail station restricts traffic and prohibits bus operations.

Pi08 On-street parking on Cock Lane for Civic Centre during events.

Pi09 Loading bay on Brewery Road conflicts with bus and cycle lane.

Pi10 Taxis on Burford and Amwell Street particularly on market days. (Now resolved through additional stacking space).

Pi11 Parking in residential streets by workers in Hoddesdon.

Pi12 Parking in roads around Barclay Park particularly during cricket and football matches.

Freight

Key Issues

4.20 The Essex Road industrial estate is a significant local employer and contributor to the economic vitality of the borough. Supporting its continued vitality is seen as a key objective of the Urban Transport Strategy. The estate does attract a lot of freight traffic and there are concerns raised by the community about the volume of Heavy Good Vehicles, particularly along residential roads.

4.21 The key issues are primarily focused on HGV traffic.

Fi01 Traffic routing into bus lane on Brewery Lane in Hoddesdon to avoid delivery lorries and vans.

Fi02 HGVs using inappropriate Roads; Duke Street and Middlefield Road, and Essex Road (old alignment) due to SATNAV database error.

Demand Management

4.22 Managing the demand for travel, particularly by car can be a powerful lever to reduce traffic levels. The existing high car use and other barriers to travel serve to reduce people's propensity to use sustainable modes. Hertfordshire's policy is to promote sustainable travel to school, which in effect means all modes other than the car. The strategy to deliver this is set out in the Sustainable Modes of Travel Strategy for travel to schools and colleges which has been developed in line with national indicators. The main programmes to deliver the policy and indicators are:

- Safer Routes to School.
- School Travel Plans.

4.23 **TravelWise** is the transport awareness initiative pioneered by Hertfordshire County Council and now adopted nationally for the National TravelWise Association. It aims to change people's attitude to the use of their cars. The campaign seeks to make other methods of transport, such as cycling, walking and using public transport a real alternative to the car. TravelWise promotes a number of events including Walk to School Week, Business TravelWise, publicity campaigns, and events in National Bike Week etc. There are currently no organisations with a business travel plan in place in Hoddesdon and Broxbourne.

4.24 The **TravelSmart** project in Broxbourne is being delivered by Sustrans and Socialdata with funding from Central Government's Greener Living Fund and support from Hertfordshire County Council, Broxbourne Borough Council and other local partners. Between May and August 2010 the TravelSmart project team aimed to contact around 8,000 households in the Borough of Broxbourne. Local residents across the Borough, from Hoddesdon Town to Waltham Cross, were offered free personalised travel information to encourage them to walk, cycle and use public transport more often.

Key Issues

4.25 Issued raised with respect to journeys to school and work include:

Ei01 Car dominated school runs.

Ei02 Low cycling and walking access to schools.

Ti01 Lack of work place travel plans.

Ti02 Lack of enforcement of development related work place travel plans.

Future Developments

4.26 The emerging Broxbourne Core Strategy seeks to deliver approximately 240 dwellings per year from 2011 to 2026 in urban areas combined with a strategic allocation at Greater Brookfield for retail, leisure and residential uses. The strategy will also establish long-term scope to release land from the green belt to provide new housing and employment land where needed.

4.27 The significant development proposed for the 'Land West of Hoddesdon', has raised concerns over the associated increase in traffic. As the proposal develops there will need to be dialogue between Broxbourne Borough Council and Hertfordshire County Council to assess the options for new access via the A10 Dinant Link Road or via existing urban roads. This debate will also encompass discussions about the provision of pedestrian and cycle routes from the development to the town centre to mitigate transport impacts and promote a sustainable development. This will support Broxbourne Borough Council's objective to revitalise Hoddesdon.

4.28 Responses on development planning issues raised during consultation are bulleted:

Di01 Concerns about the increases in congestion associated with planned housing growth. Particularly on A10 and A1170.

Di02 Ensure sufficient sustainable travel options to Greater Brookfield development.

Di03 Ensure sufficient promotion of cycling at long term development site between Hertford Road and A10.

Di04 Ensure sufficient cycle / walk links to/from development at Hertford Regional College.

Di05 Ensure appropriate access and sustainable transport options for future developments at Lido site in Broxbourne.

Di06 Traffic impact of all developments on the A10.

Di07 Traffic impact of Tower Centre development. Identify opportunities provided by development to address existing parking and access issues and scope to improve access into the town centre from the north.

Assessment of the Key Issues

4.29 The consultation process undertaken as part of the Urban Transport Plan process generated an extensive list of important issues relevant to Hoddesdon and Broxbourne which spanned all strategy areas of the study. Further analysis of each issue was undertaken which referred to the Route User Hierarchy, analysis of available data and site visits. Issues were then prioritised as key issues if the relevant evidence existed. The identification of key issues has enabled the development of intervention and strategy options to help support Hoddesdon and Broxbourne's future vision. Table 4.1 lists the key issues and illustrates the relationship between the key issues and interventions that have been developed.

Scheme Development

4.30 The schemes outlined in this chapter have been developed in response to the identified key issues. Available data has also been used 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

4.31 Each of the schemes included in a long-list of possible schemes were assessed against the following criteria:

- Urban Transport Plan objectives addressed;
- Local Transport Plan targets and fit with programme entry / funding criteria; and
- deliverability criteria (i.e. public acceptability, funding / affordability, cost, feasibility, delivery risk).

4.32 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.

Programme of Measures Required

4.33 The schemes included in this section have been developed to contribute towards the key issues identified through consultation. These schemes are designed for implementation over the next 15-20 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.

4.34 The schemes are presented schematically in Figure 4.1 overleaf and tabulated against issues addressed, in Table 4.1.

FIGURE 4.1 PROPOSED SCHEMES

Proposed Schemes

NM01-1	Cycle facilities - on-road cycle lanes on A1170 Ware Road
NM01-2	Cycle facilities -alternative signed on-road cycle route off A1170 to Hoddesdon town centre
NM01-3	Crossing improvements on Amwell Street off Sun roundabout, Hoddesdon
NM02-1	Extension of shared pedestrian cycle facility along Dinant Link Road along Charlton Way
NM02-2	Toucan crossing at Charlton Way/Lampits/Brewery Road roundabout.
NM02-3	Puffin crossing and new footway link across Charlton Way to north of junction with Lampits giving access to Netto .
NM02-4	Zebra crossing across Conduit Lane linking Netto and Sainsbury's supermarkets.
NM02-5	Conversion of existing Pelican crossing southern end of Charlton Way to Toucan.
NM02-6	Essex Road Access Gateway Development
NM03-1	Cycle route along St Cross School footpath, St Catherine's Road, Churchfields.
NM03-2	New River Spur. St Catherines Road, New River to Broxbourne station.
NM04-1	Cycling permitted along New River Path
NM04-2	Cycle Route: Churchfields to New River and Caldercote Way, Winford Drive to New River
NM05-1	Improve signage to, from and along New River to local centres and transport nodes
NM05-2	Surfacing and where required widening of New River footpath from Rye House station to Broxbourne station
NM05-3 *	Re-surfacing of River Lea towpath between Dobbs Weir and Old Nazeing Road
NM06-1	Improvements to Bramble Lane. Signing and gating at points of entry.

PT01-1	Access ramp from New River to station forecourt.
PT01-2	Way finding between station and Broxbourne.
PT01-3	Station forecourt improvements.
PT01-4	Review signalisation of junction with Station Road
PT01-5	Review commuter parking along Station Road following removal of temporary TRO.
PT01-6	Review period of commuter ban on residential roads around the station.
PT02-1	Roll out of Real Time Passenger Information.
PT02-2	Promotion of existing integrated ticketing schemes.
PT02-3 *	Promotion of hospital shuttle.
PT02-4 *	Review integration of hospital shuttle with dial a ride.
UR01-1	Widen footpath over the New River.
UR01-2	New station car park at Turnford Surfaces development site.
UR01-3	Increase cycle parking at station.
UR01-4	New way finding to station directing pedestrians through Essex Road, Fishermans Way.
UR01-5	New Farm Lane pedestrian route linking Pindar Road and industrial estate with Rye House station and bus routes on Rye Road and Old Highway.
UR02-1	New crossing Tower Centre to Burford Street/Brewery Road.
UR02-2	One-way system Amwell Street \ Burford Street.
UR02-3	Cycle parking at key locations in town centre.
UR03-1	Esdaile Lane one-way system

S01-1	Signage and road markings.
S02-1	Signage and road markings.
S03-1	Signage and road markings.
S03-2	Relocation of speed limit terminus
S04-1	Signage and road markings.
S04-2	Traffic calming - additional hump between Camaby Road and Graham Avenue.
S04-3	Traffic calming - refurbish existing humps
S05-1	Signage and road markings.
S06-1	Signage and road markings.
S06-2	Relocation of speed limit terminus
S07-1	Signage and road markings.
S07-2	Traffic calming - speed cushions.
DM01-1	Review weight and width restrictions and improve signing at appropriate locations
DM01-2	Change name of Essex Road and direct SATNAV service providers to update databases.
DM02-1	Develop travel plans for major employers.
DM03-1	Continuation of Safer Routes to Schools programme.
DM04-1 *	Review junction protection and installation of regular passing areas.
DM05-1 *	General review of parking across Urban Transport Plan area.

* Issue not shown on map

TABLE 4.1 KEY ISSUES IDENTIFIED AND INTERVENTIONS

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
CONGESTION		
Ci01	High car mode share and dependency.	NM01, PT01, DM02, DM03
Ci02	Inappropriate use of residential road by HGVs; rat-running and SATNAV due to mis-assignment of Essex Road in SATNAV databases.	DM01
Ci03	Congestion along A1170 during the peak, including commuter and local school traffic.	DM02, DM03
Ci04	Congestion along Essex Road and Dinant Link Road during the peaks.	DM02
Ci05	Sporadic traffic queuing behind traffic tuning right along A1170 at signalised and priority junctions in particular conflicts from northbound traffic turning right from High Street into Esdaile Lane.	UR03
Ci06	Congestion along Station Road Broxbourne during the peak due to temporary lack of parking at Broxbourne station.	PT01
Ci07	Congestion at junction of High Street with Charlton Way and Amwell Street at the Sun roundabout.	DM02
Ci08	Congestion at roundabout at junction of Bell Lane and High Road Broxbourne (A1170).	DM02
Ci09	Congestion along High Road in Turnford at New River Arms roundabout.	DM02

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
ACCESSIBILITY AND BUS PATRONAGE		
Ai01	Lack of east-west public transport.	Not addressed.
Ai02	Poor bus services to Essex Road Industrial Estate.	NM02, UR01
Ai03	Weaker evening and weekend services.	Not addressed.
Ai04	Poor bus information in local centres and lack of real time information.	PT02
Ai05	Increased enforcement of bus priority in Hoddesdon needed to reduce through traffic in town centre.	UR02
Ai06	Poor pedestrian access at Rye House Rail Station across the railway bridge.	UR01
Ai07	Poor rail to bus timetable coordination at Broxbourne.	PT01
Ai08	Lack of pedestrian crossing on Burford Street between the war memorial and the Clock Tower and poor location of bus stop on Amwell Street.	UR02
Ai09	High traffic volumes and wide carriageways of Charlton Way produce a severance effect on access to town centre.	NM02
Ai10	High traffic volumes and speeds, plus wide carriageways of the A1170 Dinant Link Road produce a severance effect on the town centre.	NM06
Ai11	High traffic volumes on A1170 is intimidating for vulnerable road users and creates severance.	NM02
Ai12	Poor pedestrian and cycle access to Essex Road industrial estate across New River.	UR01

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
Ai13	Poor accessibility to local hospitals, by public transport.	PT02
Ai14	Unattractive underpasses to Hoddesdon town centre.	NM01, NM02
Ai15	Lack of continuity of footpath on Charlton Way.	NM02
PUBLIC TRANSPORT- RAIL		
Ri01	Poor mobility impaired access to platforms at Broxbourne station. (Now addressed by Network Rail).	Addressed by Network Rail scheme.
Ri02	Poor lighting on bridge to Rye House station.	UR01
Ri03	Lack of parking at Rye House rail station.	UR01
Ri04	Poor pedestrian access to Rye House station.	UR01
Ri05	Poor signage Hoddesdon town centre to Rye House station.	PT01, UR01
Ri06	Poor layout of Broxbourne station car park with poor bus access and queuing cars exiting in the evening peak due to junction layout.	PT01
CYCLING		
Yi01	On-street parking on A1170 opposite St Cross School blocks the cycle lane.	DM05
Yi02	Lack of quality and continuity of cycle route along A1170.	NM01, NM03, NM04
Yi03	Lack of secure cycle parking in Hoddesdon town centre and at local centres along the A1170.	UR02

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
Yi04	Lack of permeability of town centre for cyclists.	UR02
Yi05	Pinch points for cyclists at Old Nazeing Road/ Station Road over the railway bridge, and at the humpback bridge at Rye House station.	NM03,NM04
Yi06	Cycling prohibited on New River path.	NM04,NM05
Yi07	Poor condition of, and access to, River Lee towpath between Dobbs Weir and Old Nazeing Road in Essex.	NM05
Yi08	Lack of cycle parking at Rye House station.	UR01
Yi09	Poor and low levels of cycle parking at Broxbourne station. (New cycle racks now provided).	PT01
QUALITY OF LIFE AND RIGHTS OF WAY		
Wi01	Lack of clarity on priorities and road layout creates confusing environment for pedestrians wishing to cross between the war memorial and the Clock Tower in Hoddesdon town centre.	UR02
Wi02	Poor pedestrian/cycle environment on Rye House station bridge.	UR01
Wi03	Poor pedestrian realm in underpass on Charlton Way and general low permeability for pedestrians wishing to access the town from the east and north.	NM02
Wi04	Poor pedestrian environment at Essex Road/River Walk due to HGVs.	Addressed in Broxbourne Borough Council's Development Brief.

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
Wi05	Poor way finding to and from the New River.	NM05
Wi06	Motorcycles using Bramble Lane.	NM06
SPEED LIMIT COMPLIANCE		
Vi02	Park Lane, Hoddesdon near Copthorn Avenue.	SI01
Vi03	Bell Lane in Broxbourne.	SI02
Vi07	Cock Lane.	SI03
Vi08	Baas Lane.	SI04
Vi09	Pindar Road.	SI05
Vi10	B1197 Hertford Road.	SI06
Vi11	Hundred Acre Estate, including Bridleway South	SI07
MODE SHARE JOURNEYS TO SCHOOL		
Ei01	Car dominated school runs.	DM03
Ei02	Low cycling and walking access to schools	DM03
FUTURE DEVELOPMENTS		
Di01	Concerns about the increases in congestion associated with planned housing growth. Particularly on A10 and A1170.	NM06
Di02	Ensure sufficient sustainable travel options to Greater Brookfield development.	DM02, DM03
Di03	Ensure sufficient promotion of cycling at long term development site between Hertford Road and A10.	NM06

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
Di04	Ensure sufficient cycle / walk links to/from development at Hertford Regional College.	DM03
Di05	Ensure sustainable options for future developments at Lido site in Broxbourne.	DM02
Di06	Traffic impact of all developments on the A10.	NM06,DM02
Di07	Traffic impact of Tower Centre development.	UR02, DM02
PARKING		
Pi01	Parking on footways and at junctions.	DM05
Pi02	Parking reduces carriageway width inhibiting two-way operation.	DM05
Pi03	On-street commuter parking on streets around Broxbourne station.	DM05
Pi04	Illegal parking around schools.	DM05
Pi05	Clarity of parking restrictions on Station Road.	DM05
Pi06	Clarity of parking restrictions along Hoddesdon High Street. (Now resolved).	UR02, DM05
Pi07	On-street parking around Rye House Station restricts traffic and prohibits bus operations.	DM05
Pi08	On-street parking on Cock Lane for Civic Centre during events.	DM05
Pi09	Loading bay on Brewery Road conflicts with bus and cycle lane.	UR02
Pi10	Taxis on Burford and Amwell Street particularly on market days. (Now resolved through additional stacking space).	UR02, DM05

ISSUE REF. CODE	ISSUE SUMMARY	INTERVENTION REF. CODE / COMMENT
Pi11	Parking in residential streets by workers in Hoddesdon.	DM05
Pi12	Parking in roads around Barclay Park particularly during matches.	DM05
BUSINESS TRAVEL PLANNING – TRAVELWISE		
Ti01	Lack of joined up work place travel plans.	DM02
Ti02	Lack of enforcement of development related work place travel plans.	DM02
FREIGHT		
Fi01	Traffic routing into bus lane on Brewery Lane to avoid delivery lorries.	UR02
Fi02	Rat-running HGVs; Duke Street and Middlefield Road, accessing industrial estate.	DM01

4.35 The following chapter records the scheme pro forma that describe the interventions in more detail. While the focus of the plan is on clear short term deliverables, the costs are outline and should be viewed as broadly indicative.

5 Non-Motorised User Network

5.1 Analysis of local people's travel patterns to work shows that the car is the most popular mode of transport and is likely to remain so. The high proportion of car-based trips that are less than 8km (5miles) in length suggest there is potential to get more people using more suitable modes such as rail, bus, walking and cycling. Issues raised through consultation suggest that there is also potential to reduce the number of short trips to schools that are made by car. Opportunities to increase walking and cycling exist and there are some under-used assets that could be made better use of, such as the New River and River Lee which run the length of the borough, if complemented by appropriate signage and surface treatments.

5.2 The proposed improvements to the cycle network will improve the connectivity and continuity of the existing routes with key destinations such as; Hoddesdon Town Centre, Rye House and Broxbourne rail stations, Lea Valley Regional Park and the Essex Road industrial estate, encouraging more people to cycle and help reduce congestion, reduce CO_2 emissions and promote healthier and more active lifestyles. The new cycle route proposed as alternatives to the A1170 complement the off-route links and will help to provide quieter routes for less confident cyclists.

5.3 Provision of additional cycle parking in Hoddesdon Town Centre will address existing local congestion issues by encouraging more people to make shorter journeys by bike. Locating cycle parking near to key destinations such as shops will also help to increase use of these facilities. Improving road crossing facilities for cyclist through the provision of wider cycle friendly TOUCAN signalised crossings will also improve general cycling permeability of the area.

5.4 The plan also supports Network Rail's proposals to provide more cycle parking at Hoddesdon and Rye House rail stations which will encourage those who currently drive, to switch to the more sustainable and healthy mode and go some way to relieving congestion, particularly along Station Road.

5.5 There is also a proposed scheme, secured through developer contributions, and subject to a Broxbourne Borough Council Development Brief, that will provide new pedestrian and cycling links from the A1170 to the Essex Road industrial estate. This Urban

Transport Plan supports the principles of this scheme and its aspirations to promote improved sustainable access to the site.

5.6 These schemes will help to support the on-going work conducted by Hertfordshire County Council to improve the local cycle network, strategic cycle routes, cycle mapping and raising awareness of cycle provision in Hoddesdon and Broxbourne.

TABLE 5.1 WALKING AND CYCLING IMPROVEMENTS

Scheme Number	Description	Key Issues Addressed
NM01	Cycle lanes along A1170 Ware Road and alternative signed cycle route to town centre using quiet residential roads parallel to A1170 and upgrading of existing crossing to a toucan. Upgrade to an existing informal crossing on Amwell Street.	Ci01, Ai14, Yi02
NM02	Charlton Way cycle and pedestrian improvements. Scheme included three new at-grade crossings and a shared pedestrian\cycle path along the eastern side.	Ai09, Ai11, Ai14, Ai15, CI04, Wi03
NM03	Alternative signed cycle route between Upper Marsh Lane and Station Road using St Catherine's Road and Churchfields. Potential cycle route spur between Churchfields and Broxbourne Station using existing footpath.	Ci03,Ci05, Yi02, Yi05
NM04	New River Path cycle route would provide a link between Station Road and Cozens Lane parallel to A1170	Yi02, Yi06
NM05	General improvements to and permissions on, the footpaths along the New River and River Lee for walking and cycling links to key locations including Rye House and Broxbourne stations, local green spaces and employment.	Yi06, Yi07, Wi05
NM06	Bramble Lane improvements in the form of signing and gating to protect its status.	Ai10, Wi06, Di01,Di03,Di06

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		**Scheme Ref:NM01**
Scheme Name:	A1170 Ware Road	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ci01, Ai14, Yi02,	Accessibility	NM02 A1170 Charlton Way/Dinant Link road

Location/General Description

Ware Road is a principle 'A' class main distributor road with a speed limit of 30mph. It connects A10 / A414 at its northern end to Amwell Street at its southern. The section of Ware Road / Amwell Street under investigation is highlighted in blue on **Figure 1** and is approximately 1.3km in length.

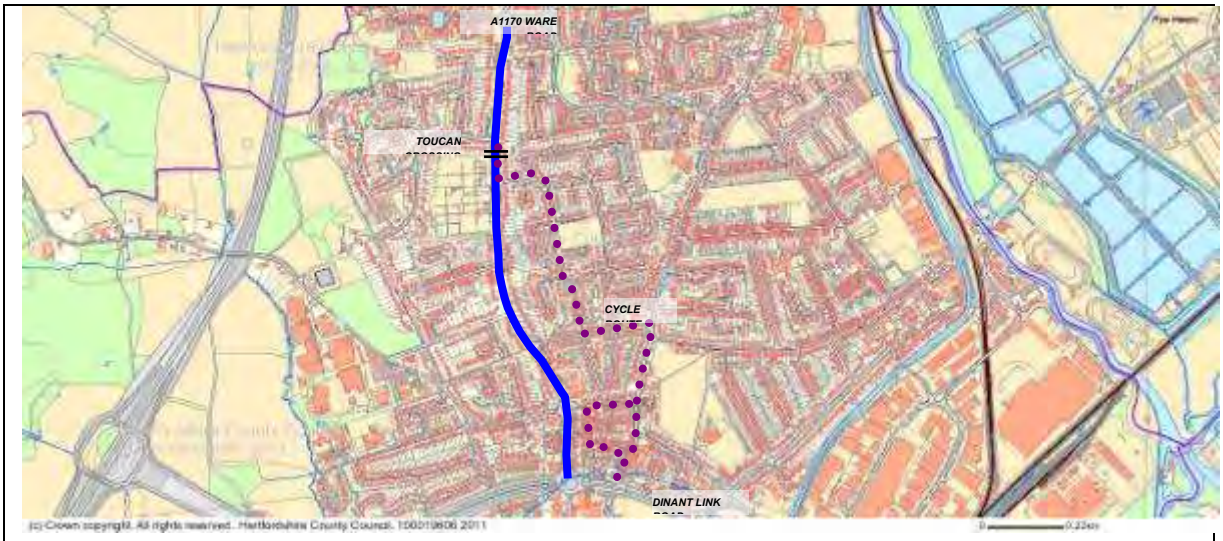


Figure 1 - Site Location

This section of the A1170 is approximately 7.5-8m wide with central islands, hatching and right-turn ghost islands. There is an existing pedestrian refuge south of the junction with Roseland's Avenue which incorporates a patch of coloured surfacing and "SLOW" markings. This is due to be replaced with a pelican crossing.

Plate 1 –pedestrian refuge near Roselands Avenue

Plate 2 – A1170 narrow (1m) on-road cycle lanes

This section of the A1170 suffers from a high level of congestion during peak hours which has an impact on other road users. It also affects turning movements at Roselands Avenue and at Hoddesdon Cemetery further south.

To address the issue of congestion the promotion of sustainable modes of travel is recommended.

Plate 3 – eastbound view across Amwell Street showing existing informal crossing facility

Other sections of the A1170 incorporate on-road cycle lanes which are approximately 1m in width. However, these are considered to be sub-standard (current standard 1.5m) and are consequently not well used or liked by cyclists as they are often encroached by vehicles and cyclists feel 'squeezed' in the lanes.

At the southern end of this section (Amwell Street) there is an existing informal crossing facility. This is in poor condition with incorrect dropped kerb heights (particularly on the eastern side). The width of the dropped kerb section in the central island is narrow and both sides of the carriageway lack tactile paving.

A10 Hoddesdon Link Road, junction with A1170 Amwell Street and Dinant Link Road is identified as an Hazardous Site.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
01-1	CYCLE FACILITY On-road (substandard) cycle lanes on A1170 Ware Road linking into existing on-road cycle lanes at northern end (Bridle Way) to Amwell Street at its southern end.	The preferred width for this type of facility is 1.5m however; there is inadequate carriageway width along this section to incorporate a facility of this width. On other sections of the A1170 substandard width cycle lanes have been installed which are approximately 0.9-1.0m in width, and therefore this type of facility could be considered for this section. ***This option is recommended for further consideration.***	£200,000-£300,000
01-2	CYCLE FACILITY An alternative signed on-road cycle route could be promoted (highlighted purple on **Figure 1**). This would provide cyclists with a facility into the town centre using quiet residential roads	The pelican crossing located just south of Roselands Avenue could be upgraded to a toucan crossing and cyclists could follow a signed route which follows The Drive / Dorchester Avenue / Middlefield Avenue/Middlefield Road / Burford Street connecting into Dinant Link Road at its southern end. The final section of Burford Street would need to incorporate a northbound contra-flow cycle lane up to Roman Street ***This option is recommended for further consideration.***	£125,000-£150,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
01-3	AMWELL STREET INFORMAL CROSSING IMPROVEMENTS	Consideration should be given to improving this crossing location for pedestrians. The dropped kerbs on either side of the carriageway need to be correctly aligned and tactile paving incorporated as appropriate to make this crossing more attractive. ***This option is recommended for further consideration.***	£5,000-£10,000

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		**Scheme Ref:NM02**
Scheme Name:	A1170 Charlton Way/Dinant Link Road	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ai02, Ai09, Ai11, Ai14, Ai15,Ci04, Wi03	Accessibility	NM03 A1170 Charlton Way to Station Road

Location/General Description

A1170 Dinant Link Road and Charlton Way are both principle 'A' classified main distributor roads that encircle the northern and eastern sides of the town centre. Dinant Link Road and the top section of Charlton Way up to its junction with Brewery Road are covered by a 40mph speed limit whilst the remainder has a 30mph speed limit.

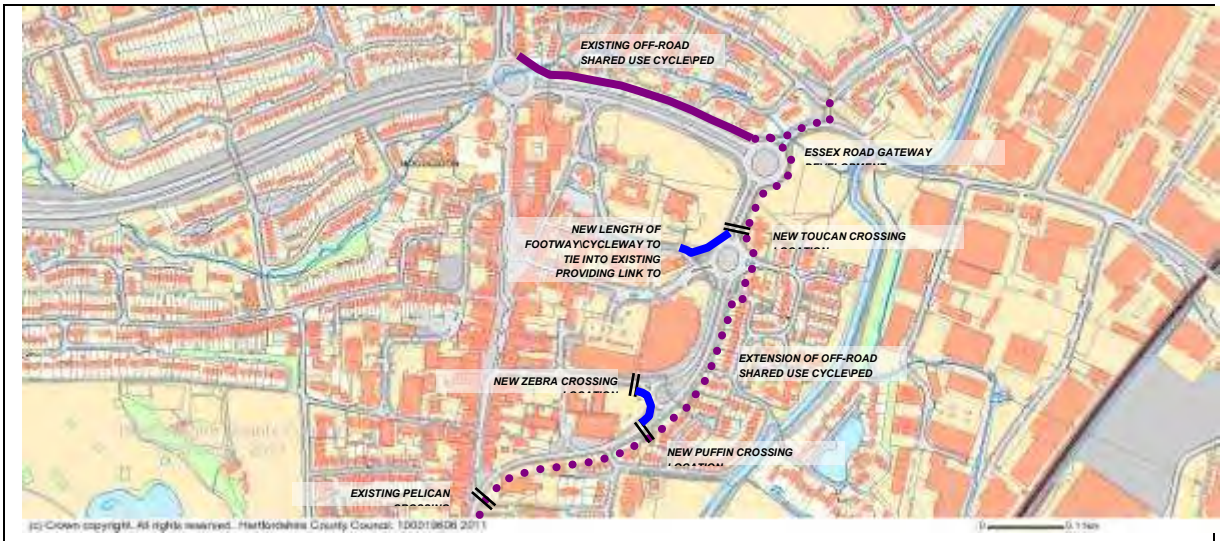


Figure 1 - Site Location and Potential Interventions

Along Dinant Link Road there is already an off-road shared cycle\pedestrian facility however, there is no existing footway along the western side of Charlton Way and pedestrian\cycle movements from the north\east side of town are dependent on the use of underpasses. These are accessed via stepped entry points which do little to encourage pedestrian / cycle permeability into the town centre from this area **Plate 1**. There is evidence however that despite at-grade crossings and the lack of footway on the western side, pedestrians are crossing the A1170 without using the underpasses and using the grass verges **Plate 2**.

Essex Road is congested during peak hours. This congestion is intensified by the narrow bridged crossing of the New River. The Borough Council's preferred scheme for the enhancement of Essex Road, set out in its current development brief, involves widening the existing road over the New River and construction of a separate structure for pedestrians and cyclists south of the road. Implementation of this scheme is hoped to alleviate congestion and improve highway safety. The cost of these proposals was estimated to be £850,000 in 2006. Funding for these improvements will be derived from existing and future section 106 funds, from prospective developments within Hoddesdon Business Park and from income from nearby planning obligations

Plate 1 – example of the access\egress of one of the underpasses

Plate 2 – lack of footway on the western side of Charlton Way past Netto car park

The 'Lampits' residential area in particular, located on the eastern side of the A1170, suffers severance caused by the A1170 with both Netto and Sainsbury's located on the western side. There is evidence that residents are regularly crossing the A1170 at the junction with Lampits which has created an unofficial footpath route around Netto **Plate 3** & **4**. A10 Hoddesdon Link Road, junction with A1170 Amwell Street and Dinant Link Road and A1170 Dinant Link Road, Carlton Way junction with Essex Road, are identified as Hazardous Sites.

Plate 3 – existing unofficial crossing location used by pedestrians to access Netto\Sainsbury's on western side of A1170

Plate 4 – unofficial footpath created by pedestrians next to Netto

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
02-1	EXTENSION OF SHARED PEDESTRIAN\CYCLE FACILITY	The existing section of shared pedestrian / cycle facility along Dinant Link Road (purple line on **Figure 1**) could be extended all of the way around the eastern side of Charlton Way and tie into the existing cycle lane on High Street at the southern end. ***This option is recommended for further consideration.***	£250,000 - £300,000
02-2	TOUCAN CROSSING Across northern arm of Charlton Way\Lampits\ Brewery Road roundabout	A crossing at this location would tie into the new shared pedestrian / cycle facility along the eastern side (Ref 1) providing a direct route to St Catherine's School located on Hazlewood Avenue. A new length of off-road facility could be provided across the verge which would tie into the school. Future consideration could be given to providing a cycle contra flow along Hazelwood Avenue or other appropriate route in the future to provide cycle access into the town centre. ***This option is recommended for further consideration.***	£200,000 - £250,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
02-3	PUFFIN CROSSING & NEW FOOTWAY LINK Across Charlton Way north of the southern junction of Lampits providing access to Netto	Pedestrians currently cross directly opposite Lampits however a formal pedestrian crossing would be better located slightly north of this junction. This would need to be implemented in conjunction with a new length of footway around the outside of the Netto boundary wall tying into the existing footway along Conduit Lane. Minor alterations to the kerbline / boundary wall may be required to achieve a suitable footway width consequently discussion will need to take place with Netto to get their agreement for this work. This would provide a facility for pedestrians accessing Netto and Sainsbury's from the Lampits area. The extent of the highway boundary should be established to undertake this task. Pedestrians accessing Netto may be tempted to climb over the Netto boundary wall which would give them direct access rather than walk all of the way around to the access off Conduit Lane. Consideration could be given to getting agreement from Netto to create a gap in their boundary wall for use as a pedestrian access. ***This option is recommended for further consideration. (The Netto store has now been taken over by ASDA).***	£150,000 - £175,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
02-4	ZEBRA CROSSING Across Conduit Lane linking Netto and Sainsbury's	There are currently dropped kerbs across Conduit Lane which link the two developments. These are well used by pedestrians however delays are experienced as Conduit Lane is well used by drivers accessing the Netto car park and short term parking bays at the rear of the town centre. This location would benefit from being upgraded to a zebra crossing. This would tie into the other proposals for this route (**Ref 1** & **3**) providing a complete facility for pedestrians from the north and east of the town centre. ***This option is recommended for further consideration.***	£20,000 - £25,000
02-5	REFURBISHMENT OF EXISTING PELICAN CROSSING Convert existing PELICAN crossing to a TOUCAN	At the southern end of Charlton Way there is an existing pelican crossing. If the cycle facility along Charlton Way is implemented this crossing would benefit from being converted to a toucan crossing. As the crossing is in good condition the conversion to a toucan should be delayed until the crossing is due to be refurbished. ***This option is recommended for further consideration.***	£50,000 - £60,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
02-6	Essex Road Access	The Urban Transport Plan supports Broxbourne Borough Council's proposals for improvements to Essex Road set out in its current development brief. These are subject to securing the necessary Section 106 funds. Broxbourne Council in partnership with Hertfordshire County Council intend to implement improvements to Essex Road as it passes over the New River Bridge. As part of this a new structure for pedestrians and cyclists is to be constructed on the southern side of the road. A detailed feasibility study is on-going to establish an outline scheme for the road and footway proposal.	Section 106

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref:NM03
Scheme Name:	A1170 Charlton Way to Station Road	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ci03,Yi02, Yi05,	Accessibility	NM02 A1170 Charlton Way\Dinant Link road

Location/General Description

The A1170 between Charlton Way and Station Road is classified as a main distributor road with a 30mph speed limit. The section of the A1170 under investigation is highlighted blue on **Figure 1** and is approximately 1.3km in length.

Figure 1 - Site Location

Plate 1 – on-road cycle lane blocked by parked vehicles

There are on-road cycle lanes along most of this section of the A1170 however, these are frequently parked on and driven over providing a hostile environment for cyclists. This is frequently the situation outside St Cross School during pick-up and drop-off times. These pinch-points on the cycle network need to be considered when looking at the whole cycle journey.

An alternative route using quiet residential roads could be promoted between Upper

Marsh Lane and Station Road. This would utilise an existing footpath alongside St Cross School, across St Catherine's Road and along Churchfields (indicated by the purple line on **Figure 1**). An addition to this route could include a spur along St Catherine's Road to the footpath which runs alongside New River and into Broxbourne Station (indicated by the dotted purple line on **Figure 1**).

At the southern end of Charlton Way a separate issue of congestion has been highlighted at the junction with Esdaile Lane. Esdaile Lane is a single width carriageway extending approximately 125m in length linking Charlton Way at its western end with Riversmead at its eastern via an additional length of Esdaile Lane which is classified as a local access road. The section under investigation is highlighted green on **Figure 1** and has no road classification. The route is well used by parents dropping off / picking up at St Augustine's School, Riversmead.

B194 Station Road junction with A1170 High Road is identified as an Hazardous Site.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
03-1	CYCLE ROUTE St Cross School footpath/St Catherine's Road/Churchfields	This route would provide a quiet alternative route to the A1170 for cyclists using residential roads. The existing footpath would need to be converted to cycle use however the rest of the route would require signs only. ***This option is recommended for further consideration.***	£10,000-£15,000
03-2	NEW RIVER SPUR ROUTE St Catherine's Road/ Footpath to Broxbourne Station	This route would utilise the footpath alongside New River which would need to be converted for use by cyclists and would provide a direct route from A1170 to Broxbourne Station. ***This option is recommended for further consideration.***	£100,000-£150,000

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref:NM04
Scheme Name:	A1170 Station Road to Cozens Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Yi02, Yi06	Accessibility	NM03 A1170 Charlton Way to Station Road

Location/General Description

The A1170 between Station Road and Cozens Lane is classified as a main distributor road with a 30mph speed limit. The section of the A1170 under investigation is highlighted blue on **Figure 1** and is approximately 1km in length.

Figure 1 - Site Location

There are on-road cycle lanes along most of this section of the A1170 however, these are only approximately 1m in width and are consequently encroached by vehicles. Sufficient road width is not available to increase the cycle lanes to the recommended 1.5m width.

Plate 1 – cycling along New River path is currently prohibited

Plate 2 – New River with possible cycle route along eastern bank (left-hand side)

An alternative quiet route could be provided along New River as indicated by the purple dotted line on **Figure 1**. Cycling is currently prohibited along the New River path however this could be converted for use by cyclists. On-road sections of cycle route could tie-in at each end of the route as indicated by the purple line on **Figure 1**.

B194 Station Road junction with A1170 High Road is identified as an Hazardous Site.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
04-1	NEW RIVER PATH CYCLE ROUTE	Cycling is currently prohibited along New River Path. This could be converted for cycle use providing a cycle facility from Station Road to A1170. ***This option is recommended for further consideration.***	£60,000 - £70,000
04-2	CYCLE ROUTE Churchfields to New River Path & Caldecote Way\Winford Drive to New River Path	On-road spurs at each end of the New River Path link could be provided. These would require signing only. ***This option is recommended for further consideration.***	£5,000-£10,000

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		**Scheme Ref:NM05**
Scheme Name:	New River	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Yi06, Yi07,Wi05	Cycling Quality of Life	NM01 A1170 Ware Road NM02 A1170 Charlton Way/Dinant Link Road NM03 A1170 Charlton Way to Station Road NM04 A1170 Station Road to Cozens Lane

Location/General Description

The New River and River Lee run along a broadly north south axis in the east of the Urban Transport Plan area. The New River was built in the 17th Century to supply fresh water to London, and is now owned by Thames Water. Both the New River and River Lee, offer pedestrian connectivity to key locations in Hoddesdon and Broxbourne, with the New River running particularly close to the rail stations at Rye House and at Broxbourne. Cycling is currently not permitted along the New River footpath although Thames Water has indicated they are amenable to allowing it. The New River offers a potential attractive 'off road' route for cyclists as it parallels the A1170. Cycling is permitted along the River Lee towpath and there is signage **(Plate 1)** displaying the expected code of conduct of cyclists. Similar could be introduced along the New River. It is not anticipated that lighting would be introduced along either course, and so it is recognised that perceived security issues would mean these routes were less attractive to some users, particularly after dark.

Plate 1 – River Lee towpath Code of Conduct

British Waterways has completed a £200k visitor improvements' project on a one mile stretch of towpath on the River Lee in Hertfordshire. The improvement works included the widening and resurfacing of the towpath from Waltham Common Lock to Cheshunt Lock and repainting of canal furniture and benches. The towpath was widened up to 1.6 metres in places. Similar resurfacing could be introduced along the New River, subject to requisite permissions.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
05-1	Improve signage to and from the New River to local centres and transport nodes showing time on foot and by cycle to key destinations.	Seasonality of route. Potential barriers at road / pipe crossings. ***This option is recommended for further consideration***	£10,000-£15,000
05-2	Surfacing (and where required widening) of New River footpath from Rye House Station to Broxbourne Station with link from St. Catherine's Road to Broxbourne Station a priority.	Seasonality of route. Potential barriers at road / pipe crossings. Will need Thames Water endorsement. Potential issue with footpath widths. Need to consider any relevant Bye-Laws. ***This option is recommended for further consideration***	£200,000 per mile
05-3	Improving the River Lee towpath between Dobbs Weir and Old Nazeing Road.	Seasonality of route. This stretch lies within Essex although it links into the transport nodes in Hoddesdon and Broxbourne. ***This option is recommended for further consideration***	£200,000-per mile

Non-Motorised User Network (Pedestrians/Cyclists/Equestrians)		Scheme Ref:NM06
Scheme Name:	Bramble Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ai10,Wi06, Di01, Di03, Di06	Accessibility	N/A

Location/General Description

Bramble Lane is classified as a restricted byway (for use by all non-motorised traffic). It runs in a north-south direction, under and alongside the A10, providing a link between Hertford Road at its northern end to Lord Street at its southern. The section of Bramble Lane under investigation is highlighted blue on **Figure 1**, and is approximately 1km in length.

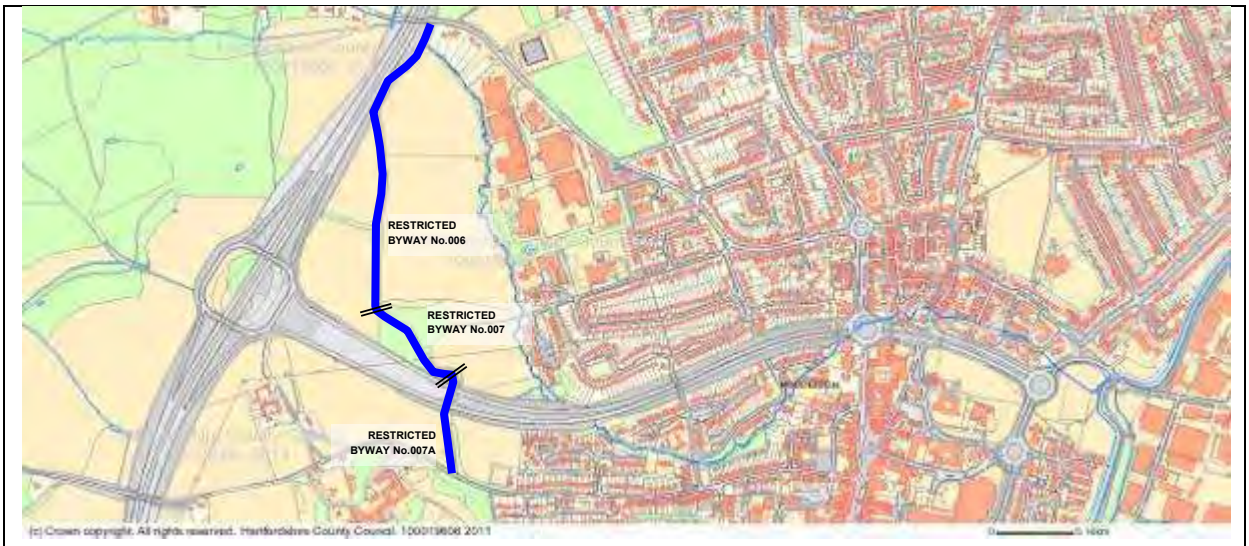


Figure 1 – Site Location

Access to the lane, at the southern end in particular, is unrestricted and there have been issues with misuse by mini mopeds in the past.

Plate 1 – northern entry\exit to Bramble Lane from Hertford Road

Plate 2 – southern entry\exit to Bramble Lane from Lord Street

Land on both sides of the A10 Dinant Link Road has been highlighted as areas which may be developed at some point in the future for housing and as such the potential link provided by Bramble Lane should be safeguarded.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
06-1	UPGRADE BRAMBLE LANE Signing and gating at points of entry	Land on both sides of the A10 Dinant Link Road has been highlighted as areas which may be developed at some point in the future for housing and as such the potential link provided by Bramble Lane should be safeguarded to provide sustainable travel options for new and existing residents. Improvements should be investigated to protect the status of Bramble Lane. Appropriate measures could include improved publicity of the route for use by all non-motorised traffic. Gating options should be considered to deter misuse by motorised vehicles. ***This option is recommended for further consideration.***	£5,000 - £10,000

6 Public Transport Networks

6.1 Hoddesdon and Broxbourne have excellent rail links to London and are served by two rail stations; a branch line from Rye House and fast and frequent services along the West Anglia Main Line from Broxbourne. The latter station is the main rail node in the borough and attracts large numbers of commuters, many of whom drive to the station from the hinterland. There are historic issues with queuing traffic exiting from the station in the evening however the recently completed car park decking is not considered to have exacerbated the problem to date.

6.2 Broxbourne rail station is connected to local centres by frequent bus services running north-south along the A1170 corridor. Indeed, bus connections are strong generally in this corridor, facilitated by the highway and geography. It is this geography (i.e. the waterways) that also limits east-west bus services which are much weaker and evidenced by long travel times to the local hospitals which typically lie off the north-south axis.

6.3 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 PUBLIC TRANSPORT NETWORKS

Scheme Number	Description	Key Issues Addressed
PT01	Improve pedestrian and cyclist access to Broxbourne station, making better use of the New River and providing additional signage from Broxbourne local centre. Proposals also include improved bus stop waiting facilities and review of station forecourt parking allocations. Potential signalisation of Station Road access.	Ai07, Ci01, Yi09, Ri05, Ri06
PT02	Promotion of existing integrated ticketing and roll out of Real Time Passenger Information for buses through the borough. Promotion of the hospital shuttle.	Ai04, Ai13

Public Transport Network Improvements		Scheme Ref:PT01
Scheme Name:	Access to Broxbourne Station	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ai07, Ci01, Yi09, Ri05, Ri06	Accessibility	NM02 A1170 Charlton Way\Dinant Link Road

Location/General Description

Broxbourne station enjoys fast frequent services to London, as such, as well as drawing from a large local community of commuters; there is also a significant number of commuters driving to the station from the surrounding area.

The station is owned by Network Rail and managed by the franchisee, National Express East Anglia, who runs the train service. Network Rail has recently completed the decking of the car park and there is now space for an additional 140 cars. Major upgrades to the station are the responsibility of Network Rail, although in future franchise agreements this may move toward the train operator, who currently has responsibility for minor improvements and day-to-day station operation.

Plate 1 Existing cycle rack at Broxbourne station

Plate 2 – Bus stop at Broxbourne station

Current plans for the station, funded via the Department for Transport include platform extensions and new over-bridges and lift access to improve internal accessibility. As part of the station upgrade there are also plans to increase cycle racks, with new provision located close to the ticket hall.

Bus interchange is provided by one stop with shelter and while there is a frequent

bus service from the station there can be coordination issues between arrival times of trains and departure times of buses. A new rail timetable is to be introduced in December 2012 which will be an opportunity to review bus-rail coordination.

Possible future franchise changes may cause issues for longer term investment at the stations.

Access and way-finding to the station could be improved, particularly for pedestrians and cyclists while the popularity of the station with park and ride commuters leads to cars queuing to exit the station in the evening peak. The recent double decking of the car park has increased parking capacity by 140 spaces however this does not seem to have exacerbated the issue to date. Nevertheless, reducing car access, particularly by commuters would go some way to alleviating this problem as well as congestion downstream along Station Road and the A1170.

Options/Variations			
Ref.	**Potential Interventions**	**Potential Issues/Risks**	**Cost**
01-1	Introduce a cycle friendly ramp down from New River into the station forecourt. This would connect with the previous cycle routing scheme;NM05-2. NEW RIVER SPUR ROUTE, running from St Catherine's Road/Footpath to Broxbourne Station	This would encourage cycling to the station and potentially reduce car access. Cycling would need to be permitted along the footpath. National Express East Anglia and Thames Water are amenable to this option in principle. Network Rail already has plans to increase cycle racks. ***This option is recommended for further consideration.***	£50,000
01-2	Improved way-finding between rail station and Broxbourne town centre. Signage also showing journey times for walking and cycling.	This would encourage access to the station by foot and cycling and promote rail as an alternative mode, particularly for leisure travellers. ***This option is recommended for further consideration.***	£5,000 - £10,000

Options/Variations			
Ref.	**Potential Interventions**	**Potential Issues/Risks**	**Cost**
01-3	Station forecourt improvements: • improved bus stop waiting facilities including DDA compliance; • additional kiss and drop; • rationalise taxi parking; and • additional cycle stands.	Network Rail has existing station plans addressing internal access and additional cycle stands. Franchisee is not adverse to a review of the layout of the southern car park and allocation of spaces although the forecourt serves a number of competing functions. Parking spaces are deemed an asset and permission from the Department for Transport is needed before any can be removed. ***This option is recommended for further consideration.***	£500,000 - £1,000,000
01-4	Review signalisation of junction with Station Road and Broxbourne Station service road to improve bus access and regulate traffic flow.	Realignment of the bridge is too expensive while earlier reviews indicated signalisation of junction would cause problems down- stream. A review of these studies and new technology would need to be undertaken. ***Review and monitor only.***	£5,000- £10,000

Options/Variations			
Ref.	**Potential Interventions**	**Potential Issues/Risks**	**Cost**
01-5	Review parking along Station Road following removal of temporary TRO.	During the double decking works a temporary TRO was introduced along Station Road to prohibit parking by commuters. There are limited duration restrictions of local side roads (commuter bans) already. The situation will be monitored once the TRO is lifted. ***Review and monitor.***	£5,000-£10,000
01-6	Review period of commuter bans on residential roads around Broxbourne station	Current commuter bans impact on church groups attending morning functions. Potential to reallocate ban to mid-day. ***Review.***	£5,000-£10,000

Public Transport Network Improvements		Scheme Ref:PT02
Scheme Name:	Bus Services	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ai04, Ai13	Accessibility Public Transport Bus Patronage	PT01 Access to Broxbourne Station

Location/General Description

Hoddesdon and Broxbourne enjoy good bus connections along its north-south axis, dominated by the A1170, with frequent services during the peaks and daytime. Bus service levels drop off in the evening and at weekends and east to west bus connectivity is limited .The lack of east-west bus connectivity is evidenced by the poor accessibility to local hospitals (Chase Farm, QE2, Lister, Princess Alexandra and Cheshunt Community hospital) by public transport. There is a Council supported hospital shuttle bus, but this is not well used.

Broxbourne rail station is well served by buses although there were some issues raised over rail to bus timetable coordination and poor waiting facilities at the station

Plate 1 Bus Information in Hoddesdon Town Centre

Plate 2 – Real Time Information in Bus Flag

Rye House rail station does not have a dedicated bus service due to limited turnaround space at the station and capacity restrictions on local roads, caused by parked cars. On-street parking by local residents, most severe during evenings and weekends, reduces carriageway width, and has led to the withdrawal of

evening and weekend services.

Essex Road Industrial Estate, one of the largest employment centres in the borough is currently only served by one route, the continuation of which is now in question.

There is poor bus information provision in local centres and lack of real time information along the main bus corridor A1170.

Hertfordshire County Council has committed to rolling out Real Time Information Provision (RTPI) with part-funding from developer contributions (through Section 106 funding). Improvements in RTPI can either take the form of bus stop flag indicators that provide information on the next bus to arrive (see Plates 1 and 2) or more sophisticated systems that also provide information on the routes served and other information including journey planning. 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. RTPI 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. This will help to encourage more people to use bus services and to ensure that services are accessible to all.

There is a need for improved bus information, including Real Time Passenger Information (RTPI), at Broxbourne rail station, Hoddesdon Town Centre, and at other key locations across Hoddesdon and Broxbourne. RTPI will encourage more people to use bus and rail services by providing more reliable travel information.

* 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 on and off buses.

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
02-1	ITS implementation for coordinated bus priority. Real Time Passenger Information and dynamic journey planning, online and smart-phone applications.	RTPI will help to encourage more people to use bus services and provide better quality of service to existing users. ***This option is***	Included in Countywide Automatic Vehicle Location RTPI project

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
		recommended for further consideration.	
02-2	Further promotion of existing integrated ticketing schemes such as Intalink Explorer and PlusBus	Better promotion will encourage greater take up of rail and bus services. ***This option is recommended for further consideration.***	£5,000 - £10,000
02-3	Promote and maintain hospital shuttle.	Better promotion will help ensure the service is well used. ***This option is recommended for further consideration.***	£5,000 - £10,000
02-4	Review integration of hospital shuttle with dial a ride services.	Integration will reduce costs of service provision. ***This option is recommended for further consideration.***	£3,000- £10,000

7 Urban Realm

7.1 Improvements to the urban realm can greatly enhance people's journey experience, particularly as pedestrians and cyclists, and provide an environment in which there is a greater sense of security and greater propensity to walk and cycle and to access public transport services.

7.2 At the time of writing, Broxbourne Community Safety have agreed to fund street lighting improvements at the southern end of Hoddesdon High Street from Capital Funding, while the lighting in the pedestrian area of the High Street is also set to be improved in the new financial year. Together this will vastly improve the security of the area and at the same time reduce energy consumption and maintenance.

7.3 The approach to Rye House rail station from the south / Rye Road is over a very narrow bridge and can be quite intimidating. This in itself acts as a barrier to travel for some, particularly at night when the approach is not well lit. With bus services curtailed in the evenings and weekends, rail is currently the only real and attractive alternative to the car in Rye Park. By improving access to the station, new opportunities will be opened up for many local residents.

7.4 Hoddesdon Town Centre is a busy market town with a varied retail offer. While local businesses benefit from the trade brought in by car, the internal road layout can be confusing for pedestrians and cyclists. Crossing from the Tower Centre to Burford Street involves judging traffic coming from multiple directions often made worse by drivers illegally using the bus lane on Brewery Road. Simplifying traffic paths will aid traffic circulation and present a less confusing layout to pedestrians and drivers alike.

7.5 A summary of possible schemes is presented in the table below and in the following pro forma.

TABLE 7.1 URBAN REALM

Scheme Number	Description	Key Issues Addressed
UR01	Improve access for pedestrians and cyclists to Rye House rail station and provide new pedestrian links and signing to link the Essex Road industrial estate with bus and rail services.	Ai02, Ai06, Ai12, Ri02, Ri03, Ri04, Ri05, Yi08, Wi02
UR02	Improvements to Hoddesdon town centre focus on introducing a one-way system to simplify traffic circulation. New cycle lanes and stands are also proposed.	Yi03, Yi04, Di07, Pi06, Pi10, Fi01, Wi01

Urban Realm Improvement and Integration		**Scheme Ref:UR01**
Scheme Name:	Rye House	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ai02, Ai06, Ai12, Ri02, Ri03, Ri04, Ri05, Yi08, Wi02	Accessibility Public Transport Rail	NM05 New River DM04 Parking Review

Location/General Description

Rye House rail station is to the north of Hoddesdon, on the Hertford East branch of the West Anglia Main Line. Train services are provided by National Express East Anglia. Services to London Liverpool Street run every 30 minutes in the morning peak. The station also has a significant number of in-commuters accessing employment at the Essex Road industrial estate.

Access to the station was a recurring theme raised by the community. There is no space for buses to turnaround at the station and parked cars limit two way carriageway operations along Rye Road resulting in the station having no direct bus service. The station is not well signed from Hoddesdon and there is limited

Plate 1 Access to Rye House Station

Plate 2 –Parking on Rye Road

cycle parking. Pedestrian and cycle access from the Hoddesdon side is poor and involves crossing a narrow bridge with limited footway provision. There is no step free access to the south platform.

There is a current development brief by Broxbourne Borough Council for the development site (Turnford Surfaces) directly adjacent to the station that provides for a number of houses and a small station car park. Network Rail has plans to introduce new cycle racks.

Rye Road, Hoddesdon junction with Fishermans Way is identified as an Hazardous Site.

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
01-1	Widen footpath on bridge over New River to improve access to the station	Broxbourne Borough Council has a scheme in draft. Increasing footway width would reduce two-way operability of the bridge and therefore necessitate signalisation of the bridge. Bridge works would be subject to necessary permissive agreements from the bridge owner. ***This option is recommended for further consideration.***	£150,000 - £200,000
01-2	Provide a new station car park at Turnford Surfaces development site.	A planning brief has been drafted by Broxbourne BC which proposes a small car park for the station to be provided as part of the development. Day to day management of the car park would need to be identified together with a possible tariff structure. ***The development of this option is to be left within Broxbourne Borough Council's development brief.***	N/A
01-3	Increased cycle parking at station.	This option would be subject to relevant agreements with Network Rail and Train Operating Company. ***The option will remain***	N/A

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
		within Network Rail's existing commitment.	
01-4	Way finding to direct pedestrians through Essex Road, Fishermans Way to Rye House station and other local bus routes.	Provides a more pedestrian and cyclist friendly environment and encourages use of rail for people from Hoddesdon. ***This option is recommended for further consideration.***	£5,000 - £10,000
01-5	New Farm Lane pedestrian route and signage to link Pindar Road and industrial estate with bus routes on Rye Road and Old Highway.	Encourages sustainable access to Essex Road Industrial Estate by rail station and via the bus services on Old Highway and Rye Road. ***This option is recommended for further consideration.***	£5,000 - £10,000

Urban Realm Improvement and Integration		Scheme Ref:UR02
Scheme Name:	Hoddesdon Town Centre	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Yi03, Yi04, Di07, Pi10, Fi01, Pi06,Wi01	Accessibility Quality of Life	N/A

Location/General Description

Amwell Street is an unclassified local access road located at the northern end of Hoddesdon Town Centre. It has a 30mph speed limit up to Pauls Lane where it is then covered by a 20mph zone covering the town centre. Beyond Pauls Lane, it is one-way. Burford Street which joins it on its eastern side is an unclassified local access road covered by a 30mph speed limit.

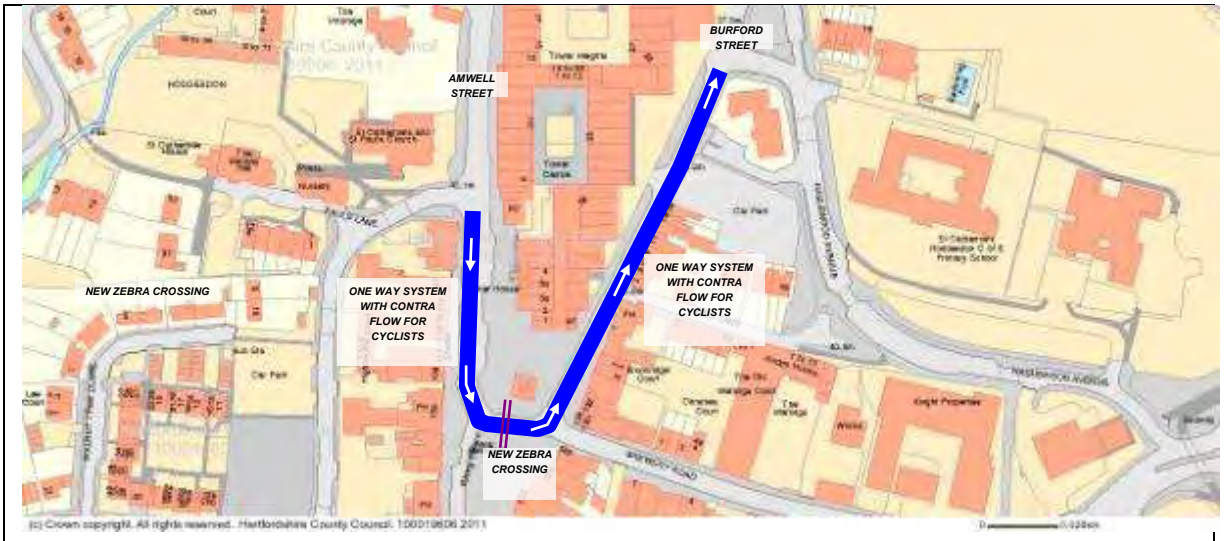


Figure 1 - Site Location and Potential Interventions

The northern section of Amwell Street is used as a waiting area for taxis along its eastern side **Plate 1**.

Plate 1 – northbound view of Amwell Street

Plate 2 –southern end of Amwell Street at its intersection with Burford Street and Brewery Road showing existing low-level hump

Throughout the 20mph zone the carriageway surface is block paved with large areas in need of repair. There are low height humps throughout the 20mph zone which are intended to be used as informal crossing areas by pedestrians and to maintain low vehicle speeds.

Traffic is prohibited on market days.

There are a number of conflicting movements at this intersection which create a confusing environment for pedestrians whom would benefit from more clearly defined priority. There is also lack of permeability of the town centre by cyclists.

Brewery Road, which is covered by a 30mph speed limit, currently has a westbound bus and cycle lane effectively creating a one-way eastbound lane for other vehicles. This lane for bus and cycle only is regularly blocked by delivery vehicles and used by vehicles contravening the bus/cycle only order **Plate 3**. The road markings along Brewery Road are faded and the eastern access/egress point is inconspicuous **Plate 4**.

Plate 3 – western end of Brewery Lane

Plate 4 – eastern access\egress from Brewery Lane

Burford Street houses a number of car parks however these are used by commercial vehicles **Plate 5**. Most of its length is covered by parking restrictions in the form of double yellow lines however, high levels of on-street parking takes place along its

northern section (Hazelwood Avenue) where there are no parking restrictions **Plate 6**.

Plate 5 – high levels of commercial parking in Burford Street car park on market day

Plate 6 – on-street car parking at northern end of Burford Street

The extent of the existing 20mph zone could be reviewed as part of any potential intervention while additional measures could also be introduced to ensure that any speed limit is self-enforcing.

Section106 developer contributions could be used to *part* fund possible solutions.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
02-1	NEW FORMAL CROSSING FACILITY FOR PEDESTRIANS Zebra crossing (**Figure 1**)	A new formal crossing facility in the form of a zebra crossing could be considered at the intersection of Amwell Street / Burford Street\Brewery Road. This would provide an improved facility for pedestrians and highlight their presence to drivers. ***This option is recommended for further consideration.***	£30,000 - £40,000
02-2	ONE-WAY SYSTEM (ANTICLOCKWISE DIRECTION) Amwell Street/Burford Street	Extending the one way system from Amwell Street into Burford Street will reduce conflicts at this intersection and would free up road space for other road users (**Ref 3**). Implementation of a one-way system	£75,000 - £105,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
	(**Figure 1**) plus CONTRA-FLOW CYCLING (CLOCKWISE DIRECTION) Throughout one-way system	in Amwell Street\Burford Street will provide adequate carriageway width to implement a contra-flow cycle lane along this section which would improve cycling permeability of the town. The introduction of a one-way system would have implications for the existing bus routes and stop locations and these would need to be considered in any further scheme feasibility. ***This option is recommended for further consideration.***	
02-3	CYCLE PARKING Multiple locations	Cycle parking should be provided throughout Hoddesdon Town Centre to encourage cycle usage. Suitable locations could include the southern end of High Street and a mid-point along High Street. ***This option is recommended for further consideration.***	£2,000-£5,000 per 10 spaces. (Prices vary depending on type of provision)

Urban Realm Improvement and Integration		Scheme Ref : UR03
Scheme Name:	Esdaile Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ci05	Accessibility Quality of Life	N/A

Location/General Description

Esdaile Lane extends for approximately 183m in length. The eastern most 58m long section is classified as a local access road. The western section of the road is not classified.

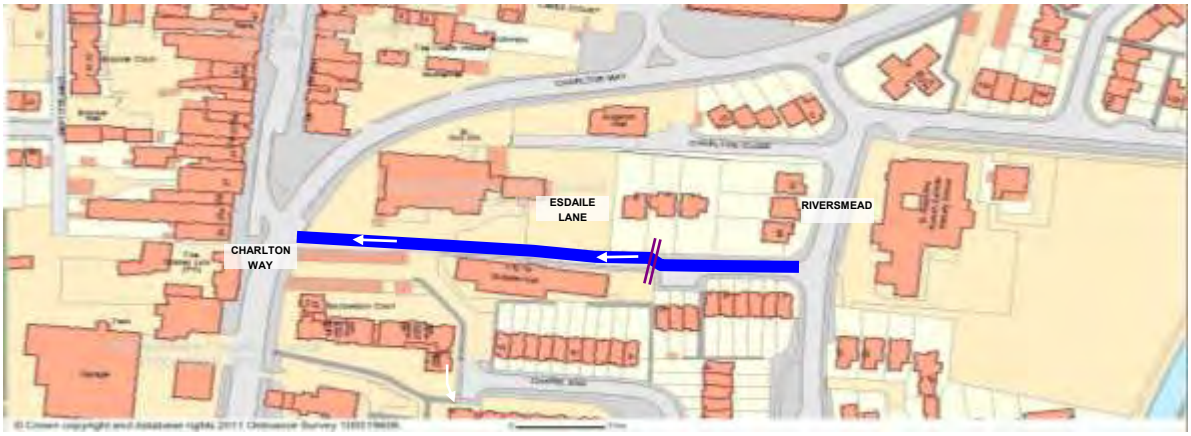


Figure 1 - Site Location and Potential Interventions

The western section is single lane width only. This widens out at the eastern end of the section to an area that operates under a chicane with eastbound traffic having priority.

Plate 1 – eastbound view of Esdaile Lane from Charlton Way showing chicane priority working in the distance

Plate 2 –westbound view of Esdaile Lane from end of cul-de-sac

The route is frequently used as a route to/from St Augustine's RC Primary School, located on Riversmead avoiding an extensive alternative route through Lampits. Northbound vehicles waiting to turn right into Esdaile Lane cause congestion on Charlton Way during the peak hours.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
03-1	ESDAILE LANE ONE-WAY	To reduce congestion caused by waiting vehicles on Charlton Way the single width length of Esdaile Lane to its main cul-de-sac could be made one-way only in a westbound direction. The extent of the highway boundary would need to be checked to ensure that this is not a private access road. ***Current layout of Charlton Way is unsuitable for a southbound right turn into High Street***. ***This option is recommended for further consideration***	£15,000 - £20,000

8 Speed Compliance

Road Safety

8.1 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:

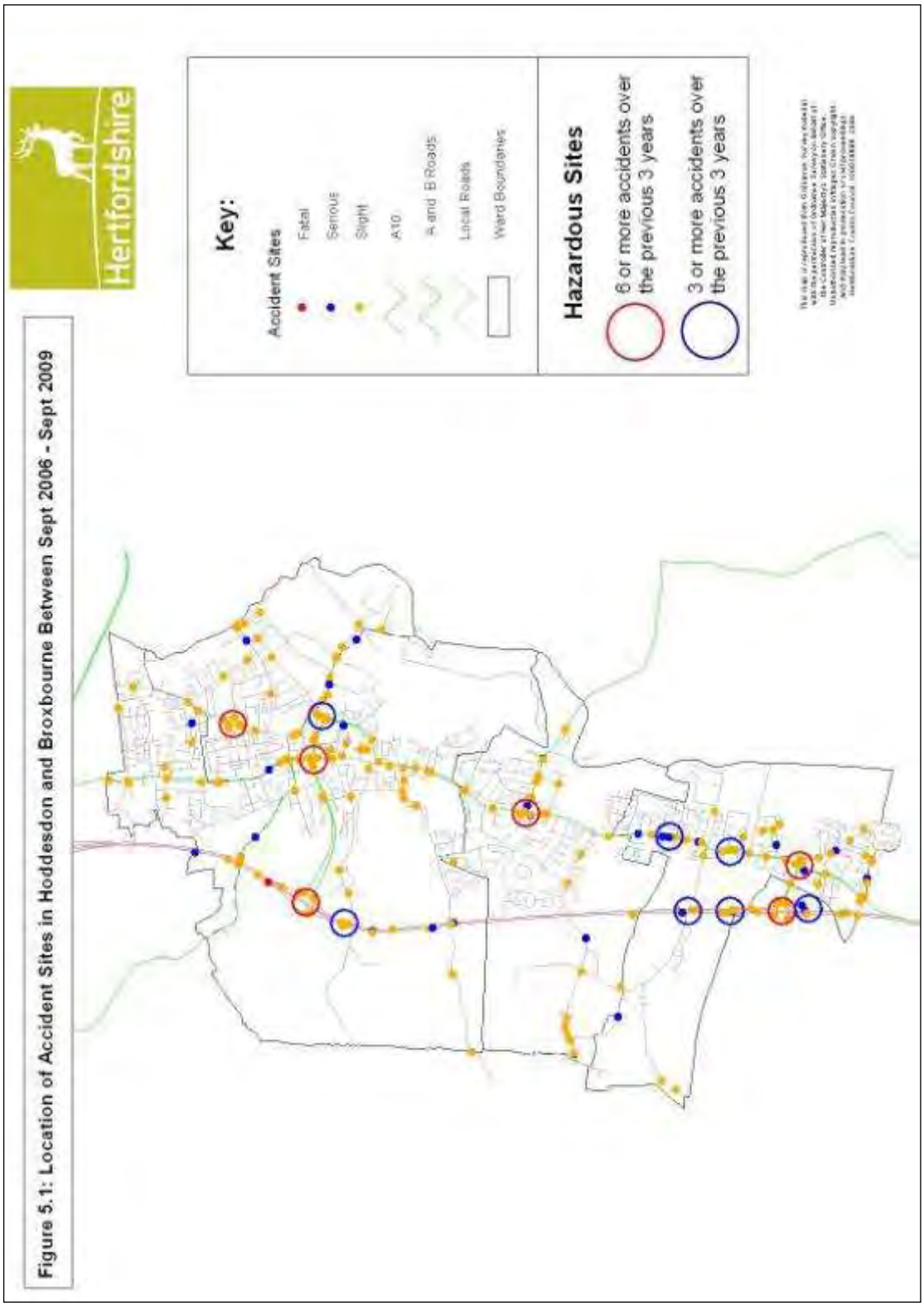
- Six or more injury collisions, any severity, in the previous three year period, in a 75m circle.
- Four or more injury collisions, any severity, in a one year period, in a 75m circle.
- Three or more child KSI collisions, in the previous three year period, in a 75m circle.
- Three or more KSI collisions, 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.

8.2 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. 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.

8.3 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.

8.4 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 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. Figure 8.1 shows the location of current Hazardous Sites.

FIGURE 8.1HAZARDOUS SITES IN HODDESDON AND BROXBOURNE



8.5 Speed Compliance schemes will help to ensure that speed limits on local roads are adhered to. The schemes proposed will help to support Hertfordshire County Council's on-going programmes for Speed Compliance and Road Safety, and will help to tackle specific local issues identified through the public consultation. Any new signage introduced will be done so in consideration of the need to reduce general street clutter.

TABLE 8.1 SPEED MANAGEMENT SCHEMES

Scheme Number	Description	Key Issues Addressed
S1	Park Lane. Additional signage and road markings to help reduce vehicle speeds.	Vi02
S2	Bell Lane. Additional signage and road markings to help reduce vehicle speeds.	Vi03
S3	Cock Lane. Additional signage and road markings together with relocation of the 30mph speed limit terminus to help reduce vehicle speeds.	Vi07
S4	Baas Lane. Additional signage and road markings together with an additional flat top road hump to help reduce vehicle speeds.	Vi08
S5	Pindar Road. Additional signing in the form of an 'industrial area' gateway feature could be considered for this site.	Vi09
S6	Hertford Road (B1197). Additional signing in the form of a gateway feature at the 30mph speed limit location together with relocation of the 30mph speed limit terminus will help to reduce speeds.	Vi10
S7	Bridle Way South. Additional signage and road marking together with traffic calming features in the form of cushions will help to achieve the desired speed reduction.	Vi11

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S01
Scheme Name:	Park Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi02	Speed Compliance	N/A

Location/General Description

Park Lane is an unclassified Local Access road with a speed limit of 30mph. The 30mph section of Park Lane under investigation is highlighted in blue on Figure 1, and is approximately 760m in length.

There is footway predominantly on the eastern side only with short sections of footway on the western side north of the junction with Woodstock Road (northern end) and south of the junction with Mandeville Close. There are roundabouts at the junctions of Benford Road and Mandeville Close located near each end of Park Lane providing access to cul-de-sacs. Park Lane itself is free from on-street parking as all the properties have substantial driveways for more than one vehicle.

Figure 1 - Site Location

Speed surveys undertaken in October 2010 with radar gun equipment on the section between Cock Lane and Baas Lane, showed 85th percentile speeds of approximately 42mph northbound and 44mph southbound. However, speed surveys undertaken in 2007 on the section between the two roundabouts indicated that speeds were in the region of 34.0mph northbound and 30.6 southbound.

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

Plate 1 – northbound approach to Cock Lane showing commencement of footway on western side at northern junction of Woodstock Road

Plate 2 – northbound approach to roundabout junction with Mandeville Close where footway on western side finishes

When Park Lane is assessed against the Speed Limit Framework in the HCC 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 & 2 above there is no on-street parking to slow traffic mainly due to residential properties having off-road parking facilities. Properties directly accessed off Park Lane are screened behind hedges and fences with frontages for more than one vehicle.

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

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
01-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the change in limit. Road Markings could be renewed, and consideration given to the use of edge lines to visually narrow the carriageway, along with more prominent centre lines at junctions and "SLOW" markings at key hazards. ***This option is recommended for further consideration.***	£10,000-£15,000

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref S02
Scheme Name:	Bell Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi02	Speed Compliance	N/A

Location/General Description

Bell Lane is an unclassified Local Access road with a speed limit of 30mph. Speed surveys undertaken in 2004 on the section between A1170 High Road and Baas Lane, showed 85th percentile speeds of approximately 38.1mph eastbound and 37.9mph westbound.

The 30mph section of Bell Lane under investigation is highlighted in blue on **Figure 1**, and is approximately 507m in length.

Figure 1 - Site Location

The accident data for the 3 year period from 1st November 2007 up to and including October 2010 shows that there have been 3 injury accidents – two slight and one serious.

When Bell Lane is assessed against the Speed Limit Framework in the HCC Speed Management Strategy it is unclear whether it meets the environment criteria for a 30mph speed limit. At the most eastern end of Bell Lane, east of Broxbourne School there are sheltered parking bays and a zebra crossing. Further west an

element of on-street parking takes place as can be seen in **Plate 2**.

Beyond this area carriageway widths are in the region of 6.2m with footways on either side of the carriageway. Properties are fairly well set back from the carriageway with off-road parking facilities for at least one vehicle.

Plate 1 – westbound view from Beverly Close junction

Plate 2 – eastbound view from Beverly Close junction

There are parking restrictions on both sides of the carriageway up to Broxbourne School (8:00am – 9:00am and 3:00pm – 4:00pm). These continue along the northern side up to Tudor Rise. Side road junctions along the length of Bell Lane are protected with double yellow lines preventing parking at all times.

When Bell Lane is assessed against the Speed Limit Framework in the Hertfordshire County Council's Speed Management Strategy it is not clear whether the whole length of section meets the environment criteria for a 30mph speed limit. As can be seen in **Plates 1** & **2** above there is limited on-street parking to slow traffic for most of its length due to the parking restrictions.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the change in speed limit. Road Markings could be renewed, and consideration given to the use of edge lines to visually narrow the carriageway, along with more prominent centre lines at junctions and “SLOW” markings at key hazards. ***This option is recommended for further consideration.***	£10,000 - £15,000

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S03
Scheme Name:	Cock Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi07	Speed Compliance	N/A

Location/General Description

Cock Lane is an unclassified Local Distributor road with a speed limit of 30mph. Speed surveys undertaken in October 2010 on the section between A1170 High Street and the change of speed limit, showed 85th percentile speeds of approximately 37.6mph eastbound and 41.0mph westbound. The 30mph section of Cock Lane under investigation is highlighted in blue on **Figure 1**, and is approximately 930m in length.

Figure 1 - Site Location

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

Plate 1 – Eastbound view of western 30mph terminus point

Plate 2 – Westbound view of eastern end of Park Lane showing overflow on-street parking in vicinity of Broxbourne Civic Hall

When this 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 environment criteria for a 30mph speed limit. As can be seen in Plates 1 and 2 there is a vast difference in environment between the eastern and western section of Cock Lane. The location of the commencement of the 30mph speed limit at the western end is rural in nature with a lack of footways on both sides of the carriageway. There is no direct access to properties and the environment has a very 'open' feel. The eastern end of Cock Lane houses the Broxbourne Civic Hall which generates parking overspill onto the surrounding roads. The Sheredes Senior school also lies by the eastern end and the promotion of cycling to the school, and hence the reduction in perceived threat, is a key issue. There is footway on the southern side only up to the junction with Park Lane. The existing 30mph terminus is located just west of the junction with Crabtree Walk. Unfortunately this setting is not naturally conducive to reducing vehicle speeds due to driver's perception of the environment.

Plate 3 – Eastbound approach to roundabout junction with Park Lane

Plate 4 - Eastbound approach to Sheredes Senior School

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
03-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the change in speed limit. Road Markings could be renewed, and consideration given to the use of edge lines to visually narrow the carriageway, along with more prominent centre lines at junctions and “SLOW” markings at key hazards. ***This option is recommended for further consideration.***	£10,000 – £15,000
03-2	RELOCATION OF SPEED LIMIT TERMINUS	The location of the existing 30mph limit terminus point with its rural ‘open’ feel is not conducive to encouraging low speeds. There are no direct accesses off Cock Lane. The mini roundabout at the northern end of Park Lane would provide a natural location for the repositioning of the speed limit as the roundabout signifies the start of a different type of environment from the westbound approach with footways on the southern side. Approximately distance 200m. ***This option is recommended for further consideration.***	£2,000 – £5,000

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S04
Scheme Name:	Baas Lane	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi08	Speed Compliance	N/A

Location/General Description

Baas Lane is an unclassified Local Access road with a speed limit of 30mph. Speed surveys undertaken in October 2010 on the section between Park Lane and Bell Lane, showed 85th percentile speeds of approximately 35.5mph northbound and 31.5mph southbound.

The 30mph section of Baas Lane under investigation is highlighted in blue on **Figure 1**, and is approximately 557m in length.

Figure 1 - Site Location

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

		
Plate 1 – Northbound view at Carnaby Road junction showing existing flat top tapered hump		***Plate 2 – Southbound view of existing flat top road hump north of Graham Avenue***

Baas Lane is already traffic calmed with flat top road humps at four locations along its length. These are in fairly poor condition and not evenly spaced.

		
Plate 3 – Northbound view of southern most flat top road hump		***Plate 4 - Southbound view from Carnaby Road junction***

The spacing between the existing most northern hump and the one north of Graham Avenue could encourage an increase in speeds

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
04-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the change in speed limit. Road Markings could be renewed, and consideration given to the use of edge lines to visually narrow the carriageway, along with more prominent centre lines at junctions and “SLOW” markings at key	£10,000 – £15,000

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
		hazards. ***This option is recommended for further consideration.***	
	TRAFFIC CALMING Flat top road hump	Baas Lane already benefits from vertical traffic calming features in the form of flat top road humps along its entire length. These are in poor condition and unevenly spaced.	
04-2A		Consideration could be given to implementing an additional road hump between Carnaby Road and Graham Avenue. ***This option is recommended for further consideration.***	£5,000-£10,000
04-2B		Consideration could be given to refurbishing the existing road humps along the length of Baas Lane. ***This option is recommended for further consideration.***	£30,000 - £40,000

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S05
Scheme Name:	Pindar Road	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi09	Speed Compliance	N/A

Location/General Description

Pindar Road is a one-way unclassified Local Distributor road with a speed limit of 30mph. It is also a low frequency bus route. Speed surveys undertaken in October 2010 showed 85th percentile speeds of approximately 38mph southbound. The 30mph section of Pindar Road under investigation is highlighted in blue on **Figure 1**, and is approximately 1050m in length.

Figure 1 – Site Location

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

		
Plate 1 – Northbound view of Pindar Road access in to industrial area showing short length of permissible on-street parking on the eastern side		***Plate 2 – Southbound view of Pindar Road exit from industrial area***

This road provides access to a number of industrial units as well as the Hoddesdon Household Waste Recycling Centre. It is a two-lane carriageway which operates as a one-way system in a clockwise direction. Parking restrictions extend for all of its length preventing on-street parking except for a short section – eastern side of the northbound carriageway.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
05-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs 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 narrow the carriageway, along with more prominent centre lines at junctions and “SLOW” markings and signage at key hazards. ***This option is recommended for further consideration.***	£10,000 – £15,000
05-2	TRAFFIC CALMING Flat top road hump	Taking into account all of the points raised above, no interventions are recommended for this site. Given the assessment against the Speed Limit Framework in the Hertfordshire County Council Speed Management Strategy, it could be considered appropriate to increase the speed limit to 40mph. However, with the high number of	£0

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
		HGVs and HGV manoeuvres in and out of units it would be inappropriate to do so. ***This option is <u>not</u> recommended.***	

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S06
Scheme Name:	Hertford Road (B1197)	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi10	Speed Compliance	N/A

Location/General Description

Hertford Road is a 'B' class Secondary Distributor road with a speed limit of 30mph. It is also a high frequency bus route. Speed surveys undertaken in October 2010 on the section between A1170 and West Hill Road, showed 85th percentile speeds of approximately 40mph in both directions. The 30mph section of Hertford Road under investigation is highlighted in blue on **Figure 1**, and is approximately 2km in length and clearly made up of two sections.

Figure 1 – Site Location

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

Plate 1 – Westbound view towards speed limit terminus point

Plate 2 – Eastbound view from western end showing (Vehicle Activated Sign (VAS)

The western section of Hertford Road is fairly open in nature with accesses to industrial units and a few isolated bungalows, central hatching with coloured surfacing and central islands as can been seen in **Plate 1**. There is also a Vehicle Activated Sign (VAS) on the northern side of the carriageway operating for eastbound traffic, **Plate 2**. There is footway on the southern side only along this section. Beyond Goodwood Close the footways extends to both sides of the carriageway and the 'feel' of the road changes to residential in nature. The most eastern end of Hertford Road has short sections of parking lay-bys and some on-street parking.

Plate 3 – Eastbound view beyond Goodwood Close showing footways on both sides of the carriageway

Plate 4 – Westbound view of eastern end of Hertford Road

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
06-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the change in speed limit. ***This option is recommended for further consideration.***	£10,000 – £15,000
06-2	RELOCATION OF SPEED LIMIT TERMINUS	The location of the existing 30mph speed limit terminus point is not conducive to encouraging low speeds. The change of environment to residential would provide a natural location for the repositioning of the speed limit. Approximately distance 450m. ***This option is recommended for further consideration.***	£2,000 - £5,000

Quality of Life - Tackling Safety Concerns, Speed Limit Compliance and Walking Issues		Scheme Ref:S07
Scheme Name:	Bridle Way South	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Vi11	Speed Compliance	N/A

Location/General Description

Bridle Way South is a Local Distributor road with a speed limit of 30mph. It is also a high frequency bus route. Speed surveys undertaken in October 2010 on the section between Queens Road and St Johns Road, showed 85th percentile speeds of approximately 35.8mph eastbound and 37.7mph westbound.

The 30mph section of Bridle Way South under investigation is highlighted in blue on **Figure 1**, and is approximately 701m in length.

Figure 1 - Site Location

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

		
Plate 1 – Westbound view showing pedestrian underpass west of Tunfield Road		***Plate 2 – Northbound view showing pedestrian underpass south of Dymokes Way***

There is a footway along one side of Bridle Way South only (southern/western) and two pedestrian underpasses providing safe, conflict-free crossing points for pedestrians and other vulnerable road users.

There are no direct accesses off Bridle Way South however there are regular cul-de-sac junctions on both sides.

Along Bridle Way North there are currently three flat top humps in the vicinity of the school – one on each approach and one directly outside.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
07-1	SIGNAGE & ROAD MARKINGS Install Traffic Signs and Road Markings to raise driver awareness of key hazards, and subsequently reduce speeds.	Provide Gateway feature at 30mph speed limit location to emphasis the speed limit. Road Markings could be renewed, and consideration given to the use of edge lines to visually narrow the carriageway, along with more prominent centre lines at junctions and “SLOW” markings at key hazards. ***This option is recommended for further consideration.***	£10,000 – £15,000

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
07-2	TRAFFIC CALMING Vertical features	There are currently three flat top road humps in the vicinity of the school on Bridle Way North. Similar features could be considered along the straighter sections of Bridle Way South to manage excessive speed/s along this section. As it is a high frequency bus route speed cushions would be most appropriate to achieve the desired speed reduction. ***This option is recommended for further consideration.***	£100,000-£125,000

9 Network Demand Management

9.1 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.

9.2 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.

9.3 The Essex Road Industrial Estate is a valuable local economic asset for the borough and is a key local employment centre. As with any industrial estate it does generate significant volumes of HGV traffic throughout the day and this often involves large commercial vehicles driving down unsuitable residential streets, either to avoid congestion further on, or as in the case of the original Essex Road alignment, due to erroneous allocation of street names in SatNav databases. The schemes proposed will go some way to manage the impact of these HGV movements on the local community while not inhibiting the operations of the businesses served by them.

9.4 School and Workplace Travel Planning will help to ensure that information about sustainable transport options is provided at both workplaces and schools and complement other proposals such as the new cycle routes, way finding improvements and Real Time Passenger Information. This in turn should help to tackle local congestion problems by reducing the number of shorter car journeys.

TABLE 9.1 DEMAND MANAGEMENT SCHEMES

Scheme Number	Description	Key Issues Addressed
DM01	Review of weight and width restrictions on roads around the Essex Road industrial estate. Potentially renaming old Essex Road and directing SATNAV providers to refresh their databases.	Fi02
DM02	Roll out of Workplace Travel Plans for major employers.	Ci01, Ci03, Ci07, Ci08, Ci09, Ti01, TI02,Di02, Di05, Di06, Di07
DM03	Encourage take up of schemes developed under the existing Safer Routes to Schools programme.	Ei01, Ei02, Ci01, Di02, Di04
DM04	Rye Road junction protection.	
DM05	A parking review of the whole urban transport plan area would highlight problem areas and provide recommendations for suitable parking restrictions. Review would focus on areas near shopping parades, schools, overflow parking and commuter parking.	Pi01, Pi02, Pi03, Pi04, Pi05, Pi06, Pi07, Pi08, Pi10, Pi11, Pi12,Yi01

Network Demand Management & Travel Choices		Scheme Ref:DM01
Scheme Name:	Freight Signing Strategy	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Fi02	Congestion Quality of Life	NM01 A1170 Ware Road NM02 A1170 Charlton Way/Dinant Link Road NM03 A1170 Charlton Way to Station Road NM04 A1170 Station Road to Cozens Lane

Location/General Description
There are issues with drivers of Heavy Goods Vehicles (HGVs) rat-running along Duke Street and Middlefield Road, on their way to Essex Road Industrial Estate. While erroneous SatNav use is routing lorry drivers via the old residential section of Essex Road, rather than along Dinant Link Road and into the industrial estate.

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
01-1	Review of freight weight, width and height restrictions and improve signing with signs at more appropriate locations.	Relies on compliance. Could be introduced with physical measures to restrict access. ***This option is recommended for further consideration***	£5,000-£10,000

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
01-2	Change name of Essex Road and direct SatNav service providers to update their databases.	Local authorities can direct SatNav service providers on the roads that can be assigned. This is already being pursued by Hertfordshire County Council and Broxbourne borough Council. Time lag between database updates and drivers refreshing their own database. Would require updating of council and land registry records. Relies on compliance. Could be introduced with physical measures to restrict access. ***This option is recommended for further consideration***	£5,000-£10,000

Network Demand Management & Travel Choices		Scheme Ref:DM02
Scheme Name:	Workplace Travel Planning	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ci01 Ci03, Ci07, Ci08, Ci09,Di02,Di05, Di06, Di07	Accessibility Quality of Life Congestion	NM05 New River PT02 Bus Services NM01 A1170 Ware Road NM02 A1170 Charlton Way/Dinant Link Road NM03 A1170 Charlton Way to Station Road NM04 A1170 Station Road to Cozens Lane

Location/General Description
Workplace travel plans have already been developed for some major employers. This scheme proposes the development of additional workplace travel plans for major employers who do not already have one in place and additional monitoring of existing travel plans. For this intervention to be most effective, it will be best to conduct travel plans through the development control process. Hertfordshire County Council has a process for engaging with employers through this mechanism. Traffic levels, particularly along the A1170 in the peaks, has been identified by stakeholders as a problem within Hoddesdon and Broxbourne and the travel plans will help to reduce local traffic when implemented.

Options/Variations			
Ref.	Potential Interventions	Potential Issues/Risks	Cost
02-1	Development of Travel Plans for major employers.	The travel plans will help to manage levels of traffic through Hoddesdon and Broxbourne in the peaks. The scheme's success will depend on monitoring and incentivising employers to follow through with their plans. ***This option is recommended for further consideration.***	£15,000 -£20,000
02-1	Extension of TravelSmart for Hoddesdon North and Rye Park	In partnership with Sustrans	£100,000

Network Demand Management & Travel Choices		Scheme Ref:DM03
Scheme Name:	Safer Routes to Schools	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Ei01, Ei02, CI01, Di02, Di04	Mode Share of Journeys to School	NM05 New River PT02 Bus Services NM01 A1170 Ware Road NM02 A1170 Charlton Way\Dinant Link Road NM03 A1170 Charlton Way to Station Road NM04 A1170 Station Road to Cozens Lane

Location/General Description
Safer Routes to Schools projects take an 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. 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. Safer Routes to Schools initiatives could include:

- road safety skills training;
- walking buses;
- highway improvements; and
- provision of cycle parking and waiting shelters.

Safer Routes to School should be promoted at the same time as the promotion of sustainable modes and cycling schemes. This will ensure that parents are fully aware of the walking and cycling network. This will encourage them to make more journeys (especially journeys to school) by walking and cycling.

Network Demand Management & Travel Choices		Scheme Ref:DM04
Scheme Name:	Rye Road	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Pi07, Pi01	Quality of Life	UR01 Rye House DM05 Parking

Location/General Description

Rye Road is an unclassified local distributor road with a 30mph speed limit. The extent of Rye Road under investigation is highlighted blue on Figure 1. Old Highway joins Rye Road on its northern side. It is classified as a local access road. The length of Old Highway under investigation is highlighted purple on Figure 1.

Figure 1 - Site Location

Both of these roads experience a high level of parking.

Plate 1 – high level of on-road parking in Rye Road and HGV traffic

Plate 2 – off-road parking for Rye Road accessed via Old Highway

The high level of parking in both of these roads inhibits bus services particularly at weekends and has led to evening and weekend services being withdrawn.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
04-1	PARKING REVIEW To include junction protection and regular passing areas for buses to maintain service	The review would identify the mix of resident and visitor parking and where junction protection can be reinforced and passing areas provided, to improve two way traffic operations. ***This option is recommended for further consideration either as a stand- alone review or as part of a wider review under DM05*** *.*	£10,000-£15,000
04-2	Echelon / square on parking at shopping parade and additional cycle stands.	There are existing proposals for shop parking schemes at Rye Road and Stanstead Road The Stanstead Road shops parking scheme is scheduled to be implemented by December 2011. The Rye Road scheme is on hold pending resolution of ownership and legal issues.	On-going

Network Demand Management & Travel Choices		Scheme Ref:DM05
Scheme Name:	Parking	
UTP Key Issues	**LTP Targets**	**Links to Other Schemes**
Pi01, Pi02, Pi03, Pi04, Pi05, Pi06, Pi07, Pi08, Pi10, Pi11, Pi12.Yi01	Quality of Life	DM04 Rye Road

Location/General Description
Throughout the Hoddesdon & Broxbourne Urban Transport Plan area there are a number of areas which experience inappropriate parking. The issues are often obstructive parking on footway or at junctions, commuter parking in residential areas for the station and inconsiderate parking around schools. Parking inconsiderately can block footways for pedestrians whilst parking at junctions affects visibility for road users and pedestrians. A reduction in the carriageway width at some locations by parking prohibits bus operations.

Options/Variations			
Ref.	Potential Interventions	Assessment of Suitability	Cost
05-1	PARKING REVIEW	The review should focus initially on locations already identified through the urban transport plan consultation process and include hot spots, problems of footway parking, shopping parades, areas by schools and overflow parking in residential areas caused by commuters. ***This option is recommended for further consideration.***	£50,000

10 Five Year Delivery Programme

10.1 This chapter sets out an implementation plan for the schemes recommended in Sections 5 to 9. 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

10.2 The Implementation Plan is presented in Table 10.1. 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.

10.3 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 ranks 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.

10.4 The schemes are presented in number order, and this does not reflect the priority status of each scheme.

Monitoring and Date of Plan Review

10.5 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.

10.6 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 Hoddesdon and Broxbourne as part of the Local Transport Plan and Urban Transport Plan monitoring process and county-level performance management monitoring.

TABLE 10.1 IMPLEMENTATION PLAN

Scheme	Scheme ID	Scheme Location/Description/Options	Phasing/Timescale/Cost						Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependence with Other	Key Risks to Technical / Feasibility / Delivery
			Short Term (Years 1 and 2)		Medium Term (Years 3, 4 & 5)		Long Term (Year 6+)						
NM01 - A1170 Ware Road	NM01-1	Cycle facilities – on-road cycle lanes on A1170 Ware Road					£200,000-£300,000		HCC	Broxbourne BC	LTP		
	NM01-2	Cycle facilities –alternative signed on-road cycle route off A1170 to Hoddesdon town centre			£125,000-£150,000				HCC	Broxbourne BC	LTP	NM01	None
	NM01-3	Crossing improvements on Amwell Street off Dell roundabout, Hoddesdon		£6,000-£10,000					HCC	Broxbourne BC	LTP		
NM02 - A1170 Charlton Way / Dinant Link Road	NM02-1	Extension of shared pedestrian cycle facility along Dinant Link Road along Charlton Way					£250,000-£300,000		HCC	Broxbourne BC	LTP	NM03	Fencing along Charlton Way subject to planning consent
	NM02-2	Toucan crossing at Charlton Way/Lanetts/Bowery Road roundabout					£200,000-£250,000		HCC	Broxbourne BC	LTP		None
	NM02-3	Puffin crossing and new footway link across Charlton Way to north of junction with Lanetts giving access to Netto			£150,000-£175,000				HCC	Broxbourne BC	LTP/Developer		Potential planning negotiations with ASDA as new owners of Netto
	NM02-4	Zebra crossing across conduit Lane linking Netto and Sainsbury's supermarkets		£20,000-£25,000					HCC	Broxbourne BC	LTP/Developer		Potential planning negotiations with ASDA as new owners of Netto
	NM02-5	Conversion of existing Pelican crossing southern end of Charlton Way to Toucan			£50,000-£65,000				HCC	Broxbourne BC	LTP		None
NM03 - A1170 Charlton Way to Station Road	NM03-1	Cycle route along St Cross School footpath \ St Catherine's Road \ Churchfields		£10,000-£15,000					HCC	Broxbourne BC	LTP	NM07	None
	NM08-2	New River type 'St Catherines Road \ New River to Broxbourne Station			£100,000-£150,000				HCC	Broxbourne BC/Thames Water	LTP		Required Thames Water permission
NM04 - A1170 Station Road to Cozens Lane	NM04-1	Cycling permitted along New River Path			£60,000-£70,000				HCC	Broxbourne BC/Thames Water	LTP	NM03	Thames Water own New River
	NM04-2	Cycle Route: Churchfields to New River and Caldecote Way\ Lomford Drive to New River.		£5,000-£10,000					HCC	Broxbourne BC	LTP		None
NM05 - New River and River Lee	NM05 -1	Improve signage to and from the New River to local centres and transport nodes	£10,000-£15,000						HCC/Thames Water	Thames Water / Broxbourne BC	LTP	NM02, NM03, NM04	None
	NM05 -2	Surfacing and where required widening of New River footpath from Rye House station to Broxbourne station					£200,000 per mile		HCC/Thames Water	Thames Water / Broxbourne BC	LTP		Thames Water own New River
	NM05 -3	Re-surfacing of River Lee towpath between Dobbs Weir and Old Nazeing Road					£200,000 per mile		Essex CC	British Waterways			Requires buy in from Essex CC and British Waterways Uncertain funding
NM06 - Bramble Lane	NM06-1	Improvements to Bramble Lane Signing and gating at points of entry	£5,000-£10,000						HCC	Broxbourne BC	LTP/Developer	N/A	None
PT01 – Access to Broxbourne Station	PT01-1	Access ramp from New River to station forecourt.			£50,000				HCC	Broxbourne BC	LTP/TOC/Network Rail	NM07	Requires buy in from Network Rail
	PT01-2	Way finding between station and Broxbourne	£5,000-£10,000						HCC	Broxbourne BC/Network Rail	LTP		None
	PT01-3	Station forecourt improvements					£500,000-£600,000		Network Rail / TOC	HCC	Network Rail / TOC		Network Rail / TOC to ensure
	PT01-4	Review of signalisation of junction with Station Road	£5,000-£10,000						HCC	Broxbourne BC	LTP		Requires traffic operations feasibility
	PT01-5	Review commuter parking along Station Road following removal of temporary TRO	£5,000-£10,000						Broxbourne BC	HCC	LTP		None
	PT01-6	Review period of commuter ban on residential roads around the station	£5,000-£10,000						Broxbourne BC	HCC	LTP		None
PT02 - Bus Services	PT02-1	Roll out of Real Time Passenger Information		Included in County-wide RTPI					HCC	Broxbourne BC	LTP	PT01	None
	PT02-2	Promotion of existing integrated ticketing schemes	£5,000-£10,000						HCC	Broxbourne / Bus operator / TOC	LTP		Requires operator buy in
	PT03-1	Promotion of hospital shuttle	£5,000-£10,000						HCC	NHS	LTP		None
	PT02-3	Review integration of hospital shuttle with dial-a-ride	£5,000-£10,000						HCC	NHS	LTP		None
	UR01-1	Widen footpath on New River bridge			£150,000-£200,000				HCC	Broxbourne BC	LTP		None
	UR01-2	New station car park at Tranford Sidings development site			Included in Development Brief				Broxbourne BC	Developer	Developer		Developer buy in

Scheme	Scheme ID	Scheme Location/Description/Options	Phasing/Timescale/Cost			Lead Partner	Key Partner / Stakeholders	Potential Funding Sources	Inter-dependance with Other	Key Risks to Technical / Feasibility / Delivery
			Short Term (Years 1 and 2)	Medium Term (Years 3, 4 & 5)	Long Term (Year 5+)					
UR01 - Rye House	UR01-1	Increase cycle parking at station.		Included in Network Rail plans		Network Rail / TOC		Network Rail / TOC	NM05, DM04	Requires Network Rail and TOC to secure
	UR01-2	New way finding to station directing pedestrians through Essex Road, Fishermans Way.	£5,000-£10,000			HCC	Developer/local business	LTP		None
	UR01-3	New Farm Lane pedestrian route linking Amber Road and industrial estate with Rye House station and bus routes on Rye Road and Old Highway.		£5,000-£10,000		HCC	Developer/local business	LTP		None
UR02 - Hoddesdon Town Centre	UR02-1	New Crossing Town Centre to Burford street/Brewery Road		£30,000 - £60,000		HCC	Broxbourne BC	Developer		None
	UR02-2	One-way system Amwell Street \ Burford Street & Centre -Rive cycle lane Amwell \ Burford Street.			£75,000-£105,000	HCC	Broxbourne BC	LTP	N/A	Subject to traffic modelling
	UR02-3	Cycle parking at key locations in town centre.		£2,000-£5000 per 10 spaces		HCC	Broxbourne BC	LTP		None
UR03 - Eastern Lane	UR03-1	Eastern Lane one-way system			£15,000-£20,000	HCC	Broxbourne BC	LTP	N/A	None
101 -Speed Compliance Park Lane	101-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
102 -Speed Compliance Bell Lane	102-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
103 -Speed Compliance Cock Lane	103-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
	103-2	Relocation of speed limit terminus		£2,000-£5,000		HCC	Broxbourne BC	LTP	N/A	None
104 -Speed Compliance Bees Lane	104-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
	104-2	Traffic Calming - additional humps between Cornsilk Road and Graham Avenue		£5,000 - £10,000		HCC	Broxbourne BC	LTP	N/A	None
	104-3	Traffic calming - refurbish existing humps		£30,000 - £40,000		HCC	Broxbourne BC	LTP	N/A	None
105 -Speed Compliance Pindar Road	105-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
106 -Speed Compliance Hertford Road	106-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
	106-2	Relocation of speed limit terminus		£3,000 - £5,000		HCC	Broxbourne BC	LTP	N/A	None
107 -Speed Compliance Bridgeway South	107-1	Signage and road markings	£10,000 - £15,000			HCC	Broxbourne BC	LTP	N/A	None
	107-2	Traffic calming - speed cushions			£100,000-£125,000	HCC	Broxbourne BC	LTP	N/A	None
DM01 - Freight signing strategy	DM01-1	Review weight and width restrictions and improve signing at appropriate locations	£5,000 - £10,000			HCC	Broxbourne BC	LTP	NM01, NM02, NM04,NM04	None
	DM01-2	Change name of Essex Road and direct SATNAV service providers to update databases.	Existing programme			HCC	Broxbourne BC	LTP		Requires SATNAV service providers compliance
DM02 - Workplace travel planning	DM02-1	Develop travel plans for major employers		£15,000-£20,000		HCC	Businesses	LTP	NM01, NM02, NM03, NM04, NM05, PT02	Requires buy in from business if not part of planning application
	DM02-2	Extension of Travelsmart to Hoddesdon North and Rye Park		£50,000-£100,000		Sustrans / HCC	Businesses	LTP		Requires buy in from business if not part of planning application
DM03 - Safer Routes to School	DM03-1	Continuation of Safer Routes to Schools programme	Existing programme			HCC	Schools	LTP	NM01, NM02, NM03, NM04,NM05, PT02	Requires school's buy in
DM04 - Rye Road	DM04-1	Review junction protection and installation of regular parking areas	£10,000 - £15,000		£50,000-£100,000	Broxbourne BC	Broxbourne BC	LTP	DM05, UR01	None
	DM04-2	Kiosks / square on parking at shopping parade and additional cycle stands	Existing programme			Broxbourne BC				Delayed through legal issues
DM05 - Parking	DM05-1	Review of parking bay spots across Urban Transport Plan area	£50,000			Broxbourne BC	Broxbourne BC	LTP	DM04	None

11 Summary

11.1 Hoddesdon and Broxbourne are both important local centres within Hertfordshire, with very distinct characteristics. Broxbourne is a largely affluent dormitory settlement with large commuter flows to London. Hoddesdon is more self-contained centred on its vibrant town centre and industrial estates.

11.2 The local geography, both demographic and economic, lends itself to walking and cycling and short bus trips, but low mode shares suggest that there is potential for a greater proportion of trips being made by these more sustainable modes. The schemes developed within this Urban Transport Plan will help to improve facilities for pedestrians, cyclists and public transport users.

11.3 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 (set out in Section 10).

Schemes Recommended

11.4 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 Local Transport Plan programme entry / funding criteria, Urban Transport Plan objectives, and deliverability criteria. The schemes are presented in five packages.

- Improvements to the **Non-Motorised User Network** include making more use of the New River for walking and cycling, safeguarding Bramble Lane byway and cycling improvements and new routes along the A1170 corridor to local centres and the rail stations.
- Improvements to **Public Transport** include new pedestrian links to Broxbourne station, the roll out of Real Time Passenger Information and the promotion of Integrated Ticketing.
- Improvements to the **Urban Realm** include improved pedestrian and cyclist access to Rye House station and improvements to Hoddesdon Town Centre, including a new one-way system with contra-flow cycle lanes.

- **Speed Compliance** proposals will introduce physical measures to reduce speeding at specific locations.
- **Demand Management** proposals include promotion of workplace and school travel plans, better management of freight movements and parking reviews.

Conclusion

11.5 The schemes set out within this Urban Transport Plan will help to deliver the objectives for Hoddesdon and Broxbourne 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.

11.6 The five year delivery plan outlined in Section 10 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.

11.7 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	Draft Hoddesdon and Broxbourne Urban Transport Plan
Document Title	
Client Contract/Project No.	HCC0901844
SDG Project/Proposal No.	22133901

ISSUE HISTORY

Issue No.	Date	Details
1.0	01/07/10	Draft for Public Consultation
1.1	12/07/10	Draft for Consultation with Officer Steering Group
1.2	17/08/10	Draft for Consultation with Member Steering Group
1.3	08/10/10	Draft for Public Consultation
2.0	24/02/11	Final version of Plan to client
2.1 (v11)	04/05/11	To OSG
V15	08/06/11	To MSG
V16	27/06/11	To Herts
Final	18/11/11	For client
Final v2	23/01/12	For client

REVIEW

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