Welwyn Garden City Urban Transport Plan



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What is the Urban Transport Plan?

The Urban Transport Plan sets out the proposed transport improvements for Welwyn Garden City within the context of the Hertfordshire Local Transport Plan 2006/07-2010/11 and the emerging Regional Transport Strategy. However, the Urban Transport Plan looks to the longer term over a twenty year period reflecting the fundamental role that transport plays in our society. The Plan will be adopted by Hertfordshire County Council in conjunction with Welwyn Hatfield Council and other local agencies and will be reviewed on a regular basis.

Problems Identified

A number of problems have been identified including poor accessibility for modes other than car, the intrusive impacts of car use (noise, severance, poorer air quality, safety concerns, parking), inadequate walking routes and limited uptake of cycling and poor access to the rail station. Apart from the issues associated with the town centre, residential areas have parking problems and an intermittent bus service during some periods. Other problems are associated with employment areas where traffic builds up at peak times and parking demands exceed the space available, such as the area around the QE2 hospital.

The proximity of Welwyn Garden City to London and other centres in Hertfordshire and the location of the trunk road network and main line railway have a strong bearing on travel patterns, particularly journeys to work. The number of rail passengers has risen dramatically in recent years and capacity constraints are evident. On the roads, congestion is expected to feature more regularly. East-west links are important although existing road links are heavily used and have limited capacity; apart from bus links, there are no alternatives to car use. At a local level, considerable changes are taking place in the town and opportunities associated with the redevelopment of town centre sites and the Broadwater Road West site will need to be grasped. These redevelopments can be expected to add to the demand for travel but there is considerable scope to promote sustainable modes given the location of sites in relation to the town centre, rail and bus stations.

National, Regional and Local Policy Context

Government guidance on transport places a strong emphasis on sustainable modes – walking, cycling, bus and rail use. This emphasis features strongly in guidance at national, regional and county levels. The relationship between sustainable modes and car travel and the relative demand for each is the focus for change – if more people travel by sustainable means - then there will be significant economic, social and environmental benefit. Conversely, if the growth in car use continues, fuelled by inappropriate land use decisions and car dependent development, then there will be significant problems of poor air quality and road safety and more regular traffic congestion. Currently around 64% of journeys to work in Welwyn Hatfield district are made by car (Census 2001) and while congestion is not as severe as many other places, increased demand for car travel will inevitably result in longer journeys, less reliable journeys, higher costs and environmental damage. However, bus use is relatively poor – around 3% of journeys to work – and cycling (3%) and walking (10%) are also under-represented.

The Local Transport Plan considers transport problems and solutions against key criteria – congestion, accessibility, safety, air quality and quality of life. In addressing these, considerable efforts are required to ensure that healthier and less damaging means of travel become part of people's lifestyles and culture so that car dependency is addressed for the future. The town centre and the employment areas including Shire Park ensure that there is strong demand for movement to the town from other areas. Good links with other urban centres are important and the rail and bus services that are in are place provide valuable connections but are subject to capacity constraints and traffic congestion. The Local Transport Plan also includes a range of targets against which the success of the measures introduced through the Urban Transport Plan will be measured.

Emerging Issues for the Town

A number of issues are emerging in Welwyn Garden City. Additions to the retail facilities in the town centre and **redevelopment sites** for housing and other uses at The Campus and Broadwater Road will help encourage walking, cycling and the use of bus and rail. The success of the redevelopments will also be influenced by the level of parking provided and it is desirable that less parking is provided in favour of promoting more sustainable means of travel. In particular, the location of the Broadwater Road West redevelopment site to the east of the railway emphasizes the need for a strong link to the town centre and rail station. The opportunity exists to replace the sub-standard footbridge at the rail station to create a high quality link between the site and the town centre, without which car dependency will persist. A replacement bridge could be a high profile gateway to the town and integrate established and new land uses. This is a major opportunity to show how public transport facilities can be linked with residential sites to the benefit of the town as a whole.

Walking is considered to be a key issue with scope to extend the opportunities to walk rather than use the car for local journeys. In light of the issues raised, the plan proposes a greater emphasis on walking with more road crossings, signing and lighting, particularly in the town centre coupled with some restrictions on car movements in the core area. The unique town centre environment reflects the origins of the town and walking could play a major role in the future. Creating a walking and cycling zone without circulating traffic in the central area will further enhance the image and attractiveness of the town.

In addition, better **cycle parking** facilities are proposed to encourage regular cycling alongside the extension of existing cycle routes. These should be available at the rail stations, workplaces, schools and local amenities.

Further investigation of **rail users** indicated that the frequent service attracts many users and that a high proportion access Welwyn Garden City station on foot (50%), cycle, bus and taxi. The links between the rail and bus stations are poor, particularly during the evenings when the Howard Centre is closed, despite their relative proximity to each other. At Welwyn North station, car parking is the major concern, especially on-street parking in the vicinity.

A refurbished **bus station** is proposed to enhance the quality of the facility and encourage its use and this would also meet the requirements of disabled people. This assumes that the bus station would be retained in its current location as a focus for local services. Although a range of bus services is in place, their use could be encouraged by better facilities at stops such as detailed specific information and improved interchange.

Summary

The **East of England Plan** envisages considerable growth in housing and employment in the area and hence transport movements will be greater than at present. The challenge is to direct growth in demand to non-car modes to avoid congestion while maintaining good accessibility for all.

Parking is an important issue and should aim to provide a balance between the needs of the town centre retail offer by providing adequate short stay spaces and the need to provide facilities for walking, cycling, bus and rail users. Data suggests that existing town centre provision is adequate and that the Howard Centre car park is underused with spaces available all the time. In addition to a reduction in parking standards for new development sites, better management of on-street spaces would help alleviate difficulties in residential areas.

A number of other issues have been investigated. Data for **road traffic accidents** suggest that while there are no individual locations where there are clusters of serious casualties, the majority of accidents involve vehicle collisions. To address concerns over child casualties, measures could be introduced to reduce traffic speeds and promote safety. Related to this is the **Safer Routes to Schools** and School Travel Plan programme currently underway. This aims to improve safety but also encourage the use of sustainable modes, particularly walking, for journeys to school.

Other measures that could be introduced to reduce car dependency include travel plans for workplaces, car sharing and car clubs for residential areas. Although freight movements are not intrusive, better information to hauliers could improve deliveries to retail and other locations. Cycling has been identified as an area for improvement as a healthy and attractive alternative to car use, building on the routes already in place. Concerns about the Mundells gyratory have also been raised with redevelopment and the potential for more conflicting vehicle movements.

The range of measures proposed addresses the difficulties identified while meeting Local Transport Plan objectives and targets to improve transport in and around the town. These have been listed in the Plan under the LTP objectives together with an indication of their likely cost and time scale.

The junction of Bessemer Road and Broadwater Road will need re-engineering is major development takes place in the area as a result of increased demand affecting the junction where delays at peak periods are experienced currently.

1.1 The Urban Transport Plan

- 1.1.1 This plan sets out the proposed transport improvements for Welwyn Garden City for the next 15 to 20 years. It is designed to meet local needs whilst also addressing the County Council's overall transport objectives and targets as set out in the Hertfordshire Local Transport Plan 2006/07 to 2010/11. Although the plan period is up to 2026, it is acknowledged that any future changes to local circumstances or countywide transport policies may require periodic reviews. The first review will take place in 2012, subject to any significant influences in the meantime.
- 1.1.2 This Urban Transport Plan has been adopted by Hertfordshire County Council in its role as transport authority and has been developed in conjunction with Welwyn Hatfield Council and other local agencies and through public consultation.
- 1.1.3 This document, as well as the Local Transport Plan (LTP) and Urban Transport Plans for other towns in Hertfordshire, is also available on the County Council's web site at <u>www.hertsdirect.org/ltp</u>.

1.2 Background to the Plan Area

- 1.2.1 The area covered by the plan is shown in Figure 1.1 on page 2.
- 1.2.2 Welwyn Garden City has a population of 43,200 and is one of a number of urban centres in mid-Hertfordshire. Links with other centres including Hertford, St Albans, Hatfield and Stevenage are important considerations. The proximity of the town to London via motorway and main line rail links also has a strong bearing on travel patterns. There are parts of the town which experience considerable deprivation in contrast to the apparent affluence of many local people and car ownership overall is high. Welwyn Garden City provides a strong retail centre and has a unique environment as a result of the design concept when the town was planned as one of the first garden cities, incorporating a number of prominent public open spaces.

Figure 1.1 Plan Area



1 Introduction

- 1.2.3 The main thrust of the Urban Transport Plan is to promote sustainable transport in accordance with the LTP and Government guidance. This attempts to place much stronger emphasis on walking, cycling, bus and rail use. Failure to engender a substantial shift to sustainable modes has far-reaching consequences with the negative impacts of vehicles undermining the unique environment of Welwyn Garden City. This approach implies not only encouragement of sustainable modes in terms of expenditure, design, quality and maintenance but also challenging current traffic circulation and penetration and, importantly, car parking.
- 1.2.4 Particular issues include the following:
 - Accessibility An over-emphasis on motor vehicle movements precludes clear walking and cycling routes while bus services are marginalized;
 - Congestion While congestion is not widespread, traffic can be expected to increase without intervention;
 - Environment Car travel creates problems of intrusion, noise, severance and poorer air quality;
 - Parking Town centre on-street parking blights the unique environment of the central area;
 - Walking Routes involve crossing roads but barriers to movement exist including subways, poor signing and routes that are perceived to be unsafe;
 - Cycling Routes are not given priority over motor vehicles and there is limited cycling in the town centre;
 - Safety Road traffic is perceived to be dangerous for example for journeys to school; and
 - Other Quality of access to the rail station is perceived to be poor.
- 1.2.5 2001 Census data indicates mode split for journeys to work (see Figure 1.2 and Tables 1.1 and 1.2). 64% of journeys to work in Welwyn Hatfield are made by car either as driver or passenger.



Figure 1.2 Mode Share for Journeys to Work of Resident Population (adjusted to exclude people not currently working, April 2001)

Source: <u>www.statistics.gov.uk</u>

Table 1.1 Comparison of Mode Share of Journeys to Work

	Welwyn Hatfield	East of England Region	England
Work at home	8.9	9.4	9.2
Underground, metro, light rail or tram	0.8	0.8	3.2
Train	8.6	6.1	4.2
Bus, minibus or coach	3.2	4.0	7.5
Taxi or minicab	0.5	0.5	0.5
Driving a car or van	58.3	58.9	54.9
Passenger in a car or van	5.6	5.8	6.1
Motorcycle, scooter or moped	1.0	1.1	1.1
Cycle	2.7	3.9	2.8
Walk	10.0	9.1	10.0
Other	0.4	0.5	0.5

Source: Census 2001 (<u>www.statistics.gov.uk</u>)

1 Introduction

1.2.6 These figures show that while the proportion of car users for journeys to work in Welwyn Hatfield is greater than that for England as a whole, it is slightly less than that for the East of England region. However, the relatively high incomes of Welwyn Hatfield residents and the economic growth anticipated for the area can be expected to create higher levels of car ownership with the associated problems of traffic congestion.

Mode	Number	Per cent excluding people not currently working
Works mainly at or from home	4,131	8.9
Underground, metro, light rail or tram	349	0.8
Train	3,990	8.6
Bus, minibus or coach	1,465	3.2
Taxi or minicab	240	0.5
Car or van driver	26,900	58.3
Car or van passenger	2,567	5.6
Motorcycle, scooter or moped	467	1.0
Cycle	1,269	2.7
Walk	4,605	10.0
Other	174	0.4
Not currently working	24,397	
Total	70,554	100

Table 1.2 Mode	Share for	Welwyn	Hatfield	Journeys to	Work
		W Civyii	naticia	Journeys to	WOIN

Source: Census 2001 (www.statistics.gov.uk)

1.3 Overarching Objectives and Targets

- 1.3.1 This Urban Transport Plan is designed to deliver solutions to transport problems that have been identified through local consultation and knowledge. However, the transport solutions and improvements also need to be set within the context of the County Council's overall transport objectives.
- 1.3.2 This plan has been developed with a view to delivering the following LTP targets (see Table 1.3). These are shown under the headings of the 'shared priorities' set out in the LTP.

Table 1.3 Local Transport Plan Targets

Indicator	Baseline (2003/04)	Target (2010/11)
Congestion		
Change in Area-Wide Traffic Mileage	20.7 million	22.4 million
Mode Share of Journeys to School	57.5%	60% sustainable modes
School Travel Plan	14%	83%
Accessibility		
Public Transport Patronage	31 million journeys per year	31 million journeys per year
Bus Service, User Satisfaction	55%	60% (2009/10)
Bus Punctuality	80% (2004/05)	80%
% of people who find it difficult to travel to a local hospital (Accessibility)	29%	24%
Cycling Trips	2,397 trips per day (2004/05)	2,658 (11% increase)
Passenger Transport Information, User Satisfaction	39%	50%
Rights of Way	61% (2004/05)	80%
Safety		
Killed and Seriously Injured	1,084 (1994-98)	No more than 600
Children Killed and Seriously Injured	113 (1994-98)	No more than 56
Total Slight Casualties	5,509	No more than 5,509
Speed Limit Compliance	56% (2004/05)	60%
Other		
Non-Principal Classified Road Condition	19.44%	19.44%
Unclassified Road Condition	19.29%	19.29%
Footway Condition	52%	52%

Source: LTP 2006/07-2010/11 (Table 11.1)

County Council Policies

- 1.3.3 In addition to these targets, the plan will also proactively deliver the following County Council policies:
 - review of direction signing for all road users (primarily cyclists and pedestrians);
 - review of speed limits;
 - identification and promotion of pedestrian priority routes;
 - reduction in congestion and the effects of the Traffic Management Act;
 - reduction in street clutter through removing unnecessary signs and re-locating other street furniture;
 - reviewing provision of parking facilities for cycles, two-wheelers and disabled motorists;
 - ensuring that all pedestrian crossings are compliant with current Disability Discrimination Act requirements; and
 - review of route hierarchy.
- 1.3.4 These policies serve to support the LTP objectives and measures determined through the Urban Transport Plan will need to take them into account.

1.4 Transport 'Health Check'

- 1.4.1 A 'heath check' was undertaken to review the position on transport and provide direction for subsequent investigations. It was designed as a means of framing the Urban Transport Plans in terms of established national, regional and local policy coupled with consideration of development opportunities and their implications for transport. This included taking a view on the many objectives presented by various policy documents and distilling these into a meaningful set of objectives for Welwyn Garden City.
- 1.4.2 Transport policies change over time and their scope has widened to cover emerging issues at a regional level and to provide better guidance regarding the relationship between land use and transport planning. Fundamentally, there has been a strong emphasis on reducing the impact of car travel through guidance such as Planning Policy Guidance 13: Transport.
 - Accessibility should refer to all modes and not just provide opportunities for people who have use of a car. It should also address the opportunities to access employment, education, health and other facilities;
 - For the local economy, the long term spread of employment locations and a shift from manufacturing to service industries needs to be reflected by changes to transport networks. Also, freight movement is largely by road and hence is affected by traffic congestion;
 - Safety and security should be improved especially the reduction of road traffic casualties, particularly those affecting children and vulnerable road users. People will use the means of travel with which they feel safe and secure but car use has adverse affects on other people;

- Environment and health problems can be addressed by improving vehicle technology but mainly by reducing the use of cars and heavy commercial vehicles. Personal fitness is strongly supported by walking and cycling, habits which need to be developed through school and workplace travel initiatives;
- Social inclusion can be improved through targeted community transport provision and creating better opportunities to access employment by public transport; and
- Demographic change affects the demand for travel. Different demands of older and younger age groups need to be reconciled.
- 1.4.3 The health check combined the objectives into a **transport vision**: to secure an integrated, safe, sustainable, efficient, reliable and affordable transport system.

Recommended Changes

- 1.4.4 To meet the vision, some of the underlying principles need to be put into effect. For car travel, it should be recognized that unrestrained growth undermines the vision. To manage this, a change in emphasis is required:
 - to contain car use, greater controls over car parking need to be adopted. In addition, speed management measures and enforcement in residential areas need to be in place to ensure that safety is not compromised;
 - for rail, better interchange arrangements at stations are needed to provide attractive facilities to make linked journeys e.g. bus/rail or cycle/rail;
 - buses must be given greater priority in the design of redevelopment sites with clear walking links to stops. Site design should focus on buses as a priority before car parking provision is determined. Commitment to revenue support is needed to maintain services when levels of demand are lower but there is a need to provide a high quality service beyond the short term;
 - a safe cycle network should be evident with reallocation of road space, secure cycle parking throughout the area and complete and attractive routes. Although levels of use of the formal routes appears to be limited and hence their value for money is open to question, creating a cycling culture takes time and many less experienced cyclists are put off due to concerns about traffic. The full benefits will be realized only when the network is completed;
 - walking routes should be appropriately lit, signed and include safe road crossings. Measures on routes to schools should be introduced to protect vulnerable road users including dropped kerbs and restrictions on car parking close to the school entrance; and
 - travel plans for workplaces, schools and residential areas should be promoted to engender a change in travel behaviour alongside initiatives to raise awareness of transport issues e.g. the link with healthy lifestyles.

1.5 Interface With Key Stakeholders

1.5.1 An Action Planning Day was held on 15 September 2006 on behalf of Welwyn Hatfield Council¹. It aimed to bring together local stakeholders in response to possible development scenarios in the town centre and to obtain opinions regarding the location and type of development and associated issues that were felt to be the most appropriate. The event provided an opportunity to seek the views of stakeholders on a variety of transport issues using a brief questionnaire. This Note sets out the responses received. People involved included community groups, council members and officers, transport providers and interest groups.

Questionnaire

1.5.2 The questionnaire is shown in Figure 1; this was designed to be easy to complete. The questions reflected issues raised in the development of the Urban Transport Plans, particularly relating to walking and public transport use, two key issues in Welwyn Garden City centre. Although the number of responses was not high, the survey provides a flavour of views in the town.

Responses

- 1.5.3 Around 100 questionnaires were circulated and 30 were completed and returned. The results are shown in Figure 2.
- 1.5.4 On parking, most respondents suggested that parking was convenient or were neutral; onstreet parking was not considered to be easy.
- 1.5.5 The public transport questions produced mixed responses. It was suggested that first impressions of the town by bus users was good and that bus timetables are easily usable. However, there was less support for the adequacy of bus services.
- 1.5.6 Using the same means of transport after dark as during the day indicated less certainty and the rail station was not seen as a strongly positive gateway. It was indicated that visitors would have difficulties in navigation if they were unfamiliar with the town and arrived by public transport.
- 1.5.7 Town centre driving was not considered to be easy and a majority felt that car movements were intrusive to pedestrians in the centre. There was support for encouraging cycling and walking routes were considered to be unattractive. However, walking routes were considered to be safe and the choice of route did not appear to be affected by the attractiveness of that route. The principle of Puffin crossings was known to a majority of respondents.
- 1.5.8 It was indicated that taxis were important although their convenience was less clear.
- 1.5.9 Signing in the town was not considered to be adequate and similarly signing to the centre from major routes suggested some deficiencies. There was no clear view regarding the acceptability of routes to health facilities.

¹ The Action Planning Day was facilitated by Urban Practitioners, a consultancy working for Welwyn Hatfield Council to develop a masterplan for the town centre taking into account the various proposed land use changes.

1 Introduction

- 1.5.10 Main walking routes were indicated as being acceptable but cycle routes and arrangements for other modes (bus/car/taxi) were considered by the majority to be unacceptable.
- 1.5.11 Respondents were given an opportunity to indicate other comments. These included:

Public transport:

- bus services are inadequate during evenings;
- bus reliability is poor;
- additional bus from Stanborough/stadium area to the centre and rail station would be useful;
- better buses from outer areas are needed;
- poor integration of bus and rail stations;

Walking:

- walking routes are poorly designed with confusing traffic signals and unattractive subways;
- better footway surfacing needed;
- Puffin crossings need to be replaced as they are unsafe;

Town centre vehicle movements and parking:

- Howardsgate is unsuitable for car use;
- town centre on-street parking is difficult especially at peak times;
- Stonehills cul-de-sac causes problems of car movements;
- there is no need for cars in the town centre;
- taxi rank and parking in Stonehills results on congestion;
- parking in Wigmores North outside John Lewis is popular and should be retained;
- surface parking takes up too much space and multi-storey parking would allow traffic removal in the centre;
- parking should be encouraged at Campus East and Campus West rather than the town centre;
- road direction signs are too large and intrusive;
- new road link under multi-storey car park to Digswell Road/Campus East is a good idea;
- access to QE2 hospital is difficult because of on-street parking; and
- 30mph speed limit in Osborn Way should be emphasized;

Layout:

- overcome the division between east of the railway and west of the railway.
- 1.5.12 While there were mixed views from a limited number of responses, the survey suggested that walking and cycling routes need to be improved and that town centre parking and vehicle movements should also be re-considered.





strongly agree

agree

- neutral
- 🗆 disagree

strongly disagree

Analysis of Welwyn Garden City Questionnaire (15 September 2006)

1.6 Agency and Community Workshop

- 1.6.1 A workshop was held on 26 June 2007 for stakeholders to contribute to the Urban Transport Plan in terms of ideas for measures to be included for implementation. This was held at Campus West in the town centre and was chaired by Councillor Clare Berry (Hertfordshire County Council and Welwyn Hatfield Council) and facilitated by MVA Consultancy (see Appendix A). The purpose and scope of the Urban Transport Plan were explained in the context of the LTP objectives and targets. Participants were invited to contribute their ideas from their own experiences of travelling to and within the town. Proposals were then considered in relation to the objectives and their possible contribution to targets.
- 1.6.2 The majority of suggestions involved accessibility, notably comments on public transport and walking. Improvements for buses in general such as better information, improved evening services and infrastructure were proposed. More specifically, improvements to the bus station and the link to the rail station were felt to be required. Walking improvements were supported and key issues included the footbridge at the rail station (in need of upgrading and replacement) and the town centre. There was considerable debate over possible pedestrianisation of Stonehills and Howardsgate in the core of the town centre and it was suggested that this would improve the environment of the central area. The lack of an LTP target for walking was felt to be an omission.
- 1.6.3 Cycling was also raised with a need for continuous routes and more secure parking. New routes were also suggested.
- 1.6.4 Parking was contentious issue especially regarding parking charges and possible displacement to residential streets and the availability of free short stay spaces in the town centre.
- 1.6.5 Congestion was felt to be a problem at some locations including the Shire Park exit onto Mundells and in Digswell. Some signal junctions caused delays to traffic as did on-street parking (which also presented other problems of safety and access to bus stops).
- 1.6.6 Safety issues were raised including pedestrian crossings, maintenance and personal security, it was suggested that initiatives to improve journeys to schools would be beneficial.
- 1.6.7 As a result of the process, a number of initiatives were proposed which have been added to those already included in the Urban Transport Plan. Other contributions have resulted from dialogue as part of the development of the plan (see Appendix B).

2.1 Local Issues

2.1.1 The transport issues for the town have been developed through local consultation and from data held by the local authorities². The full set of issues that this plan needs to address is set out in the tables below. Potential solutions to these problems are indicated in Chapter 10.

Table 2.1 Local Issues

Congestio	on
C1	Some circulatory traffic in town centre is unnecessary.
C2	Off-street parking management could reduce opportunities for long stay commuter parking in the town centre but may displace parking into residential streets.
C3	On-street parking by rail users around the QE2 Hospital, at Welwyn North station and other locations causes obstruction to other traffic and inconvenience to local residents.
C4	Residential areas suffer from obstructive and unmanaged parking.
C5	Traffic movements increasing at the Mundells gyratory due to commercial redevelopment.
C6	Buses are delayed due to traffic congestion e.g. Bridge Road/Broadwater Road junction.
C7	Initiatives to influence demand for vehicle movements needed e.g. travel plans.
C8	Potential congestion at Bessemer Road/Broadwater Road junction as a result of development sites.

² Data reports have been provided to Hertfordshire Highways on Walking, Public Transport and Development Issues.

Accessibility				
A1	Poor accessibility to Welwyn Garden City rail station by walk/cycle, particularly from Broadwater Road/Peartree across footbridge.			
A2	Low priority given to walking in town centre creating conflicts with vehicles.			
A3	Existing development sites are dominated by road access and parking to the detriment of other modes despite meeting the parking standards set out by the highway authority and local planning authority.			
A4	Bus station does not meet DDA requirements and presents a poor image to potential users.			
A5	Secure cycle/powered two-wheeler parking is not available at key locations e.g. rail station.			
A6	Poor walking routes to bus stops.			
A7	Lack of strong walking and cycling routes (with clear sightlines, adequate lighting, etc).			
A8	Lack of direction signing.			
A9	Routes are inconsistent due to need for further road crossing facilities.			
A10	Meaningful information about public transport services can be difficult to obtain and use.			
A11	Taxis are perceived to be unwelcoming.			
A12	Improved buses needed e.g. fully accessible low floor fleet.			
A13	Location and capacity of taxi ranks inadequate.			
A14	Greater awareness of bus services to QE2 hospital in Welwyn Garden City and other strategic health facilities e.g. Lister Hospital, Stevenage and GP surgeries.			
A15	Affordability of bus fares among younger age groups deters use later in life.			
A16	Evening bus services operate at much lower frequencies, discouraging travel.			

Safety	
S1	Walking routes at some locations are inadequate
S2	Personal security concerns especially after dark.
S3	Cycling routes inconsistent especially at road crossings.
S4	Unappealing and unpopular subways.
S5	Comprehensive Safer Routes to Schools initiatives need infrastructure measures as well as commitment in the community, extending the current programme.
S6	Mundells gyratory has conflicting vehicle movements due to the high number of junctions and accesses.

Air Quality				
AQ1	On-street parking in town centre causes traffic movements and environmental problems.			
AQ2	Growth in the number of vehicle movements adds to emissions.			

Quality of Life		
QL1	Maintaining and enhancing the Conservation Area status of the town centre is important.	
QL2	Enhancing the quality of the built environment.	

2.2 Local Opportunities/Future Pressures

2.2.1 This plan takes into account the following known opportunities and pressures (see Table 2.2). Any significant changes will be considered in future reviews of the plan.

Issue	Time Scale	Effect on existing problems	Possible new problems created
Town centre retail expansion	Within 5 years	Increased demand for travel	Pressure on public car parking capacity
Broadwater Road West redevelopment	Within 5 years	Increased demand for travel	Traffic congestion at peak times especially Bessemer Road/Broadwater Road junction
Campus East redevelopment	Within 5 years	Adds new land uses e.g. residential; pressure on car park capacity	Additional demand for local travel.
Areas of deprivation	Short term	Poor accessibility to essential facilities from some parts of the town e.g. Peartree	Car dependency

Table 2.2 Local Opportunities/Future Pressures

2.3 Local Objectives and Targets

- 2.3.1 Assessment of the current and future problems shows that the key issues to be addressed include:
 - improving the walking environment so that more people will make journeys on foot rather than by car;
 - working with operators to improve public transport services and infrastructure to offer a practical and attractive alternative to car use; and
 - dealing with development pressures to promote sustainable transport through design.
- 2.3.2 All this needs to be dealt with in a co-ordinated way so that the transport system as a whole is improved. This requires an integrated approach involving a wide range of stakeholders including the local authorities, transport providers, the business community, local residents, community groups and others.
- 2.3.3 Given the opportunity to address these problems, the local aims for the town are:
 - Aim 1 to create walking-friendly routes and an enhanced town centre where pedestrians have priority over traffic;
 - Aim 2 to improve the bus station and stops throughout the town to offer better facilities and service information; and

- Aim 3 to ensure that development proposals in the town centre, Campus East and Broadwater Road West adopt sustainable modes in preference to accommodating car journeys and parking.
- 2.3.4 These three issues walking, public transport and development have been the focus for the development of this plan. Other issues such as car parking have also been investigated and are included. All are considered to be significant enough to discuss given their scope for reducing the demand for travel, particularly by car. In combination, there is considerable scope to address the LTP objectives and targets in a meaningful way.
- 2.3.5 For targets to be identified and addressed, appropriate monitoring needs to be undertaken. Walking is particular difficult to monitor given the extensive range of origins and destinations while cyclists may use routes that avoid busy roads. Also, considering quality issues requires seeking the views of users which may be restricted and unrepresentative samples. The monitoring issue should be addressed with a comprehensive programme of data collection including count data, interview surveys and attitude surveys.

3.1 The Role of Walking

- 3.1.1 Walking is a key issue raised in the health check and is an important means of addressing the 'shared priorities' of the LTP:
 - congestion can be addressed by encouraging walking for shorter journeys rather than car use;
 - accessibility requires employment, education, health and food retail facilities to be available within walking distance where possible;
 - safety and personal security can be improved by walking initiatives; and
 - air quality is supported by transfer of journeys from car to walking.
- 3.1.2 In addition, walking contributes to a number of quality of life factors and the layout of Welwyn Garden City demonstrates the value of a strong local environment. However, the LTP does not include a specific target for walking and measurement can be difficult.
- 3.1.3 Travel to work data (2001 Census) indicates a walking mode share of 9% in Welwyn Hatfield compared with a national average of 10%. The Welwyn Hatfield Walking Strategy highlighted the discontinuity of routes especially in the town centre, along main roads, links to bus and rail facilities, lack of lighting, lack of signing, routes shared with cyclists and lack of routes shown on maps and street plans. The contrast between the ambient town centres during daytimes and during the evening was noted. Seating and public toilets were also recognized as being important.
- 3.1.4 Access to employment is also a prime reason for trip making. The wider distribution of jobs in Welwyn Garden City is not conducive to walking for many people with locations such as Mundells/Shire Park not being ideally placed for easy access on foot.
- 3.1.5 No major clusters of accidents are evident suggesting that there are no locations where there is a particular conflict between pedestrians and traffic. No fatalities occurred and the number of serious casualties is small. However the majority of accidents involve people under 25. This suggests that remedial measures should be targeted towards younger age groups, particularly children under 15. The figures show that there were 27 child casualties in the three year period in Welwyn Garden City; this compares with 28 adult casualties.
- 3.1.6 Sample surveys have been undertaken which revealed a number of issues:
 - lack of understanding of puffin signal crossings (by motorists and pedestrians) although this is being addressed by public awareness initiatives;
 - lack of pedestrian signing;
 - misleading signing (to Welwyn Garden City bus station from the rail station);
 - lack of clear routes to bus stops;
 - street furniture in the town does not appear to be a problem in fact there is a wide selection of seating, cycle stands and litter bins but also wide areas of paving;

- limitations of street lighting, especially in the vicinity of vegetation the large trees that provide an attractive daytime amenity obscure street lighting after dark. A Lighting Strategy Report has been provided regarding options to improve town centre street lighting;
- confusion caused by motorists in the town centre (mounting footways and making crossing difficult); and
- the threatening environment in and around subways.
- 3.1.7 A single barrier to movement can influence the decision to walk or use another mode. The main barriers are generally roads (increasing mobility for car users but undermining the interests of pedestrians) with poor crossing facilities. Other barriers may be easily remedied such as dropped kerbs throughout routes. Interaction with road traffic may be lessened by reducing vehicle speeds and distancing pedestrians from vehicles by providing wider footways. This is generally achieved in Welwyn Garden City centre but the constant movement of cars seeking parking spaces undermines the ambience of the area.
- 3.1.8 Changes to vehicle movements in the central area would be beneficial in terms of safety, air quality and quality of life. Reducing the number of motorists seeking short term parking spaces and redirecting them to off-street car parks would enhance the area around the Howard Centre, Howardsgate and Parkway with an emphasis on walking as cycling as the dominant modes. This would encourage business and a more ambient atmosphere would fulfil the design aspirations of the garden city.

3.2 Welwyn Garden City Railway Bridge

- 3.2.1 The walk link provided by the railway bridge is of major significance. The present structure is unsatisfactory in that capacity is constrained, particularly on the eastern side for structural reasons and barriers have been installed recently to restrict loadings. It provides the only access to the station platforms but also provides a key link between the Howard Centre (in which the station facilities are located) and the commercial and residential areas to the east of the railway. This is the most direct route to the town centre and avoids using the road bridges across the railway but is not an adopted Public Right of Way.
- 3.2.2 The condition of the bridge is poor in terms of lighting and maintenance which presents an undesirable route. It crosses the East Coast main Line and adjacent sidings and is a long structure with no intermediate access points. This adds to personal security fears as there is no escape route and the enforced narrowing of the bridge makes for an uncomfortable prospect should undesirable users be evident. Using the bridge heightens a sense of isolation as there is no activity above, below or either side for much of its length. The steps at the eastern end preclude the use of the route by people with mobility impairments.
- 3.2.3 It is understood that the bridge is owned and maintained by Network Rail but has structural problems and is effectively life-expired. Therefore it is crucial that dialogue Network Rail takes place given its responsibility for the structure.
- 3.2.4 A solution is needed to realize the opportunities that this situation presents. The location of the route is ideal in that it provides a connection to the core of WGC, the station and the development site to the east side. It is a prime location for providing a new, high profile bridge which could be incorporated into the highway network for maintenance purposes,

3 Walking

supported by Network Rail, First Capital Connect as train operator/station leasee and Cereal Partners and other adjacent land owners. A new bridge must be substantially wider bearing in mind its considerable use, its increased potential for use and to overcome personal security difficulties. Ideally it should be covered for weather protection and include full CCTV surveillance linked to both Network Rail and town centre networks. Consideration should be given to including provision for cyclists and the bridge should be fully accessible at the eastern side.

3.2.5 Inevitably such a design would be costly. However, its location is vital for the station to operate and to overcome the railway's location as a barrier to movement. The opportunity exists for an exciting and strong design to be created but this may cost in the region of £5 million and would need to accord with Network Rail's specification. The fact that redevelopment to the east is planned could realize a contribution to enable such a scheme to happen.

4.1 Requirements of the Plan

- 4.1.1 The area's public transport provision is similar to that found in many parts of the UK with some strengths but a significant number of weaknesses public transport is not meeting its potential both in terms of investment in infrastructure and services and in terms of how services are delivered. Improving the profile and attractiveness of bus services is essential if more people are to be encouraged to use them.
- 4.1.2 The LTP provides the main policy context. It includes a Bus Strategy to explain how the County Council intends to support non-commercial bus services and work with others to provide a bus service to meet the needs of local people. The LTP notes that bus routes focus on urban corridors and there are comparatively few east-west services. Also, there is an unusually high proportion of services that are contracted out by the County Council 45% as they are not considered to be commercial propositions. This suggests a very strong commitment to providing short to medium term revenue support but raises the question of how effective this approach is in the face of rising tender costs from operators and more fundamentally, the role of the local bus network itself.
- 4.1.3 Some of the LTP targets are specifically related to public transport while it needs to be recognized that improvements to public transport form a major part of the package of measures to address car use (and hence road safety, congestion and air quality problems). The target for public transport patronage is to maintain the 31 million passenger journeys made in 2003/04 by 2010. This is not an ambitious target as it assumes no growth at all and instead `sets out to minimise the rate of decline'. The LTP funding commitment will not be adequate to achieve substantial change in levels of use.

4.2 Improving Accessibility

- 4.2.1 Improved accessibility to facilities by public transport, walking and cycling is a major component of LTPs. This can only be achieved if the whole route is considered, that is the walk to the bus stop as well as the bus journey itself. Many routes to stops are poor with isolated stops, limited facilities and poor lighting. Stops should be located at transport nodes such as the intersection of walking and cycling routes and where there is some form of activity such as a shop, petrol station or similar.
- 4.2.2 Accessibility to a range of facilities is at the core of the LTP. This includes equitable travel for health, employment, education and other purposes. The reorganization of health facilities has emphasized the need to provide strong bus links to established hospital sites including the QE2 in Welwyn Garden City and the Lister Hospital in Stevenage as well as GP surgeries.

4.3 Bus Services

4.3.1 The Bus Strategy sets out aspirations to improve services and infrastructure against the objectives for safety, congestion management, accessibility and quality of life. Continuing fare increases are seen as a barrier to bus use. While operating costs, mainly fuel, have risen substantially, the commercial market necessitates higher fares to cover these costs.

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Fares tend to be complex and offer poor value in relation to the perceived cost of car use. Information provision is fundamental to expanding the use of the network and can take a number of forms, many of which are inadequately presented in the area currently.

- 4.3.2 There is insufficient evidence in the LTP2 about how the emphasis on bus priority measures will be taken forward in Welwyn Garden City, particularly given the fact that the area has relatively few signal controlled junctions the Bridge Road/Broadwater Road junction includes bus detection equipment but there are no other similar junctions. There are limited opportunities for priority measures at roundabouts without major investment.
- 4.3.3 To support non-commercial bus services, the County Council is dependant on its own revenue budget, the district council's budget and developer contributions. The Bus Strategy recognizes the role of district councils both in their advisory role and to provide funding. Developer contributions are also a means of securing bus services although funding may be subject to time limits.
- 4.3.4 The Mid Hertfordshire Area Transport Plan includes a Passenger Transport Strategy. For bus, this involves working with operators for improvements (particularly east-west links), introducing bus priority measures, improving waiting facilities and information and related measures. For rail, improvements to stations are supported as well as more major infrastructure schemes. As part of an integrated network, provision for taxis will be made to help address social exclusion. The plan also includes a target to reduce car mode share from 66.7% (2001) to 59.1% by 2021 of which increased bus patronage is an element. However, given the level of resources committed to passenger transport in the LTP, it appears unlikely that this target will be met.

4.4 Rail Services

- 4.4.1 The rail stations in the area are served by frequent and rapid services to London and to Stevenage and the north on the East Coast Main Line. Around 79 trains serve Welwyn Garden City each way Monday to Friday; Welwyn North has around 38 trains each way. These are operated by First Capital Connect which operates services radiating from London Kings Cross.
- 4.4.2 At Welwyn Garden City station, the incorporation of the station facilities into the Howard Centre is innovative but the weak point is the bridge linking this with the platforms. The bridge itself is dull and unattractive, especially after dark and the lifts are not attractive to potential users. Access from the east across the railway is a major concern.
- 4.4.3 Welwyn North station has a more limited local catchment and could be expected to attract users from a wider, particularly those who drive to a station and are closer to Welwyn North than another station with parking. Welwyn North is an attractive and largely unchanged facility, well suited to its level of use.

4.5 Improving Accessibility

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isolated stops, limited facilities and poor lighting. Stops should be located at transport nodes such as the intersection of walking and cycling routes and where there is some form of activity such as a shop, petrol station or similar.

4.6 Rail Station Surveys

- 4.6.1 Rail services are well used and provide rapid and frequent links to Potters Bar and London Kings Cross to the south and Stevenage and East Coast Main Line destinations to the north. However, there has been little data obtained on how and why people use the stations and hence surveys were undertaken in September 2006.
- 4.6.2 Welwyn North is well used during peak periods but has very limited use off-peak. Much of the demand comes from the wider surrounding area as indicated by the take-up of parking spaces both in the two station car parks and on-street in the vicinity of the station (the latter partly attributable to motorists avoiding the car park charging). Welwyn Garden City has a healthy level of use, particularly during peak periods.
- 4.6.3 The majority of journeys are for commuting. Around 16% of journeys to Welwyn Garden City are for shopping and around 16% of journeys to Welwyn North are for work other than the usual workplace.
- 4.6.4 The proportion of people making regular journeys was high, as would be expected with a strong commuting route. 43% of journeys to Welwyn North and 43% to Welwyn Garden City are made five or more times per week; 25% of journeys to Welwyn North and 20% to Welwyn Garden City are made between two and four days per week.
- 4.6.5 The means by which people travel from the station to their destination is important both in terms of their travel decisions and in relation to the options available and the ease with which they can be used. A high proportion of people walk from the stations to their destinations, particularly Welwyn Garden City (58%). The access to the latter from the east side of the railway via the footbridge is unattractive and the number of people using it supports the case for major improvement. Welwyn North has a significant number of car park users, reflecting the limited provision at Welwyn Garden City. Welwyn North also has the largest proportion of on-street parking by rail users, even when the station car parks are not fully occupied. Car drop off/pick up is evident at both locations for which informal arrangements apply as there are a limited number of short stay parking spaces available.
- 4.6.6 Buses are used by relatively small proportions of rail users, 8% at Welwyn Garden City but no bus interchange is evident at Welwyn North due to the lack of services available. 8% of Welwyn Garden City respondents arriving by train then used taxis suggesting that good interchange is important. Cycling accounted for 3% of rail users at Welwyn North and 4% at Welwyn Garden City. This represents significant demand for which secure cycle parking should be available.

4.7 Improving Buses in Welwyn Hatfield

4.7.1 Throughout the country, steps are being taken to ensure that the profile of buses is raised and that more people choose to use buses. Where pro-active initiatives have been taken, significant improvements have been made.

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- 4.7.2 It is clear that strong marketing of services is essential. This needs to cover not just routes and timetables but the wider concept of bus users, often targeted at habitual motorists and particular groups such as young people. Currently there is little evidence of this in Welwyn Hatfield, although Uno³ is very well placed to promote bus use.
- 4.7.3 Partnership is also essential. An active partnership should be developing ideas to improve infrastructure and services in Welwyn Garden City. While there is not a major congestion problem, infrastructure at stops and interchanges could be improved considerably and raise the profile of services. Intalink⁴ provides a basis for better integration and co-operation but needs to involve more than branding and ticketing.

4.8 Welwyn Garden City Bus Station

- 4.8.1 The bus station is located at the northern end of the Howard Centre adjacent to Bridge Road. It lacks style and attraction and takes the form of standard shelter arrangements with linear stops for buses (as opposed to an acute 'saw-tooth' layout). While the location is reasonable in relation to the town centre and rail station, it lacks good signing and walk links and a contemporary and stylish re-design would enhance the appeal of the bus station which is currently unimaginative and unappealing for potential users. The layout is not conducive to level, safe access as some users are required to cross to the central island stops. It is unlikely that another suitable site would become available and it is appropriate to retain the bus station in its current location but with improved layout and facilities.
- 4.8.2 The bus station was reconstructed in the 1980s with stops alongside the kerb and with two additional stops on an island, necessitating users to cross the circulatory area. The footway adjacent to the main boarding area is narrow and there is limited space for queuing and to provide information. Vehicle entry is from the east (Osborn Way roundabout) and there is a rising gradient to the exit at the west onto Osborn Way close to the Stonehills junction. The bus station has limited weather protection (overhang from the Howard Centre and shelters on the island). While reasonably located in relation to the town centre, the facility looks dated and unappealing. Figure 4.1 shows the current layout.
- 4.8.3 The town centre masterplan currently being devised is considering an alternative arrangement for buses which would abandon the bus station in favour of on-street stops. A decision on the future of the bus station and its possible enhancement has yet to be made.

³ Uno, formerly University Bus, is the bus company founded and operated by the University of Hertfordshire.

⁴ Intalink is a partnership between local authorities, bus and rail operators to achieve better travel information, awareness of services, improved co-ordination and integration and higher standards of service.


Figure 4.1 Current Layout of Bus Station

- 4.8.4 A review of bus station capacity was undertaken based on public timetables and times of arrival and departure. This indicated that the bus station operates within capacity.
- 4.8.5 A re-design would meet a number of objectives:
 - provide a much more attractive image of bus use in the town;
 - allow better vehicle movements and avoid conflicts with pedestrians;
 - create level boarding/alighting to meet DDA requirements; and
 - provide better weather protection and passenger facilities.
- 4.8.6 The basic concept is to provide bays on a 'saw tooth' arrangement, that is with buses directed into bays and reversing out (four bays) with one driver-on/drive-off stop for services with short dwell times and one driver-on/drive-off stop for alighting passengers using services that terminate at Welwyn Garden City. Space is provided on the north side of the bus station for vehicles to layover.

Constraints

4.8.7 By adopting the boundaries of the current site, there is a limited amount of space available. Other constraints are evident from the structure of the Howard Centre and the pedestrian bridge to the car park on the other side of Osborn Way. The layout has been designed to avoid structures and space the bays generously. This is for two reasons – to allow the

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construction of kerbing for level boarding and alighting (and hence overcoming the problem caused by the gradient) and to provide appropriate space for buses to reverse.

Benefits

- 4.8.8 More circulatory space for passengers will be created. This will allow better facilities to be provided such as seating and comprehensive information. People with mobility impairments will benefit from more space and level boarding of buses. No passengers will need to cross the vehicle circulation area and hence safety is improved doors could be provided between the boarding points and buses if required to add to the safety features if required.
- 4.8.9 It would be advantageous to create better weather protection in the form of a canopy the length of the facility from the Howard Centre structure to cover the boarding bays. An entrance for pedestrians to the facility from the town centre in the form of a glass frontage would raise the profile of the bus station significantly as well as provide weather protection. This could warp around the vehicle exit and be a strong design feature to enhance the built environment.
- 4.8.10 All the current bus movements will continue to be possible with the revised layout (access from two directions from Osborn Way roundabout), exit onto Osborn Way. Hence all services to the town will be able to access the bus station.
- 4.8.11 The main difference will be with the reversing of buses from the four 'saw tooth' bays. This is standard practice in many bus stations and relies on the simple rule of all incoming buses giving way to reversing buses. Ample space is provided between bays to allow visibility and manoeuvring space. The design has been undertaken on the basis of all buses being 12m long although many buses currently in use are smaller. Given that not all the bays will be used all the time suggests that entry and exit will not cause any difficulties. Figure 4.2 shows inbound vehicle movements with the proposed new layout.



Figure 4.2 Inbound Vehicle Movements for Proposed Bus Station Re-Design

4.9 Public Transport Action Plan

Bus Services

- 4.9.1 It is appropriate to establish an effective partnership involving all bus operators, Hertfordshire County Council, Welwyn Hatfield Council, developers and others to:
 - introduce infrastructure improvements on- and off-street including comprehensive upgrading of stops and bus interchanges (enhancing Welwyn Garden City and providing new facilities elsewhere);
 - work with developers to integrate bus services with proposals at the planning stage and through to implementation – ensuring that services meet demand;
 - improve vehicle presentation and customer care although these vary, our observations suggest that there is some room for improvement;
 - significantly improve information at stops, bus stations and elsewhere using various media (web sites, telephone, real time, static);
 - jointly market services under the Intalink brand;
 - review current services in terms of routes and timetables taking into account demographic and economic changes;

- commission research into demand patterns and needs of the community adjusting the network to meet new demands such as evening and weekend services and revised routes;
- consider new fare structures and payment methods helping to speed up journeys and encourage use; and
- consider best practice from elsewhere to introduce tried and tested initiatives.

Rail Services

- 4.9.2 The number of rail services available is impressive with rapid journey times to key destinations, particularly London. However, integration with other modes could be improved. More specifically:
 - on-street car parking at Welwyn North needs to be more regulated in view of the high number of station users who arrive by car;
 - the footbridge to Welwyn Garden Station must be replaced by a high quality bridge which would also serve as a major link between the west and east parts of the town;
 - additional station parking could be considered at Welwyn Garden City if justified on road traffic grounds and provided that train capacity is available; and
 - revised interchange arrangements should be designed at Hatfield Station to take the opportunities presented to create a high quality rail/bus/taxi/cycle/walk facility that is more representative of the user types and will attract additional rail users.

5.1 New Opportunities

- 5.1.1 Promotion of rail and bus journeys, walking and cycling is best achieved when the development proposals focus on these modes rather than on car movements and parking provision.
- 5.1.2 The District Plan⁵ sets out the Council's position regarding development requirements and constraints in accordance with other planning frameworks including regional guidance and the LTP2. The Plan includes three key principles: to locate development where it is already accessible by a number of modes of transport, give priority to walking, cycling and passenger transport in the design and servicing of development and reduce car parking at accessible sites.
- 5.1.3 The creation of additional retail and other land uses in the town centre could provide the catalyst for other initiatives including the proposed re-vamp of the bus station, improvements for pedestrians and cyclists and the removal of unnecessary on-street parking spaces in the central area.

5.2 Regional Housing and Employment Allocations

- 5.2.1 The East of England Plan the regional spatial strategy has been subjected to an Examination in Public and the Panel has produced its report. The Panel recommends that Welwyn Hatfield's housing allocation from 2001 to 2021 should rise from 5,800 proposed in the draft plan to 10,000 dwellings and that Welwyn Garden City and Hatfield should become Key Centres for Development and Change. In addition it recommends the development of new employment sites within the borough. This could mean that approximately 190ha (470 acres) will be released from the green belt in Welwyn Hatfield alone an area equivalent to the built-up area of the Hatfield Aerodrome site.
- 5.2.2 The identification in the ODPM's Sustainable Communities Plan and the regional spatial strategy of Stevenage as a Key Centre and a priority area for regeneration suggests that its role will grow relative to Welwyn Hatfield (even if substantial additional development takes place in the latter). The expansion of the Lister Hospital and retail/leisure activities will require stronger public transport links to be provided throughout the working day and during evenings and weekends also.

5.3 Development Sites in Welwyn Garden City Town Centre

5.3.1 According to the District Plan, priority should be given to walking and cycling rather than car movements in the town centre. It also requires that in terms of access and servicing, any schemes would need to provide good pedestrian links with the rest of the town centre, make provision for public transport and provide for any necessary alterations to the surrounding highway network to maintain vehicular movement around the town centre. Developments would need to provide for additional parking commensurate with the scale of additional retail

⁵ Welwyn Hatfield Council (2005) *Welwyn Hatfield District Plan 2005.*

5 Development Sites

floorspace and other accommodation, which is easily accessible and in accordance with adopted parking standards. The Campus East site must also continue to provide strategic car parking requirements for the town centre as a whole.

- 5.3.2 The expansion of retailing will encourage more trip-making and it can be expected that the majority of these will be by car. A 'traditional' view is that the economic success of a centre is indicated by an increase in traffic. However, it is the number of people who visit rather than the number of vehicles that are evident that is a better indicator of success. Measures should reflect a need to encourage circulation on foot rather than providing short stay on-street parking to support economic activity and create a better environment.
- 5.3.3 Traffic circulation would be improved with more traffic directed towards Osborn Way to access the town centre; currently, Osborn Way is lightly used. However, the future of Osborn Way is unclear as an additional link road is being considered. The concept of removing traffic from the town centre in favour of pedestrians and cyclists suggests a move towards a circulatory route around the centre. Another possibility is the removal of traffic from Osborn Way with traffic being transferred to the Broadwater Road approach. This would add to peak period congestion in Broadwater Road (largely associated with the Bridge Road junction) even without additional movements from the redeveloped Broadwater Road West site.

Town Centre North

5.3.4 A site in front of the John Lewis store could be developed for which Supplementary Planning Guidance is being produced but has yet to be adopted. This is the preferred site for additional comparison goods floorspace, given its location within the primary retail core of the town centre and the potential for linkages with the Howard Centre and John Lewis. It has the capacity to accommodate up to 9,300m² (100,000 sq.feet) of additional retail floorspace.

Town Centre South

5.3.5 Land at the southern side of the town centre fronting Church Road provides another opportunity for additional convenience goods floorspace. It includes an established food store, which could be extended to provide a larger store to help address the need to improve the quality of the convenience goods retail provision in the town centre. It may also provide for a mix of other uses including cafes and restaurants and its development would assist in anchoring and revitalising the end of the town centre, in accordance with the town centre strategy.

5.4 Campus East

5.4.1 This is one of two locations for additional convenience goods retail floorspace in the town centre. The site has good pedestrian links, is close to the bus station and contains a number of car parks serving the town centre as a whole. It contains an established supermarket, which could either be extended or redeveloped to provide a larger store which would help to address the need to improve the quality of the convenience goods retail provision in the town centre. Its location on the edge of the main civic/cultural/leisure area of the town centre means that it is in a strong position to generate linked trips which would make it suitable for

a mixed-use development, including residential and office uses, which could enhance the sustainability and vitality of the centre.

5.4.2 The Campus East site is identified for a mixed use development comprising retail, office and residential uses. When taken forward, the Council requires that good walking access is achieved and improved passenger transport provision is sought alongside measures to maintain efficient vehicle movement on surrounding roads and to provide 'adequate parking to meet the needs of the development and the strategic parking needs of the town centre as a whole'.

Oaklands College of Further Education

5.4.3 It is suggested that the college will consolidate activities at the Smallford campus in St Albans superseding the use of the existing site at The Campus (or a smaller site). In the short term this suggest that improvements to walking routes between The Campus and the town centre are less important but in the longer term, other uses will require better links, particularly to the bus and rail stations. Re-structuring of the college activities will require better links between the various sites and improved inter-urban buses.

5.5 Broadwater Road West

- 5.5.1 A development brief will be produced for this previously developed land with some listed buildings to take into account. A mixed use development is proposed with employment, residential, leisure and other uses. This will generate additional traffic on Broadwater Road. While this may not be a major problem in terms of the capacity available, there are likely to be added pressures at junctions in the vicinity. More significantly, efforts must be made to provide access by non-car modes to avoid further dependency on car use. This should include regular bus services (which would also serve extensive nearby employment areas), comprehensive cycling facilities and well-designed walking routes.
- 5.5.2 It is important to ensure that a sustainable site is promoted including appropriate bus services and walking and cycling links alongside parking provision. This leaves open the possibility of a car-orientated site, despite the proximity to the town centre and its rail and bus stations. Unless very strong links are provided by sustainable modes, the site will exacerbate the problem of severance by the railway and not contribute to reducing the exclusion that this creates.
- 5.5.3 This site is very significant in that it has the potential to provide increased activity to the east of the railway. The railway forms a barrier to movement and has the effect of isolating the residential and commercial areas to the east from the town centre to the west of the railway. When the site is redeveloped, it is essential that the link between the two halves of the town is improved.
- 5.5.4 Key issues include replacing the bridge across the railway and the Bessemer Road/Broadwater Road junction. The current footbridge is unattractive and structurally deficient and replacement should be considered. Features of the existing bridge include:
 - provision of access between Broadwater Road, the rail station and the Howard Centre which is preferable for many people to the alternative road links;

- well used but has limited capacity;
- poor appearance and lighting;
- access from the ends and station platforms only so there is a long section with no escape route;
- no cycle access; and
- steps on the east side preventing easy use by people with mobility impairments.
- 5.5.5 It would be possible to replace the bridge with a more modern bridge in the same location but this would be a missed opportunity. A replacement structure should have the following features:
 - full accessibility at both ends i.e. steps and ramp on the east side;
 - width to allow for heavy use and to reduce the feeling of isolation;
 - covering to allow for inclement weather;
 - surveillance including CCTV; and
 - comprehensive lighting.
- 5.5.6 There is the opportunity to provide a high profile bridge both to provide a means of crossing the railway and to introduce a landmark structure to the town at what is a gateway for rail users. This would be of major benefit to the Broadwater Road redevelopment in that points of access (bus station, rail station) and the town centre would have high quality access to the site.
- 5.5.7 It is suggested that a working group of interested parties should consider the strategy to be adopted to work towards the delivery of transport schemes and would include:
 - Welwyn Hatfield Council;
 - Hertfordshire County Council;
 - the developer(s);
 - adjacent land owners/developers;
 - Network Rail (maintainer of the current structure);
 - First Capital Connect (station leasee);
 - Town Centre Manager; and
 - representatives of cycling and walking interests.
- 5.5.8 The cost of any new bridge, particularly a major high profile structure, would be considerable, probably several millions of pounds. It could however be funded in part or wholly by the developer(s) and the private sector stakeholders indicated above, working jointly with local authority interests.

5.6 Impacts of Proposed Developments

5.6.1 MVA Consultancy has devised a Transport Assessment Model to ascertain the impacts across all modes of development proposals. Individual proposals are generally required to determine Transport Assessments to demonstrate that they can be accommodated within the

5 Development Sites

transport networks and outline the measures that will be introduced to ameliorate the impacts of additional demand. On this basis, the acceptability of each proposal is determined by the highway authority and the local planning authority.

- 5.6.2 The model requires input data to quantify the expected land uses and associated trip generation. It then calculates generated trips (with destination zones) and attracted trips (with origin zones) by time period and direction. The number of trips by mode is then determined to indicate the expected impacts on the transport networks. Car driver trips are then assigned to the local road network to show the expected impacts on highway links and junctions.
- 5.6.3 Inevitably each of the new developments will create additional demand for travel for a variety of purposes. However, minimizing car use is the key to reducing the impacts so that the highway network can continue to function without congestion and to reduce the negative impacts of car use pollution, noise, safety, exclusion, cost, severance and parking provision.
- 5.6.4 The Bessemer Road/Broadwater Road/Bridge Road junction suffers from congestion at peak times which delays buses as well as other traffic. Its location adjacent to the Broadwater Road West redevelopment site and close to other redevelopment sites in the Bessemer Road/Mundells area means that the junction will experience considerably greater demand in future. Work will need to be undertaken to improve the junction design to avoid further congestion.

5.7 Town Centre

5.7.1 The model has been applied to the town centre on the assumption that additional retail capacity is provided in Town Centre North and South and at Campus East. New residential units are included at Campus East and office and other land use changes in Town Centre South. Data on the location and quantity of the proposed changes were obtained from Welwyn Hatfield Council. The majority of trips associated with the development would have origins and destinations within the town. While there are car trips generated, walk trips are also significant. Bus also provides a means of accessing the centre. Table 5.1 shows the estimated number of trips generated by the additional development. While the quantum of development could change, the relatively local nature of the journeys suggests that there are opportunities to promote walking, cycling and bus journeys in response to the expansion of the retail offer.

Table 5.1 Trip Generation for Welwyn Garden City Centre Expansion

Origin/Destination	AM Peak		PM Peak	
	In	Out	In	Out
Internal	6,971	7,783	8,515	7,673
Local external (within WGC)	503	1,117	1,739	1,517
Longer external (outside WGC)	143	389	515	442
Total	7,619	9,289	10,769	9,632

Source: MVA Consultancy.

6 Car Parking

6.1 The Role of Parking

- 6.1.1 Car parking is a fundamental element of any transport strategy for the town. The availability and cost of parking is a major influence on how people choose to travel. The supply and location of spaces incurs costs to providers, particularly Welwyn Hatfield Council in its role as parking manager for several of the key sites. Parking has been considered in a number of inter-related strands:
 - the perception of parking in making travel choices and the implications for social exclusion;
 - traffic management associated with parking access and egress;
 - Iong stay versus short stay provision;
 - off-street charging arrangements;
 - on-street parking in the town centre;
 - privately managed parking;
 - residential parking;
 - rail station parking;
 - parking standards for new developments; and
 - overall strategy including walk links, personal security.

6.2 Travel Choices

- 6.2.1 People with a car available will orientate regular journeys around a known parking space. This provides a sense of security and reliability and hence colours their perception of other means of travel. Thus car use is encouraged as it is perceived to be simple and relatively inexpensive. For less regular journeys, people perceive the ease with which a parking space is found as a measure of the success of their journey.
- 6.2.2 A similar view is often adopted by retailers where car parking is seen as a considerable incentive to potential shoppers. However, the attractiveness of the town centre can be gauged in terms of pedestrian activity rather than the number vehicle movements. It is people who generate business, not cars.
- 6.2.3 People without access to a car are disadvantaged in a number of ways compared with car users. An emphasis on car parking helps to marginalize sustainable modes. Fundamentally, providing car parking, especially in surface car parks, is wasteful of space and is often in locations where land is most valuable such as in town centres. Although car parking is provided by the local authority, there are implications for the enforcement and maintenance budgets and car parks are of little value to people without cars.

6.3 Traffic Movements

- 6.3.1 Finding a parking space is affected by a number of factors including local knowledge, personal preferences, the location of the final destination(s), the quality of the car park and the charges levied.
- 6.3.2 The parking stock in Welwyn Garden City is ample to accommodate current demand. Data suggests that there is always spare capacity, even at peak times when some of the individual car parks become full. However, the limited access points to car parks can create a perception that there is congestion or that demand is not being met. The location of the entrance to the Howard Centre car park may contribute to its lack of use compared with other car parks.
- 6.3.3 Providing appropriate signing to car parks is essential to ensure efficient vehicular movements. This can be in the form of both static signs indicating the location and type of car parks and variable message signs. The latter have proved to be very useful in many centres and can show the real time availability of spaces. This avoids unnecessary traffic movements and helps motorists find a space quickly; this should be considered for the town.
- 6.3.4 On-street arrangements in the town centre are poor. The one way system requires motorists searching for a space to circulate around a lengthy route. This causes unnecessary traffic and undermines the quality of the central area. There are also safety implications as walking is in conflict with vehicle movements and air quality is worsened by cars circulating. The on-street spaces in Howardsgate and Stonehills contribute little to the town's economy in that people have easy access to alternative parking spaces close by. Close regulation is needed to ensure that the limited stay constraints are enforced. The current enforcement regime is effective and around 600 Penalty Charge Notices are issued monthly.
- 6.3.5 To create a high quality town centre environment, limited stay on-street parking in the core of the town centre could be abolished (apart from provision for Blue Badge disabled drivers). Stonehills plus all or part of Howardsgate could then be a designated a vehicle-free area in which walking and cycling predominate and could also provide a focus for public events. This would contribute towards air quality and environmental targets in line with LTP targets. The town centre would then be able to fully exploit its unique garden city experience.
- 6.3.6 The core of the town centre (the area bounded by Parkway, Church Road, Osborn Way and The Campus) is surrounded by a number of car parks and on-street spaces. The off-street capacity here meets the demands of long stay users such as retail employees and people commuting by rail. On-street spaces that could be attractive to commuters such as those to the west of Parkway are restricted between 9am and 11am so that long stay use is prevented.
- 6.3.7 Parking charges should reflect the value of the spaces. However, parking charges are an emotive subject, particularly where there has been a long history of restraint. There are ways of introducing a new charging structure:
 - give users extended notice of impending changes e.g. six months or a year in advance, coupled with season ticket discounts;
 - use comparisons from other centres to demonstrate how higher charges can be sustainable and justified; and

- consultation to achieve an understanding of change.
- 6.3.8 These difficulties are addressed by the current arrangement which reviews long and short stay charges in alternate years. Although Welwyn Garden City parking prices are higher than some other areas (at around £1 per hour), long stay spaces at Campus East Lower are relatively cheap at £3.50 per day.
- 6.3.9 While Welwyn Hatfield Council manages some car parks, others are privately managed including Waitrose, John Lewis and Sainsbury. Dialogue with private operators is essential to ensure a consistent approach and to encourage employers which provide long stay parking to develop travel plans and incentives to reduce provision.

6.4 Residential Parking

- 6.4.1 On-street residential parking causes problems as many parts of the town were built before the widespread ownership of cars. However, the peripheral parts of the town where cars proliferate cause problems for moving vehicles as they are obstacles to safe traffic and block sightlines. Parked cars create hazards for other road users, particularly pedestrians and cyclists as routes are blocked although there may be some traffic management benefits in reducing vehicle speeds. Buses are delayed by parked vehicles, particularly around the QE2 Hospital where cars associated with staff and visitors to the hospital are blocking local roads. A similar situation has been evident around the University of Hertfordshire's College Lane campus where there have been conflicts between residents and staff and students parking.
- 6.4.2 Residential parking zones can be introduced to overcome this. However, these can be unpopular with residents as they inevitably introduce constraints. Their merits in terms of road safety are evident however, with junctions cleared and safe crossing places created. Residents' zones require close regulation to ensure that an equitable and effective regime in maintained and this has implications for the Council's revenue budget. With decriminalized parking in place, as in Welwyn Hatfield, the introduction of controlled zones is made easier. However, any resident permit scheme should be acceptable to local people in that parking problems must be so serious that they outweigh the inconvenience and cost of a permit scheme. Welwyn Hatfield Council has deferred any decisions on introducing Controlled Parking Zones in favour of junction protection and providing additional parking in key locations.
- 6.4.3 Priority areas identified include the area around the QE2 Hospital, around Welwyn North Station and, to a lesser extent, in and around the town centre such as the Guessens Road area.

6.5 Rail Station Parking

- 6.5.1 Providing parking for rail users can be difficult. At Welwyn North station, the car park operates at capacity and it is evident that rail users park in adjacent streets to the detriment of local residents. Other than better management of on-street parking, there is little more that can be done at this location as the majority of rail users access the station by car.
- 6.5.2 However, at Welwyn Garden City station, there may be an opportunity to create additional station parking as part of the Broadwater Road West development although it is contrary to

6 Car Parking

County Council policy to create additional parking for rail users. Parking for rail users is a controversial matter in that it appears to encourage car use and traffic movements, particularly in the context of the town centre. It needs to be demonstrated that station parking is unrelated to town centre provision and accommodates the needs of people who would otherwise make longer journeys by car rather than by transferring to rail for the main part of their journey.

6.5.3 The possibility of a new car park supports the case for a replacement footbridge to access the station from the site. However, despite generating additional income for Network Rail and the train operator, this would need to be justified given the fact that trains are operating over their capacity during peak periods and there is no space for additional users who could make use of long stay parking. The availability of parking may also attract users from sustainable modes.

6.6 Parking Standards

- 6.6.1 When new developments are planned, the amount of parking is determined according to Welwyn Hatfield Council's parking standards which accord with those set out by the County Council. These should be related to the level of accessibility by non-car modes where there is good access by walking, cycling and public transport, there is less justification for parking provision. Many urban locations allocate no parking at all for residential developments on the grounds that sites are fully accessible. For locations such as Welwyn Garden City, this is less likely to be achieved but nonetheless centrally located sites can benefit from the provision of less parking. In this situation there is more developable land and a more attractive, people-friendly setting in which to locate. Reduced parking standards would be appropriate for the Broadwater Road West site given its proximity to the rail and bus stations (with a new walk/cycle link) and offers considerable potential for sustainable urban design without domination by car access and parking provision.
- 6.6.2 For retail development in the town centre, the onus should be on developers to robustly defend any additional parking provision. It will need to be demonstrated that additional provision will create additional retail activity rather than supporting sustainable modes. It is unlikely in the current policy framework that additional parking provision can be justified, particularly as there is sufficient capacity available in and around the town centre already.

6.7 Current Parking Supply

- 6.7.1 An assessment has been made⁶ of the occupancy levels of the three main car parks:
 - Hunters Bridge (640 spaces) The analysis indicated that it is used to capacity on Saturdays (November and December) for much of the day but there is space available on weekdays but with peak demand around the middle of the day. This shows that it is well located and popular;
 - Howard Centre (700 spaces) Spaces are available throughout the week, the maximum noted being around 550 in December; at least 100 spaces are available at

⁶ Analysis by Mouchel Parkman as part of Urban Practitioners' work on town centre options for Welwyn Hatfield Council.

times of peak demand suggesting that it is not as attractive to shoppers as it could be, despite being slightly cheaper than other car parks; and

- Campus West (355 spaces) This is more distant from the retail core and serves the college and civic activities. However, some spaces are available on weekdays (with at least 30 spaces free in December) but it is less well used on Saturdays.
- 6.7.2 In addition, the John Lewis car park is well used with queues building up regularly while onstreet spaces (free for limited stay) in the town centre are well occupied with regular turnover. Table 6.1 sets out the off-street public car parking availability. The total off-street parking stock of over 3,000 spaces compares favourably with other towns. While motorists can park in the core area all day, the cost of doing so reflects their central location.

Location	Capacity	Туре	Management
Church Road	221	Short and long stay	Welwyn Hatfield Council
Hunters Bridge	640	Short and long stay	Welwyn Hatfield Council
Campus West	355	Short and long stay	Welwyn Hatfield Council
Howard Centre	725	Short and long stay	Howard Centre
Waitrose	228	Short stay (2 hr max)	Britannia Parking Ltd
John Lewis	100	Short and long stay	John Lewis
Osborn Way (station)	401	Short and long stay	Welwyn Hatfield Council
Campus East Lower	370	Long stay	Welwyn Hatfield Council
Campus East Upper	148	Weekends only, long stay	Welwyn Hatfield Council
Total Supply	3,188		

Table 6.1 Town Centre Off-Street Parking Capacity

Note: Church Road car park to be replaced by new Sainsbury car park with an additional 129 spaces. College parking at Campus East is available at weekends (around 350 spaces) at a cost of 50p per day which competes with other off-street parking.

source: <u>www.welhat.gov.uk</u>⁷.

6.7.3 Table 6.2 sets out the levels of occupancy of each of the three car parks for which data was available. This shows the relative popularity of the Hunters Bridge car park but also shows that for much of the day, there is considerable capacity available. This suggests that short term use, particularly for shoppers around the middle of the day on Saturdays, is the key influence on demand rather than long stay use.

⁷ Note: capacity of Hunters Bridge and Howard Centre car parks is different to that used in Mouchel Parkman analysis (Campus West 335 and Howard Centre 700).

Car Park	Weekd	Weekdays in November		Saturdays in November		
	Mean	Min	Max	Mean	Min	Max
Howard Centre	49%	30%	61%	55%	25%	74%
Hunters Bridge	53%	14%	78%	77%	20%	100%
Campus West	79%	53%	94%	70%	20%	98%
Total	56%	35%	73%	65%	41%	89%
Car Park	Weekd	lays in Dec	ember	Saturd	ays in Dec	ember
Car Park	Weeko Mean	lays in Dec Min	ember Max	Saturd Mean	ays in Dec Min	ember Max
Car Park Howard Centre		-			-	
	Mean	Min	Max	Mean	Min	Max
Howard Centre	Mean 65%	Min 45%	Max 80%	Mean 68%	Min 43%	Max 85%

Table 6.2 Car Park Occupancy (%) 9am to 5pm

6.7.4 Figure 6.1 shows the location of car parks in the town centre and public on-street spaces. It also indicates proposed locations for variable message signing to direct motorists to the most appropriate car parks, depending on occupancy.

Figure 6.1 Town Centre Parking



6.8 Parking Strategy

- 6.8.1 Welwyn Hatfield Council has indicated its approach to parking⁸ to meet the requirements of PPG13, the Regional Transport Strategy and the LTP. The Council has subsequently acquired Decriminalised Parking Enforcement powers. Of the strategy's action plan for on-street parking, greater management in residential and commercial areas is proposed. For off-street parking, several elements are noteworthy:
 - to set charges in the Council car parks in support of the overall car parking objectives;
 - to introduce charges in all Council car parks within five years;
 - to limit the number of long stay parking spaces in Council car parks to the current level;
 - to consider parking provision and management as part of the overall transport system; and
 - to encourage the use of alternative modes of transport [to the car] such as buses, rail, cycling and walking.
- 6.8.2 Social inclusion is also referred to: 'Care will be taken to ensure that car parking charges are not excessive and that adequate car parking is available in town centres'. It is not clear however how 'excessive' and 'adequate' are defined.
- 6.8.3 Private Non-Residential (PNR) parking is identified as a major influence on travel behaviour but one over which the local authority has control only through new development sites. In the town centre and at many sites throughout the town, including recent developments, sizeable areas for parking are available, thus encouraging employees to travel by car. However, although powers are available to local authorities, the introduction of a workplace parking levy is not considered to be appropriate for Hertfordshire. With such PNR in place, control over the use of spaces is entirely up to the employer and there is little scope for encouraging the use of non-car modes other than through workplace travel plans. In practice, efforts are made to provide secure car parking as a priority at employment sites, contrasting with the basic facilities for bus users, cyclists and pedestrians. For example, minimal facilities for cyclists at new units at Mundells but car parking alongside Bessemer Road is within the site's secure perimeter fence while pedestrians and bus users gain access via a turnstile gate.
- 6.8.4 It is difficult to combine the parking interests of the local authority with those of the private sector in that a pricing strategy for council-managed spaces can be undercut by the privately-managed car parks. In this situation, all operators will need to cover costs so that price competition will only be short term. It may be pursuing dialogue among operators to define a parking strategy; should this not occur then the council's pricing can be altered incrementally to meet wider objectives independently of other operators.

6.9 Applying the Principles

6.9.1 The strategy provides a useful framework in the current policy context. In doing so, it substantiates restraining off-street parking provision, particularly as the current capacity is

⁸ Welwyn Hatfield Council (October 2004) Welwyn Hatfield's Parking Strategy 2004-2010.

not used fully. Moves to integrate parking with wider transport and land use changes will help to contain demand for car movement. Any proposed development of additional retail space in the town centre will need to consider the possible use of surface car parks and where that parking capacity could be relocated – this does not imply additional provision as the existing spaces are not fully used. The Council's intention to set appropriate charges should reflect the value of spaces i.e. those in the core should command higher charges. For new development sites, the level of parking provided should be determined by accessibility criteria for non-car modes.

- 6.9.2 The recommended approach can be set out sequentially:
 - remove on-street limited stay spaces from Howardsgate and Stonehills;
 - co-ordinate increases in off-street car park charges;
 - introduce comprehensive real time occupancy information on-street and via the Council's web site;
 - introduce residents' parking zones;
 - promote reductions in car parking provision for development sites; and
 - aim for a concentric arrangement of a walk/cycle zone in the town centre surrounded by short stay car parks with long stay provision beyond.

7.1 Issues Raised

7.1.1 A number of other issues have been raised during the development of the plan. While none is of major concern, all are elements of an integrated approach and are considered below.

7.2 East-West Links

- 7.2.1 Much of Hertfordshire suffers from poor east-west links. North-south rail and road links are generally very good with main rail lines and motorways passing close to urban centres in contrast to the poor east-west links. Where roads are available such as the A414, they are heavily used which can cause reliability problems for motorists, freight operators and interurban buses and scheduled coach services. Rail links are no longer available and coach connections to railheads are the only alternative to journeys into London and out again to reach many destinations.
- 7.2.2 The prospects of creating stronger links are limited, even with the level of growth planned. For public transport journeys, improved east-west inter-urban bus services offer the best means of making connections. However, it is difficult to balance the desire for inter-urban services against the commercial requirements of operators. To be attractive to potential users, a high frequency service is needed, particularly if traffic congestion worsens and reliability suffers. The Regional Transport Strategy supports inter-urban bus links but does not indicate where revenue support could be sought. The Green Line (Arriva) 724 service provides east-west links via Welwyn Garden City to Harlow and Heathrow Airport although at its eastern end it does not serve Harlow rail station or Stansted Airport. Constructing major new roads is not planned in the area while restoring or creating new rail links is not feasible.

7.3 Road Traffic Accidents

- 7.3.1 The LTP provides the main policy framework for road safety in the area. Improvements in road safety are necessary to ensuring vitality and wellbeing of the population. A number of specific issues are highlighted:
 - child pedestrian casualties peak at 12-15 year olds;
 - despite reductions in motorcycle casualties accidents associated with moped riders have increased recently;
 - 16% of KSIs involve pedestrians. High numbers of those are elderly and between the ages of 20-29; and
 - exceeding the speed limit was a factor in 16% of KSIs on 30mph roads.
- 7.3.2 Key action areas have also been determined:
 - to continue to implement education, engineering and enforcement measures;
 - to focus on target groups; and
 - to set up a Road Casualty Reduction Partnership.

7.3.3 Targets relevant to safety contained within the LTP are shown in Table 7.1.

Table 7.1 Hertfordshire LTP Safety Targets

Indicator	Baseline	Target (2010)
Number of people killed or seriously injured on roads in the authority	1084 casualties (1994- 98 average)	Reduce to no more than 600 casualties
Number of children (aged 16 or less) killed or seriously injured in the authority	113 casualties (1994-98 average)	Reduce to no more than 56 casualties
Number of slight injuries (all ages)	5509 casualties (1994- 98 average)	No increase in slight casualties

- 7.3.4 A number of other indicators link with safety and these are:
 - improvements to road and footway conditions;
 - school travel plans; and
 - speed limit compliance.
- 7.3.5 The Mid Hertfordshire Area Transport Plan contains the objectives and strategies for the area. The objectives relating to safety are:
 - reduce the adverse impacts of transportation on safety; and
 - improve personal security and safety.
- 7.3.6 A number of strategies have been identified to achieve and support the objectives above and they are to:
 - support and complement the countywide road safety plan to minimise the number of collisions and injuries occurring on the highway network; and
 - support and help to deliver the countywide Safer Routes to School programme.
- 7.3.7 Accident casualty data has been provided by Hertfordshire County Council for the three year period from 1 November 2003 to 31 October 2006. This represents all personal injury accidents reported to the police.
- 7.3.8 It should be noted that a comprehensive accident investigation study has not been carried out. Assessment has been based on the information provided which has focused on analysing accident problems in terms of a high level review. Many factors can affect accident occurrences which are often numerous and not independent. A more detailed study would also require:
 - traffic levels and composition for all roads;
 - detailed contributory factors;

- road types and lengths; and
- detailed knowledge of road signs, layouts and markings etc.
- 7.3.9 From the data provided it has been possible to examine the pattern of accidents in terms of type and location. Contributory factors are however more difficult to ascertain as information concerning this is limited. Figure 7.1 shows the location of all accidents by severity (slight, serious or fatal) within the urban area of Welwyn Garden City.
- 7.3.10 A total of 440 accidents occurred over the 3-year period which included 374 slight accidents (the equivalent of 85% of all accidents), 62 serious (14%) and 4 fatal (1%). These numbers also include accidents on the A1 (M) which have not been analysed any further here as this road forms part of the motorway network and is outside the area of study.
- 7.3.11 From the information available, it appears that the fatalities are isolated cases and it is more likely that they were attributable to human error rather than highway engineering factors.



Figure 7.1 Locations of Accidents by Severity

7 Other Issues

- 7.3.12 Accidents resulting in serious or fatal severity are thinly spread throughout the town which suggests that there are no major accident problem sites. In terms of accidents on links both Howlands and Heronswood Road have had the highest number of serious and fatal incidences compared to other roads within the town. Both roads have a speed limit of 30mph and are long and straight in places.
- 7.3.13 There are a number of locations where there are clusters of slight accidents:
 - The area near the main shopping centre particularly on Parkway and Howardsgate;
 - At and around the junction of Broadwater Road/Bridge Road junction;
 - On Stanborough Road near its junction with Lemsford Lane;
 - Mundells roundabout at the junction with the B1000 Waterside Road
 - Ascots Lane outside of the Queen Elizabeth 2 Hospital; and
 - On Black Fan Road at its junctions with Ridgeway and Herns Lane.
- 7.3.14 Interrogation of these highlight that they are isolated cases but are occurring at places where vehicle-vehicle and vehicle-pedestrian movements and conflicts are concentrated i.e. shopping areas, key junctions, a hospital and outside schools.
- 7.3.15 The data has also been plotted to show accidents by mode type (motor vehicle driver, passenger and pedestrian) and this is illustrated in Figure 7.2. As the figures show 417 or 71% of accidents involved motor vehicle drivers, 118 (20%) involved motor vehicle or bus passengers and 54 (9%) involved pedestrians. The national average for pedestrian casualties is 12%⁹ so Welwyn Garden City is slightly under.
- 7.3.16 Although the majority of road accidents are associated with motor vehicle drivers and passengers other users, such as pedestrians, cyclists and motorcyclists, are at higher risk therefore resources for safety improvements should reflect this.

⁹ Road Casualties Great Britain: 2005, Department for Transport



Figure 7.2 Accidents by Mode Type

Road Safety Action Plan

- 7.3.17 A review of the data provided shows that the most serious accidents are spread throughout the town. There are a number of areas where slight accidents are clustered and these are dominated in areas where vehicle-vehicle and vehicle-pedestrian conflicts are highest for example at key junctions, shopping areas, schools and the QE2 Hospital.
- 7.3.18 In a good practice guide¹⁰ the Department for Transport recommends the use of Urban Safety Management principles which in one project reduced casualty reductions by 15%. The key elements of this include:
 - defining an appropriate road hierarchy;
 - ensuring traffic moves on the right roads;
 - managing traffic speeds; and
 - co-ordinating the activities which affect road safety.

Town Centre

- 7.3.19 The mix of uses within the town centre, such as commercial, shopping and education, leads to a number of conflicts as a variety of functions are taking place such as through traffic, local distribution, shopping trips, walking and cycling. The most successful approaches in these areas have focused on measures to manage speeds to appropriate levels, allocate different parts of the road space to different functions and in particular the needs of the vulnerable road user have been given highest priority. Measures may include:
 - raising the priority of pedestrians and cyclists, giving them specific space such as cycle lanes and wider footway provision;
 - using gateways to emphasis the transition from one type of road to another;
 - separating different flow functions (through, distribution and access); and
 - reducing the difficulty of certain manoeuvres.
- 7.3.20 Accident problems within the town centre will also be caused by on-street parking brought about by conflicts occurring when vehicles access and egress parking spaces leading to conflicts. The extensive on-street parking also reduces visibility for all road users but can be particularly problematic for pedestrians crossing and cyclists navigating through the main shopping area.
- 7.3.21 Given these issues, the core town centre area would benefit from introducing measures similar to a 'home-zone' approach with improvements encompassing the following:
 - a reduction in traffic speeds to 20mph particularly where there is on-street parking and where roads are aligned with shops;
 - reallocation of road space to improve facilities for pedestrians and cyclists;
 - the use of gateway features to encourage reductions in vehicle speeds and increase driver awareness of vulnerable road users; and

¹⁰ Road Safety Good Practice Guide, Department for Transport (2001)

- the use of traffic management techniques to reduce vehicle speeds and give priority to pedestrians and cyclists.
- 7.3.22 Physical measures to reduce vehicle speeds, particularly vertical deflection, are often unpopular and can lead to a high degree of acceleration and deceleration, and increased noise nuisance. More innovative measures¹¹ could therefore be used which may include some of the following components:
 - build-outs with planting so parking bays can be retained but pedestrian crossings and visibility are significantly improved;
 - enhancements at and around junctions to improve the visibility of drivers turning out of side streets; and
 - the use of road colouring to visually narrow road widths and introduce mock road humps.

Residential Roads

- 7.3.23 Contributory factors leading to accidents on residential roads can be complex, however vehicle speeds, a variety of turning movements and conflicts between different road users are principally the main causes. A number of different traffic management and engineering solutions can be used primarily aimed at reducing vehicle speeds and displacing inappropriate traffic such as through traffic. Solutions can include:
 - the use of traffic calming measures;
 - the introduction of 20mph zones; and
 - the use of roundabouts to help break up the speed of traffic particularly at busier junctions.
- 7.3.24 As highlighted above where traditional traffic management schemes are unpopular or undesirable, other means of reducing speeds may be more appropriate. On roads near residential areas where on-street parking is evident (such as Harwood and Heronswood Road) suitable measures may include:
 - suitable bend treatment including the reduction of forward visibility so that drivers are encouraged to reduce vehicle speeds;
 - junctions treatment; and
 - the use of build-outs.
- 7.3.25 Non-engineering measures can also be useful and should be used as part of any engineering improvements put forward. Such measures are already well used particularly in association with school and workplace travel plans and they help to raise the profile of walking, cycling and public transport use. These measures typically include:
 - training and education, for example cycle training and road safety education;
 - walking buses;
 - publicity campaigns; and
 - Safer Routes and School Travel Plan initiatives.

¹¹ 'Psychological' Traffic Calming, TRL, 2005

7.4 Safer Routes to Schools

- 7.4.1 Providing children with means for safer and better access to education by walking, cycling and public transport addresses several objectives of the LTP including reductions in car traffic, improved safety and accessibility. The Safer Routes to School (SRTS) and School Travel Plan (STP) programmes are therefore essential if these objectives and associated targets are to be met.
- 7.4.2 Recent trends show that more and more children, especially younger children, are being escorted to school by car. The National Travel Survey (2005) indicates that between 1992/94 and 2002/03 there has been an increase of 10% and 6% in the proportion of children driven to school by car between the ages 5-10 years and 11-16 years respectively. The County Council estimates that 20% of peak hour traffic is now associated with the school run.
- 7.4.3 This raises a number of issues from increased traffic congestion, particularly within the vicinity of the school, creates poorer walking and cycling opportunities which can increase parental concerns about road safety, there is also the potential for children to lose mobility independence and may reduce the likelihood of them using more sustainable modes when they reach adulthood. Health benefits associated with walking and cycling are also important especially with concerns of increasing childhood obesity. It is therefore important to stop the decline so that these and other issues do not become more prevalent.

LTP Targets

7.4.4 The Hertfordshire LTP contains a number of indicators and targets relating to school travel and other associated areas as shown in Table 7.2.

LTP Indicator	Baseline (2003/04)	Target (2010/11)
Share of journeys to school by sustainable modes	57.5%	60%
Number of schools with a travel plan	14%	83%
Children Killed and seriously injured	113 (1994-98)	No more than 56
Cycling trips	2397 trips per day (2004/05)	2658 (11% increase)
Speed limit compliance	56% (2004/05)	60%

Table 7.2 LTP indicators and Objectives Relating to School Travel

Safer Routes to School and School Travel Plan Programmes

- 7.4.5 The County Council's SRTS and STP initiatives are programmes designed to help bring about road safety improvements and behavioural change so that more pupils are encouraged to travel to school by non-car modes. The SRTS ranking list for 2006/07 contains details on the level of SRTS and STP take-up, casualty data and proportions of pupils using sustainable modes. Schools are also ranked in terms of measures implemented so far and accident rates.
- 7.4.6 The effectiveness of behavioural change measures depends on a variety of factors and those concerning schools may include the socio-economic circumstances of parents, availability of non-car alternatives and the location and type of school. There can be a considerable variation in outcomes making it difficult to gauge the effect of measures implemented, particularly as some measures are input-led i.e. establishing the number of schools with a travel plan gives no indication of the success of initiatives.
- 7.4.7 There are 28 schools, primary and secondary, within the Welwyn Garden City area that are included within the SRTS ranking list and these are shown in Figure 7.3. A total of six schools have implemented a SRTS programme and a further two (Panshanger and Commonswood schools) are undertaking small works pilot schemes. Twelve schools within the Welwyn district have a STP, the equivalent of 43% of all schools in this area.



Figure 7.3 Safer Routes to School and School Travel Plan Programmes

7 Other Issues

- 7.4.8 The take-up of STPs is good but if the LTP target of 83% of all schools having a travel plan in place by 2010/11 is to be met, this needs to increase. Travel plans are fundamental in highlighting areas in need of improvement, identifying opportunities to change pupils' travel behaviour, delivery of a package of school-based travel initiatives and providing a focus for resources.
- 7.4.9 Figure 7.4 illustrates the proportion of pupils that live within a mile of their school. Information concerning the percentage of pupils travelling by sustainable modes (walking, cycling and public transport) is also provided but this is limited to only a number of schools.
- 7.4.10 From the data it is apparent that a significant majority of schools (17) have 70% or more pupils living within one mile which suggests that there is potential for a higher number of pupils to walk and cycle. Initiatives such as 'walking buses' have proved to be popular particularly at primary school level which there are a number of in the area. Puffin crossings will be installed where controlled crossings are needed, subject to funding.
- 7.4.11 Those schools performing well in terms of the share of pupils travelling by sustainable modes include Sir Frederic Osborne School (81% of pupils), Applecroft School (74%) and Commonswood School (64%). This is perhaps to be expected as the majority of pupils live within a mile. Schools not performing as well include Panshanger primary school (44%), Welwyn St Mary's Church of England School (44%) and St John's Voluntary Aided Church of England School (24%). Both Panshanger and Welwyn St Mary's raise particular concerns given that they are both populated by large numbers of pupils living within a mile of the school (80% and 60% respectively).
- 7.4.12 A number of schools, including St John's Voluntary Aided School in Diswell, have a majority of pupils coming from distances greater than one mile so walking could be too long. Evidence¹² suggests that under these circumstances public transport offers the greatest potential to reduce car use, which also helps to promote social inclusion particularly for those households without access to a car for 'school run' trips. Improving cycle routes, especially off-road facilities, at schools where a majority of the catchment population live further away would also be more effective as longer journeys are achievable compared to walking.
- 7.4.13 Accident data provided in the ranking list (2006/07) indicates that a total of 800 child (below the age of 17) casualty accidents occurred. Only a small proportion of these accidents involved walking and cycling (89, the equivalent of 11%).
- 7.4.14 A perception that walking or cycling to school is unsafe contributes to increased use of cars for journeys to school. This accentuates the need for further initiatives to protect vulnerable road users and to encourage sustainable modes.
- 7.4.15 The figures show that some of the schools with the highest casualty rates in their vicinity do not have a SRTS and/or STP in place. If casualty accidents are to be reduced, a system of understanding issues and implementing improvements is essential and the SRTS and STP programmes are well placed to carry out this function.

¹² Department for Transport (2004) *Smarter Choices – changing the way we travel.*



Figure 7.4 Proportion of Pupils Living Within One Mile of School

7 Other Issues

- 7.4.16 From the data provided it is clear that some schools are performing better than others in terms of pupils travelling by non-car modes and accident casualties. It is however difficult to determine, from the information provided, which measures are the most effective. In order to rank schools to access the potential benefit of SRTS support, the County Council uses a system that allocates points based on:
 - the implementation of a walking bus scheme;
 - the undertaking of cycle training;
 - pedestrian skills initiative;
 - whether a school travel plan is in place; and
 - whether the school is involved in walk to school events.

School Travel Plans

- 7.4.17 Priority should be given to encouraging the take-up of STP programmes given that only around 43% of schools in the area have one. An STP is essential in determining transport issues and encouraging pupils, parents and teachers to change their travel behaviour. Schools without one are less likely to see significant changes in terms of reduction in car travel to walking, cycling and public transport use.
- 7.4.18 Given that resources are likely to be limited, the plan should identify those schools that could benefit from other proposed measures e.g. road safety, public transport, walking and cycling routes.
- 7.4.19 Accessibility to schools for those children that have to travel further distances, but excluded from free statutory transport, should also be considered particularly in light of the LTP 'shared priority' concerning accessibility and concerns of social exclusion.
- 7.4.20 A number of schools with the highest accident casualty rates do not have a SRTS programme. Further investigation should be undertaken to determine the causes of accidents at the worst performing schools to see if road safety improvements are required. These schools should be included on the SRTS programme as a priority.

7.5 Taxis

- 7.5.1 Taxis provide transport for people for whom there are no alternatives including people without access to a car, visitors to the area and disabled people. Taxi journeys often occur under particular circumstances such as late night, when carrying shopping or luggage or making journeys to a rail station.
- 7.5.2 A number of aspects of taxi operation have been considered:
 - quality of taxi service e.g. driver knowledge (for disabled users, older people, etc as well as knowledge of the town and surrounding area);
 - quality of vehicles e.g. wheelchair accessible taxis;
 - Iocation of taxi ranks;

- possible role as part of the wider transport network e.g. connecting with local bus services.
- 7.5.3 A rank is situated in Howardsgate to serve the retail area and a further rank is located outside the station entrance beneath the Howard Centre (see Figure 7.5). The latter is inconspicuous and poorly signed for people arriving by train and is rarely, if ever, used as a result. Hence a visible town centre presence is preferred. The potential removal of extraneous traffic from the central part of the town centre would create an opportunity to provide a focal taxi rank.
- 7.5.4 The existing district-wide Taxi Quality Partnership could be developed to provide a framework for improved customer care, providing better accessibility and better regulation.

7.6 Powered Two Wheelers

7.6.1 Motorcycles can use road space and parking spaces more efficiently than cars. Provision of secure motorcycle parking in public car parks could be extended to a wider rage of destinations. However, the safety of moped users continues to be a concern and education programmes are being aimed at all road users to reduce casualties.

7.7 Travel Plans

- 7.7.1 Travel plans are an effective means of promoting sustainable transport and can be applied at schools, workplaces and other locations. They involve taking a co-ordinated approach to transport problems such as lack of car parking, safety and the provision of facilities e.g. for cyclists and bus users.
- 7.7.2 School travel plans are being promoted through the County Council and encourage children and parents to avoid car use, primarily by walking to school but also for older children by cycling and bus use. This has the advantage of encouraging healthier lifestyles as well as reducing conflicts between children and vehicles at school times.
- 7.7.3 Workplace travel plans can be applied to larger employers and are often initiated through the planning process. The plans require mode share targets to be set and constraints to be placed on the amount of on-site parking provided. Although there are difficulties with enforcing travel plans, they can be effective in supporting non-car modes and providing suitable infrastructure such as safe walking routes, secure cycle parking and discounted public transport tickets. As new employment areas expand, efforts should be made to introduce travel plans either individually or in combination. As there is no parking enforcement on Sundays, difficulties can occur.
- 7.7.4 Similar principles can be applied to larger redevelopment sites and include residential, leisure and other land uses as well as commercial developments. A site travel plan would be appropriate for sites such as Broadwater Road West to reinforce sustainable planning principles through the planning system.

7 Other Issues

7.8 Access to Health Facilities

7.8.1 The future and location of health facilities in the area has been the subject of much debate. Currently, non-emergency patient transport is available for some people, particularly those who have mobility problems and are unable to access treatment centres. It has been suggested that the service is extended to other users including healthcare professionals and visitors. This may require a different type of service to be provided but it would fill gaps in the commercial bus network and be tailored to meet wider needs.




7.9 Car Clubs

- 7.9.1 Car clubs offer access to vehicles without the need to fully fund and accommodate ownership. Cars are pooled and booked by individual users as required with payments being based on mileage or time used. This minimizes demand for parking spaces and designated spaces may be made available on-street and in some car parks.
- 7.9.2 Some UK examples have emerged in recent years including schemes in Edinburgh, Bristol, Leeds, LB Sutton, Swansea and Leicester. Users are attracted to the scheme on grounds of cost savings and convenience. The principles of car clubs are supported both by Government transport advice and land use planning in recognition of the reduced parking requirements and environmental benefits. The concept is particularly appropriate in urban residential developments where sustainable modes are also available and where space is at a premium.
- 7.9.3 There may be scope to consider car clubs in Welwyn Garden City as one element of the transport package for new developments, particularly Broadwater Road West and Campus East. For both sites, residents will be able to walk to a full range of town centre facilities and the rail and bus stations but could take advantage of car use on a less regular basis, made possible with car clubs. This arrangement would also help to reduce the demand for parking space and hence intensify land uses at these locations. This would accord well with the introduction of a residential travel plan.

7.10 Welwyn Hatfield Car Share Scheme

7.10.1 A scheme was introduced in April 2007 which includes up to 8,000 members from John Lewis and other town centre employers. Co-ordinated by the district council, the car share administers a database to allow sharers to identify people with similar requirements so that car journeys can be avoided and costs and parking spaces shared.

7.11 Freight

- 7.11.1 There are two forms of freight movement affecting the town delivery vehicles such as those associated with retailing and other sites such as the QE2 hospital and distribution activities associated with commercial premises. There is little evidence of through freight movements due to the availability of the A1(M) and other strategic routes.
- 7.11.2 Retail deliveries do not appear to present problems as off-street loading areas are unusually prevalent amongst nearly all centrally located outlets. The Howard Centre has servicing facilities which are located away from areas of potential conflict. Other shops in the town centre have rear access although some of those in the core area may prefer to use front accesses. This may be for convenience or due to problems in manoeuvring within loading areas due to parked cars etc. Enforcement is effective and could be supported by staff travel plans to promote the use of off-street loading areas.
- 7.11.3 Access by delivery vehicles to a restricted zone could be arranged but this would need to be undertaken with the co-operation of retailers. While the notion that delivery times should be restricted to avoid daytime activity is attractive, this can be difficult to achieve due to delivery schedules and the additional costs incurred for out-of-hours movements.

7 Other Issues

- 7.11.4 Data for freight activity is limited so a first step in assessing such issues in greater depth would be to establish data sources. An approach that may be worth adopting would be reviewing Penalty Charge Notice (PCN) data to determine illegal unloading hotspots indicative of insufficient loading provision. Recommendations for additional on-street loading bays can then be devised on this basis. An alternative approach would be to undertake a comprehensive freight study in which drivers and retailers are interviewed to determine trends in greater detail. Other areas where commercial vehicles are evident such as the Mundells area and Shire Park are located away from the town centre so few conflicts arise.
- 7.11.5 A number of towns have devised a freight map for use by hauliers that identifies key delivery locations and restrictions and this could be helpful for Welwyn Garden City. The development of a freight map may be further reinforced by improving signing to major freight destinations, tying in these directions with the map by highlighting preferred routes for deliveries to reduce routeing through residential areas.
- 7.11.6 A number of rail sidings are sited in the town centre adjacent to Welwyn Garden City station. Although little used, there may be some potential for future use, particular in association with the demolition and construction of the Broadwater Road West site. In any event, rail facilities should be retained for potential use.

7.12 Cycling

7.12.1 LTP guidance places considerable emphasis on cycling as a safe and healthy alternative to car journeys. However, the potential has been difficult to realize despite strenuous efforts to raise the profile of cycling with the introduction of the National Cycle Network and initiatives in schools amongst other measures. Welwyn Garden City is well suited to cycling with relatively flat topography, ample road space and with many routes where traffic does not present major safety problems. However, there is considerable scope to complete a wider network of routes and secure parking facilities. A mix of on-road and off-road routes is desirable to encourage proficient and less experienced cyclists to avoid car use. The adoption of travel plans by businesses and schools also supports cycling.

Strategy Progress

- 7.12.2 It is clear that there has been a concerted effort towards improving conditions for cyclists based on the Welwyn Hatfield Cycling Strategy. Since the introduction of the cycle strategy, a number of new routes have been constructed and progress has been made towards promoting cycle use and disseminating literature.
- 7.12.3 The cycle action plan sets out the focus for improvements over the life of the cycle strategy but from the documentation available it is apparent that progress has slipped particularly in implementing new and improved cycle routes. High quality on- and off-road cycle routes are essential if the safety concerns often associated with high vehicle speeds and volumes are to be removed and more cycling encouraged.
- 7.12.4 The existing cycle network coverage across the area is encouraging but greater priority should be given to routes linking residential areas to employment, education, health and other key destinations. This is important if the cycle strategy is to assist in reducing peak hour traffic flows in particular. Convenient and safe crossing points should also be a priority particularly in areas where vehicle volumes and/or speeds are higher.

7 Other Issues

- 7.12.5 The cycle strategy should therefore set a priority for improving routes and crossings that link residential areas to the major transport generators that include:
 - The Howard Centre;
 - Mundells/Shire Park;
 - Schools/Colleges; and
 - QE2 Hospital.
- 7.12.6 It is acknowledged that a number of new and improved routes linking the above areas are proposed within the cycle strategy action plan. However, more effort is required to ensure that these proposals are implemented if LTP targets and local aspirations for increased cycle use and reductions in car traffic are to be met.
- 7.12.7 Welwyn Hatfield Council has initiated 'Pedal Point' to provide a focus for cycling in the area, distribute route maps and information and to advise on cycle maintenance issues. This supports other initiatives to promote cycling and introduce additional facilities.
- 7.12.8 Integration with other modes is also important so cycle routes that link to bus and rail stations should be considered, particularly where there are gaps in the network such as to Welwyn North station. Cycling provides new journey opportunities when combined with public transport but secure cycle parking at the rail and bus stations and at bus stops is not apparent.
- 7.12.9 Electronic data is available of cycle use since spring 2004 but this is limited to only four sites. The small data set and the fact that cycle use can fluctuate depending on external factors such as weather means that it is difficult to reach any firm conclusions here; however, the data shows that in general there seems to have been an increase in cycling since 2004. A summary of the monitoring data is provided in Tables 7.3 and 7.4 which show the average number of weekday trips made during a typical winter and summer month respectively.

Location	2004	2005	Change (%)
Black Fan Road	84	87	3 (+4%)
Gresley Close	66	73	7 (+11%)
Cavendish Way	122	123	1 (+1%)
Chequers	n/a	103	n/a

Table 7.3 Two Way Cycle Trips (November 2004 and 2005)

Location	2004	2005	Change (%)
Black Fan Road	108	125	17 (+16%)
Gresley Close	77	87	10 (+13%)
Cavendish Way	94	87	-7 (-8%)
Chequers	n/a	208	n/a

Table 7.4 Two Way Cycle Trips (June 2004 and 2005)

- 7.12.10 Black Fan Road has seen the largest increase in cycle use since monitoring started, which may be a result of improvements carried out in 2005 on the 'Bushey Ley Open Space-Safeway-Moors Walk' link. Further means of acquiring cycle use data is required. More permanent counts on cycleways and annual records of cycle parking would be beneficial, so that progress of the strategy can be measured.
- 7.12.11 There are no targets for cycling contained within the cycling strategy although the latest annual progress report (2006) does state that these are to be determined in the 2006/07 progress report. A lack of suitable targets is considered a major weakness of the strategy and along with limited monitoring data it is difficult to see how the efficacy of the measures implemented and proposed are to be measured. Establishing a number of cycle targets and collection of cycle data should be seen as a priority.

Observations

- 7.12.12 A number of site visits were carried out. In the town centre:
 - the core of the town centre should provide a more attractive cycle environment because traffic speeds are generally lower and the one-way systems maintains a simple network, however the large amount of on-street parking means that it is less conducive to on-street cycling particularly by more vulnerable cyclists;
 - cycle parking is well placed throughout the town centre but there are is lack of stands outside the rail and bus stations. No secure parking, for example lockers, were evident - it was also apparent that cyclists preferred using Sheffield stands over other alternatives when given a choice; and
 - signing within the town centre is limited and when provided appeared to be misleading.

Action Plan

- 7.12.13 In order to achieve a step change in cycle use the following requirements should provide the basis for decision-making concerning cycle infrastructure improvements:
 - **Coherence:** Cycle infrastructure should be complete, linking all trip origins and destinations. Routes should be continuous and consistent in standard;
 - Directness: All routes should be as direct as possible with unnecessary detours kept to minimum. Routes should be based on desire lines;

- Attractiveness: Routes must be attractive therefore attention must be given to adequate lighting, personal safety, noise, aesthetics and integration with surrounding area;
- Safety: Infrastructure should be designed so that the risk of conflicts (as well as perceived risk of conflict) with other highway users is reduced; and
- Comfort: Cycle routes should be smooth, well maintained surfaces, with gentle gradients and uncomplicated manoeuvres.
- 7.12.14 Existing guidance¹³ also recommends that whatever facilities are provided, the highway network should be made as convenient and safe as possible for cyclists. If applied this could take away the need to construct new infrastructure in certain circumstances and integrates well with other strategies already put forward:
 - Traffic reduction: can traffic volumes be reduced sufficiently to achieve the desired benefits?
 - Traffic calming: can speeds be reduced and driver behaviour modified to achieve the desired improvements?
 - Junction treatment and traffic management: can the problems that cyclists encounter, particularly accident locations, be solved by specific junction treatment or other traffic management solution?
 - Redistribution of the carriageway: can the carriageway be redistributed to give more space to cyclists? and
 - **Cycle lanes and cycle tracks:** having considered and, where possible, implemented the above, what specific cycle lanes or tracks are now necessary?
- 7.12.15 For **cycle routes** the prioritised programme of improvements, as contained within the Welwyn and Hatfield Cycling Strategy, should be continued with emphasis given to the above. All routes should connect residential areas with key employment, education, retail and leisure sites. A mix of on and off-road routes should be provided so that cyclists of all abilities are catered for.
- 7.12.16 Improved **cycle parking** should be provided outside rail stations where observations show that stands are already well used. Secure cycle parking e.g. lockers (particularly outside rail/bus stations) should be available.
- 7.12.17 **Cycle monitoring** is essential and should be extended to cover more routes and cycle parking. This can be achieved by permanent equipment or temporary equipment supplemented by manual counts and surveys of cycle parking.

Proposed Cycling Schemes

- 7.12.18 A number of initiatives are proposed in the Cycling Strategy:
 - Mundells to Chequers and Hydeway (Bessemer Road and Broadwater Road);
 - Town centre to Knightfield (linking Digswell, Haldens, Knightfield and Panshanger with the town);

¹³ The Institute of Highways & Transportation *Cycle-Friendly Infrastructure 1996*

- Black Fan Road improvements (Bushey Ley Open Space, Safeway, Moors Walk);
- East-west route (linking Cole Green Way, Panshanger and Peartree with the town centre);
- Town centre improvements: Great North Way (Sherrardswood to town centre) and Gresley Close link to town centre;
- Town centre to Chequers (via Bridge Road East, Heronswood Road, QE2 Hospital and Howlands);
- Town centre to Black Fan Road (linking with Panshanger via Bridge Road, Knella Road and Buchey Ley);
- Mill Green to Stanborough Road (providing a further link between the Welwyn Garden City and Hatfield via Stanborough Lakes);
- Digswell Road to A1000 Hertford Road (in connection with Knightsfield scheme);
- Welwyn to Welwyn North station via Hertford Road and B1000;
- Black Fan Road to Moors Walk (linking Safeway, Sir Frederick Osborn School and Moors Walk, Panshanger);
- Stanborough Lakes to Wheathampstead;
- Town centre to Monks Walk School (via Roundwood Drive, Sherrardswood and Knightsfield); and
- Handside Lane to Longcroft Lane (via Barleycroft Road, Parkway and Birdcroft Road).
- 7.12.19 In addition, cycle parking facilities will be improved at Hydeway to improve the current informal arrangements. This is associated with the new route along Bessemer Road and Broadwater Road with a spur along Hydeway.

7.13 Mundells

- 7.13.1 Mundells is a traffic gyratory system located to the north east of the town. This unusual arrangements accommodates not only traffic from several directions but also an increasing number of access to premises, some sizeable. The development of Shire Park as an employment area also contributes to traffic demands at Mundells. In addition, traffic congestion within Shire Park has led to motorists parking beyond the site in residential areas.
- 7.13.2 The location of new land uses in the central area of what is essentially a large roundabout results in turning movement from the offside as well as the nearside of vehicles moving around the gyratory which adds to the complexity of negotiating the area. Cycle and walking routes are available via subways but the area is dominated by vehicles. Concerns have been raised about the conflicting vehicle movements and the increasing levels of traffic generated by development sites in addition to the radial roads.
- 7.13.3 Observation of the Mundells emphasizes the weaknesses of the current arrangement:
 - Entry/exits of connecting roads and accesses to sites are close together so that vehicle weaving is made difficult, especially for users who are unfamiliar with the layout;

- Growth in the number of users is inevitable with the opening of new premises and further construction on the east side;
- Off-site parking associated with Shire Park (avoiding the on-site congestion during the evening peak) contributes to problems at the Mundells;
- Traffic speeds are inappropriate given the number and location of accesses etc; and
- Facilities for pedestrians and cyclists exist but are unattractive and poorly maintained.
- 7.13.4 The subways to access the central island are unattractive with blind spots for pedestrians and cyclists and are poorly lit. Attempts have been made to improve signing however. Maintenance is poor with one subway being covered in mud and vegetation on the approaches not being managed. The subways provide segregated access but improvements should be undertaken including replacement of the maps, addition of mirrors, improved surfacing and better lighting. Secure cycle parking is not apparent but the newest development site on the south side within Mundells includes basic cycle stands, although cycle access is prevented from the eastern direction. The cycle routes appear to be used by regular cyclists.
- 7.13.5 Frequent buses serve the Falcon Way employment area and circulate around the Mundells gyratory. However, stop facilities are uninviting, especially compared with facilities for car users the premises alongside Bessemer Road are surrounded by security fencing with an access turnstile giving the impression that car users are accommodated on the inside but bus users are excluded.
- 7.13.6 On the north side of the gyratory, the new access to the County Council supplies depot is almost opposite another access, a situation which is repeated elsewhere. This arrangement will inevitably cause problems of conflicting movements as the number of vehicles increases. A cycle route is available alongside the depot but is unattractive after dark and needs to be improved with the redevelopment of the large site to the east.
- 7.13.7 Between Herns Way and Black Fan Road, further accesses are evident on the offside. Should this large site be developed, careful consideration should be given to vehicular exit as large vehicles in particular would have difficulty joining the main traffic flows as sight lines are poor. However, the developments agreed for these currently vacant sites are not expected to generate large numbers of vehicle trips.
- 7.13.8 Between Black Fan Road and Bessemer Road, there are further hazards including the Tewin Road turn and access on both sides. The new exit from the units in the centre of the gyratory is poorly designed, particularly for large vehicle movements. This part of the Mundells could be expected to have many opposing vehicle movements. The reported casualty records indicate that accidents occur at the junctions on the gyratory, a situation which will not be improved by adding demand.
- 7.13.9 Reducing the speed limit from the current 40mph limit to 30mph throughout would help alleviate confusion arising from conflicting vehicle movements. This will require additional signing and lighting as well as regular enforcement; although the conflicting movements will remain, the speed reduction will help to avoid accidents but the growth in the number of vehicle movements will exacerbate the problems. Commitment from the police is essential if a revised speed limit is to be enforced.

7 Other Issues

7.13.10 The introduction of at-grade pedestrian crossing facilities would encourage walking to employment sites. Puffin crossings could be installed should demand justify them. In the longer term, it may be possible to install traffic signals at all the junctions accessing Mundells. However, this would be a major job involving careful positioning of signals and providing adequate vehicle stacking space and pedestrian/cycle crossings; further requirements would include flexible control, extensive ducting provision and anti-skid surfacing. Such a scheme could cost in the order of £1 million.

8.1 Measures Identified

- 8.1.1 The full programme of measures needed to meet the local targets and address the problems is set out in Tables 8.1 to 8.3. Costs indicated are initial estimates and require more detailed consideration when schemes are taken forward. Changes may be necessary if greater costs are incurred as a result of the town centre's Conservation Area status for example. Costs indicated are indicative as further more detailed investigation will be required as schemes are taken forward for implementation. The lead agency for delivery is indicated but it is possible that for some schemes, partnership working will be essential. The time scales indicated short term (up to five years), medium term (five to ten years) and long term (over ten years) do not take account of funding availability and assume that appropriate funding can be obtained.
- 8.1.2 The proposals relate to the objectives and targets set out in Chapter 2 and hence will contribute to established targets where robust monitoring data is available. In addition, the suggestions from the Agency and Community Workshop of 26 June 2007 have been included.

Table 8.1 Proposed Measures: Congestion

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Parking						
Introduce Controlled Parking Zones (currently deferred; subject to further consultation)	Management of space available [C4]	(Managed parking)	£50,000 plus ongoing enforcement	Welwyn Hatfield Council	Medium term	High
Reduce short stay parking duration in Howardsgate from 60 mins to 30 mins	Congestion created by space occupancy [C1]	(Managed parking)	£1,000	Welwyn Hatfield Council	Short term	High
Introduce and enforce parking on-street controls around Welwyn North Station	Commuter parking for station affects local residents [C3]	(Managed parking)	£5,000	Welwyn Hatfield Council	Short term	High
Further enforcement of parking restrictions	Problem parking especially in residential areas at bus stops, junctions etc. [C4]	Congestion	Revenue funding	Welwyn Hatfield Council	Short to long term	High
Co-ordinate price rises for off-street parking	Attractiveness of car use [C2, AQ2]	Change in area- wide traffic mileage	Revenue funding	Welwyn Hatfield Council	Short to medium term	Medium
`Sustainable' parking (Hunters Bridge car park)	Lack of priority given to low emission vehicles[C7]	Air quality	£3,000	Welwyn Hatfield Council	Short term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Introduce real time variable message signing for car parks e.g. Digswell Road, Bridge Road (westbound and eastbound), Parkway Public Transport	Traffic circulating in search of spaces [C1]	Congestion Air quality (Managed parking)	£200,000	Welwyn Hatfield Council/Hertfordshire Highways	Medium term	Medium
Bus priority on exit from bus station	Delays caused to buses by other traffic [C6]	Bus punctuality	£10,000	Hertfordshire Highways	Short term	High
Right turn bus priority from Lemsford Lane to Stanborough Road	Delays caused to buses by other traffic [C6]	Bus punctuality	£10,000	Hertfordshire Highways	Short to medium term	Medium
Bus priority at Bridge Road/Broadwater Road signals	Delays affecting bus movements [C6]	Bus punctuality	£30,000 (subject to feasibility)	Hertfordshire Highways	Medium to long term	Medium
Introduce bus priority measures e.g. bus gates, bus lanes, junction priorities	Improving bus reliability and punctuality [C6]	Bus punctuality	£400,000	Hertfordshire Highways	Short to long term	High
Relocate taxi ranks	Better locations would reduce congestion [C1]	(Traffic management)	£5,000	Welwyn Hatfield Council	Short term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Other						
Site travel plans	Need for sustainable modes for larger redevelopment sites e.g. Broadwater Road West and Campus East [A3, A7]	Change in area- wide traffic mileage	Monitoring and travel plan costs funded by developer - Developer/ Hertfordshire County Council/ Welwyn Hatfield Council	Hertfordshire Highways and developers	Medium to long term	High
School travel plans e.g. Knightfields	Safety and wellbeing of children [C7, S5]	Mode share of journeys to school; School travel plans	Revenue funding	Hertfordshire County Council	Short to long term	High
Reconfigure Bessemer Road/Broadwater Road/Bridge Road traffic signal junction	Increased future demand due to redevelopment sites [C8]	Congestion Bus punctuality	£750,000	Hertfordshire Highways and developers	Medium term	High
Workplace travel plans e.g. Mundells, Broadwater Road West	Location of new development sites encourages car use [C7, A3]	Change in area- wide traffic mileage	Monitoring and travel plan costs funded by developer	Hertfordshire Highways and developers	Short to long term	Medium
Develop car clubs in residential areas	Need for car use but not on an exclusive basis	Change in area- wide traffic mileage	Self-financing by residents	Welwyn Hatfield Council/residents	Short to medium term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
	[C7]					
Promote existing car share scheme (based on town centre)	Number of vehicle movements [C7]	Change in area- wide traffic mileage	Administration cost	Welwyn Hatfield Council	Short to long term	Medium
Install traffic signal control at Mundells exit from Shire Park and/or reconfigure gyratory	Traffic speeds and conflicting movements and peak period congestion from Shire Park [C5]	(Traffic management)	Feasibility study needed	Hertfordshire Highways and developers	Long term	Medium
Distribute maps of freight destinations in the town	Lack of information on sites of shops, commercial and hospital sites [C1]	Change in area- wide traffic mileage	£2,000	Welwyn Hatfield Council	Short term	Low
Congestion Total			£1,466,000	Estimated public fu	nding	
				Supported by privat	e funding as availal	ble

* costs are purely indicative and require further refinement and detailed consideration at a later stage.

Note: In due course, local targets will be determined to reflect the Local Transport Plan targets once the schemes are developed further (including local suggestions and petitions where appropriate).

Table 8.2 Proposed Measures: Accessibility

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Town Centre						
Restrict traffic circulation in Howardsgate	Safety, air quality, environmental detriment [A2]	(Increased walking)	£25,000	Hertfordshire Highways	Short to medium term	High
Pedestrianize Stonehills and remove limited stay parking in Howardsgate/ Stonehills area (subject to town centre master plan)	Conflicts of walking/cycling and traffic [A2, A1]	(Increased walking)	£5,000	Welwyn Hatfield Council	Medium term	High
Signing	Lack of direction signing for pedestrians [A8] and for motorists from main routes including A1(M)	(Increased walking)	£10,000	Hertfordshire Highways/ Highways Agency	Short term	High
Dropped kerbs	Complete installation programme [A7, A6]	(Increased walking)	£20,000	Hertfordshire Highways	Short to medium term	High
Consider walking targets	Absence of measure of success of initiatives [A2]	(Walking increase)	None	Hertfordshire Highways/Welwyn Hatfield Council	Short term	High

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Improved walking links to car parks	Need for better links to Hunters Bridge car park/Waitrose [A7]	Total slight casualties	£5,000	Hertfordshire Highways	Short term	Medium
New pedestrian crossings e.g. The Campus	Located where traffic dominates [A9]	(Increased walking)	£200,000	Hertfordshire Highways	Medium term	Medium
Motorcycle parking	Lack of space for powered two- wheelers [A5]	Change in area- wide traffic mileage	£2,000	Welwyn Hatfield Council	Short term	Medium
Information pillars e.g. Bridge Road, Howardsgate, The Campus, Parkway	Poor signing [A8]	(Increased walking)	£20,000	Welwyn Hatfield Council	Short term	Low
Bridge Road pedestrian improvements e.g. reallocation of road space (subject to town centre masterplan)	Poor pedestrian environment [A2]	(Increased walking)	£10,000	Hertfordshire Highways	Short to medium term	Low
Walking						
Overcome incomplete walk/cycle routes by	Lack of continuity creates barriers to	(Increased walking)	£200,000	Hertfordshire Highways	Short to medium term	High
introducing safe road crossings	movement [A1, A7]	Cycling trips				

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Improve walk/cycle routes to town centre, employment areas, rail station	Clear, good quality routes need to be in place	(Increased walking)	£500,000	Hertfordshire Highways	Short to medium term	High
Improved visibility of street furniture	Needs of visually impaired people [A7]	(Increased walking)	£5,000	Hertfordshire Highways	Short term	Medium
More seating	Meeting needs of older and disabled people/carers [A7]	(Increased walking)	£10,000	Welwyn Hatfield Council	Short term	Medium
Footway maintenance	Removing obstructions and hazards e.g. poor surfacing, overgrown vegetation [A7]	(Increased walking)	£50,000	Hertfordshire Highways	Short to medium term	Medium
Improve walking and cycling access to Mundells including lighting and signing	Poor condition of routes [A7]	Cycling trips (Increased walking)	£30,000	Hertfordshire Highways	Short term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Improve pedestrian crossing arrangements at QE2 Hospital	Poor crossing arrangements on walking routes and to bus stops, especially for people with mobility impairments [A6, A9]	(Increased walking)	£80,000	Hertfordshire Highways	Short to medium term	
Install signal controlled crossings at Mundells	Isolation of sites [A9]	(Increased walking)	£250,000	50% Hertfordshire Highways and 50% developers	Medium term	Low
Access to Public Transport						
Bus stop clearways	Remove vehicular obstructions at	Public transport patronage	£5,000	Hertfordshire Highways	Short term	High
	stops to allow level boarding/alighting [A12]	Bus service, user satisfaction				
Bus service information	Lack of service information at stops [A10]	Passenger transport information, user satisfaction	£10,000	50% Hertfordshire County Council/ 50% operators	Short term	High

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Routes to rail station including link to bus station	Poor routes when Howard Centre closed (signing, lighting, etc) [A1, S2, A8]	(Increased walking)	£50,000	50% Welwyn Hatfield Council/50%Howard Centre	Short term	High
Replacement footbridge across railway including station access (subject to town centre masterplan)	Current bridge is poor quality and requires substantial maintenance – inadequate to meet needs of Broadwater Road West development site [A1]	(Increased walking) Public transport patronage	£5 million (depending on design and Network Rail requirements)	50% Network Rail with developer(s) and First Capital Connect, 50% Hertfordshire Highways and Welwyn Hatfield Council	Medium to long term	High
Short term improvements to footbridge across railway	Poor pedestrian environment [A1]	(Increased walking)	£5,000	Hertfordshire Highways/Network Rail	Short term	High
Improved information at bus stops, bus station, major sites, phone, web site, etc	Unattractive public transport offer [A10]	Passenger transport information user satisfaction	£10,000	Hertfordshire County Council/Intalink	Short to medium term	High
Improve cycle facilities at rail station	Inadequate secure cycle parking [A5]	Cycling trips	£10,000	First Capital Connect	Short term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Redesign bus station (subject to town centre masterplan)	Poor waiting and information arrangements and not meeting DDA requirements [A4]	Public transport patronage	£300,000	50% Hertfordshire County Council and 50% developer(s)	Medium term	Medium
Improve bus presentation and staff	Mixed presentation currently; need for low floor buses throughout [A12, A4]	Public transport patronage Bus service user satisfaction	Fleet renewal and maintenance ongoing	Bus operators	Short to medium term	Medium
Better walk links to bus stops	Isolated and unattractive stop locations with poor access for mobility impaired people [A6]	Public transport patronage	£30,000	Hertfordshire Highways	Short to medium term	Medium
More evening bus services	Lack of good frequency services after 7pm [A16]	Public transport patronage	Variable but could be high revenue cost if subsidies required	Hertfordshire County Council	Short to medium term	Medium
Buses to major health facilities	Lack of services coordinated with heath facilities e.g. QE2 and Lister Hospital [A14]	Public transport patronage	£10,000	50% Hertfordshire County Council/50% healthcare providers	Short to medium term	Medium

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
'Plus Bus' facility	Lack of awareness of 'Plus Bus' scheme [A10]	Public transport patronage	£1000	Hertfordshire County Council/operators	Short term	Medium
Bus fare initiatives for young people	Need to encourage younger age groups to use buses regularly [A15]	Public transport patronage	Revenue funding	Operators/Hertfordshire County Council	Short term	Medium
Inadequate taxi ranks to be overcome by more provision	Lack of road space [A13]	(Taxi use)	£10,000	Welwyn Hatfield Council	Short term	Medium
Taxi customer care	Needs of particular users require sensitive handling by taxi drivers e.g. disabilities [A11]	(Taxi use)	Ongoing training	Taxi operators	Short term	Medium
Real time bus information	Lack of reliable bus service information [A10]	Passenger transport information, user satisfaction	£1 million minimum	Hertfordshire County Council/operators	Medium to long term	Low
Promote existing bus services e.g. 6 to Shire Park	Lack of awareness of Shire Park service [A10]	Public transport patronage	£1,000	Hertfordshire County Council/operators	Short term	Low

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Access to Key Destinations						
Access to major health facilities	Improve buses to QE2 Hospital in Welwyn Garden City and other strategic health facilities [A14]	% of people who find it difficult to travel to a local hospital	Promotion of existing services	Bus operators	Short term	High
Bus linking health facilities	Expand current non-emergency patient transport	% of people who find it difficult to travel to a local hospital	To be determined	Primary Care Trust/Hertfordshire County Council	Short to medium term	High
Access to additional town centre redevelopment sites (subject to town centre masterplan)	Additional retail development [A3]	(Increased walking, cycling, public transport use)	Dependant on emerging proposals	Developer	Medium term	Medium
Access to Campus East redevelopment site (subject to town centre masterplan)	Central residential development; promoting sustainable modes [A3]	(Increased walking, cycling, public transport use)	Dependant on emerging proposals	Developer	Medium term	Medium
	[A3]					

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Access to Broadwater Road West redevelopment site (subject to town centre masterplan)	Central residential development; promoting sustainable modes including replacement bridge to town centre [A1, A3, A7]	(Increased walking, cycling, public transport use)	Dependant on emerging proposals	Developer	Medium to long term	Medium
Cycling						
Overcome incomplete cycle routes by introducing safe road crossings	Lack of continuity creates barriers to safe movement [A7, S3]	Cycling trips	£200,000	Hertfordshire Highways	Short to long term	High
Secure cycle parking at a range of locations (rail and bus stations, Campus West, employment sites, retail centres, etc)	Lack of secure parking [A5]	Cycling trips	£50,000	80% Hertfordshire Highways/Welwyn Hatfield Council, 20% First Capital Connect	Short to medium term	High
Broadwater Road cycle link between Hydeway and Chequers	Lack of continuous route [A7]	Cycling trips	£50,000	Hertfordshire Highways	Short term	Medium
Mundells to Black Fan Road/Morrisons cycle link	Lack of route [A7]	Cycling trips	£50,000	Hertfordshire Highways	Short term	Medium
Stanborough roundabout to	Lack of continuous	Cycling trips	£5,000	Hertfordshire Highways	Short term	Medium

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Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Stanborough Lakes cycle link	route [A7]					
Welwyn Garden City to Welwyn and Oaklands cycle route	Lack of route [A7]	Cycling trips	£100,000	Hertfordshire Highways	Short term	Medium
Oaklands to Welwyn North cycle route	Lack of upgraded route [A7]	Cycling trips	£50,000	Hertfordshire Highways	Short term	Medium
Accessibility Total			£5,539,000	Estimated public fundi	ng	
			£2,830,000	Estimated private fund	ing	
			£8,369,000			

* costs are purely indicative and require further refinement and detailed consideration at a later stage.

Note: In due course, local targets will be determined to reflect the Local Transport Plan targets once the schemes are developed further (including local suggestions and petitions where appropriate).

Table 8.3 Proposed Measures: Safety

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	
Personal Security						
Measures for people with visual impairments	Measures such as markings and adding reflective strips to street furniture	Total slight casualties	£5,000	Hertfordshire Highways	Short term	High
Removal of overhanging vegetation and obstructive signs	Obstructions to pedestrians, cyclists and wheelchair users	Total slight casualties	Revenue funding	Hertfordshire Highways	Short term	High
Extension of CCTV provision	Personal security [S2, S4]	(Increased walking)	£50,000	Welwyn Hatfield Council	Short to medium term	Medium
Improved pedestrian subways at Mundells, Bridge Road	Sightlines, lighting, surveillance and personal security [S4, A7]	(Increased walking)	£50,000	Hertfordshire Highways	Medium term (but possibly avoidable should Bridge Road roundabout/subways be removed)	Medium
Lighting	Inconsistent street lighting [S2, A6, A7]	(Increased walking)	£50,000	Hertfordshire Highways	Short to medium term	Medium

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Response to changing social patterns e.g. licensing hours	Consider security issues and transport provision [S2]	Public transport patronage	Administrative cost	Welwyn Hatfield Council and Police	Short to medium term	Low
Road Safety						
Safer Routes to Schools e.g. walking buses with	Reduce car journeys for	Mode share of journeys to school	£500,000	Hertfordshire County Council	Short term	Medium
continuous review of programme	journeys to school [S5]	School travel plan				
Safety barriers at St John's School, Digswell	Improving safety for children [S5]	Children killed and seriously injured	£20,000	Hertfordshire Highways	Short term	Medium
		Total slight casualties				
Safety education for vulnerable road users	Casualty records for children and younger age groups [S5]	Children killed and seriously injured	Ongoing	Hertfordshire Highways	Short to medium term	Medium
		Total slight casualties				
Pedestrian crossings e.g. Bridge Road, Broadwater	Understanding of Puffins and	Killed and seriously injured	£1,000	Hertfordshire Highways	Short term	Medium
Road	Pelicans [S1]	Total slight casualties		ingilway5		
Safety Total			£681,000	Estimated public f	unding	
				Supported by priv	ate sector funding as	available

* costs are purely indicative and require further refinement and detailed consideration at a later stage. Note: In due course, local targets will be determined to reflect the Local Transport Plan targets once the schemes are developed further (including local suggestions and petitions where appropriate).

Table 8.4 Proposed Measures: Quality of Life

Measure	Issues Addressed	Targets Addressed	Estimated Cost*	Lead	Time Scale	Indicative Priority
Environmental protection in Conservation Area(s)	Need to maintain and enhance the town centre [QL1, AQ1]	(Increased walking)	Revenue funding	Welwyn Hatfield Council	Short to long term	Medium
Removal of litter and graffiti on public and private land/apparatus	Visual impacts [QL2]	(Increased walking)	£5,000	Welwyn Hatfield Council	Short to medium term	Low
Quality of Life Total			£5,000	Estimated public f	unding	
				Supported by priva	ate sector funding as	s available

* costs are purely indicative and require further refinement and detailed consideration at a later stage.

Note: In due course, local targets will be determined to reflect the Local Transport Plan targets once the schemes are developed further (including local suggestions and petitions where appropriate).

8.1.3 In summary, the above measures total around £10.5 million as shown in Table 8.5 (including a replacement bridge across the railway and Mundells traffic signals). While this appears to be a substantial sum, over the longer term various sources can be used including the LTP, local authority revenue budgets and developer contributions.

Measure	Estimated Public Funding*	Estimated Private Funding*	Total Cost*
Congestion	£1,416,000	-	£1,416,000
Accessibility	£5,539,000	£2,840,000	£8,379,000
Safety	£681,000	-	£681,000
Quality of Life	£5,000	-	£5,000
Total	£7,641,000	£2,840,000	£10,481,000

Table 8.5 Summary of Measures

* costs are purely indicative and require further refinement and detailed consideration at a later stage

8.2 Five Year Delivery Programme

- 8.2.1 The measures outlined above may be delivered through a variety of funding mechanisms. Some schemes will only be delivered in conjunction with private sector development in the town while others will be included in the LTP programme funded by the Department for Transport via the County Council.
- 8.2.2 Currently, over £0.5 million of developer contributions is allocated for sites in Welwyn Garden City. While mainly for small schemes, they provide funding for a variety of improvements for bus users, pedestrians and cyclists and can supplement LTP funding.

8.3 Monitoring and Date of Plan Review

- 8.3.1 A report on the schemes delivered and progress towards the local targets will be published annually. This is similar to the arrangements for LTP monitoring required by the Department for Transport to ensure that schemes are being delivered as planned and that good value for money is being achieved.
- 8.3.2 The plan will be reviewed after five years (2012) and a modified plan will be published. The five year review will allow for new targets to be added if appropriate and for the current targets to be modified if unforeseen pressures have arisen.

9.1 The Plan Area

- 9.1.1 Welwyn Garden City provides a focus for travel as one of a number of centres in mid-Hertfordshire. Its unique layout and strong retail offer encourage car journeys but accessibility by other modes is also important, with particular emphasis on rail journeys (especially towards London). Bus, walking and cycling represent smaller mode shares but are increasingly important in the sustainable transport context.
- 9.1.2 The Urban Transport Plan is set against the background of the Hertfordshire Local Transport Plan which sets out objectives and targets and aims to reduce car dependency by encouraging other modes and better integrating land use and transport. Despite the apparent strong activity levels in the town, there are difficulties of poor accessibility to the rail station, perceived pressures on parking and impediments to walking and cycling. Considerable opportunities are presented with proposed developments within close proximity of the centre. These could be developed as sustainable sites with a strong emphasis on walk links and encouraging cycling and public transport use and reduced provision of parking.

9.2 Current Transport Arrangements

- 9.2.1 A 'health check' was undertaken to assess how the area was performing in terms of transport. This identified the need for accessibility by all modes, not just car and the strong influences determined by land use decisions, particularly where employment opportunities are located in relation to where people live. Safety and security was also important. Significantly, any transport proposals must accord with the recent focus on environmental issues such as reducing vehicle emissions and encouraging healthier lifestyles. Transport provision is also important to meet social inclusion objectives by ensuring that there is sufficient choice of transport an access to essential facilities for everyone.
- 9.2.2 This approach recommended a number of improvements including greater controls over car parking, better interchange arrangements at rail stations, a stronger focus on bus services, the creation of a safe cycle network, better walking routes and travel plans for workplaces and schools.

9.3 Walking

- 9.3.1 Walking was identified as a key issue with significant scope for improvements in the town and the surrounding area. It offers a healthy alternative to car use for shorter journeys but existing routes are often unattractive in contrast to the ambiance and attractive design of the town centre. Improvements such as better road crossings, improved lighting and signing have been recommended.
- 9.3.2 A major proposal is a replacement footbridge across the railway and accessing the station. The current bridge needs to be upgraded to link the town centre with the proposed Broadwater Road West redevelopment site and this could be a landmark scheme for the town, funded by the development. It would unite the east and west parts of the town and greatly improve the image of rail users arriving at the station.

9.4 Passenger Transport

- 9.4.1 Passenger transport is a vital means of encouraging a shift from car use to more sustainable modes. Rail services to the town are very good but bus services, particularly east-west services, are more limited and could be better used. Surveys of rail users were undertaken which emphasized the commuter-orientated use of Welwyn North station and the importance of walk trips to Welwyn Garden City station despite its inconspicuity. The station acts as a focus for journeys and stronger links to the bus station, taxi ranks and cycle parking could be improved.
- 9.4.2 The town's bus station is inadequate in a number of respects and could be improved considerably. It is recommended that the layout be changed to allow easier use by people with mobility impairments and to improve the image of buses. Retaining the facility at its current location, while not ideal, offers the most practical way forward.
- 9.4.3 A number of other recommendations are made including better transport information, improved infrastructure, better presentation of buses and staff and stronger marketing under the Intalink brand. Services should be able to react more effectively to demographic and economic circumstances.

9.5 Development Sites

- 9.5.1 Development proposals offer considerable potential to create sustainable transport links in accordance with national and regional guidance. The town centre could accommodate additional retailing but this does not necessitate the provision of additional parking capacity; instead, improved access by walking, cycling and public transport are achievable. Redevelopment at Campus East could be successful in supporting walk trips particularly, being well located in relation to the bus and rail stations and town centre facilities.
- 9.5.2 The Broadwater Road West site offers a very significant opportunity to promote sustainable transport given its location close to rail and bus links. To achieve this, the proposed replacement of the footbridge across the railway is essential to link the site with the town centre, without which non-motorised journeys cannot be promoted successfully. It is recommended that the site is designed to focus on the link to the rail and bus stations and the Howard Centre and parking provision should reflect this high level of accessibility.

9.6 Linking Land Use and Transport

9.6.1 The emergence of the Urban Transport plan has taken place alongside the planning process associated with town centre changes. The importance of transport in this context cannot be over-emphasized, particularly in terms of parking supply. An emphasis on sustainable access to the town centre is the key to enhancing and expanding the garden city concept.

9.7 Car Parking

9.7.1 Parking is a contentious issue. Analysis has shown that the town has an adequate supply of parking, even taking into account potential expansion. The current arrangements allowing short stay on-street parking in the core area undermine the attractiveness of the town and

hence there are benefits associated with creating a car-free area in Stonehills and part of Howardsgate with restricted vehicular access. Long stay parking spaces should be located at the periphery to allow existing spaces to be converted to short stay use, thus encouraging the retail and business economy. Beyond the town centre, parking standards and accessibility to sites by non-car modes should involve greater scrutiny while management of the space available should be encouraged, for example through the introduction of Controlled Parking Zones.

9.8 Other Issues

9.8.1 A number of other issues have been considered including road traffic accidents, taxis, freight and cycling. While not presenting major difficulties, there is scope for improvement, particularly to improve cycling facilities further. The Mundells gyratory is experiencing considerable growth with new sites being developed, adding to the traffic flows and conflicting movements on this unusual one way system. Taking this into account, the speed limit could be reduced on safety grounds.

9.9 Programme of Measures

- 9.9.1 An investment programme has been determined in response to the problems identified. This includes measures to improve walking facilities (crossings, subways, signing, etc.), addressing town centre constraints and opportunities and particularly focusing on the proposed replacement bridge across the railway. Public transport improvements can be achieved, led by re-design of the bus station which will enhance the image of bus use. Schemes to encourage cycling and better manage car parking are proposed. The possible redevelopment opportunities are demonstrating how the provision of sustainable transport can greatly enhance the proposals, particularly if supported by travel plans.
- 9.9.2 The programme can be funded through the LTP process supported by developer contributions and other sources so that significant improvements can be achieved.

9.10 Implementation and Review

9.10.1 The schemes indicated in the Urban Transport Plan will be taken forward for implementation and reviewed to make sure that they are meeting the objectives set. The most significant schemes out for Welwyn Garden City include the replacement footbridge over the railway, a re-vamped bus station and changes to town centre traffic management and parking alongside a range of smaller measures to support walking, cycling and public transport use. The opportunities presented by redevelopment sites are significant and will need to be fully integrated with transport schemes. Beyond the town centre, improved walking and cycling networks, better bus services and information and other measures will help benefit local communities and businesses. Further proposals will be developed in due course.

Appendix A – Agency and Community Workshop participants

The Urban Transport Plan workshop was held on 26 June 2007 and attendees included the following:

Organisations

Laurie Blair	Arriva The Shires
Andrew Carnegie	Chamber of Commerce
Mike Gall	First Capital Connect
Tony Welsh	Hertfordshire Constabulary (Traffic Management Unit)
Brian Jackson	Hertfordshire CTC
Dennis Lewis	Welwyn Garden City Society
Chris Watts	Welwyn Garden City Society
Brian Wilson	Welwyn Hatfield Access Group
Tom Davidson	Welwyn Hatfield Environmental Network
Don Gentry	Welwyn Parish Transport Group
Alan Sparshott	Welwyn Parish Transport Group
Peter Neville	Welwyn Rail Users Group
Local Authorities	
Helen Bromley	Welwyn Hatfield Council (Councillor for Handside)
Colin Croft	Welwyn Hatfield Council (Councillor for Hatfield Central)
Clare Berry	Welwyn Hatfield Council (Councillor for Hatfield North) and
Sue Jones	Welwyn Hatfield Council (Councillor for Hollybush)
Mandy Perkins	Welwyn Hatfield Council (Councillor for Welwyn South)
Mike Beckham	Welwyn Hatfield Council (Head of Transportation)
Anita Wood	Welwyn Hatfield Council (Senior Projects Officer)
Malcolm Cowan	Hertfordshire County Council (Councillor for Handside and Peartree)
Trevor Mose	Hertfordshire County Council (Transport Policy)
James Dale	Hertfordshire County Council (Development Control)
Lindsey Lucas	Hertfordshire County Council (Development Control)
Neil French	Hertfordshire County Council (Passenger Transport Unit)
Andy Gipson	Hertfordshire County Council (Passenger Transport Unit)
Steve Dibben	Hertfordshire Highways (Area Manager)
Trevor Land	Hertfordshire Highways (Strategy Development Manager)

Other invitees included Centrebus, East of England Regional Assembly, Hatfield Association of Rail Travellers, John Lewis Partnership, Uno, Welwyn Hatfield Ethnic Minorities' Group, Welwyn Planning and Amenity Group

Appendix B - Consultees

During the development of the plan, a number of local organizations were involved including the following:

Local authorities

- Joint Members Panel Steering Group (16 April 2007, 24 May 2007)
- Hertfordshire County Council (Passenger Transport Unit, Development Control, Safer Routes to Schools)
- Welwyn Hatfield Council (Transportation, Planning)

Organizations

- Age Concern
- Arriva The Shires
- Chamber of Commerce
- Community Safety Officer
- East and North Hertfordshire PCT and West Hertfordshire PCT
- Hertfordshire Constabulary
- First Capital Connect
- Uno
- Urban Practitioners (consultants to Welwyn Hatfield Council)
- Welwyn Hatfield Access Group
- Welwyn Hatfield Environmental Network
- Welwyn Garden City Society
- Welwyn Garden town centre manager
- Welwyn Parish Transport Group
- Welwyn Rail Users' Group



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