CHESHUNT AND WALTHAM CROSS
URBAN TRANSPORT PLAN
Public Consultation Document

October 2010

Main document

Hertfordshire Highways
www.hertsdirect.org/highways

Hertfordshire

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Glossary of Terms

AAP - Area Action Plan
BBC - Broxbourne Borough Council
BSF - Building Schools for the Future
CHN - Cheshunt Rail Station
DfT - Department for Transport
EEDA - East of England Development Agency
HCC - Hertfordshire County Council
HIIS - Hertfordshire Infrastructure & Investment Strategy
LAA - Local Area Agreements
LDF - Local Development Framework
LTP - Local Transport Plan
NHATP - North Hertfordshire Area Transport Plan
NHDC - North Hertfordshire District Council
NXEA - National Express East Anglia
ODA - Olympic Delivery Authority
RES - Regional Economic Strategy
RSS - Regional Spatial Strategy
TEO - Theobalds Grove Rail Station
TP - Travel Plan
UTP - Urban Transport Plan
WAML - West Anglia Main Line
WLC - Waltham Cross Rail Station

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Introduction

1 Introduction

1.1 Introduction

This plan sets out the approach to the delivery of transport improvements for Cheshunt and Waltham Cross over the next 10 years whilst also looking to the longer term period to 2026. It is designed to meet local needs whilst also delivering the County Council's overall transport targets and objectives as set out in the Local Transport Plan 2006/07 – 2010/11 (LTP2 available on the County Council's website at www.hertsdirect.org/ltp), and the emerging LTP3, which set the framework for achieving the vision for transport in Hertfordshire.

The purpose of the UTP is to set out an appropriate package of transport measures that responds to problems, opportunities and threats, and which seeks to achieve national, regional and local transport objectives. It has been developed in consultation with District Council and other key stakeholders.

The UTP therefore responds to the national policy context for transport currently set out in Delivering a Sustainable Transport System (DaSTS) (http://www.dft.gov.uk/about/strategy/transportstrategy/dasts/dastsreport.pdf) published in November 2008. It also takes into consideration the Regional Spatial Strategy for the East of England (Government Offices | East of England |) published in May 2008.

At the more local level, the UTP supports the Hertfordshire Local Transport Plan 2006/07- 2010/11. It also responds to the emerging Broxbourne Core Strategy (The Borough of Broxbourne Core Strategy Consultation document published in November 2008) (http://www.broxbourne.gov.uk/pdf/Draft%20core%20strategy%20-lowres-%20version%20-%206nov08.pdf) and the Broxbourne Community Plan (http://www.broxbourne.gov.uk/PDF/COMMS-CommPlan2007-09Web.pdf).

1.2 The UTP Document

The UTP document is presented in three volumes:

- The Urban Transport Plan (this volume): This is the main document which presents the problems and opportunities identified; the UTP measures; and the delivery programme for the UTP measures
- Appendix Volume 1: This contains the discussion notes which analyse the problems and options and form the basis of the formulation of the UTP measures.
- Appendix Volume 2: This contains the Stakeholder Consultation Report.

Other documents relevant to the UTP include:

- Cheshunt and Waltham cross Draft data Report (HCC);
- Urban Transport Plan for Cheshunt and Waltham Cross Draft Stage 1 Report (AECOM)

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Background to the UTP Area

2 Background to the UTP Area

2.1 Background to the UTP Area

Cheshunt and Waltham Cross lie approximately 20 miles north of London and are well served by the national highway network, being located close to the M25. North-south transport links are also good, with the A10 route between London and Cambridge running through the area together with the West Anglia main line with direct trains to London Liverpool Street, Cambridge and Stansted Airport. The west of the area is also served by the Hertford branch. Luton and Stansted Airports are within easy reach.

Cheshunt and Waltham Cross border the outer London Borough of Enfield and are also close to the settlements of Waltham Abbey and Hoddesdon, while Harlow, Hertford and Welwyn are within easy reach. To the east of the area, the Lee Valley creates a barrier to local movement and the A10 and rail lines also create local barriers to movement within the area.

The locations of Cheshunt and Waltham Cross and the availability of road and rail links have a significant effect on travel patterns in the area. In particular, there is a high level of out-commuting. In addition, there is a high level of through trips on the A10 and rail routes, which have a significant impact on the nature and extent of travel conditions in the area.

Figure 2.1 shows the location of Cheshunt & Waltham Cross and key transport routes serving the area. ***Figure 2.2*** shows the UTP study area and key local routes and facilities.

2.1.1 Population

Figures from the 2001 Census indicate that Cheshunt had a resident population of 38,717 people in 15,620 households, while Waltham Cross had a resident population of 9,528 people in 4,086 households. Cheshunt has a younger age profile with a higher percentage of under 17's. Waltham Cross has an older age profile with a higher percentage over 65's in comparison to the average for Hertfordshire and England and Wales.

The age structure of the local population has implications for transport provision in that an ageing population may be more dependent on public transport. Likewise, provision of public transport will be important for those under 17, but cycling and walking facilities will also be more relevant.

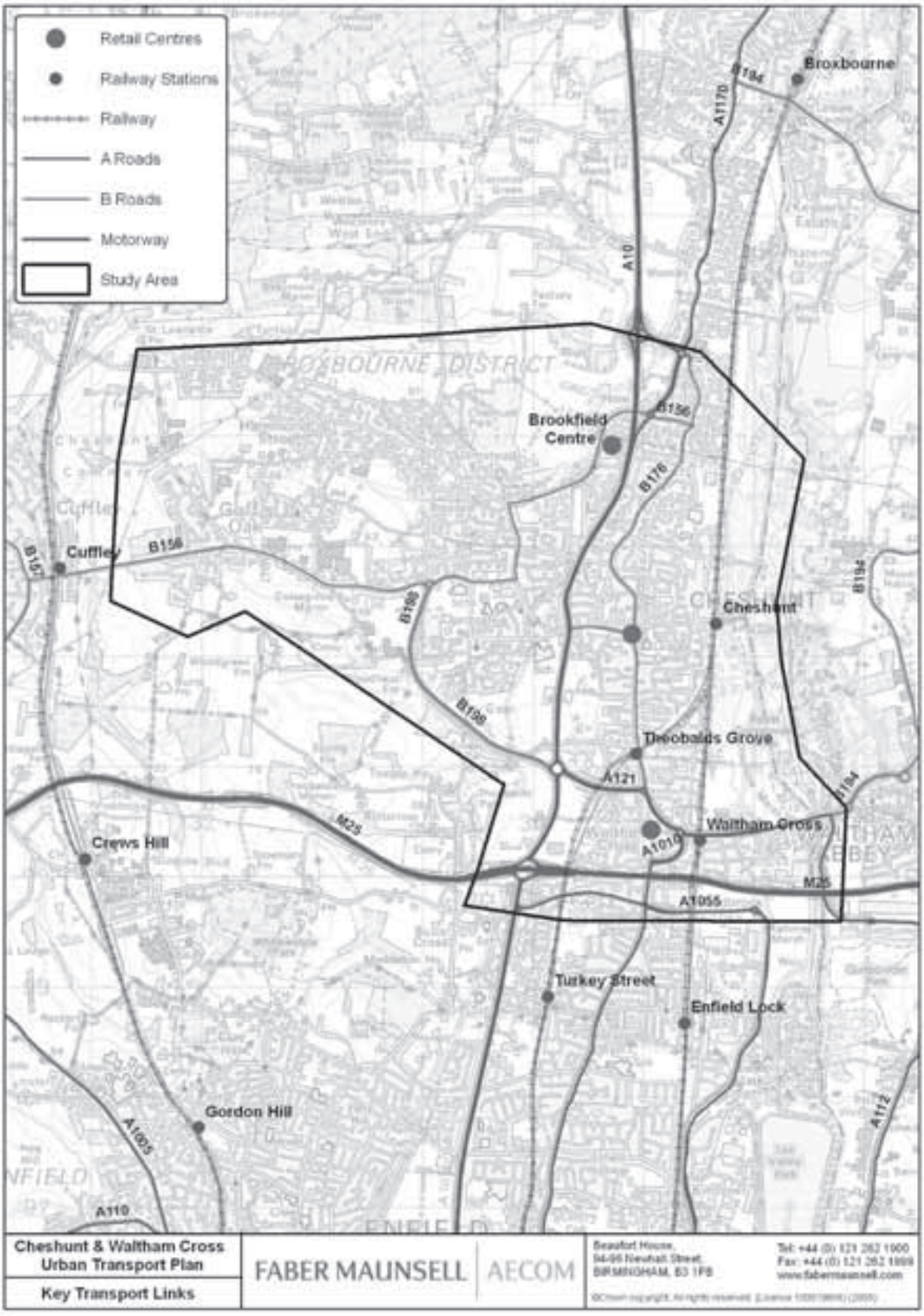
2.1.2 Transport Corridors

The M25 lies just inside the southern border of Waltham Cross, with the A10 Great Cambridge Road running north from Junction 25 past both towns.

The A10 is a key through route as well as providing a link into and out of the area. It is of dual carriageway standard with no frontage access along its length past Cheshunt and Waltham Cross. There are several junctions along the A10 within the study area.

Figure 2.1: Location of Cheshunt and Waltham Cross

Figure 2.2: The Cheshunt and Waltham Cross UTP Area



The B198 (Lieutenant Ellis Way) is also of dual carriageway standard and provides a major corridor to the west of the study area via the B156, linking to the A10 via a roundabout. At the same roundabout, the A121 serves the Waltham Cross area and provides a major corridor to the east of the study area.

The B176 forms a significant spine road for local traffic in the area serving both Cheshunt and Waltham Cross town centres. It runs north/south (roughly parallel to the A10) as a high street from Turnford, through Cheshunt and down to the centre of Waltham Cross. It is a single carriageway with considerable frontage activity but benefits from having off highway parking provisions in numerous locations.

2.1.3 *Car Ownership*

Car ownership is displayed in ***Table 2.1*** below. Hertfordshire as a county has high levels of car ownership compared with the average for England and Wales. Like Hertfordshire, Cheshunt displays high levels of car ownership. In contrast, Waltham Cross has a lower level of car ownership.

Table 2.1: Car Ownership Comparisons

	% of households			
Car/van availability	Cheshunt	Waltham Cross	Hertfordshire	England and Wales
None	17.61	27.21	17.69	26.79
One	41.87	47.04	41.98	43.80
Two	31.29	20.61	31.61	23.53
Three	7.06	4.21	6.58	4.51
Four or more	2.17	0.95	2.18	1.38
All Households	***100***	***100***	***100***	***100***

(Source: Cheshunt and Waltham Cross Urban Transport Plan Draft Data Report)

2.1.4 *Travel Characteristics (Journeys to Work)*

Information on journey to work trip movements has been investigated previously by HCC (Draft Data Report 2007) and by the Borough of Broxbourne (Broxbourne Sustainable Transport Study).

The HCC Cheshunt and Waltham Cross UTP Draft Data Report, using census information, indicates that there were about 18,700 employed residents in Cheshunt in 2001. Over 30% of these (6,000 residents) lived and worked within the town while almost 70% (12,700 residents) commuted to workplace locations outside the town.

Well over half of those out-commuting and around 38% of employed residents (7,300) commuted to Greater London. Other popular destinations include; elsewhere in the borough of Broxbourne (1,900 residents), East Hertfordshire (1,000 residents) and Essex (870 residents).

As well as home to work trips from residents, there is significant commuting into the area from other areas. The 2001 census indicated that 12,570 people work in Cheshunt with 6,650 (52%) travelling from outside the town, a similar number to those commuting out. The key origins of in-commuters to the town were

from elsewhere in Broxbourne (over 1,700 workers), Greater London (just under 1,700 workers) and Essex (1,100 workers).

In Waltham Cross there were around 3,000 employed residents. Just over 25% of these (800 residents) lived and worked within the town, meaning around 2,200 workers commuted to external locations outside town. 46% of employed residents (1,400) commuted to Greater London. Destinations are similar to Cheshunt above with 360 residents commuting to elsewhere in Broxbourne, 190 residents to Essex and 120 residents to East Herts.

Journey to work trip patterns are therefore similar in Cheshunt and Waltham Cross. The significance of out commuting to the London area is very pronounced. The majority of these movements are to locations broadly in the A10 corridor, including Enfield, Haringey and Islington as well as central London (City of London and Westminster).

Key journey to work movements within both Cheshunt and Waltham Cross converge on the employment locations in the area. These include the town centres and Brookfield centre, principal industrial estates and business parks at Delamare Rd, Cheshunt, Britannia Rd and Park Plaza, Waltham Cross. The Broxbourne Borough Council offices and larger school sites also provide significant employment.

For those using cars for the journey to work, internal trips create significant north-south movements along the B176 and east-west movements, many of which have to cross the A10. The out-commuters and in-commuters by car, in contrast, make much greater use of the A10 as well as the M25, A121 and A1055 routes.

The following ***Tables 2.2 and 2.3*** show the modal split for journeys to work made to, from and within Cheshunt and Waltham Cross:

Table 2.2: Mode Split of In-Commuting to and Out-Commuting from the UTP Area

	% of Total In Commuting		% of Total Out Commuting	
Mode	Cheshunt	Waltham Cross	Cheshunt	Waltham Cross
Bus	4.24	10.99	3.14	10.75
Train	3.10	2.28	16.74	13.79
Car/passenger	85.47	77.55	71.15	62.93
Walk	3.52	4.49	2.25	3.13
Cycle	1.17	1.97	1.54	2.15
Other*	2.50	2.73	5.18	7.25
Total	***100***	***100***	***100***	***100***

(Source: Cheshunt and Waltham Cross Urban Transport Plan Draft Data Report)
**includes underground, motorcycle and taxi*

Table 2.3: *Mode Split for Work Trips Within the UTP Area*

	% of Total Living & Working in Town	
Mode	Cheshunt	Waltham Cross
Bus	1.50	1.52
Train	1.63	2.90
Car/passenger	50.99	34.09
Walk	16.51	26.77
Cycle	1.51	2.78
Other*	27.85	31.94
Total	***100***	***100***

(Source: Cheshunt and Waltham Cross Urban Transport Plan Draft Data Report)
**includes underground, motorcycle and taxi*

Table 2.4 shows the distance travelled to work by Broxboune residents and the mode of travel for distances of up to 30km. This demonstrates that the vast majority of journeys to work are under 30km with 29% journeys under 5km. In addition, 16% of trips are under 2km. Of the trips less than 2km, 36% and 4% respectively are undertaken by walking or by cycle, while 50% of these short distance trips are undertaken by car or van. The potential for these trips to be diverted to non-car modes is highlighted in Table 2.4. For longer commuting trips between 20 and 30km 51% are by train, but even though this is a high percentage, there is scope for this to be increased.

Table 2.4: Mode split/distance Travelled for Commuter Trips Originating in Broxbourne District – Potential Transfer to Sustainable Modes

Distance Travelled	% Total trips to Work	Under-ground, (%)	Train (%)	Bus (%)	Powered two wheeler (%)	Driving a car or van (%)	Passenger in a car or van (%)	Bicycle (%)	On Foot (%)
Less than 2km	16%	0	1	2	1	50	7	4	36
2km to less than 5km	13%	0	1	7	1	73	10	3	4
5km to less than 10km	19%	0	3	5	2	81	7	1	1
10km to less than 20km	17%	1	8	2	2	81	4	0	1
20km to less than 30km	16%	8	51	1	3	36	1	0	1

(Source: 2001 Census)

Potential for increased mode share for sustainable modes

2.2 Key Characteristics of the UTP Area

This section has highlighted some key baseline characteristics and conditions in the UTP area and they are explored in detail in the UTP Stage 1 Draft Report and in Appendix Volume 1. In summary, the key findings are:

- Compared to the England and Wales average Cheshunt has a younger age profile with a higher percentage of under 17's. Waltham Cross has an older age profile. The age structure of the local population has implications for transport provision as an aging population may be more dependent on public transport.
- Cheshunt displays high levels of car ownership. In contrast, Waltham Cross has lower car ownership. The latter reinforces the significance of public transport provision in Waltham Cross in that the lower rate of car ownership implies a greater dependence on alternatives to the car and particularly accessibility by bus.
- Access to the national highway network is good.
- Good rail access to London.
- Relatively difficult east-west access owing to barrier effect of A10 and rail lines.
- There is a relatively low bus and cycle use for most journeys to work and a high level of car use for in-commuting.
- There is evidence of peak period traffic congestion at the main junctions on the A10, the A121 in the Waltham Cross area, around Cheshunt town centre and in the Brookfield area.
- Employment opportunities are focussed along the spine of the borough between Waltham Cross and Hoddesdon. Consequently residents in the towns of Cheshunt and Waltham Cross can easily access employment opportunities by public transport, on foot or by cycle
- Most residents in Cheshunt are shown to be able to access the town centre by bus within 15 minutes. Residents living further away in Hammond Street are within a 30 minute travel time of the town centre. For Waltham Cross, most residents are within 15 minutes of the town centre, with the exception of the southeast corner in Holdbrook which is within 30 minutes of the town centre. The Brookfield Centre is served by low frequency bus services.
- There is limited availability of parking at stations in the study area and level of charges may dissuade some potential rail users.

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LTP and HCC Targets and Objectives

3 LTP and HCC Targets and Objectives

3.1 National Context

The UTP for Cheshunt and Waltham Cross needs to support the wider policy context for transport set at the national and regional levels, together with the local policy context as identified in the HCC Local Transport Plan and the local policy context of Broxbourne Borough Council.

At the national level, the government has set out its key goals for transport in Towards a Sustainable Transport System TaSTS), published in October 2007 (http://www.dft.gov.uk/about/strategy/transportstrategy/pdfsustaintranssystem.pdf) and in Delivering a Sustainable Transport System (DaSTS) (http://www.dft.gov.uk/about/strategy/transportstrategy/dasts/dastsreport.pdf) published in November 2008 as follows:

- to **support** national **economic** competitiveness and **growth**, by delivering reliable and efficient transport networks;
- to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcome of **tackling climate change;**
- to **contribute to better safety, security and health** and longer life-expectancy by reducing the risk of death, injury or illness arising from transport, and by promoting travel modes that are beneficial to health;
- to **promote** greater **equality of opportunity** for all citizens, with the desired outcome of achieving a fairer society;
- to **improve quality of life** for transport users and non-transport users, and to promote a **healthy natural environment**.

The policy "health check" carried out as part of the UTP preparation has demonstrated that these themes and associated national goals for transport are already well reflected in regional and local policies that provide the context for development of the Cheshunt and Waltham cross UTP. They present a range of challenges which need to be tackled in the UTP, which may be summarised as follows:

Climate Change

- Delivering reductions in greenhouse gas emissions, taking account of cross network policy measures.

Competitiveness and Productivity

- Reducing lost productive time by maintaining or improving the reliability and predictability of journey times on key local routes for business, commuting and freight.
- Improving the connectivity and access to labour markets of key employment areas.
- Supporting the delivery of housing, while limiting potential for increased congestion.

- Ensuring local transport networks are resistant and adaptable to shocks and impacts such as adverse weather, accidents, terrorist attacks and impacts of climate change.

Equality of Opportunity

- Enhance social inclusion and the regeneration of deprived or remote areas by enabling disadvantaged people to connect with employment opportunities, key local services, social networks and goods through improving accessibility, availability, affordability and acceptability.

Safety, Security and Health

- Reduce the risk of death or injury due to transport accidents.
- Improve the health of individuals by encouraging and enabling more physically active travel.
- Reduce the social and economic costs of transport to public health, including air quality impacts.
- Reduce crime, fear of crime and anti-social behaviour on city and regional transport networks.

Quality of Life

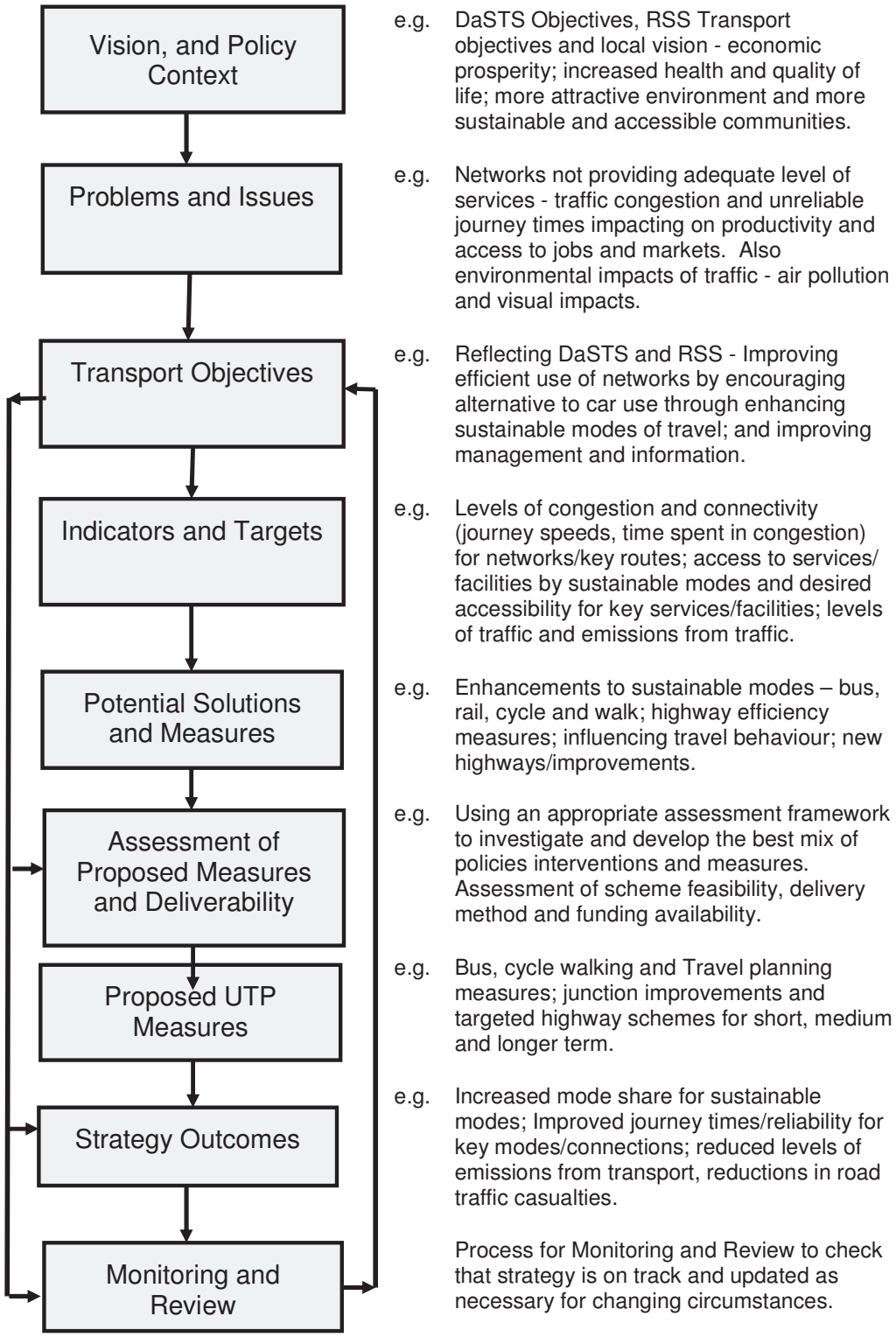
- Reduce the number of people and dwellings exposed to high levels of noise from road and rail networks.
- Minimise the impacts of transport on the natural environment, heritage and landscape.
- Improve the quality of transport integration into streetscapes and the urban environment.
- Improve the journey experience of transport users of urban, regional and local networks, including at the interfaces with national networks and international networks.
- Enhance well-being and sense of community by creating more opportunities for social contact and better access to leisure activities and the natural environment.

TaSTS proposed a four-step process for developing a sustainable transport system:

- clarifying the goals of transport policy;
- specifying the challenges to be addressed on each of the three types of network (city and regional, national and international) and on a cross-network basis;
- generating a range of cross-modal options to address the challenges, looking at the role of regulation and price as well as infrastructure;
- appraising the options on the basis of their delivery against the transport goals and their value for money.

In response to this approach, the development of a transport plan for an area involves a number of steps as illustrated in ***Figure 3.1***.

Figure 3.1: Structure for the Development of the UTP



Key aspects of the approach to developing the UTP are:

- The wider policy context (national, regional and local);
- Existing transport problems and issues and future threats
- A clear definition of objectives, indicators and targets as the starting point for identifying future transport problems and strategy responses;
- Possible transport interventions and their potential contribution to delivering objectives;
- Potential barriers to implementation of transport interventions;
- Identification of future development opportunities and threats;
- Assessment of possible measures and their feasibility/deliverability;
- Identification of the preferred schemes and programme;
- Formulation of a monitoring and review process for the transport strategy.

This process may seem somewhat idealised, but it has several virtues and provides a structure within which participation can be encouraged at all the key stages in decision-making. It offers a logical basis for proposing solutions, and also for assessing proposals suggested by stakeholders. It ensures that the appraisal of alternative solutions is conducted in a logical, consistent and comprehensive way against the full set of objectives.

This UTP responds to transport problems identified through local consultation and knowledge but the overall direction and content of the plan also responds to transport objectives and targets established in the relevant national, regional and local policy frameworks.

3.2 East of England Regional Spatial Strategy

The Regional Spatial Strategy for the East of England (Government Offices | East of England |) sets out a strategy to guide planning and development up to 2021. The East of England Plan was first published in draft form in December 2004 and has subsequently been revised before the finalised document was published in May 2008. The key transport related objectives in the Plan are as follows:

- locating development so as to reduce the need to travel
- effecting a major shift in travel away from car use towards public transport, walking and cycling;
- maintaining and strengthening the East of England's inter-regional connections by improving access to economic opportunities in London;
- ensuring adequate and sustainable transport infrastructure;
- promoting social cohesion by improving access to work, services and other facilities, especially for those who are disadvantaged;
- providing a network of accessible multi-functional greenspace;

It is imperative that the UTP responds to this agenda for transport so that it complements future planning of the area which will be taken forward through the Local Development Framework process.

3.3 Hertfordshire Local Transport Plan

HCC's approach to transport is formulated as part of its LTP. The current LTP covers the period from 2006/7 to 2010/11. The LTP3 is now being developed for the next five year period and will also include a longer term strategy for transport across the County.

The County Council's LTP transport objectives contribute to the delivery of the shared priorities which the Department for Transport has outlined that Highway Authorities have to deliver, namely:

- Tackling congestion;
- Supporting the economy;
- Reducing casualties;
- Respecting the environment; and
- Improving accessibility.

The LTP objectives are supported by targets and a range of indicators against which performance towards achieving targets may be measured.

The targets and objectives are framed by the County Council's vision of what the future of transport in Hertfordshire should be over the next 20 years, namely;

> *to provide a safe, efficient and affordable transport system that allows access for all to everyday facilities. Everyone will have the opportunity and information to choose the most appropriate form of transport and time of travel. By making best use of the existing network we will work towards a transport system that balances economic prosperity with personal health and environmental well being.*

The Hertfordshire Local Transport Plan 2006/07- 2010/11 sets the framework for achieving the vision for transport in Hertfordshire. This UTP has been developed with a view to delivering the nine Local Transport Plan Objectives which are listed under the DfT's shared priorities below.

Safety

- To improve safety for all by giving the highest priority to minimising the number of collisions and injuries occurring as a result of the transport system.

Congestion

- To obtain best use of the existing network through effective design, maintenance and management.
- To manage the growth of transport and travel volumes across the county, and thereby secure improvements in the predictability of travel times
- To develop an efficient, safe, affordable and enhanced transport system which is attractive, reliable, integrated and makes best use of resources.

Accessibility

- To develop a transport system which provides access to employment, shopping, education, leisure and health facilities for all, especially those without a car and those with impaired mobility.
- To ensure that the transport system contributes towards improving the efficiency of commerce and industry and the provision of sustainable economic development in appropriate locations.

Air Quality

- To mitigate the effect of the transport system on the built and natural environment and on personal health

Quality of Life

- To raise awareness and encourage the use of alternative modes of transport through effective promotion, publicity and information
- To reduce the need for the movement of people and goods through integrated land use planning, the promotion of sustainable distribution and the use of telecommunications.

The Local Transport Plan has 22 indicators associated with targets. Only those that are relevant to the UTP are listed in ***Table 3.1*** below;

Table 3.1: LTP Targets Relevant to the UTP

Indicator	Baseline (2003/04)	Target (2010/11)
Public transport patronage (Number of bus passenger journeys (i.e. boardings) per year in the authority)	31 million journeys per year	31 million journeys per year
Bus service user satisfaction (Percentage of bus users satisfied with the local provision of passenger transport services)	55%	60% (2009/10)
Bus punctuality (Percentage of buses keeping to schedule (for services at intermediate timetabled points))	80% (2004/05)	80%
% of people who find it difficult to travel to a local hospital (Accessibility)	29%	24%
Change in area wide traffic mileage (vehicle-kilometres per day)	20.7 million	22.4 million
Cycling trips (Number of cycling trips across the authority)	2397 trips per day (2004/05)	2658 (11% increase)
Change in peak period traffic	Watford 22553	23284

flows	St. Albans/ Hatfield 16415	17289
Congestion	To be established	To be set
Air quality	To be established	To be set
Mode share of journeys to school (Percentage of pupils who travel to school using sustainable modes)	57.5%	60% sustainable modes
Passenger transport information user satisfaction (Percentage of users satisfied with local provision of passenger transport information)	39%	50%
Rights of way (Percentage of total length of footpaths and other rights of way that were easy to use by member of the public)	61% (2005/05)	80%
School travel plans (Percentage of schools with school travel plans)	14%	83%
Speed limit compliance (Percentage level of compliance with 30mph speed limit)	56% (2004/05)	60%

There are a number of indicators that relate to casualty reduction. The number of reported collisions are constantly monitored county-wide. As a general rule those sites with the highest number of reported collisions receive attention using funding from the casualty reduction indicators. As there is a well developed process for dealing with casualty reduction schemes these have not been included in the Urban Transport Plan.

There are also a number of daughter documents to the current LTP including;

- Cycling Strategy
- Bus Strategy
- Rail Strategy
- Accessibility Strategy
- Speed Management Strategy
- Road Safety Plan
- Rights of Way Improvement Plan

These documents elaborate on the strategy to be adopted to achieve the LTP targets. These strategies have also been taken into consideration in developing the UTP.

3.3.1 *Cycling Strategy*

The Cycling Strategy lists two headline objectives:

- more people cycling more often as a convenient, quick, healthy and sustainable form of transport for short journeys
- more people cycling more often as an activity that contributes positively to the primary shared local transport objectives

3.3.2 *Bus Strategy*

The Bus Strategy lists the following targets:

- Reverse the declining trend in bus travel and restore patronage to 2004/04 levels by 2010/11 to 31m passengers per annum
- Achieve 60% satisfaction levels with services by 2010/11
- 95% of buses leaving from a terminus are to be between one minute early and five minutes late
- 70% of buses leaving intermediate timing points are to be between one minute early and five minutes late
- Achieve 50% satisfaction levels with passenger transport information by 2010/11

3.3.3 *Rail Strategy*

Rail targets and objectives are set by Department for Transport and Network Rail. The Rail Strategy identified opportunities for partnership working between HCC and rail operators.

3.3.4 *Rights of Way Improvement Plan*

The Rights of Way Improvement Plan sets out the vision for Hertfordshire, which is

- To create, by 2026, an accessible and integrated off-road network for non-motorised users based on rights of way and other routes, that meets the current and perceived future needs and demands of Hertfordshire's residents and visitors.

The vision will be met through implementation of the following 12 core actions:

- Develop routes that cater for the needs of people with limited mobility and visual impairments
- Develop the rights of way network from significant passenger transport connections
- Reduce the number of unnecessary physical barriers on the network
- Promote Hertfordshire's countryside to residents and visitors
- Develop appropriate well-maintained links into the countryside for use by local people
- Create and develop off-road routes linking communities with places of work, schools and other local facilities
- Extend the network currently available to cyclists and horseriders
- Help people wishing to improve or maintain their health by developing a range of circular off-road routes

- Ensure that opportunities to protect, extend and enhance the off-road network are included in proposals for new developments
- Where the off-road network is affected by busy transport routes work to ensure that appropriate measures are taken to improve the safety and attractiveness of the routes for users
- Address problems of fly-tipping, litter and dog-fouling in partnership with appropriate local and regional agencies
- Identify and address potential demand for access to the countryside amongst those who currently do not use the network

3.3.5 *Road Safety Plan*

The Road Safety Plan outlines the strategy for meeting the LTP objective to reduce the number of casualties from 1,084 to 600 by 2010/11.

3.3.6 *Speed Management Strategy*

The Speed Management Strategy sets out objectives as follows:

- To facilitate the safe and efficient movement of people (including pedestrians) and goods whilst protecting and enhancing quality of life within communities whilst minimising the effect on the local environment
- To achieve a consistent approach to setting speed limits based on the function and nature of the route
- To enable a consistent approach to the implementation of speed management tools
- To increase driver awareness of appropriate speed by ensuring a clear and logical approach to the setting of speed limits and speed management tools

The Strategy is currently under review and is expected to be endorsed in November 2009.

3.3.7 *Accessibility Strategy*

The vision set by the Accessibility Strategy is

- To have a reasonable standard of access for all by appropriate transport to key services of health, learning, work, food shopping and leisure.

The objectives are

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

3.4 Hertfordshire County Council Key Policies

3.4.1 *Hertfordshire Corporate Plan 2009/2012*

The Hertfordshire Corporate Plan sets out the following priorities which the UTP will address:

- Support economic wellbeing
- Maximise independent living
- Ensure a positive childhood
- Secure a good education for all
- Reduce carbon emissions
- Promote safe neighbourhoods
- Be a leading council

3.4.2 *Hertfordshire County Council Proactive Policies*

In addition to targets set through the LTP2, the UTP will also support delivery of the County Council's Proactive Policies:

- Review of direction signing for all road users (primarily motorists, cyclists and pedestrians)
- Review of speed limits
- Identification and promotion of pedestrian priority routes
- Reduction in congestion
- Reduction in street clutter through removing unnecessary signs and relocating other street furniture
- Reviewing provision of parking facilities for cycles, powered two-wheelers and disabled motorists
- Ensuring that all pedestrian crossing are compliant with current Disability Discrimination Act requirements
- Review of route hierarchy

3.5 Broxbourne Borough Council Key Policies

3.5.1 *Broxbourne Borough Council Local Development Framework*

The key document coming forward in the Council's Local Development framework is the Core Strategy for the district of Broxbourne which will provide an overarching plan for the Borough but is yet to be published. The Borough of Broxbourne issued a Core Strategy Issues and Options paper in May 2007 (http://www.broxbourne.gov.uk/PDF/PP%20-%20CS_Issues_and_options.pdf) and this has been followed by the publication of a Core Strategy Consultation document in November 2008.
(http://www.broxbourne.gov.uk/pdf/Draft%20core%20strategy%20-lowres-%20version%20-%206nov08.pdf)
The Core Strategy submission document is expected to be published in 2010 and adopted in 2011.

The Core Strategy documents already published have highlighted a number of highway issues to be addressed in the core strategy, including.

- Improved sustainable travel alternatives including better bus access and integration between bus and rail and wider application of green travel plans for new development;
- Enhanced provision for walking and cycling, including a new footbridge over the A10 at Theobalds Lane;
- Access and parking around the Borough's rail stations;
- Access and parking provision in the Borough's town centres:
- Use of demand restraint to encourage the use of alternatives to the car;
- Upgrading access in the vicinity of the proposed Olympic venue in Broxbourne; and
- Improving public transport access and measures to reduce congestion in as part of the Brookfield Strategic Development site.

3.5.2 *Broxbourne Borough Council Community Plan*

The Community Plan highlights the following objectives in relation to transport:

- Seeking improvements in access to railway stations and rail services;
- Better co-ordination of bus and rail services;
- Provision for pedestrian and cycling routes along and across the A10;
- Improving linkages with the Lee Valley Park; and
- Measures to address areas with parking pressure.

3.5.3 *Broxbourne Sustainable Communities Strategy*

It is planned to endorse the document in the Spring of 2010. This will replace the Community Plan. The Borough Council is working on the key themes that will be contained within the strategy. One of these will be around Access and Transport. The draft 'priorities for action' around this theme are:

- Using the Urban Transport Plans as a mechanism for change
- Improving access to railway stations
- Improving co-ordination between modes
- Improving quality of service and facilities for all forms of transport

These are complemented by three identified transport needs which are improving railway stations, increasing provision for pedestrians and cyclists and reducing congestion. It is also noted that improving the vitality of town centres is an aspiration within many of the themes.

3.6 Conclusion

The LTP objectives, targets and indicators provide the basis for objectives for the Cheshunt and Waltham Cross UTP. Consideration of local problems and aspirations will have an impact on the strategy direction but not on the underlying objectives and indicators. Local factors and strategy direction will have a bearing the outcomes which the UTP is intended to deliver and this will need to be reflected in targets for the area. Consideration has therefore been

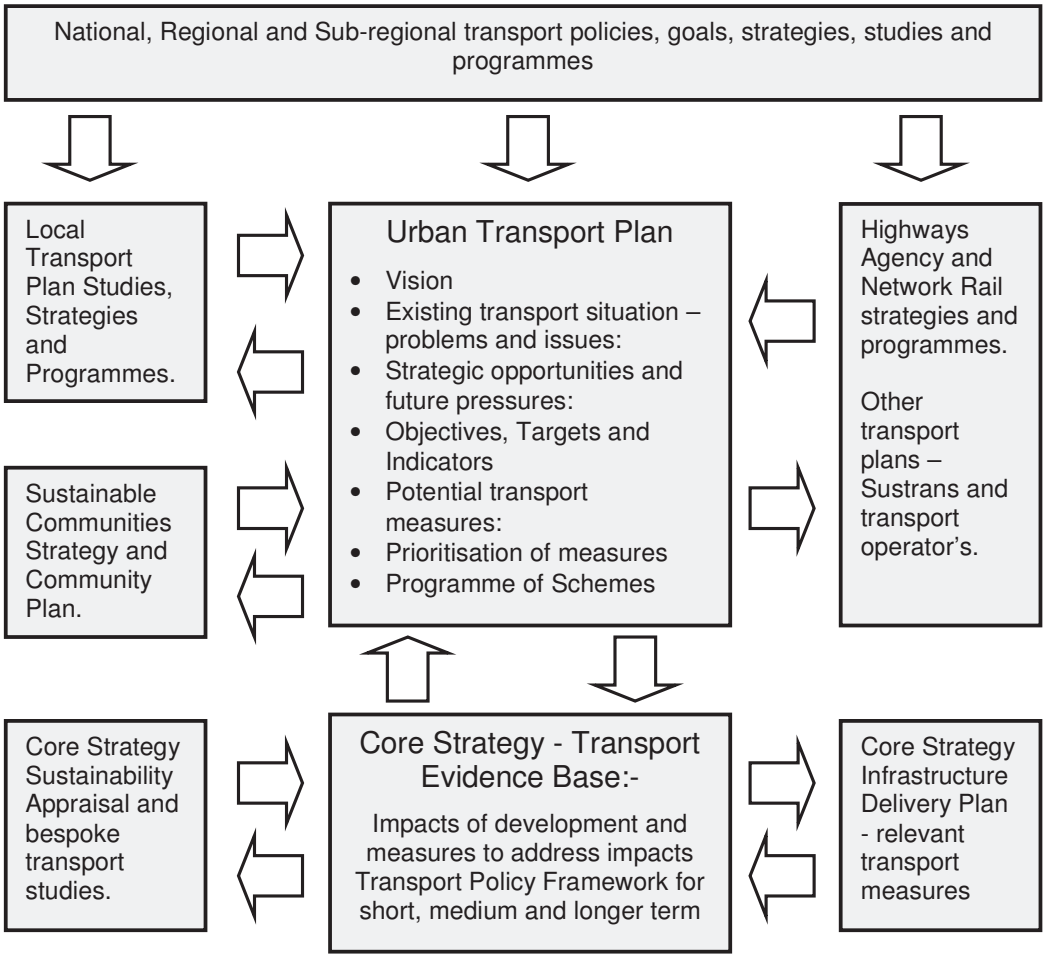
given in the UTP to the scope for certain targets to be higher than those set out in the current LTP.

Monitoring will be undertaken for every scheme developed with LTP funding including a before and after study which will outline how the scheme helps meet the LTP target(s) which fund it.

The preparation of the UTP has taken into consideration the emerging transport policies in the Broxbourne Core Strategy. Likewise, the UTP will be a relevant consideration in the development of the Broxbourne Core Strategy. During the course of preparing the UTP, the proposed spatial strategy for the Core Strategy had not been developed sufficiently to be fully examined within the UTP process. Consequently the traffic impacts of development sites potentially coming forward over the plan period will need to be considered as part of a further study to be undertaken by Broxbourne Council, possibly supplemented by transport assessments carried out by developers.

The linkage between the UTP, Core Strategy and wider transport planning and delivery processes is illustrated Figure 3.2.

Figure 3.2 Linkage between UTP and Broxbourne Core Strategy



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Local & Strategic Problems

4 Local & Strategic Problems

4.1 Method

Information sources for gathering fact and opinion regarding the problems for Cheshunt and Waltham Cross included:

Existing policies – a policy review was conducted to gain a contextual understanding of present and proposed measures to address issues, problems and opportunities. This included the Hertfordshire Local Transport Plan 2006/07 – 2010/11 (LTP2) and daughter documents:

Existing policies and development proposals were also discussed with planning officers at HCC and BBC.

Site visits – Site visits were undertaken to gain understanding of the local environment and to note congestion, sustainable transport, public transport, parking and safety issues in the area, and gain an appreciation of potential options for addressing these problems.

Data sets – Local area data sets set out in the Hertfordshire County Council Cheshunt and Waltham Cross UTP Data Report were interrogated together with additional information available from the 2001 Census. Wider data sets were also interrogated, including Network Rail Utilisation Strategy (http://www.networkrail.co.uk/browse%20documents/rus%20documents/route%20utilisation%20strategies/greater%20anglia/great%20anglia%20rus.pdf) and the Highways Agency Route Network Report for the South East (http://www.highways.gov.uk/business/documents/RNR08_SE.pdf).
Information derived from these data sets provided a detailed picture of general travel trends in the area.

Stakeholder consultation – Relevant officers of HCC and BBC involved in transport development and transport infrastructure provision were contacted to obtain information on current and future transport problems, issues, opportunities and plans. To support this process, separate member and officer workshops were undertaken on 12th November 2008.

A wider stakeholder workshop was also held on 27th January 2009 which included invited representatives from a range of transport service providers, public agencies and local interest groups. The workshop process and outcomes are set out in Appendix Volume 2.

In order to enable residents in the area to provide input to the development of the UTP, summary information and a questionnaire was distributed through the Broxbourne News. This information and questionnaire was also made available on a bespoke website. This process and the public response is also set out in Appendix Volume 2.

The consultation process enabled participants to consider and prioritise transport problems, issues and objectives in the area. It identified possible solutions and specific measures that would respond to local problems and help achieve objectives.

4.2 Transport Problems

Table 4.1 below sets out the transport problems and issues identified through the four information sources described above which have been grouped under the following five themes:

- Cycling and Walking (WCP)
- Bus services/facilities (BUP)
- Rail services/facilities (RAP)
- Highways (Traffic) and Parking (HPP), and
- Smarter Choices (SCP)

Issues, problems and opportunities have been given their own unique alphanumeric reference (e.g. Walking & Cycling Problems 1 = WCP1). Each of the problems are cross-referenced against UTP measures which are presented in Tables 7.1 and 7.2.

Further details on the problems and their impacts on the transport network are discussed within Appendix Volume 1.

Table 4.1: Problems and Issues Identified in the UTP Area

Walking & Cycling (WC)	
WCP1	Underpasses (particularly the Monarchs Way underpass) create movement barriers for pedestrians and cyclists and are perceived by some users to be unpleasant and unsafe
WCP2	Poor east-west links for pedestrians and cyclists due to barrier created by railway lines and the A10
WCP3	Insufficient provision for pedestrians and cyclists to safely negotiate busy junctions and to cross busy roads
WCP4	Poor access to Lee Valley (lack of routes and safe crossing provisions across the railway line)
WCP5	Cycle routes are lacking and where they exist are in poor condition or at an inadequate standard not linking to key destinations (discontinuous, narrow, dangerous and poorly signed)
WCP6	Conflict between pedestrians and cyclists, particularly in/around town centres
WCP7	Insufficient cycle parking provisions at key destinations
WCP8	Cycle ban in Waltham Cross town centre
WCP9	Potential closures at rail crossings will create barriers to pedestrians and cyclists
WCP10	Relatively few people in the area walk or cycle either for regular journeys or for recreation.
WCP11	Level crossing provisions are inadequate, especially for the disabled and mobility impaired
WCP12	Accessibility to rail stations for those with impaired mobility is

	poor owing to lack of lifts.
WCP13	Proximity to general traffic and large vehicles makes walking and cycling unpleasant
WCP14	Inadequate promotion/publicity to encourage cycling (SCP1)
WCP15	No footway on Winston Churchill Way
Bus Services & Facilities (BU)	
BUP1	Illegal parking in bus lanes (HPP7)
BUP2	Capacity constraints at Waltham Cross bus station leads to congestion and safety concerns
BUP3	Low frequency of some bus services, in particular in the evenings and at weekends
BUP4	Travel to London is not fully integrated, both in terms of ticketing and services
BUP5	Inadequate services to other towns
BUP6	Inadequate services to hospitals
BUP7	Poor east-west links
BUP8	Poor integration of bus and rail services (RAP4)
BUP9	Quality of buses is perceived as being poor, particularly access to buses for the disabled and mobility impaired. (Currently 90%+ of buses are DDA compliant and all buses must meet this standard by 2017.)
BUP10	Lack of awareness of bus routes and timetables (SCP3)
BUP11	Bus stop infrastructure is substandard at some locations
BUP12	Limited bus services to Cheshunt rail station
BUP13	Bus fares are expensive compared to London
BUP14	Positioning of taxi rank at Waltham Cross causes congestion for buses at the bus station
BUP15	Low proportion of sustainable travel to Brookfield due to over-provision of parking and lack of bus services (HPP15)
BUP16	Poor bus reliability and journey times
BUP17	Poor positioning of bus stops (perceived problem)
Rail Services & Facilities (RA)	
RAP1	Substandard disabled access provision at rail stations
RAP2	Inadequate facilities and parking at Cheshunt and Waltham Cross rail stations (HPP10)
RAP3	Expansion of Cheshunt rail station car park is restricted by land ownership constraints and high cost (HPP14)
RAP4	Poor integration of bus and rail services (BUP8)

RAP5	Train services and facilities at Theobalds Grove rail station are substandard
RAP6	Fare system complicated and train fares are expensive
RAP7	Overcrowding of train services, particularly during peak periods
RAP8	Parking at Cheshunt and Waltham Cross rail stations is expensive (HPP17)
RAP9	Limited range of train services at some stations, particularly Theobalds Grove.
Highways (Traffic) & Parking (HP)	
HPP1	Congestion and parking around schools
HPP2	Congestion along main traffic corridors
HPP3	Congestion in town centres and at Brookfield Centre
HPP4	Localised congestion at key junctions
HPP5	Localised congestion due to poor positioning of bus stops
HPP6	Congestion due to illegal/unauthorised parking, bus lanes and traffic calming
HPP7	Illegal parking in bus lanes (BUP1)
HPP8	Road accidents and speeding along main roads in residential areas
HPP9	Commuter parking in residential areas near stations
HPP10	Inadequate and affordable parking facilities at Cheshunt and Waltham Cross rail stations (RAP2)
HPP11	Lack of signing to car parks
HPP12	Different parking management regimes lead to inconsistent provision of car parking and variations in charging inconsistent with user requirements.
HPP13	Insufficient car parking facilities at town centres.
HPP14	Expansion of rail station car parks is restricted by land ownership constraints (RAP3)
HPP15	Low proportion of sustainable travel to Brookfield due to over-provision of parking and lack of bus services (BUP15)
HPP16	Abuse of disabled parking bays
HPP17	Parking at Cheshunt and Waltham Cross rail stations is expensive (RAP8)
Smarter Choices (SC)	
SCP1	Lack of promotion/publicity to encourage cycling (WCP14)
SCP2	Insufficient focus on reducing the need to travel and encouraging greater use of sustainable modes of transport

SCP3	Lack of awareness of bus routes and timetables (BUP10)
SCP4	Limited number of schools with active school travel plans

4.3 Summary of Key Issues

A review of the problems identified through the stakeholder and public consultation and through site surveys highlighted the following key transport issues in the area:

Strategic Issues

- Peak period traffic congestion on the A10;
- Congestion on the M25 (with knock on effect on the local highway network);
- Lack of rail capacity on the West Anglia Route;

Local issues

- Peak period traffic congestion;
- Public perception of relatively unattractive bus services and limited accessibility by bus;
- Capacity of Waltham Cross bus station;
- Quality of facilities at Waltham Cross and Theobalds Grove stations and peak period overcrowding on trains;
- Lack of parking capacity at rail stations;
- Poor integration between bus and rail;
- Lack of quality cycle networks, and barriers to cycle use;
- Barriers to walking, including issues of signage and personal security;
- Parking problems in Cheshunt town centre;

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Local & Strategic Opportunities / Future Pressures

5 Local & Strategic Opportunities / Future Pressures

5.1 Method

The process used to gather information on local problems was also applied to identify the local opportunities and future pressures which needed to be considered in the development of the UTP. This included consideration of opportunities and pressures arising through current plans and longer term aspirations that are being considered through the Broxbourne Core Strategy which will provide the overarching strategy for development in the Cheshunt and Waltham Cross Area to 2026.

Broxbourne Council carried out a consultation on its Core Strategy (which forms part of the LDF), in November 2008 and is currently finalising its Core Strategy for submission during 2010. The Council's spatial strategy is to focus on utilising land in the urban area and then extensions of existing urban areas. The Core Strategy will identify "strategic sites" that are central to the achievement of its strategy and the Council has identified the Brookfield area to meet the need to meet residential needs and to improve the Borough's retail offer.

The proposal to develop the Greater Brookfield area for residential, retail, leisure and employment uses is likely to be the most significant development proposal in the Core Strategy. The Core Strategy is also looking to safeguard land as a strategic employment site in the southern part of the Borough which could be land to the west of the A10 opposite the existing park Plaza development. Development options for the period post 2021 could include sites to the east and west of the A10 (sites known as Maxwell's Farm and Albury Farm) and land to the west of Cheshunt.

5.2 Brookfield

There is already a significant retail facility at Brookfield (the Brookfield Centre), situated between the A10 and Halfhide Lane, comprising Tesco and Marks and Spencer stores and 1,670 parking spaces. Brookfield Retail Park lies to the west of Halfhide Lane with 425 parking spaces. The two retail areas operate as separate entities and are separated by the busy Halfhide Lane.

5.2.1 Development Proposals

Development proposals for the Brookfield area are already coming forward to expand the existing Brookfield Centre northwards to provide an extensive retail development together with office, leisure, residential, health and hotel facilities (known as Brookfield Riverside). It is proposed that the commercial developments will be served by a further 3000 parking spaces (making more than 5000 spaces for the area as a whole).

As part of the proposed development, a number of highway infrastructure measures are proposed through the developer's transport assessment, which is still at the preliminary stage. These include a bus hub and a new link road connecting Halfhide Lane with the Turnford interchange on the A10 which is to

have a new southbound slip road onto the A10. Halfhide Lane is proposed to be closed to through traffic and a new bus hub for the development is also proposed. An indicative plan of the proposed development is shown in Figure 5.1 and further details of transport measures to support the proposed Brookfield development can be found in the pro-forma (HP18) in Appendix A at the end of this report.

The development proposals also include preliminary ideas for improving public transport, walk and cycle access to the site. Possible bus improvements being considered include a new express bus service linking Cuffley Station, Greater Brookfield and Cheshunt station. It is also suggested that the C3 route, which calls at the Brookfield Centre, could be improved to provide an enhanced service. Improved pedestrian and cycle links are also proposed.

5.2.2 *Transport Issues*

Transport will be a major factor in considering if and how the proposed Brookfield Riverside development is taken forward. This will involve consideration of both existing transport conditions and potential traffic impacts of the proposed development, including the appropriateness of proposed infrastructure and highway links. There is already significant traffic congestion in the area at peak times on Halfhide Lane and Brookfield West. Figures 5.2 and 5.3 show average peak period journey times on these links for the morning peak period and the evening peak period between 01/09/2008 and 31/08/2009.

In the wider area, the A10 junctions with Church Lane, College Road and the A121 are also heavily congested at peak times. The UTP has considered and proposed more detailed corridor studies, which can be found in the pro-formas (HP14 and HP16) in Appendix A to this report. The existing Brookfield Centre also has limited bus connectivity and is not well served by cycle and pedestrian links to the surrounding area. Broxbourne Borough Council have commissioned consultant MVA to carry out high level traffic modelling to assist in developing their LDF which is due to be adopted in March 2011. The purpose of this exercise is to model likely transport flows on the A10, M25 and other key roads in the Borough considering a number of future development scenarios.

Also in the local area, planning permission has been granted in 2009 for residential development on the Cheshunt Reservoir site which lies some 500 metres to the south of the Brookfield Centre. This will have a single vehicular access from Brookfield Lane West and will lead to increased traffic on this route. This development includes provision of contributions towards traffic calming measures and sustainable transport measures.

These existing traffic problems and transport approach to development in the Greater Brookfield area are referred to in Chapter 6 of the Broxbourne Local Plan Second Review 2001-2011. Paragraph 6.1.8 states that

> "*However, the volume of traffic using the area causes congestion on local roads, particularly at peak times, and adversely affects the amenities of residents. Hence it is essential that any longer term proposals for the centre are founded on a comprehensive review and restructuring of the road network. Additionally, it is clearly desirable and necessary to introduce and enhance public transport in order to comply with government policy as expressed in PPG13 Transport published in March 2001.*"

Figure 5.1 Brookfield Riverside – Indicative Master Plan

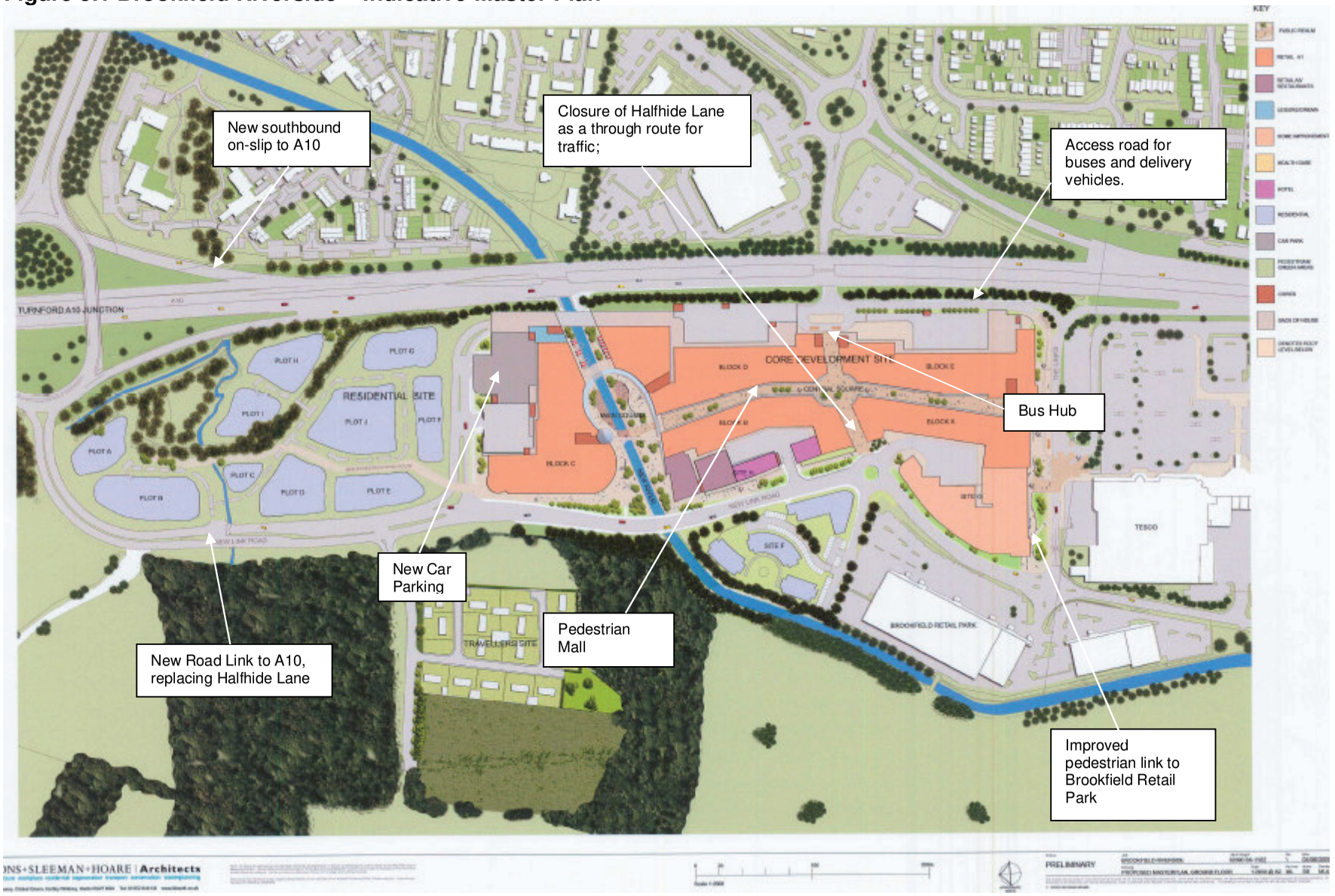

Figure 5.2: AM Peak Period Average Speeds (8am-9am)

Source: HCC (based on TRAFFICMASTER data)

Figure 5.3: PM Peak Period Average Speeds (5pm – 6pm)

Source: HCC (based on TRAFFICMASTER data)

Paragraph 6.2.1 also seeks improved linkages between the Brookfield centre and the Brookfield Retail Park. Paragraphs 6.2.2 to 6.2.5 set out four objectives for the area. The first three of these relate to transport and are as follows:

- "The primary objective for Greater Brookfield is therefore to promote the centre as a single entity for mixed use development."
- Broaden the mix of development and thereby create a more sustainable centre;
- Effect significant improvements in pedestrian and traffic movements around the centre.

As part of the planning process, the transport implications of the proposed Brookfield Riverside development will be the subject of a transport assessment and travel plan. The purpose of the transport assessment and travel plan will be to identify the measures that will be taken to address the potential transport impacts of development and improve accessibility and safety for all modes of travel, particularly alternatives to the car such as public transport, walking and cycling.

Potential transport impacts of the proposed development will depend on the level of additional trips by different modes generated by the development, when these trips occur and the routes they use. The majority of trips to the development will relate to proposed retail uses. The assessment of the impacts of changed retail trip patterns is complex in that some trips will be diverted from other centres such as Waltham Cross, Harlow, Welwyn Garden City, Enfield and beyond.

In addition, some trips to the development will already be on the network and may only divert a short way to become "pass by" trips. Likewise, trips that access the new development by sustainable transport modes will depend on a number of factors, including the provision and attractiveness of new bus services and facilities for cyclists and pedestrians as well as provision of transport information.

The approach to parking provision at the new development will also be a key consideration as it will influence travel demand. The provision of easily accessible and free off-street parking can make high car use self-sustaining. Modal choice can be skewed by the provision of large amounts of 'free' parking, particularly at workplaces. In addition, free parking at retail stores and parks can affect the viability of other retail centres where charging is enforced.

Effective management and control of parking in retail and business centres can reduce car commuting, helping to reduce congestion and achieve wider environmental objectives.

All these factors will need to be considered as part of the transport assessment and travel plan. However, based on current transport conditions, the policy context for transport and potential transport implications of the proposed Brookfield Riverside development, it is possible to set out some key principles for the proposed development.

If the Brookfield Riverside development takes place it will form a sub-regional shopping centre providing retail and leisure facilities which could attract users from a wide area. As a new facility, it will be important for it to be served by a

range of high quality transport services and infrastructure so that it is accessible by those who do not have access to a car. It is also important that the development does not exacerbate existing traffic problems and that increases in traffic volumes in the vicinity of the site do not cause adverse impact on local people.

Key principles for addressing transport in the proposed Brookfield Riverside development are therefore as follows:

1) Ensure that the development is served by high quality, frequent and attractive bus services which are available for visitors and employees and which provide accessibility to the surrounding area, as well as the wider area through links to local rail stations. (See pro-forma HP18 in Appendix A at the rear of this report)

2) Ensure high quality highway access to cope with expected demand. Preliminary ideas from the developer include a new link to the A10 Turnford interchange. (See pro-forma HP16 in Appendix A at the rear of this report)

3) Ensure that traffic impacts on Halfhide Lane and Brookfield Lane West are fully investigated and that this route is improved as appropriate to minimise local congestion and impacts on the local community. (See pro-forma HP11 in Appendix A at the rear of this report)

4) Ensure that potential traffic impacts on the A10 are fully investigated and that appropriate measures are implemented to minimise traffic impacts. (See pro-forma HP16 in Appendix A at the rear of this report)

5) Ensure that the proposed retail development is not severed by Halfhide Lane by closing it through the retail site following the development of alternative routes. (See pro-forma HP18 in Appendix A at the rear of this report)

6) Provide a bus hub which will provide an attractive facility for bus users to the new development and the existing Brookfield Centre and Retail Park. (See pro-forma HP18 in Appendix A at the rear of this report)

7) Provide attractive pedestrian routes within the development and linking to Brookfield Centre and Brookfield Retail Park. (See pro-forma HP18 in Appendix A at the rear of this report)

8) Provide high quality cycle and pedestrian routes to the development from the surrounding areas linking to wider cycle networks serving the district as a whole. (See pro-forma HP11 and HP18 in Appendix A at the rear of this report)

9) Management of car parking, including an appropriate charging regime so that the new centre does not make high car use self sustaining and does not have an unfair advantage over more historic centres.

5.3 Local Opportunities / Future Problems

As well as proposals being considered in the Broxbourne Core Strategy, there are a range of current plans that are being taken forward in the study area such as the relocation of St. Mary's School and the Olympic White Water canoe

centre. The implications for these developments on existing problems in the area and the potential opportunities that these developments may create are summarised in ***Table 5.1***.

Development proposals area referred to as short term, medium term or long term. Short term refers to 0-2 years, medium term refers to 3-5 years and long term refers to over 5 years. As development proposals become firmer, any significant changes will be considered in the future reviews of the plan.

Table 5.1: Implications of Future Opportunities and Pressures

Future Issue	Time-scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
Potential Greater Brookfield development	Medium term	Reduces scale of BUP15 / HPP15 (low proportion of sustainable travel to Brookfield due to over-provision of parking and lack of bus services) Increases scale of WCP6 (conflict between pedestrians and cyclists, particularly in town centres), HPP2 (congestion along main traffic corridors), HPP3 (congestion and town centres and at Brookfield Centre), HPP4 (localised congestion at key junctions)	Opportunities to gain S106 contributions towards highway restructuring in the area and improvements to sustainable transport to alleviate congestion
Olympics White Water Canoe Centre	Up to 2012	Increases scale of HPP2 (congestion along main traffic corridors)	Opportunities to create enhance pedestrian and cycle links.
St Mary's School relocation	2009 - 2010	Increases scale of HPP1 (congestion and parking around schools) at new site, reduces scale of HPP1 (congestion and parking around schools) at old site	Opportunities to create enhance pedestrian and cycle links.

Future Issue	Time-scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
Development at former site of St Mary's School	Medium term	Reduces scale of HPP1 (congestion and parking around schools) Increases scale of HPP4 (localised congestion at key junctions)	Opportunities to create enhance pedestrian and cycle links and enhanced bus infrastructure/ services.
Cheshunt South Reservoir Development	Short term	Increases scale of HPP2 (congestion along main traffic corridors), HPP4 (localised congestion at key junctions), HPP5 (localised congestion due to poor positioning of bus stops)	Opportunities to create enhance pedestrian and cycle links and enhanced bus infrastructure/ services.
Waltham Cross Renaissance Project Environmental Improvements	On-going	Reduces scale of WCP1 (underpasses-particularly Monarchs Way underpass-create movement barriers for pedestrians and cyclists and are unpleasant and unsafe), WCP10 (relatively few people in the area walk or cycle either for regular journeys or for recreation)	Opportunities to integrate regeneration and transport and fund local transport enhancements to improve character, security and function of streets and local connectivity.
Waltham Cross bus station joint study	Subject to review	Reduces scale of BUP2 (capacity constraints at Waltham Cross bus station leads to congestion and safety concerns), BUP8 / RAP4 (poor integration of bus and rail services)	A joint study involving HCC, BBC, TfL and bus operators could identify a solution to the existing capacity problems.

Future Issue	Time-scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
Potential development west of A10	Long term	Increases scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Opportunities to gain contributions towards transport improvements.
Co-op Site mixed non-residential Development	Short/ Medium term	Increases scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Opportunities to gain contributions towards transport improvements.
Increased parking demand at rail stations	On-going	Increases scale of HPP9 (commuter parking in residential areas near stations)	Increased parking on highway around stations unless additional parking provided or improved access by sustainable means.
Level crossing closures	Long term	Increases scale of WCP2 (poor east-west links for pedestrians and cyclists due to barrier created by railway lines and the A10) and WCP9 (potential closure at rail crossings will create barriers to pedestrians and cyclists)	Safeguarding of pedestrian and cycle access and replacement vehicle access where necessary.
Housing demand – in excess of 1,100 dwelling units to be delivered	Up to 2025	Increases scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Opportunities to gain contributions towards transport improvements.
M25 Hard Shoulder Running/ Advanced Traffic Management	2015 onwards	Measure may not significantly reduce scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Continuing need to minimise additional traffic demands on the M25.

Future Issue	Time-scale	Potential Effect on Existing Problems	Possible New Problems and Opportunities Created
Eleanor Cross Road residential developments	Short term	Increases scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Opportunities to gain contributions towards transport improvements.
WAML upgrade (Four-tracking/ Crossrail)	Long term	Reduces scale of RAP7 (overcrowding of train services, particularly during peak periods)	Potential to increase rail services, reduce overcrowding and encourage more rail use.
Theobalds Grove station masterplan (BBC)	Medium term	Reduces scale of RAP2 / HPP10 (inadequate facilities and parking at Cheshunt and Waltham Cross rail stations)	Potential to work in partnership with Network Rail and National Express East Anglia to deliver improvements for rail passengers.
Mixed-use development in Enfield (Hertford Road/ Mollison Avenue)	Medium term	Increases scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Localised improvements within Enfield, unlikely to bring benefits to the Waltham Cross area
Upper Lee Valley Transport Study	Medium to Long Term	Reduces scale of HPP2 (congestion along main traffic corridors) and HPP4 (localised congestion at key junctions)	Study between Enfield and TfL – likely to be constrained to Greater London however it may be possible for wider strategic benefits to be considered which would impact into Broxbourne

Figure 5.1 Local Opportunities / Future Problems

5.4 Conclusions

The majority of the future opportunities are associated with new developments, in particular the provision of additional residential dwellings and commercial development. A particular high profile development in the area is the Olympics White Water Canoe Centre. This will have a national (and International) function and will be used intensively during the London 2012 Olympics. It will also have an important legacy role and will continue to attract visitors on a national basis into the foreseeable future.

The proposed expansion of the Brookfield Centre to include office, leisure, residential, health and hotel facilities as well as additional retail development is likely to have a major impact on the Cheshunt area. It will create a significant retail, leisure and employment centre in the north of Cheshunt which will need to have excellent accessibility by sustainable modes. The development will also need to include restructuring of the local highway network to include diversion of Halfhide Lane to form a new link road to the A10 at the Turnford junction.

The identification of future problems and opportunities informs the option development process to future proof any UTP measures which are proposed.

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Objectives, Indicators and Targets

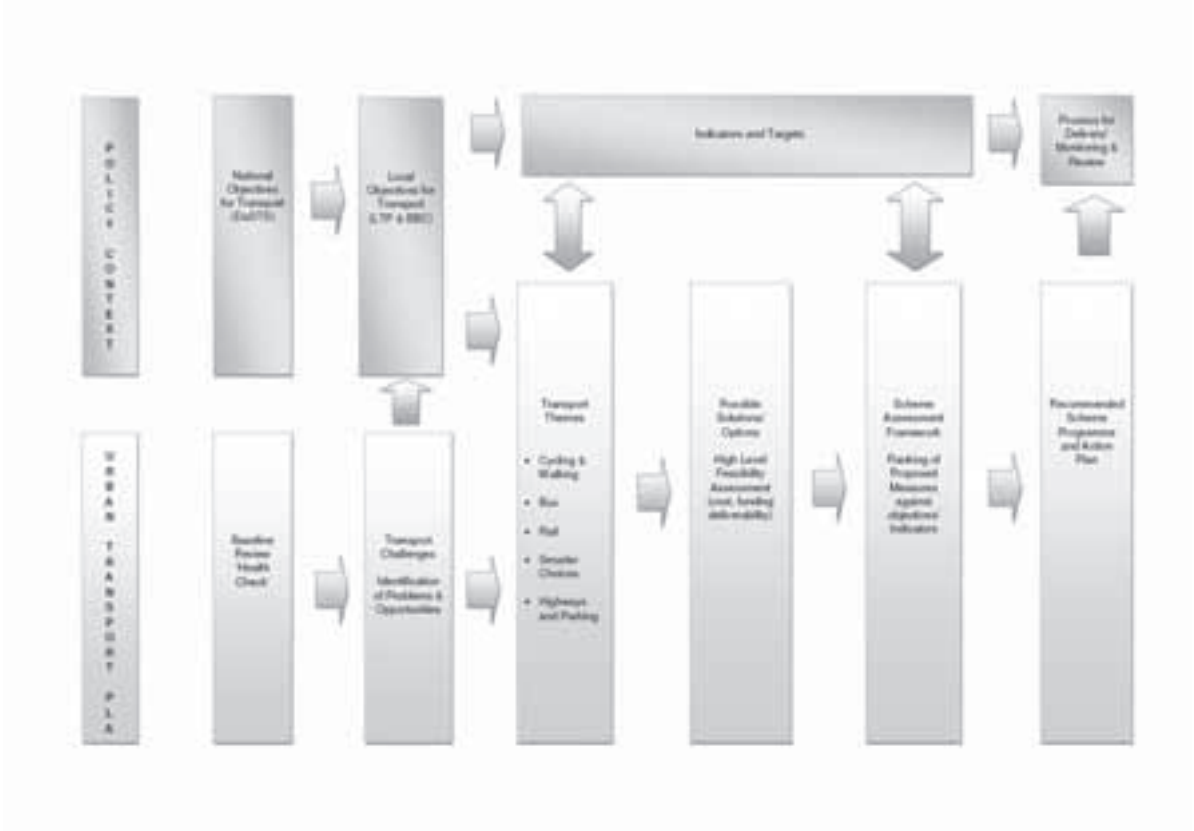
6 Objectives, Indicators and Targets

6.1 Introduction

Objectives are used to provide clarity on what the UTP is intended to achieve and the direction of desired change. They are supported by indicators that are used to quantify change and therefore measure the extent to which objectives are being achieved. These indicators have also been used as a means of assessing the extent to which potential transport measures will support delivery of objectives and to assist in establishing the relative priority of proposed measures. Achievement of objectives is measured against LTP targets.

The review of the policy context has identified a range of relevant policies, influences and studies which have assisted the development of an Urban Transport Plan for Cheshunt and Waltham Cross. These documents provide the context for the objectives and targets and the foundation for the UTP. The importance of the policy framework and the role of objectives and indicators in the development of the UTP is illustrated in ***Figure 6.1*** below.

Figure 6.1: Influence of Objectives, Indicators and Targets in the Development of the UTP



6.2 Local Objectives

A core component of the Cheshunt and Waltham Cross UTP has involved developing an agreed range of overarching objectives for the plan. These objectives need to be in keeping with wider policy framework as well as providing the context and direction specific to the UTP area. The objectives for the Cheshunt and Waltham Cross UTP have therefore been derived from the following sources:

- Identification and analysis of existing problems and issues within Cheshunt and Waltham Cross
- Wider stakeholder consultation
- National, regional and local policy documents

The relationship between the objectives of the LTP and those of the UTP is recognised as being of key importance. As such, the UTP objectives have been closely aligned with the LTP so as to provide a quantifiable basis for assessing the progress of the plan. This enables the use of LTP targets to monitor progress and identify shortfalls.

Based on national guidance, HCC Local Transport Plan and our "health check" of local transport in the Cheshunt and Waltham Cross area, the objectives established for the UTP are set out in ***Table 6.1***.

Table 6.1 UTP Objectives

1	Reduce greenhouse gas emissions from transport
2	Make best use of existing transport networks through better management and targeted improvements to improve their efficiency
3	Reducing car dependency and increasing proportion of trips by sustainable modes of travel. – rail, bus, walk and cycle)
4	Reducing traffic congestion and ensuring that transport supports growth
5	Minimising the impact of transport on the built and natural environment
6	Reducing road traffic casualties
7	Improving access to employment, shopping, leisure and health facilities, especially for those without a car and those with impaired mobility
8	Improving personal security for users of the transport system
9	Improving awareness of sustainable modes of travel and implications of travel choices

Section 4 set out key challenges that the UTP needs to tackle. These may be summarised as:

- Peak period traffic congestion;
- Relatively unattractive bus services and limited accessibility by bus;
- Capacity of Waltham Cross bus station;

- Poor quality of facilities at Waltham Cross and Theobalds Grove stations and peak period overcrowding on trains;
- Lack of parking capacity at rail stations;
- Poor integration between bus and rail;
- Lack of quality cycle networks, and barriers to cycle use;
- Barriers to walking, including issues of signage and personal security;
- Parking problems in Cheshunt town centre;

The purpose of the UTP is to identify packages of measures that will assist in both addressing these issues and delivering the overarching transport objectives for the area. The extent to which this will be achieved involves identifying an appropriate package of measures that will deliver required outcomes. It is therefore necessary to identify the likely outcomes that measures will give rise to. This is assessed through indicators and the setting of targets in relation to desired outcomes.

Indicators can be used to measure performance against specific objectives. Such “outcome” indicators measure changes in performance of the local transport system. For example, speed limit compliances used to measure achievement of the road safety objective. It is important that indicators cover the whole range of objectives and provide sufficient information to enable performance of the UTP to be monitored and reviewed over time. ***Table 6.2*** on the following page demonstrates the linkage between key national transport objectives, local objectives for the UTP area and outcome indicators.

Table 6.2 Linkages Between National and Local Transport Objectives and Indicators

National Transport Objectives / Local Transport Objectives	Reduce greenhouse gas emissions from transport	Managing and making best use of existing transport networks	Reducing congestion and ensuring that transport supports growth	Minimising the impact of transport on the built and natural environment	Reducing road traffic casualties	Reducing car dependency and increasing proportion of trips by sustainable modes of travel	Improving access to employment, shopping, leisure and health facilities, especially for those without a car or with impaired mobility	Improving personal security for users of the transport system	Improving awareness of sustainable modes of transport and implications of travel choices
Contribution of transport to economic success and growth		✓	✓						
Contribution of transport to avoiding dangerous climate change	✓			✓		✓			✓
Contribution of transport to better health and safety					✓				
Contribution of transport to improving quality of life							✓	✓	
Contribution of transport to equality of opportunity							✓		
Key Indicators									
Pollution from traffic Level of traffic – vehicle mileage	✓	✓		✓		✓	✓		✓
Public transport patronage Bus user satisfaction Bus punctuality	✓	✓				✓	✓	✓	✓
Journey times/journey time reliability		✓	✓						
Speed limit compliance Personal safety Road traffic accidents/casualties					✓				
Numbers of people cycling	✓	✓	✓					✓	
Mode share of journeys to school School travel plans	✓		✓			✓			✓
Noise/Visual intrusion from traffic				✓		✓			
Rights of Way Pedestrian trips	✓			✓		✓			
Accessibility to employment Accessibility to hospitals Accessibility to town centres	✓		✓	✓		✓	✓		✓
Access to public transport Access to travel information	✓			✓	✓	✓	✓	✓	✓

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Prioritised Programme of Measures Required

7 Prioritised List of Measures

7.1 Introduction

A range of measures have emerged for potential inclusion in the UTP through the review of baseline conditions, and through consultation with officers at HCC, BBC and representatives of key stakeholders such as Sustrans and bus and rail operators; and through public consultation. These have needed to be sifted in terms of their deliverability and in terms of their potential contribution to delivering desired outcomes. This process is explained in the following paragraphs.

7.2 Development of Measures

Proposed measures have been developed in response to national and LTP transport objectives and existing problems, as well as those problems which are likely to be expected in the future. From the outset the focus has been on bringing forward practical measures that will contribute to the delivery of desired outcomes.

The identification of potential solutions and measures involved consideration of transport problems and issues through interrogation of relevant data sources and through a targeted process of consultation. This included workshops with key officers of HCC and BBC and representatives of key external stakeholders, as well as a process of public consultation (see Appendix Volume 2).

The further development and prioritisation of prospective measures included additional consultation with key officers and agencies, as well as site survey and development of outline scheme designs and cost.

Potential transport measures have been categorised under the following transport themes:

- Walking and Cycling (WC)
- Bus services/facilities (BU)
- Rail services/facilities (RA)
- Highways (Traffic) and Parking, (HP) and
- Smarter Choices (SC)

The deliverability of prospective measures was considered as part of a review of each transport theme (see Appendix Volume 1) and any prospective measures that were considered to not be feasible or beyond the remit of the UTP were not taken forward into the prioritisation assessment framework.

The locations of potential UTP transport measures are shown on Plan 1 in the Appendix to this report.

7.3 The Prioritisation Assessment Framework

Prioritisation of the proposed measures is necessary to ensure that measures proposed for implementation in the UTP respond to problems and will produce desired outcomes in terms of LTP objectives and wider policies for the area.

The assessment was undertaken in four stages:

- Contribution towards addressing transport problems;
- Feasibility assessment;
- Scoring against indicators;
- Contribution to wider policy objectives for the area.

The scheme assessment process has sought to identify the priority of each proposed measure both within each transport theme and across all themes. Conclusions on the proposed programming of measures in the short, medium and longer term has also taken into account deliverability, delivery agency, funding, including potential joint funding requirements, and contribution towards delivering desired outcomes.

7.3.1 Contribution to Addressing Problems

Each proposed measure has been assessed against the problems listed in Chapter 4. Problems which can be addressed through the proposed measure have been identified.

7.3.2 Feasibility score

A high level assessment of the feasibility of delivering each measure has been undertaken to identify those measures where deliverability could be significantly at risk due to high cost, funding uncertainty/requirement for joint funding and potential barriers to delivery including potential lack of support and opposition.

Schemes which were not deemed to be feasible or those which the UTP cannot directly address were:

- Not taken forward for priority assessment;
- Recommended for further study; or
- Addressed through a policy approach

7.3.3 Scoring against LTP indicators

Performance of measures against objectives has been considered against a range of relevant LTP2 indicators and other related indicators. Scoring against LTP indicators formed the core of the assessment framework and was enhanced by the addition of extra indicators, particularly under the “Quality of Life” heading to increase alignment with wider County Council and BBC policies and strategies and the government’s key goals for transport set out in Delivering a Sustainable Transport System (DaSTS) published in November 2008. The Scheme Assessment Framework is elaborated in Appendix Volume 1.

Qualitative assessment was undertaken to determine the effect of each measure on each equally weighted indicator. Scores were given between -3 and +3 with negative scores representing negative impacts and positive scores representing positive impacts. Scores of 3 represented significant positive/negative impact, 2 represented moderate impact, 1 represented slight

impact and 0 represented no impact. The scores were then summed together to determine the overall impact of each measure against all indicators.

Scoring was undertaken on a largely high level subjective assessment. In the case of scoring against 'Speed Limit Compliance' this was only undertaken where there is a 30mph speed limit and the 85th percentile speed limits are greater than 35mph. The Quality of Life target had not been developed at the time of writing.

7.3.4 *Additional considerations*

Additional considerations included relevance to public consultation responses and local transport priorities emerging through the BBC Community Strategy and Local Development Framework.

7.4 Prioritised Programme of Measures

The following ***Table 7.1*** lists the prioritised programme of measures which have been identified to address the local problems and support delivery of the objectives for the UTP area. These measures are illustrated on Plan 1 in Appendix B to this report.

Priority has been determined based on the overall score of each measure against indicators. Costs and local factors have not been considered at this stage; these have been considered in the delivery programme which is elaborated in Chapter 9. Outline costs in Table 7.1 refer to the following cost ranges:

- Low: <£250,000
- Medium: £250,000 - £500,000
- High: >£500,000
- To be confirmed TBC

Funding sources are elaborated in the following Chapter which presents a five year delivery programme for the UTP measures identified in Table 7.1.

Complex schemes where further feasibility work is required to assess the deliverability of specific schemes, these have been included as 'study' measures.

Table 7.1: Priority Ranking of Proposed Measures

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
BU17	Implementation of public transport facilities in line with Brookfield Masterplan	BUP11 BUP17	H	High	High priority, low risk Would best be integrated with Greater Brookfield masterplan therefore potentially long term
WC03	A10 Theobalds Lane Cycle / Footbridge	WCP2 WCP3 WCP10 WCP13	Scheme programmed	High	High priority, low risk, committed funding. Committed funding means it can realistically be delivered in the short term.
WC07a	Park Lane Cycle/Footway rail crossing	WCP9 WCP11	H	High	High priority. Risks associated with design and permissions. Committed funding through S106 means it can realistically be delivered in the short term.
WC07b	Park Lane Bridleway crossing	WCP9 WCP11	H	High	High priority. Risks associated with design and permissions. Committed funding through S106 means it can realistically be delivered in the short term.
SC01	Develop TravelSmart – rolling out the scheme across the area by wards	WCP10 BUP10/SCP3 WCP14/SCP1 SCP2	M	High	High priority, low risk Funding secured, therefore short term.
HP13	Rosedale Way/Fairfield Primary Safe Routes to School scheme	HPP8	TBC	High	High priority and deliverable Funding secured therefore potentially short term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
BU14	Study – Work with BBC, TfL and other bus operators to investigate capacity and layover issues at Waltham Cross bus station	BUP2	L	High	High priority, medium risk. Requires consultation with many stakeholders therefore potentially medium term.
WC17c	New River Cycle / Footway Phase 3 – Church Lane to Brookfield Centre	WCP5 WCP13	H	High	High priority. Risk associated with land ownership and permissions. Will need to fit in with Greater Brookfield masterplan, therefore potentially long term.
RA10	Cheshunt Rail Station – Provision of longer platforms to accommodate longer trains	RAP7	TBC	High	Subject to DfT requirements, therefore medium term.
HP18	Study – Investigate transport measures to support the proposed Brookfield Riverside development	WCP6 HPP3 HPP13	TBC	High	High priority, low risk study Funding through developer contributions, study required to support further growth of Brookfield Riverside therefore short term
WC01b	A121 Eleanor Cross Road – Link to Cheshunt rail station via towpath (linked to Olympics site)	WCP4 WCP5 WCP10 WCP13	Scheme programmed	High	High priority, low risk. Committed funding means it can realistically be delivered in the short term.
WC18	Signing of Cycle Route – Goff's Oak to Cheshunt Station east-west route	WCP5 WCP13	L	High	High priority. Risk that length of route could affect design input therefore potentially long term.
WC24	Enhancements to Monarchs Way Subway – Landscaping, lighting and walkways	WCP1	L	High	High priority, low risk. Scheme can therefore potentially be delivered in the short term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC26	Publish a walking / cycling leaflet and upload information on HCC and BBC websites	WCP10 BUP10/SCP3 WCP14/SCP1 SCP2	L	High	High priority, low risk Scheme is easy to realise using material from UTP therefore can be delivered in the short term
BU06	Provide real time bus information at bus stops (e.g. The Pond, Theobalds Grove rail station, Cheshunt rail station, Waltham Cross bus station and Brookfield Centre)	BUP10/SCP3 BUP11	TBC	High	Subject to wider County Council implementation programme, therefore potentially medium term.
BU12	Provide minimum half-hourly bus services from all parts of the area to Brookfield Centre	BUP15/HPP15	TBC	High	High priority, medium risk Subject to agreement with bus operators and Greater Brookfield masterplan therefore potentially long term.
WC02	Footway / cycleway on south side of Winston Churchill Way	WCP10 WCP13 WCP15	Scheme programmed	High	High priority, low risk, committed funding. Committed funding means it can potentially be delivered in the short term.
WC04	A10 Cycle / Footbridge link to St Mary's School	WCP5 HPP1 WCP4	Scheme programmed	High	High priority, low risk, committed funding through planning conditions. Committed funding means it can realistically be delivered in the short term.
WC14	Cycle route – Theobalds Grove to Cheshunt rail station	WCP5	L	High	High priority, low risk. Funding secured with Sustrans therefore short term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC17a	New River Cycle / Footway Phase 1 – Theobalds Lane to College Road	WCP5 WCP13	H	High	High priority, risk over land ownership and permissions. Scheme costs could affect programming therefore potentially medium term.
WC17b	New River Cycle / Footway Phase 2 – College Road to Church Lane	WCP5 WCP13	H	High	High priority. Risk associated with land ownership and permissions. Scheme costs could affect programming therefore potentially medium priority
WC19	Signing of cycle route – Hammondstreet to Rosedale linking with Goff's Oak to Cheshunt rail station route	WCP5	L	High	High priority. Risk that length of route could affect design input therefore potentially long term
SC03	Ensure residents in the area receive information on smarter choices and sustainable modes on an annual basis	WCP14/SCP1 BUP10/SCP3 SCP2	L	High	High priority, low risk. Materials already available therefore can potentially be delivered in the short term – to be delivered as part of SC01
WC12b	Cycle route – Theobalds Grove to Lee Valley Park	WCP5	L	Medium	Medium priority, low risk Funding secured with Sustrans therefore short term
WC15	Cycle route – Park Lane to Waltham Cross Town Centre	WCP5 WCP8	L	Medium	Medium priority, low risk Dependent on WC07a therefore potentially medium term
WC30	Brookfield Lane West toucan crossing	WCP3	TBC	Medium	Medium priority but likely to be advanced through developer contributions for residential development in locality.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
BU03	Modify existing bus services to directly serve Waltham Cross rail station through liaison with bus operators	BUP8/RAP4	TBC	Medium	Medium priority. Requires agreement with bus operators therefore potentially medium term
BU04	Provide an additional bus stop facility at Waltham Cross rail station to allow additional bus services to call there	BUP8/RAP4	L	Medium	Medium priority Infrastructure delivery is feasible but dependent on BU03 therefore potentially medium term.
BU05	Increase frequency and range of bus services stopping at Cheshunt rail station	BUP8/RAP4 BUP12 RAP2/HPP10 RUP8/HPP17 HPP9	TBC	Medium	Medium priority. Risk over service deliverability. Requires agreement with bus operators but infrastructure delivery is feasible therefore potentially medium term
BU11	Provide improved east-west bus services in the Cheshunt area through liaison with bus operators	BUP7	TBC	Medium	Medium priority, medium risk Requires agreement with bus operators, linked to BU11 therefore potentially long term.
WC05	Theobalds Lane (east) Cycleway and traffic calming measures – A10 to High Street	WCP5	Scheme programmed	Medium	Medium priority, low risk. Committed funding means it can realistically be delivered in the short term
WC08	Hurst Drive Primary School Initiative	WP10 HPP1	Scheme programmed	Medium	Medium priority, low risk. Committed funding means it can realistically be delivered in the short term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC11a	Signing improvements between Waltham Cross bus station and rail station	WCP1 WCP5 WCP12	L	Medium	Medium priority, low risk Very low cost means it can be delivered in the short term
WC20	Cycle enhancements in B176 corridor	WCP5	M	Medium	Medium priority, low risk. Requires detailed investigation therefore potentially medium term.
RA03	Waltham Cross rail station – Provide lifts for access to southbound platform	RAP1	TBC	Medium	Subject to DfT funding priorities therefore medium term
RA12	Theobalds Grove rail station – Provide lifts to platforms	RAP1 RAP5	TBC	Medium	Major scheme subject to Network Rail/NXEA funding priorities therefore likely to be long term
RA16	Theobalds Grove rail station – Environmental Improvements to Theobalds Grove rail station	RAP5	L	Medium	Medium priority, low risk Funding through BBC capital programme therefore delivery is possible in the short term; also subject to rail operator approval
BU01	Provide more information on county services at Waltham Cross bus station through provision of journey planning maps and more accessible electronic passenger information points	BUP10/SCP3 BUP4	TBC	Medium	Medium priority, low risk Scheme requires display of easily produced material, therefore short term subject to TfL agreement.
BU02	Provide bus priority facilities and signalisation of Monarchs Way Roundabout (study)	BUP16 HPP4	L	Medium	Medium priority, medium risk Initial modelling work indicates that problems need to be taken into account in wider context requiring a detailed study therefore long term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC06b	Winston Churchill Way to A10 Footbridge and Theobalds Lane	WCP5	Scheme programmed	Medium	Medium priority, low risk, committed funding through planning conditions. Committed funding means it can realistically be delivered in the short term.
WC09	Cycle Route – St Mary's School to Bury Green	WCP5	Scheme programmed	Medium	Medium priority, low risk, committed funding through planning conditions. Committed funding means it can realistically be delivered in the short term.
WC23	Provision of additional CCTV at Monarchs Way subway	WCP1	L	Medium	Medium priority, low risk Supports wider objectives therefore short term
WC29	Milne Close Roundabout pedestrian improvements	WCP3	TBC	Medium	Medium priority, low risk Low cost means it can be delivered in the short term
RA04	Waltham Cross rail station – Provide new station building with level access	RAP1	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
RA06	Waltham Cross rail station – Provide upgraded passenger waiting areas with improved seating	RAP2/HPP10	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
RA13	Theobalds Grove rail station – Improve station buildings and passenger waiting areas	RAP1 RAP5	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore likely to be long term

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC01a	A121 Eleanor Cross Road cycleway final phase (linked to Olympics site)	WCP4 WCP5 WCP10 WCP13	Scheme programmed	Medium	Medium priority, low risk, committed funding Committed funding means it can realistically be delivered in the short term
WC13	Signing of cycle route – Waltham Cross to Lee Valley Park	WCP4	L	Medium	Medium priority, low risk Funding secured with Sustans therefore short term
RA01	Waltham Cross rail station – Implement Phase 2 of BBC car park expansion scheme	RAP2/HPP10	L	Medium	Medium priority, low risk Funding identified through S106/BBC therefore it can realistically be delivered in the short term
RA07	Waltham Cross rail station – Improve CCTV coverage within station, to include monitoring of cycle parking facilities	RAP2/HPP10	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
RA08	Waltham Cross rail station – Improve customer information	RAP2	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
RA14	Theobalds Grove rail station – Provide CCTV coverage of the station and cycle storage	RAP5	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
RA15	Theobalds Grove rail station – Improve customer real time information	RAP5	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
WC06a	Toucan crossing of Winston Churchill Way at A10 roundabout	WCP3	Scheme programmed	Medium	Medium priority, low risk. Committed funding through planning conditions means it can realistically be delivered in the short term

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
WC10	Signing of cycle route - Winston Churchill Way to Monarchs Way cycle route	WCP5	L	Medium	Medium priority, low risk Very low cost means it can potentially be delivered in the short term
WC11b	Provision of toucan crossing across Abbey Road	WCP1 WCP3 WCP12 BUP8/RAP4	L	Medium	Medium priority, low risk. Part of Waltham Cross package of measures.
WC28	Hammondstreet pedestrian crossing	WCP3	TBC	Medium	Subject to wider County Council implementation programme
RA05	Waltham Cross rail station – Remodel station frontage and provide drop off facility	RAP2/HPP10 RAP3/HPP4 RAP8	TBC	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term
BU07	Provide real time bus information on the HCC website	BUP10	TBC	Medium	Medium priority, low risk Part of wider HCC programme and priority assessment therefore potentially medium term
HP11	Traffic calming along Brookfield Lane West	HPP8	TBC	Medium	Medium priority but likely to be advanced through developer contributions for residential development in locality..
HP12	Church Lane Shops Access Improvements	HPP8	TBC	Medium	Medium priority, low risk therefore medium term
RA09	Waltham Cross rail station – Improve CCTV coverage within station to include monitoring of cycle parking facilities	RAP2/HPP10	L	Medium	Subject to Network Rail/NXEA funding priorities therefore potentially medium term

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
BU16	Provision of bus shelter at Cheshunt rail station	BUP8/RAP4 BUP11	Scheme programmed	Medium	Medium priority, low risk Low cost and funding identified therefore can realistically be delivered in the short term
HP16	Study – traffic management strategies for the A10, including signalisation of A121 junction	HPP2 HPP4	L	Medium	Medium priority, low risk Results of studies needs to feed into further scheme development therefore short term
SC02	Develop a car sharing scheme covering the Cheshunt and Waltham Cross area	HPP1 HPP2 HPP3 HPP4 SCP2	L	Medium	Medium priority, risk surrounding costs of setting up a scheme Would complement Travel Smart therefore long term
WC16	Completion of Winston Churchill Way to M25	WCP5	L	Low	Low priority, low risk Funding linked to development therefore potentially long term.
WC21	Signing of cycleway link to Enfield from Waltham Cross via Enfield Greenways	WCP5	L	Low	Low priority, low risk Minimal cost therefore medium term
WC22	Signing of cycleway Waltham Cross Town Centre to Abbey Road Roundabout	WCP5 WCP8	L	Low	Low priority, low risk, minimal cost Short term scheme as it highlights existing facilities in town centre
RA02	Waltham Cross rail station – Improve internal pedestrian link between Network Rail car park and station building	RAP2/HPP10 RAP3/HPP14	TBC	Low	Subject to DfT funding priorities therefore likely to be long term

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
BU13	Support and promote hospital hopper	BUP16	L	Low	Low priority, low priority Existing service heavily subsidised which would be reduced with higher patronage and make service more feasible, therefore medium term
HP14	Study – A121 route strategy including revised junction at Monarchs Way roundabout	HPP2 HPP4	L	Low	Low priority, low risk. Results of studies needed to into further scheme development therefore short term.
HP15	Study – Masterplan for Cheshunt town centre to include a revised junction arrangement at The Pond to enable more space to be given over to pedestrians and additional short stay parking for the centre	WCP6 HPP3 HPP13	L	Low	Low priority, low risk Results of studies needed to feed into further scheme development, but requires stakeholder input therefore medium term.
WC25	Abbey Road footway	WCP5	L	Low	Low priority, low risk Funding through BBC capital programme therefore can realistically be delivered in the short term.
HP02	Provide CCTV and VMS signing on A10 (M25 – Church Lane, on approaches to Cheshunt and M25) providing information on congestion	HPP2 HPP4	L	Low	Low priority, low risk. Implementation subject to wider County Council programme and priorities therefore potentially long term.
WC12a	Theobalds Lane / High Street toucan crossing	WCP3	L	Low	Low priority, some risk surrounding design and integration of facility. Funding secured with Sustrans therefore short term.

Scheme Ref	Measure	Problems Addressed	Outline Cost	Priority	Programming Considerations
HP01	Improved lining at Monarchs Way roundabout	HPP4	L	Low	Low priority, low risk. Scheme cost is very low therefore potentially short term.
HP07	Roundel High Street Improvements	HPP3	L	Low	Low priority, low risk Part of Waltham Cross Renaissance, BBC funding available therefore short term.
HP09	Goff's Lane speed reduction scheme	HPP8	TBC	Low	Low priority, low risk therefore potentially medium term.
HP06	Eleanor Cross Road taxi parking provision	HPP2 HPP4	L	Low	Low priority, low risk Planning application submitted and funding identified therefore potentially short term.
HP10	College Road / Cromwell Road Roundabout Improvements	HPP9	TBC	Low	Low priority, low risk. Potential delivery in short term.

7.5 Policy Priorities

The County Council has a range of transport policies within the LTP and daughter documents covering a range of transport themes and services which apply to the UTP area. To support the measures above and delivery of the transport objectives, a number of key local policy priorities for the UTP area have been identified. These are complementary to existing County and Borough policies and relate to responses to the specific problems and issues in the area. Policy priorities will complement the proposed transport measures helping to ensure that associated benefits are maximised. These policies and the problems they address are listed in the ***Table 7.2*** below:

Table 7.2: Policy Priorities and Related Problems Addressed

Policy Measure	Problems Addressed
Safeguard rail crossings or provide quality alternatives for walkers/cyclists at all existing level crossings providing access to Lee Valley Country Park	WCP4 WCP9
Ensure needs of walkers and cyclists are given priority in new developments and access to key facilities	WCP3 WCP5 WCP7 WCP14 SCP1
Seek to maintain the surfaces of existing and new footways, cycle ways and the Rights of Way network to an appropriate standard, and keep them clean and free of obstructions in consultation with users.	WCP5
Ensure school travel plans are regularly updated and monitored and supported by provision of sustainable transport measures and travel planning initiatives;	WCP5 WCP7 WCP14 SCP1 SCP4
Seek to work more closely with key local partners including Local Strategic Partnerships, Primary Care Trusts, Local Education Authority, and bus operators and providers of transport for people who cannot use conventional public transport to undertake accessibility assessments and to develop and implement action plans to improve accessibility in the area.	WCP11 BUP9 HPP16
Seek to align car parking charges at stations to maximise use of available parking facilities within Cheshunt and Waltham cross and at other stations which serve the area.	HPP12

Policy Measure	Problems Addressed
Seek to develop a programme of improvements to bus services and bus infrastructure (to ensure DDA compliance) which may be implemented through a developer contribution strategy	BUP3 BUP7 BUP11
Encourage cross-border integrated ticketing for buses for TfL and Hertfordshire County services;	BUP4 BUP13
Ensure new developments are designed to give priority access to sustainable modes and contribute to improvements to sustainable networks serving the sites, to assist in reducing adverse traffic impacts.	WCP3 WCP5 BUP3 BUP5 SCP2
Seek developer contributions towards travel planning services that will reduce excessive car trips from new developments.	SCP2
Give priority to short stay visitor parking in town centres and seek to provide sufficient spaces to support the viability of town centres.	HPP12
Ensure that where new publicly available parking is provided in town centres, it is available to users of the town centre as a whole and is restricted to short stay use.	HPP12
Seek to ensure that parking charges at retail centres do not give any one centre an advantage over other centres.	HPP12
Seek to work closely with National Express East Anglia, TfL, Enfield and Essex to maximise use of sustainable modes for cross border trips between the UTP area and the Greater London area and Essex.	BUP4 BUP5 RAP9
Work across the Council and with BBC to maximise opportunities offered by new technology to manage the highway network.	HPP2
Work across the Council and with BBC to maximise opportunities offered by new technology to improve personal security for transport users and to provide improved provision of information about travel conditions and travel choices	WCP14 BUP10 SCP1 SCP3
Develop improved monitoring systems to measure the outcome of transport measures and performance of the transport system in the Cheshunt and Waltham cross area.	HPP2

7.6 Measures Considered and Not Included in the UTP

The consultation and scheme development process identified measures in addition to those listed above in Tables 7.1 and 7.2. A number of these

measures were deemed to be not feasible for inclusion in the UTP due to reasons such as prohibitive costs/lack of funding opportunities, physical constraints and deliverability constraints. These schemes are detailed in ***Table 7.3*** below alongside justification of their omission from the UTP.

Table 7.3 Proposed Measures Omitted from the UTP and Justification

Proposed Measure	Justification
Undertake an initial feasibility assessment of a new east-west link south of Waltham Cross between A1055 and A121 south of M25	The scheme is not in Hertfordshire therefore delivery of the scheme cannot be secured through any HCC programme.
Allow cycling in Waltham Cross town centre	This has previously been investigated and did not gain support during public consultation.
Consider bus based Park and Ride sites for Cheshunt, Waltham Cross and Park Plaza area	There are no suitable Park and Ride sites identified in Broxbourne.
Reinstate old bus routes	Bus services can only be provided where there is a social need/market to serve. Whilst old routes could be reinstated, it requires specific assessments to be undertaken.
Traffic calming measures on the A10	Implementation of traffic calming on the A10 is not in line with the character and purpose of the road.
Reduce speed limit from 40mph to 30mph on Eleanor Cross Road	Speed limits are set against specific criteria and their change requires a specific process outside the scope of the UTP.
Put bus stops in lay-bys	Buses often struggle to emerge from lay-bys, affecting journey time reliability. The need for a lay-by should be assessed on a case by case basis rather than a blanket provision.
Provide an additional rail station with car parking in the Turnford area	Provision of a new rail station has extensive cost and land implications – the proposal would be a major scheme and subject to regional funding priorities requiring support of network rail and train operator which may not be forthcoming.
Additional cycle parking at Cheshunt Rail Station	Cheshunt Rail Station already benefits from 40 cycle parking spaces. There are severe space constraints at the station therefore additional cycle parking cannot realistically be delivered.

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Five Year Delivery Programme

8 Five Year Delivery Programme

8.1 Selection of measures

A number of measures listed in Chapter 7 are able to be delivered in the first five years of the UTP period, subject to funding.

Consideration of priority, feasibility and deliverability has been undertaken to identify measures which offer greatest benefits and best prospects for delivery as a result of their value for money and support from funding partners.

Availability of funding is a key consideration. Potential funding streams/agencies that fund transport enhancements in the UTP area are shown in **Table 8.1** and include:

Table 8.1: Potential Funding Streams/Agencies

Funding Source	Application
National Roads Funding	Funding is focused on improving efficiency of national routes e.g. Managed Motorways strategy including Hard Shoulder running for M25 Junction 23-27.
National Rail Investment Programme	Improvements to the rail network and stations are set out in the Network Rail Strategic Business Plan and Route Utilisation Strategies.
Regional Funding Allocation (RFA)	Funding for transport schemes over £5m is prioritised at a regional level. Proposals for major schemes in the UTP area will therefore have to compete for limited funding against a range of regionally significant schemes.
HCC Local Transport Plan	National funding is provided for local transport schemes identified in Local Transport Plans. In Hertfordshire, LTP funding is allocated to a range of transport indicators e.g. safety, mode share of journeys to school and congestion. UTP measures compete for funding from these allocations.
Hertfordshire Infrastructure and Investment Strategy (HIIS)	In order to inform infrastructure planning across the County, HCC has investigated the transport infrastructure required to support growth. This demonstrates the case for new development to support delivery of necessary transport infrastructure.
Developer Contributions	Planning obligations with respect to transport can set out contributions (either through the provision of service, infrastructure, land or funding) that would allow an adverse impact

	of a development to be mitigated and therefore enable development that would otherwise be inappropriate to take place. Planning conditions can also require provision of necessary transport measures to be provided in conjunction with development.
HCC and BCC programmes and capital programmes;	Council's have the ability to use resources that may be accrued from a range of sources to invest in transport, although in practice, resources are likely to be very limited.
Direct grants from Government and national bodies such as Sustrans	The government makes available direct funding for particular transport measures that it is keen to support beyond the LTP process. E.g. government funding is provided to Sustrans which supports local cycling initiatives.
Olympic Delivery Authority	Funding has been sought from the ODA to support improved access to the Broxbourne White Water Canoe Centre.
Train Operating Company	Train operating companies support improvements to station facilities through franchise agreements but the limited funds available from this source need to be prioritised across the franchise area.
TfL	TfL funding could apply to Waltham Cross bus station and transport measures in the north of Enfield that may benefit the Waltham Cross area. However, measures in the Waltham Cross area may not represent a priority compared with competing needs across the wider London area.

In many cases transport measures may be funded by several funding sources. For example, a cycle scheme may be implemented with funding from Sustrans, HCC, and BBC, (possibly also utilising developer funding). Likewise rail station improvements may be delivered through a combination of funding from a train operator, HCC and BBC. These bodies work to different planning and spending programmes and consequently the programming of a particular rail measure, for example) is likely to involve consultation and agreement by all these agencies.

Although prospective transport measures have been identified for delivery in the first five years of the plan, delivery of certain measures will continue to be uncertain until scheme designs and costs have been fully worked up and delivery partners have reached agreement on cost sharing. Where transport schemes are to be funded directly from the HCC LTP programme, highway schemes will be developed over a two year programme (first year design and preparation and second year construction). However, even these programmes are subject to annual review as part of the county wide programme management process.

8.2 Measures for Delivery in the First Five Years

Through consultation with members of the public, HCC and BBC, combined with the UTP consultant's own investigative work, a number of issues and problems have been identified with regard to transport in the Cheshunt and Waltham Cross area. These have been categorised for different modes of transport as identified in Chapter 4. Through a similar process, possible solutions have been developed into specific deliverable schemes. Schemes have been considered through an assessment framework based on a number of factors including:

- feasibility (considering high level risks involving funding availability, deliverability and third part involvement)
- relevance to specific issues
- scoring against to LTP objectives and indicators (identified in Chapters 3 and 6) – this formed the basis of scheme prioritisation
- outline costs
- considerations against public consultation priority and BBC community strategy
- programming considerations

The prioritised list of measures is presented in Chapter 7, along with policy based measures (those which would not be delivered through specific schemes but are nonetheless important in realising the UTP objectives) and measures which were considered but not taken forward.

Tables 8.2 and 8.3 identify schemes to be delivered in the short term (0 – 2 years) and in the medium term (3 – 5 years), respectively. The delivery programme organises the measures listed in Chapter 7 into the programming timescales. The programme for delivery takes into account the priority scores. However, it also takes wider consideration of the feasibility of delivering the schemes within the proposed timeframe based on factors such as cost, funding and partnering. Those factors are set out more fully in scheme proformas which can be found in Appendix A to this report.

Short term schemes in these tables which involve the implementation of physical measures not covered by BBC or HCC's current programme of works have been independently assessed through a scheme proforma. The proforma includes a description of the proposals, location plan, a deliverability assessment and outline costs. Medium term schemes also have proformas which contain slightly less detail. Where a scheme proforma has been provided, this is identified in the right hand column of the following tables.

Where the HCC has been identified as the funding source, ownership of the proposal (responsibility for delivery) has also been identified. In some cases, the costs of medium and longer term measures remain to be confirmed (shown as TBC in Tables). This is particularly the case with measures that are being brought forward by several partners.

Table 8.2: UTP Schemes for implementation in the First Five Years: Short Term Schemes to be implemented Year 0 – 2

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
WC01a	A121 Eleanor Cross Road Cycleway Final Phase (Linked to Olympic Site)	0-2 years	Scheme programmed	HCC LTP Cycling Olympic Delivery Authority British Waterways S106 (developer)	
WC01b	A121 Eleanor Cross Road - Link to Cheshunt Station via Towpath (Linked to Olympic Site)	0-2 years	Scheme programmed	HCC LTP Cycling Olympic Delivery Authority British Waterways S106 (developer)	
WC02	Footway/Cycleway on south side of Winston Churchill Way	0-2 years	Scheme programmed	BBC	
WC03	A10 Theobalds Lane Cycle/Footbridge	0-2 years	Scheme programmed	BBC Sustrans S106 (developer)	
WC04	A10 Cycle/ Footbridge Link to St Mary's School	0-2 years	Scheme programmed	S106 (developer)	
WC05	Theobalds Lane (east) improvements - cycleway	0-2 years	Scheme programmed	S106 (developer)	
WC06a	Toucan Crossing of Winston Churchill Way at A10 roundabout	0-2 years	Scheme programmed	S106 (developer)	

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
WC06b	Winston Churchill Way to A10 Footbridge and Theobalds Lane	0-2 years	Scheme programmed	S106 (developer)	
WC07a	Park Lane Cycle/Footway rail crossing	0-2 years	£1,000,000	S106 (developer)	
WC07b	Park Lane Bridleway crossing	0-2 years	£1,000,000	S106 (developer)	
WC08	Hurst Drive Primary School Initiative	0-2 years	Scheme programmed	HCC Children Schools & Families	
WC09	Cycle Route – St Mary's School to Bury Green	0-2 years	Scheme programmed	S106 (developer)	
WC10	Signing of cycle Route Winston Churchill Way to Eleanor Cross Road	0-2 years	£2,000	HCC LTP Cycling	✓ (See appendix A)
WC11a	Signing improvements between Waltham Cross bus station and rail station	0-2 years	£4,000	HCC LTP Accessibility	✓ (See appendix A)
WC11b	Provision of toucan crossing across Abbey Road	0-2 years	£210,000	HCC LTP Accessibility	✓ (See appendix A)
WC12a	Theobalds Lane/High Street Toucan Crossing	0-2 years	£102,000 (Scheme in development)	Sustrans	✓ (See appendix A)
WC12b	Signing of Cycle Route - Theobalds Grove to Lee Valley Park	0-2 years	£36,000 (Scheme in development)	Sustrans	✓ (See appendix A)

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
WC13	Signing of Cycle Route - Waltham Cross to Lee Valley Park	0-2 years	£30,000 (Scheme in development)	Sustrans	✓ (See appendix A)
WC14	Cycle Route - Theobalds Grove to Cheshunt Station	0-2 years	£246,000 (Scheme in development)	Sustrans	✓ (See appendix A)
WC22	Signing of cycleway Waltham Cross Town Centre to Abbey Road Roundabout	0-2 years	£1,000	HCC LTP Accessibility	✓ (See appendix A)
WC23	Provision of additional CCTV at Monarchs Way Subway	0-2 years	Scheme programmed	BBC	
WC24	Enhancements to Monarchs Way Subway - Landscaping/ Lighting & Walkways	0-2 years	£47,500	BBC, HCC LTP Accessibility S106 (developer)	✓ (See appendix A)
WC25	Monarchs Way (Abbey Road) footway	0-2 years	£42,000 (In BBC's Capital Programme)	BBC	
WC26	Publish a walking/cycling leaflet and information on HCC and BBC web sites	0-2 years	£20,000	BBC	✓ (See appendix A)
WC28	Hammondstreet pedestrian crossing	0-2 years	Scheme programmed	BBC	
WC29	Milne Close Roundabout pedestrian improvements	0-2 years	Scheme in development	S106 (developer)	

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
BU01	Provide more information on county services at Waltham Cross bus station through provision of journey planning maps and more accessible electronic passenger information points	0-2 years	[TBC]	HCC PTU	
BU16	Provision of bus shelter at Cheshunt rail station	0-2 years	Scheme programmed	HCC PTU	
RA01	Waltham Cross Rail Station - Implement Phase 2 of BBC Car Park Expansion scheme	0-2 years	£120,000	BBC	
RA16	Theobalds Grove Rail Station - Environmental improvements to Theobalds Grove rail station	0-2 years	£29,000 Scheme programmed	BBC	✓ (See appendix A)
HP01	Improved lining at Monarchs way roundabout	0-2 years	£12,000	HIIS	✓ (See appendix A)
HP06	Eleanor Cross taxi parking provision	0-2 years	£2,000	BBC	✓ (See appendix A)
HP07	Roundel High Street Improvements	0-2 years	£110,000	BBC	
HP10	College Road / Cromwell Road Roundabout Improvements	0-2 years	[TBC]	[TBC]	

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
HP13	Rosedale Way/Fairfield Primary Safe Routes to School scheme	0-2 years	Scheme programmed	HCC LTP Mode Share to School	
HP14	Study - Investigation of A121 route strategy including revised junction at Monarchs Way roundabout	0-2 years	£45,000	HIIS S106 (developer)	✓ (See appendix A)
HP16	Study - Investigation of traffic management strategies for the A10, including signalisation of A121 junction.	0-2 years	£60,000	HIIS S106 (developer)	✓ (See appendix A)
HP18	Study – Investigate transport measures to support the proposed Brookfield Riverside development	0-2 years	To be funded through developer contributions	S102 (developer)	✓ (See appendix A)
SC01	Develop Travel Smart – Rolling out the scheme across the area by wards	0-2 years	£400,000 Scheme programmed	Sustrans HIIS BBC	
SC03	Ensure residents in the area receive information on smarter choices and sustainable modes on an annual basis	0-2 years	Scheme programmed as part of SC01	Sustrans HIIS BBC	

Table 8.3: UTP Schemes for implementation in the First Five Years: Medium Term Schemes to be implemented Year 3 – 5

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
WC15	Signing of Park Lane to Waltham Cross Town Centre	3-5 years	£1,000	HCC LTP Accessibility	✓ (See appendix A)
WC17a	New River Cycle/Footway Phase 1 - Theobalds Lane to College Road	3-5 years	£701,000	HCC LTP RoW or Cycling S106 (developer)	✓ (See appendix A)
WC17b	New River Cycle/Footway Phase 2 - College Road to Church Lane	3-5 years	£503,000	HCC LTP RoW or Cycling S106 (developer)	✓ (See appendix A)
WC20	Cycle enhancements in B176 corridor	3-5 years	£300,000	HCC LTP Cycling	✓ (See appendix A)
WC21	Signing of Cycleway Link to Enfield from Waltham Cross via Enfield Greenways	3-5 years	£2,000	HCC LTP Accessibility	✓ (See appendix A)
WC30	Brookfield Lane West toucan crossing	3-5 years	[TBC]	S106 (developer)	✓ (See appendix A)
BU03	Modify existing bus services to directly serve Waltham Cross rail station (working with bus operators)	3-5 years	[TBC]	TBC	

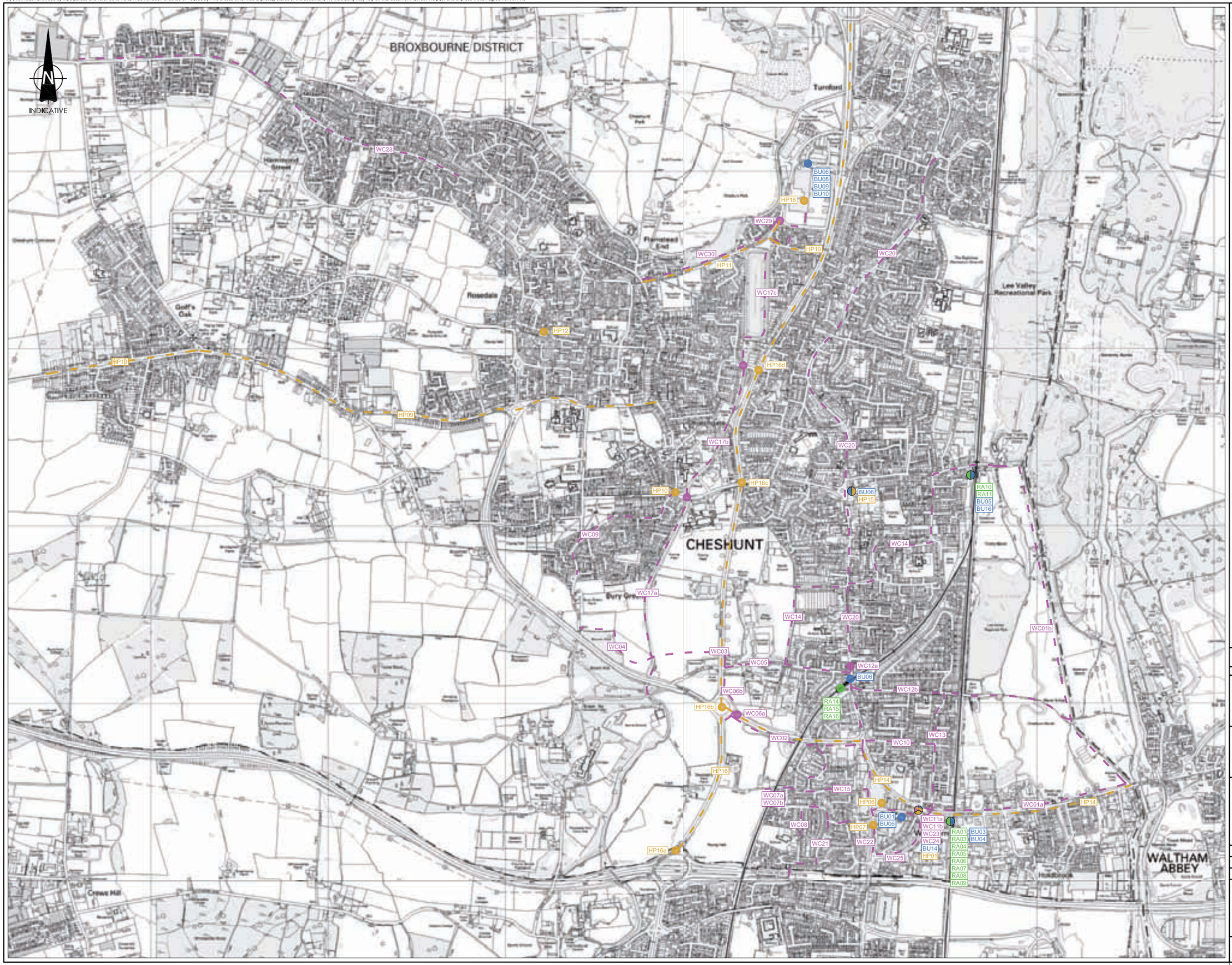
Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
BU04	Provide an additional bus stop facility at Waltham Cross rail station to allow additional bus services to call there	3-5 years	£20,000	S106 (developer) HCC LTP Bus Patronage HCC LTP Accessibility	✓ (See appendix A)
BU05	Increase frequency and range of bus service stopping at Cheshunt Station (working with bus operators)	3-5 years	[TBC]	TBC	
BU06	Provide real time bus information and electronic passenger information points at bus stops starting with those most heavily used. (Stops at The Pond, Theobalds Grove rail station, Waltham Cross bus station and Brookfield Centre)	3-5 years	TBC	HCC PTU	
BU07	Provide bus real time information on the HCC web site	3-5 years	[TBC]	HCC PTU	
BU13	Support and promote the hospital hopper	3-5 years	£10,000	HCC PTU	
BU14	Study - Work with BBC, TfL and other bus operators to investigate capacity and layover issues at Waltham Cross bus station	3-5 years	£100,000	TBC	✓ (See appendix A)

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
RA03 (see Note 1)	Waltham Cross Rail Station - Provide lifts for access to southbound platform	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	
RA04 (see Note 1)	Waltham Cross Rail Station - Provide new station building with level access	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	
RA05 (see Note 1)	Waltham Cross Rail Station - Remodel station frontage and provide drop off facility	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	
RA06 (see Note 1)	Waltham Cross Rail Station - Provide upgraded passenger waiting areas with improved seating	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	
RA07 (see Note 1)	Waltham Cross Rail Station - Improve CCTV coverage within station, to include monitoring of cycle parking facilities.	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
RA08 (see Note 1)	Waltham Cross Rail Station - Improve customer real time information	3-5 years	[TBC]	DfT HCC BBC S106 (developer) See note 1	
RA09 (see Note 1)	Waltham Cross Rail Station - Provide improved cycle storage facilities	3-5 years	£2,000	DfT HCC BBC S106 (developer) See note 1	
RA10 (see Note 1)	Cheshunt Rail Station - Provision of longer platforms to accommodate longer trains	3-5 years	[TBC]	Network Rail	
RA14 (see Note 1)	Theobalds Grove Rail Station- Provide CCTV coverage of the station and cycle storage	3-5 years	[TBC]	TBC	
RA15 (see Note 1)	Theobalds Grove Rail Station- Improve customer real time information	3-5 years	[TBC]	TBC	
HP09	Goffs Lane speed reduction scheme	3-5 years	[TBC]	HCC LTP Speed Compliance	✓ (See appendix A)
HP11	Traffic calming along Brookfield Lane West	3-5 years	[TBC]	S106 (developer)	✓ (See appendix A)
HP12	Church Lane Shops Access Improvements	3-5 years	[TBC]	HCC LTP Accessibility	✓ (See appendix A)

Scheme Ref	Measure	Year	Estimated Cost	Potential Funding Source	Scheme Proforma
HP15	Study - Investigate masterplan for Cheshunt town centre to include a revised junction arrangement at the Pond to enable more space to be given over to pedestrians and additional short stay parking for the centre	3-5 years	£39,000	HIIS S106 (developer)	✓ (See appendix A)
Note 1: subject to costings priorities and funding					

All short term and medium term schemes are shown on a plan in **Figure 8.1** overleaf.



NOTES

1. SCHEMES WC26, WC27, BU07, BU12, BU13 AND SC03 ARE GENERAL/INFORMATION TYPE SCHEMES AND THEREFORE ARE NOT SHOWN ON THIS PLAN.
2. ROUTE SHOWN FOR BU11 IS INDICATIVE ONLY.

KEY

- WALKING AND CYCLING SCHEMES
- RAIL MEASURES
- BUS MEASURES
- SMARTER CHOICES
- HIGHWAY AND PARKING MEASURES

Rev	Date	Detail	Made	Chk'd	App'd

Client:

HERTFORDSHIRE COUNTY COUNCIL

Project:

CHESHUNT & WALTHAM CROSS URBAN TRANSPORT PLAN

Title:

SHORT AND MEDIUM TERM UTP SCHEMES

Design:	EK	CAD:	EK
Chk'd:	GF	App'd:	GF
Date:	NOV 09	Scale:	NTS

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Schemes have also been packaged by location and funding sources in tables B.1 – B.26 which can also be located in Appendix B as summarised below.

Delivery Programme by Location:

UTP schemes for implementation in the first five years:

- Table B.1: Waltham Cross Town Centre Area
- Table B.2: St Mary's School Relocation
- Table B.3: Wider Cheshunt Area
- Table B.4: Access to Lee Valley Olympics Site
- Table B.5: Greater Brookfield
- Table B.6: Cheshunt Railway Station
- Table B.7: Waltham Cross Railway Station
- Table B.8: Theobalds Grove Railway Station
- Table B.9: Sustainable Travel, Information and Wide Area Measures

Delivery Programme by Funding Source:

UTP schemes for implementation in the first five years:

- Table B.10: HCC LTP Accessibility funding
- Table B.11: HCC LTP Cycling funding
- Table B.12: HCC LTP Bus Patronage funding
- Table B.13: HCC LTP Rights of Way funding
- Table B.14: HCC LTP Mode Share to School funding
- Table B.15: HCC LTP Speed Compliance funding
- Table B.16: HCC HIIS funding (used in place of LTP Congestion funding as Congestion has not been identified as a priority in Broxbourne through the LTP2).
- Table B.17: HCC Passenger Transport Unit funding
- Table B.18: HCC Childrens Schools & Families funding
- Table B.19: HCC funding (not identified at present)
- Table B.20: Broxbourne Borough Council
- Table B.21: Sustrans
- Table B.22: S106 Contributions
- Table B.23: DfT/Rail Authorities
- Table B.24: Olympic Delivery Authority
- Table B.25: British Waterways
- Table B.26: Funding Source to be confirmed

8.3 Measures for Delivery after the First Five Years

It should be noted that a number of schemes have been identified for delivery after the first five year and that the plan will be reviewed after 5 years. As a result of the review, there may be amendments to programming of schemes, and indeed to the schemes themselves; however, all the schemes currently identified as long term are shown in Table B.27 in Appendix B.

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Monitoring and Date of Plan Review

9 Monitoring and Date of Plan Review

9.1 Introduction

Regular monitoring will enable assessment of the progress of measures in the UTP against the plan. It is a vital element in ensuring that measures proposed within the UTP are delivering outcomes that address problems, support the achievement of objectives for the area and assist in achieving LTP targets. Monitoring processes need to be developed and deployed which enable quality information to be obtained on the performance of the transport system in the area and direction of trends in travel use and experience.

The results of monitoring processes should provide a basis for regular reviews of the plan to assist it to respond to evolving demands. This is an essential process in ensuring that the plan remains a relevant.

9.2 Reporting and Monitoring Frequency and Mechanism

It is envisaged that an annual report on the schemes delivered and progress towards the local targets will be published for the UTP area.

The report will be based on data collected from monitoring processes. Monitoring involves two elements: output and outcome.

9.2.1 Monitoring output

Output monitoring involves monitoring the progress of the delivery of schemes and quantifies type and extent of interventions. For example, this could include the length of cycle way constructed and number/type of pedestrian crossing facilities provided. This will involve reporting on the completion of schemes and general progress of programmed delivery, including expenditure on schemes.

Output will be monitored on an on-going basis as schemes are completed. At the time of preparing the annual report, all output monitoring data should be collated to include the most recent progress on schemes.

Monitoring output should therefore be part of an overall programme management system that should encompass HCC and BBC transport expenditure and programmes. As well as monitoring outputs, this should also include annual reviews of funding opportunities and management of the forward programme to maximise the effective use of available resources.

9.2.2 Monitoring outcome

Monitoring outcomes involves identifying changes in the performance of the transport system in the UTP area and will enable an assessment to be made on the effectiveness of schemes which are delivered through the UTP.

Monitoring outcomes should be in line with, and build on procedures already in place to monitor against the LTP indicators and targets. As such, monitoring for different outputs may not occur at the same frequency. At the time of preparing the annual report, all outcome monitoring data should be collated to include the most recent data and it is likely that some data may be more recent than others. This will be to ensure efficiency and cost effectiveness.

The following methods could be used to monitor outcomes:

Travelwise Cordons - Carried out on a three year cycle these provide modal split information in and out of Cheshunt and Waltham Cross. The previous cordon was carried out in 2008 with the next cordons taking place in 2011 and 2014.

Congestion Surveys- Levels of congestion and queue lengths can be ascertained on an annual basis from Trafficmaster congestion journey time data. It is proposed that data for the A10 and A121 be collated for the annual report as these have been identified as congestion hot spots.

Volume Counts - Vehicle volumes are collected throughout the year at two sites.

- A10 between Winston Churchill Avenue and College Road, Waltham Cross
- Crossbrook Street, Cheshunt

These are supplemented by annual manual counts which include modal split.

Speed Counts- Vehicle speed data is collected through the year at two sites in the study area:

- A121 Station Road, Waltham Cross
- Theobalds Lane, Waltham Cross

Before and After Studies - Every scheme funded by a Local Transport Plan target will incorporate a 'Before and After' study. This will demonstrate how effective the scheme has delivered against the target. Information that could be included is - speed and volume counts, pedestrian and cycle counts, queue lengths and the number of children travelling to school by sustainable means. This information will be specific to the area where the scheme has been implemented.

School travel surveys - to monitor modal split of school trips for each school in the area.

Bus User satisfaction - to monitor local levels of bus user satisfaction as a sub set of LTP bus user satisfaction surveys, possibly extended to include feedback from user groups including cycling and walking groups.

9.3 Date of Plan Review

The UTP should be subject to a full review at five yearly intervals to complement LTP programme periods. A five yearly review will allow for new targets to be added if appropriate and for the existing targets to be modified if unforeseen pressures have arisen.

As part of the plan review, progress on delivery of UTP measures will be considered together with the extent of any additional measures arising from completion of local studies and unforeseen pressures and opportunities. This will lead to the formulation of a second five year delivery programme. This process would continue until such time that a new UTP needs to be developed.

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