



West Yorkshire
Local Transport Plan
Partnership

West Yorkshire Local Transport Plan 2006/07 to 2010/11

Urban Congestion Target Delivery Plan

February 2010

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1 PURPOSE OF THE PLAN

1.1 What it is for

This plan sets out the action being followed across West Yorkshire to tackle congestion as part of the Department for Transport's (DfT) Public Service Agreement (PSA) Target on reducing congestion.

The delivery plan focuses on the 13 routes across West Yorkshire being monitored as part of the West Yorkshire element of the PSA target. The delivery plan is not intended to cover all the action being taken to tackle congestion across West Yorkshire, only that relevant to these 13 routes. Other actions are also being taken on other parts of the network where congestion occurs.

This document also includes short reports on the progress made toward the delivery of the West Yorkshire congestion target; for 2008/09 the provisional person journey time indicator was 21 seconds per person per mile less than the trajectory i.e. the target is on track.

1.2 How it will be used

This is an 'active' document which will be updated on a regular basis with revised data on progress, amendments to the programme of actions and impact of outside pressures, e.g. new developments. This is the February 2010 update to the plan approved by DfT in May 2007. In addition to recording progress since that date the report also addresses the issues raised by DfT during the assessment of the performance of the plan undertaken during in August 2009.

The document is intended to be used as a guide and reminder for those involved in the delivery and as a reporting mechanism for senior management, elected Members and DfT officials.

Because of the planned regular updating it is intended that this document will also be a report on progress; no other progress reports are envisaged.

1.3 What it contains

This document covers background and context to the target, risks to delivery, governance and reporting, delivery chain and communications, actions and delivery mechanisms, and (as it evolves) progress towards achieving the targets.

Within the document a number of interventions are identified that may be used to tackle congestion. Some of these have formal approval and are in the process of being developed or implemented. Others are only ideas at present and may or may not come to fruition.

As the implementation of the plan goes forward there will inevitably be changes in what is delivered; either because a more effective intervention has been identified or because there were difficulties or delays in delivering previously identified projects. These will be reported in future editions.

1.4 Changes

Table 1.1 shows the location of significant changes made to the text of the Plan

Table 1.1 SUMMARY OF MAIN CHANGES TO AUGUST 2009 VERSION

Section No.	Summary of change
1.5	Active Management – Text updated
2.4	Table 2.2 – Actual person journey time figure updated for 2008/09
4.1.4	Metro Officer for LTP Core Team has been updated
4.2	Table 4.1 – Updated timetable for LTP Steering Group CTDp matters
4.6	Preliminary Performance Assessment – Text updated
5.1.2	Table 5.3 – Updated text with regards to decriminalised parking enforcement
5.3	Table 5.4 – Y&H Regional meetings replaced by Yorkshire Forward
Section 6	All Districts – updates to scheme costs and progress where applicable
6.2.3	Table 6.1 – updates to Metro Initiatives
6.2.3	Table 6.3 – updates to Metro Initiatives, Progress to date
6.3	Revised Bradford Section
6.4	Revised Calderdale Section
6.5	Revised Kirklees Section
6.6	Revised Leeds Section
6.7	Revised Wakefield Section
7	Summary of Progress in 2007/08
7.2.2	Updated text relating to combined trajectories
7.2.2	Fig 7.1 & Fig 7.2 – updated Actual Performance line added

1.5 Active Management

In January 2009 the DfT introduced a six-monthly active delivery assessment method for all the Congestion Target Delivery Plans nationally. The assessment is based on the following criteria:

- Are programmed milestones being delivered?
- Is the Plan being kept under review, used and updated to take account of new information?
- Is there good evidence of wider ownership and visibility of the target and Plan within and across authorities in the target congestion area?
- Are key risks being actively monitored and mitigated?

The first assessment was submitted to DfT in February 2009 with subsequent assessments being submitted in August 2009 and February 2010. The assessments are scored by DfT on the basis of a three point scoring scale. The results show improvement in the active management of the West Yorkshire Congestion Target Delivery Plan as set out in the table below:

Table 1.2 DfT Assessment Results

Assessment	Delivery	Review	Ownership	Risk	Average score	Rank
March 09	2	1.5	2	n/a	1.8	=2/9
August 09	2	1	1	2	1.5	=2/10
February 10	1.5	1	1	1.5	1.25	= 2/10

2 BACKGROUND

2.1 Our challenges

In the West Yorkshire Local Transport Plan (LTP2) for 2006/07 to 2010/11 we identified our congestion challenges as:

- manage the road network so that people do not suffer undue delay or variations in journey time during their journey, and goods can be moved efficiently;
- manage traffic growth and congestion without inhibiting economic growth; with a particular challenge being to support forecast employment growth of 21,600 jobs over the next 10 years in Leeds;
- manage congestion without having a detrimental effect on accessibility for other modes, e.g. pedestrians and cyclists; and
- to broaden the level of awareness of the benefits for individuals, businesses and society of making Smarter Choices in local travel decisions.

2.2 Target development

A mandatory person-journey time target was required for LTP2. This section gives details of the work undertaken to develop this target for West Yorkshire which is based on selected routes on the network, chosen to cover a range of congestion issues in the main urban centres.

The indicator for the target is of the form 'Average journey time per person per mile' and relates purely to inbound journeys in the morning peak period (0730-0930). The indicator was derived from surveys of car, LGV, HGV and bus occupancy, together with bus journey times and non-bus journey times from ITIS data, supplied by DfT.

Following a desk top study of ITIS data and using local knowledge of traffic conditions and proposed developments 13 routes across West Yorkshire were chosen for inclusion in the target.

The baseline data for 2005 was established from surveys in October 2005 and ITIS data for the period September 2004 - August 2005 (excluding major school holidays and Bank Holidays, but including half terms);

For each segment of each route data on classified vehicle count, vehicle occupancy (bus and non bus) and bus journey times was collected on three weekdays.

This was combined with the ITIS data via a spreadsheet analysis to calculate an average journey time per person mile for bus and non-bus for each route segment. These were then combined and weighted to give an overall figure for each route. Finally a weighted average for all routes combined was produced to give the 2005 baseline.

The calculation of the 2011 target took place in two stages. Firstly the results of the modelling exercise undertaken as part of LTP2 Strategy development, and fully documented in WYLTP2, (pages 56 to 59) was used to provide a position with and without LTP interventions. Secondly a more detailed analysis of each route was undertaken including an assessment of the effect of proposed interventions, potential developments, increased public transport patronage, etc. a spreadsheet model was then used to predict throughput and the person journey time per mile target.

This process is more fully described in "West Yorkshire LTP2 - Development of Target for Mandatory Indicator M5, Average Journey Time per Person Mile on Key Routes" submitted to DfT in June 2006.

2.3 Route selection

The routes were approved by DfT, Treasury and GOYH. The routes were chosen so that we could measure the impact of the initiatives to tackle congestion across a broad spectrum of circumstances. Measures to reduce congestion will be implemented on other routes and areas throughout the LTP2 period (and beyond).

On some routes there are significant developments proposed, on others there are no developments. Significant interventions are planned for some routes whilst on others few direct interventions are expected. However, these were included so that the impacts of wider initiatives could be assessed.

These routes are not necessarily the most congested routes and noticeable (if temporary) increases in congestion can be expected on other routes, e.g. where there are major road schemes or other developments that will disrupt movement over the next few years. Indeed some routes were deliberately not selected because of the expected disruption that would be faced by users over the next few years.

In assessing main corridors into Leeds a decision was made to exclude those corridors which would be affected by Supertram works. However, in November 2005 the DfT withdrew funding for the Supertram scheme and invited the WYLTP partnership to investigate a more cost effective bus based scheme. The initial development of this alternative investigated the introduction of “top of the range rapid bus” technology (now known as New Generation Transport- NGT) along the routes identified for the Supertram scheme. Although alternative routes have since been investigated, the DfT has approved the continued development of the NGT system along what were the Supertram routes. Consequently no changes have been proposed for the “congestion routes” in Leeds. Similarly corridors affected by the construction of Inner Ring Road Stage 7 (now open) were excluded as benefits in journey time would result from the new road link rather than specific congestion relieving schemes on the routes.

Note. It was never the intention that the routes being monitored would be the most congested or with the most significant planned interventions. The approach arose from initial discussions with DfT on the monitoring of congestion. (Later the DfT emphasis changed more to what could be achieved on each of the corridors but this was not apparent until the initial route surveys had been undertaken).

The determination of the West Yorkshire Congestion Target was based on this approach to corridor selection and the anticipated interventions. It is clear that some of the corridors will see little change in predicted congestion levels unless the non corridor specific interventions are more successful than anticipated. The West Yorkshire authorities are satisfied that the interventions proposed will achieve the target.

The chosen routes are identified in Table 2.1 and Figure 2.1.

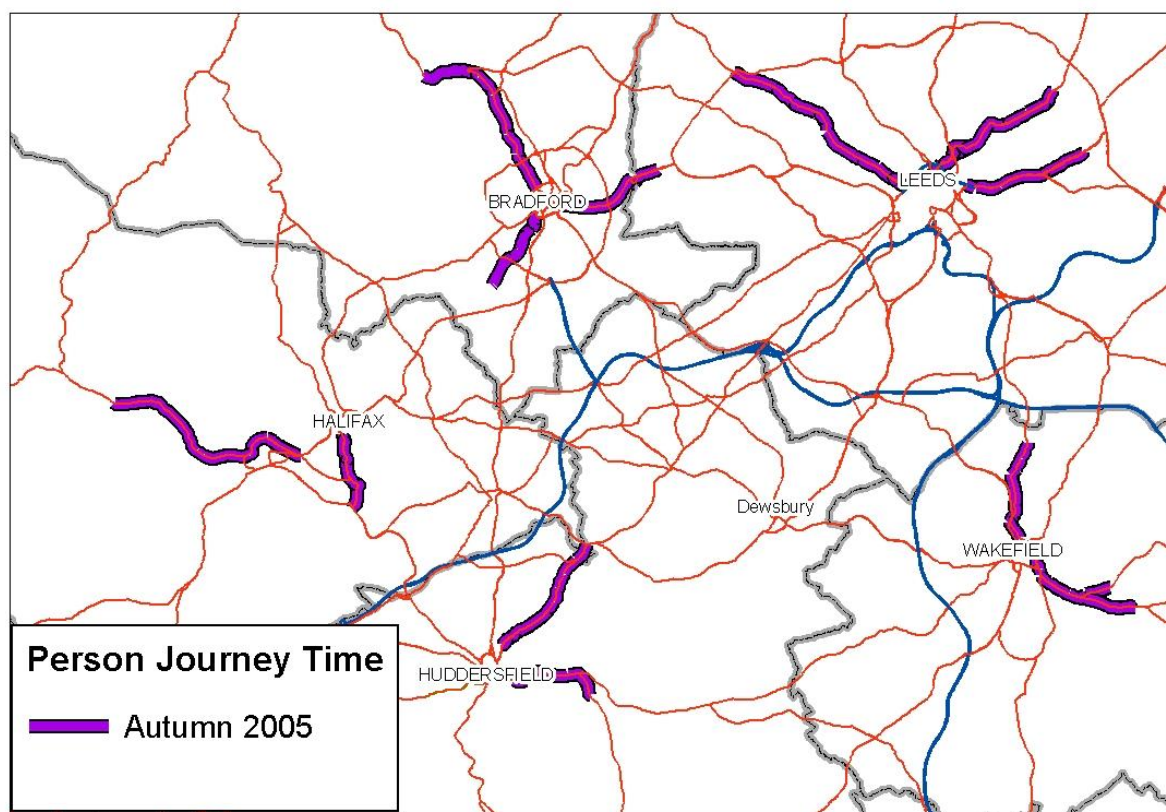
Table 2.1 LTP2 Journey time target: West Yorkshire routes

Authority	No	Route	Comments
Bradford	WY01	A650 Manningham Lane	Significant interventions planned
	WY02	A647 Leeds Road	Significant interventions planned
	WY03	Little Horton Lane	Significant interventions planned
Calderdale (Halifax)	WY04	A629 Huddersfield Road	Minor interventions planned
	WY05	A646 Burnley Road	Minor interventions planned
Kirklees (Huddersfield)	WY06	A629 Wakefield Road	Minor interventions planned
	WY07	A62 Leeds Road	Major developments and interventions planned
		(WY08 A62 Manchester Road - proposed but not used in the target)	

Authority	No	Route	Comments
Leeds	WY09	A64 York Road	Major interventions already in place, minor interventions planned
	WY10	A58 Wetherby Road	Few interventions planned
	WY11	A65 Kirkstall Road	Major interventions planned
Wakefield	WY12	A655 Black Road	Minor interventions planned
	WY13	A638 Doncaster Road	Major interventions almost completed. Minor interventions planned
	WY14	A61 Leeds Road	Major interventions planned

The route numbering is the same as used in the base year analysis for the target development

Figure 2.1 LTP2 Journey time target: West Yorkshire routes



2.4 The target

The West Yorkshire congestion target for 2010/11 agreed with DfT and GOYH is:

“On target routes, to accommodate a 5% increase in throughput with a 7% increase in person journey time per mile”

Since the target was agreed the DfT has changed the suppliers of the congestion data; TravelMaster has replaced ITIS. There are differences in the results between the sources of data. Consequently the DfT has adjusted the person journey times in the baseline year so that they are now comparable with the new data source. Whilst the target (i.e. a 7% cap on any journey time increase) remains the same the change in base year data has altered the values of the target and its trajectory. The amended weighted West Yorkshire average baseline, the target and its delivery trajectory are shown in Table 2.2.

Table 2.2 West Yorkshire congestion baseline, target and delivery trajectory

Year	Trajectory (Average journey time (minutes & seconds) per person per mile)		Actual* person journey time	
	Index	Time	Index	Time
2004/5 & 2005/6	100	4'04" [†]	100	4'04"
2006/7	+1.1%	4'07"	+1.6%	4'08"
2007/8	+2.3%	4'10"	+1.2%	4'08"
2008/9	+5.41%	4'17"	-3.39%	3'56"
2009/10	+6.31%	4'19"		
2010/11	+6.76%	4'21"		
Target				

* DfT, Statistics Bulletin, Road Traffic & Congestion Nov 09

† Target & Trajectory re calculated using DfT base of 4'05"

2.5 The target in context

2.5.1 National government PSA

The Department for Transport has set a number of Public Service Agreement (PSA) objectives and targets. The main target relevant to our local congestion target is in Objective II, Target 4. However, our actions should also benefit Targets 3 (increased use of public transport), 6 (air quality) and 7 (greenhouse gas emissions).

The PSA Objective II and Target 4 are:

Objective II

Deliver improvements to the accessibility, punctuality and reliability of local and regional transport systems through the approaches set out in Objective I and through increased use of public transport and other appropriate local solutions.

4. *By 2010-11, the ten largest urban areas will meet the congestion targets set in their Local Transport Plan relating to movement on main roads into city centres.*

2.5.2 Traffic Management Act 2004 - Network management duty

Part 2 of the Act places a duty on Local Traffic Authorities:

"It is the duty of a local traffic authority to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies and objectives, the following objectives:

- (a) securing the expeditious movement of traffic on the authority's road network; and,*
- (b) facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority."*

The Act also requires Authorities to appoint a Traffic Manager, and establish processes to identify and, where reasonably practicable, deal with things that could cause congestion and disruption. Authorities must also develop specific policies and objectives for the different roads in their network, and monitoring the effectiveness of their arrangements and actions. This delivery plan and the congestion target are seen as part of the process for delivering both objectives (a) and (b).

All the District Councils have appointed a Traffic Manager and are jointly in the process of identifying a road hierarchy and policies for each type of road. This delivery plan will influence this process and the monitoring will be used as part of the monitoring for the wider network.

2.5.3 Economic regeneration and growth

Economic growth and any accompanying population growth almost inevitably lead to an increase in trips. If a significant proportion of these trips are along already busy routes this puts pressure on the networks and is likely to lead to an increase in congestion both on roads and public transport. The following information outlines the scale of the issues:

- 0.9 million people work in West Yorkshire and around 40% (378,000) of the jobs in West Yorkshire are in Leeds.
- Employment has grown by 8.9% (76,840) from 1991 to 2001. The highest growth has been in Leeds (16%).
- The number of people living and working in West Yorkshire has grown between 1991 and 2001 with Leeds and Kirklees seeing the largest growth (11% and 10% respectively).
- Trip End Model Presentation Program (TEMPRO) forecasts growth of employment for 2005 to 2011 of 4.2% (41,600 jobs) and 2005 to 2016 of 8.3% (82,600 jobs) with 39% in Leeds, 21% in Bradford and 17% in Kirklees.
- The Leeds City Region Development Programme is working towards a 150,000 increase in jobs in the region over the next 10 years
- 2.1 million people live in West Yorkshire (42% of the total for the Yorkshire and Humber region), an increase of 3.3% (65,518 from 1991 to 2001) compared to 2.7% regionally and 2.5% nationally.
- TEMPRO forecasts growth of residents for 2005 to 2011 of 2% and 2005 to 2016 of 3%, mostly in Leeds, Bradford and Kirklees.

2.5.4 Where we are now

Traffic growth

Across West Yorkshire excellent progress has been made in restraining traffic growth. Traffic growth has remained below the national average despite significant economic growth. Between 1999 and 2006, traffic growth in West Yorkshire was 3.0 % and the LTP1 target of less than 5.0% growth between 1999 and 2006 was achieved. Since 2006 traffic flows have remained stable, although there was a slight decrease in traffic levels from 2007 to 2008.

Surveys show that traffic growth levels were within the 3% morning peak LTP1 target for 2006 in Bradford, Halifax and Huddersfield, but not on track in Leeds and Wakefield.

Surveys show a reduction in mode share of morning peak car travel from 64% in 1998 to 56.6% in 2006 across the Leeds central cordon (the most significant routes in WY in terms of numbers of trips). Over the same time period there have also been significant increases in mode share for bus (24% to 25.9%), train (9.5% to 13.3%) and walking (2.2% to 3.3%). We have seen an increase in commuting by cycle, by 13.4% from 1991 to 2001, but no increase in mode share.

In addition we have seen mode share shift away from the car to bus on Quality Bus Corridors (QBCs). For example, 7% of passengers using the East Leeds Quality Bus Initiative (featuring bus guideways) report that they formerly made their journey by car. We have increased vehicle occupancy from 1.35 persons per vehicle to 1.41 persons on the A647 in Leeds through the use of a High Occupancy Vehicle (HOV) Lane. We have seen a sustained increase in the use of rail.

The implementation of the second Local Transport Plan (2006/07 to 2010/11) has seen a continuation of much of the earlier progress.

Since 2006 peak period traffic levels into Bradford, Halifax and Leeds have declined and are well within the LTP2 target. Although peak period flows in to Huddersfield and Wakefield have increased we are still on track to deliver the target. There have been reductions in the mode share of morning peak car travel across the Leeds central cordon; falling to 55% in 2007. Falls in the mode share of peak period car travel have also been seen in Bradford, Halifax and Huddersfield. Rail use, particularly into central Leeds continues to increase and now significantly exceeds the LTP 2 target.

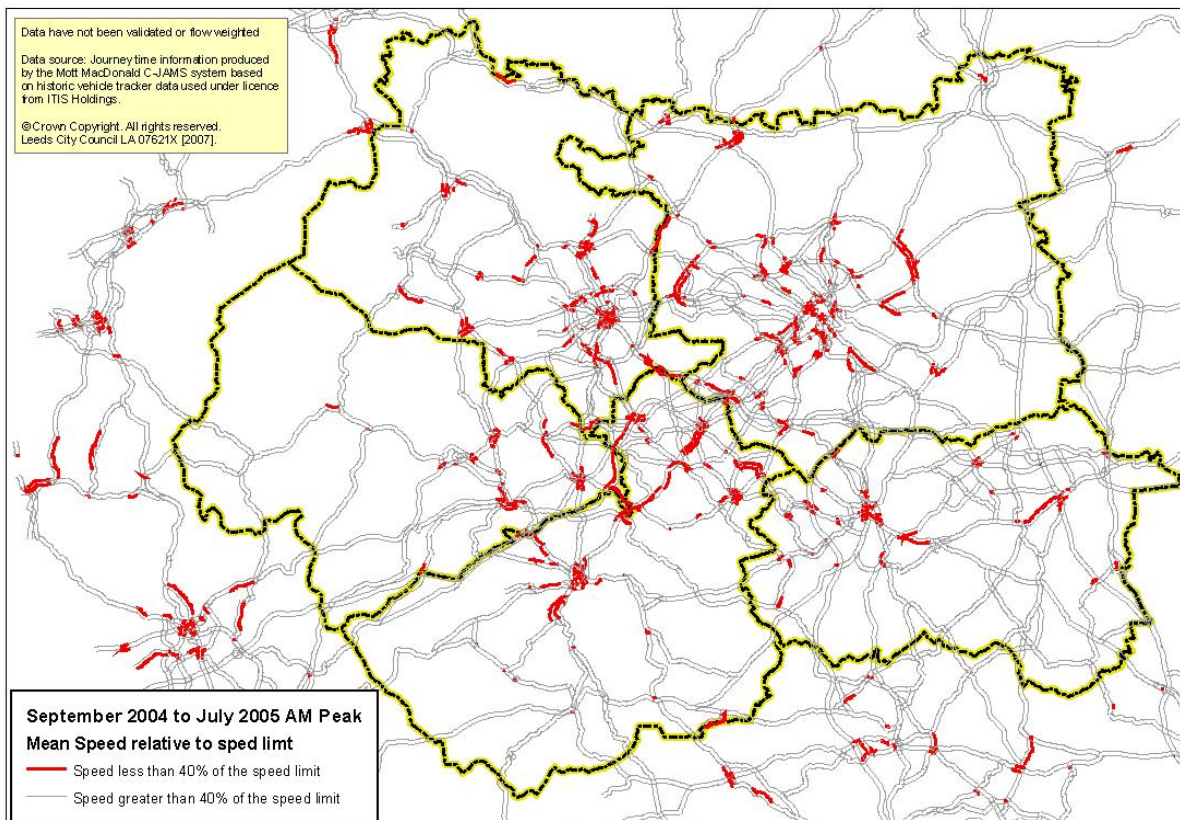
Location of congestion

To inform the development of LTP2, we used data from ITIS Holdings PLC to identify locations on the local highway network (excluding motorways) where congestion occurs.

We used the morning peak to compare the measured speed of traffic with the prevailing speed limit. Figure 2.2 shows those areas where speeds are less than 40% of the speed limit. This provides an indication of where congestion currently occurs. This analysis shows that there are congestion problems at a number of locations, in the morning peak, with some continuation into the inter-peak period.

The motorways make a major contribution to congestion. The M62 between Huddersfield and the M1, and the M1 from south of Wakefield into Leeds is heavily congested for much of the day and is often at a standstill in the morning peak. Congestion on the local road network is made worse by traffic trying both to avoid the motorway network and to access it.

Figure 2.2 Congested road lengths in the morning peak period



Impact of future developments

Leeds continues to be the fastest growing centre outside of London with the generation of over 21,600 jobs forecast in the next decade. The City Region Development Programme is anticipating an increase of 150,000 jobs across the region. As a consequence, potential exists for congestion to increase. Successfully spreading the benefits of Leeds' economic growth to the other urban centres may add further transport growth pressures in these areas

Economic growth in urban centres probably offers the best opportunity to manage any resulting increases in congestion through local demand management and public transport improvements on main radial routes. Employment, regeneration and housing developments outside the urban centres are likely to generate traffic growth, but increases in congestion may be less, because current levels of traffic are generally lower in these locations.

Major sites in the Aire Valley (east of Leeds), in Airedale to the north west of Bradford and the A62 corridor to the north east of Huddersfield contain roads which are already congested.

Strategic Transport Model forecasts

The Strategic Transport Model (STM) was used to provide an overview of where congestion may increase in future and to test a range of policy and intervention strategies. The model is currently being updated (to support the Transport for Leeds project) to expand its coverage across the city region, to better appraise park and ride and update the baseline using data collected in the recent transport surveys across Leeds. When it is updated more reliable forecasts on the scale and location of congestion will become available.

The STM was used to produce our forecast that speeds will decrease by at least 5% without the LTP2 core strategy. Areas of concern are the city centres of Leeds, Bradford, Halifax and Wakefield, areas to the east of Leeds, areas to the north west of Leeds surrounding the outer ring road, Keighley in Airedale and Brighouse. Further details of the STM can be found in the LTP2 document (pages 56-58 and 75-76)

2.5.5 Aims and objectives of the West Yorkshire authorities

Each of the West Yorkshire Authorities has a corporate ambition or vision for the future. West Yorkshire is a diverse area with each district having specific issues to address and therefore a particular emphasis on priorities.

Each district council has developed a vision and objectives to address particular issues. In most cases these have been developed through the relevant Local Strategic Partnership.

Each of the district's Local Area Agreements (LAA) include a congestion target (National Indicator 167) which means performance on reducing congestion will be formally assessed.

Tackling congestion will contribute directly to specific objectives, most particularly those relating to improving connectivity and accessibility. For example, visions include:

- [A district] with a modern transport infrastructure which makes every part of it easily accessible to those who live within it and those who want to visit (Bradford 2020 Vision).
- [A place] with a good accessible transport infrastructure and services meeting the wide variety of transport needs within the District with good links between it and other important centres and facilities (Calderdale ambitions).
- Make Kirklees better connected (Kirklees 2012 ambition).

Addressing congestion will also contribute to wider objectives, particularly in relation to supporting economic growth and improving the quality of life, for example:

- Going up a league as a city - Making Leeds an internationally competitive city, the best place in the country to live, work and learn, with a high quality of life for everyone (Leeds Mission Statement).

- With places that are attractive to live, learn, work and invest in and where our diverse towns and villages work together to promote the well being of the whole of the District (Wakefield 25 year vision).

During the development of LTP2, the full objectives of the districts were used as a basis to develop a West Yorkshire transport objective:

To develop and maintain an integrated transport system that supports economic growth in a safe and sustainable way and enhances the overall quality of life for the people of West Yorkshire:

Delivering Accessibility

- *To improve access to jobs, education and other key services for everyone.*

Tackling Congestion

- *To reduce delays to the movement of people and goods.*

Safer Roads

- *To improve safety for all highway users.*

Better Air Quality

- *To limit transport emissions of air pollutants, greenhouse gases and noise.*

Effective Asset Management

- *To improve the condition of the transport infrastructure.*

The Tackling Congestion objective has the following sub objectives:

- To encourage more journeys by public transport, walking and cycling, particularly in congested parts of the network.
- To improve journey time reliability.
- To make better use of highway capacity.
- To reduce the demand for travel by car as a proportion of overall trips.

Through work on the development of the City Region Development Programme, transport (and particularly congestion) was identified as the major inhibitor to delivering the economic growth aspirations of the city region (a target of 150,000 additional jobs over the next 10 years). For this reason a 'Congestion Partnership' has been established which is overseeing the development and implementation of a 25-year vision for transport as well as specific proposals for a Transport Innovation Fund (congestion) bid.

2.5.6 Conflicts of interest

Across West Yorkshire there is a strong thrust for regeneration and economic growth. This almost inevitably brings with it a greater demand for travel by all modes. Congestion management is a core part of the LTP strategy, but measures to restrict demand inevitably are contentious with those they seek to restrict. This is particularly the case where there are insufficient resources to invest in the alternatives, so there is a struggle to win 'hearts and minds' as to the most effective and viable approaches.

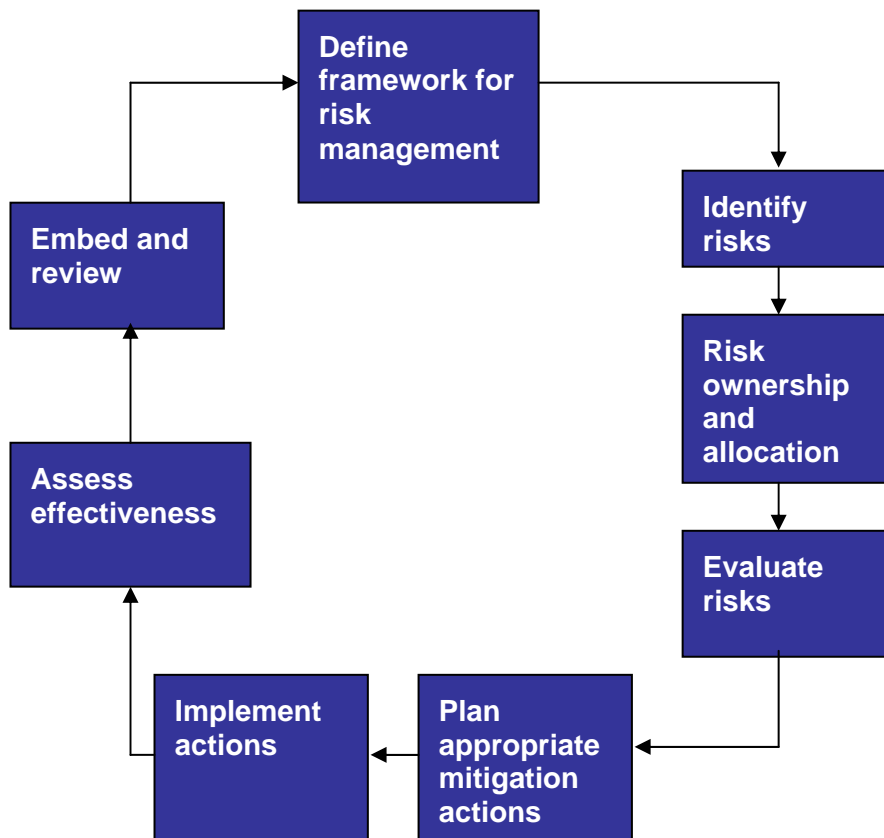
The West Yorkshire LTP contains 17 mandatory and 10 Local targets. There are competing demands for finance and other resources need to achieve progress on all of these within the constraints of available funding. We have not identified any priority ranking for the targets so congestion cannot automatically be assumed to receive preferential treatment.

3 RISKS TO DELIVERY

3.1 Main risks

It will be impossible to eliminate all elements of risk from delivering our outcomes at the start of the plan. As such we have ensured that we have mechanisms in place to review and monitor our progress at all stages of plan delivery. The process is set out in Figure 3.1.

Figure 3.1 Risk management process



3.1.1 Risk identification and quantification

A technical panel has compiled a comprehensive list of risks to each target. This forms our comprehensive risk register. Whilst there are risks associated with each target, not all will have the same impact on outcomes. In order to quantify this we set up a framework for assessing the level of risk and its subsequent management.

To quantify the risk we used a standard approach of identifying the likelihood or probability of the risk occurring and then assessing a potential impact. Both assessments utilise a simple scoring process:

Probability	Impact	Score
Very High	Severe	5
High	Major	4
Medium	Moderate	3
Low	Minor	2
Very Low	Insignificant	1
Nil	Nil	0

The relative assessments were undertaken by a second technical panel. The purpose of the scoring was to highlight the risks that were judged to be of greatest threat to the delivery. This was assessed by producing a Risk Index score which combined both probability and impact. Each risk was then graded into a red, amber or green category. Where red is the most significant risk. The grading criteria were:

Category	Score
Red (Low)	Above 15
Amber (Medium)	10 - 15
Green (High)	Below 10

The risk assessment was originally undertaken for the LTP2. This has been expanded for this Delivery Plan with additional risks that have been identified and to assess the impact of any management or mitigating measures that could be implemented. The risks for the congestion target can be seen in Table 3.1.

3.1.2 Risk management

The management and ownership of the risks is discussed in Part 4.

3.2 Other risk issues

Competing priorities for resources

This target is one of 27 in WY LTP2 and our programme for the period 2006/07 to 2010/11 has been developed to address all of these targets. The primary risk is that if we are failing to achieve our congestion target but other mandatory targets are on track it may be difficult to 'make the case' to reallocate resources, particularly if traffic problems are not seen to be affecting economic performance in the main centres.

Data collection

A significant risk is associated with the data collection and interpretation. Are our data collection procedures sufficient to monitor the small changes we are predicting or will noise in the data mean we are unable say with any degree of statistical certainty that we have met the target?

- Manual traffic counts have an accuracy of $\pm 5\%$.
- Bus occupancy counts, as currently counted have an accuracy of $\pm 15\%$.
- Bus and car journey times have an accuracy of $\pm 10\%$.

DfT have calculated that the 90% CI on our target is $7\% \pm 1.5\%$.

The measured throughput shown on some of the trajectories in (see Appendices) show considerable variation compared to the base year some positive and some negative.

It should be noted that the target for journey time is in effect for speeds to be less than 1mph slower than at present. The daily and weekly variation is often greater than this.

Table 3.1 Risk assessment framework for the urban congestion target

Risk	Consequences	Inherent risk			Management measures	Residual risk			Revised status	Risk management group
		Likely-hood	Impact	Risk index		Likely-hood	Impact	Risk index		
Economic										
Economic (and traffic) growth does not match forecasts	Excessive growth adds to delay (if infrastructure improvements fail to keep pace) and restricts growth in non car modes. Lower growth could undermine case for intervention	2	5	10	Review type and programme of interventions – unlikely to be able to respond quick enough, creates uncertainty	2	5	10	Same	External
					Improved project management planning procedures	1	5	5	Better	External
Traffic generation from developments do not match expectations	Increase traffic volumes, increased delay. Reduced traffic volumes undermine case for intervention.	3	4	12	Better assessment of planning applications, identify additional interventions – unlikely to be able to respond quick enough; creates uncertainty	3	4	12	Same	External
Car ownership costs decline	Adds to delay and restricts growth in non car modes - target fails	3	4	12	Review type and programme of interventions – unlikely to be able to respond quick enough	3	4	12	Same	External

PART 3
RISKS TO DELIVERY

Risk	Consequences	Inherent risk			Management measures	Residual risk			Revised status	Risk management group
		Likely-hood	Impact	Risk index		Likely-hood	Impact	Risk index		
Actions of key partners										
Proposals affecting Highways Agency roads e.g. ramp metering, road works	Diverted traffic leads to increased congestion - road works likely to be short lived but could affect target	3	4	12	Better coordination of works and better management by HA	2	4	8	Better	External
Widespread rail disruption as witnessed during LTP1	Greater use of car rather than rail – increased congestion - likely to be short lived but could affect target	1	4	4	None	1	4	4	Same	External
Increased cost of bus and rail use	Passengers transfer to car - adds to delay and restricts growth in non car modes	5	3	15	Review type and programme of interventions	5	2	10	Better	External
Resources and political support										
Staff availability to undertake project development	Projects delayed – increased delays	3	4	12	Use of consultants – most District Councils have a framework agreement	2	4	8	Better	General

PART 3
RISKS TO DELIVERY

Risk	Consequences	Inherent risk			Management measures	Residual risk			Revised status	Risk management group
		Likely-hood	Impact	Risk index		Likely-hood	Impact	Risk index		
Significant increase in the overall cost of delivering schemes	Fewer schemes delivered – possible increase in delays	3	4	12	Improved project and purchasing procedures, review type and programme of interventions	3	3	9	Better	General, External, Programme
Major scheme funding not provided (Route WY11 relies on major scheme funds)	Major improvements delayed or abandoned – no reduction in delays	2	4	8	Closer working with DfT on scheme development Improved project management and Business case preparation	1	4	4	Better	External
Lack of political support for projects	Projects abandoned – possible increase in growth no reductions in delays	2	4	8	Improved involvement and consultation processes	2	4	8	Same	General, Programme, Partnership
Programme delivery										
Unable to deliver congestion elements of programme to timescale	Increased traffic volumes, increased delay and restricts growth in non car modes	3	4	12	Improved project and programme management	2	4	8	Better	General, Programme, Partnership

PART 3
RISKS TO DELIVERY

Risk	Consequences	Inherent risk			Management measures	Residual risk			Revised status	Risk management group
		Likely-hood	Impact	Risk index		Likely-hood	Impact	Risk index		
Monitoring data										
Monitoring methods unsuitable	Achievements under estimated or undetected	3	4	12	Revised methodology using Real Time Information implemented	1	4	4	Better	Monitoring
Other risks										
Public Transport patronage does not grow at expected rate	Adds to delay and restricts growth in non car modes	2	4	8	Review type and programme of interventions	2	4	8	Same	External, Programme, Partnership
Smarter Choices, Travel plans, etc. ineffective	Increased traffic volumes, increased delay and restricts growth in non car modes	3	3	9	Review type and programme of interventions. Include behavioural change measures within delivery strategy	3	2	6	Better	External, Programme, Partnership

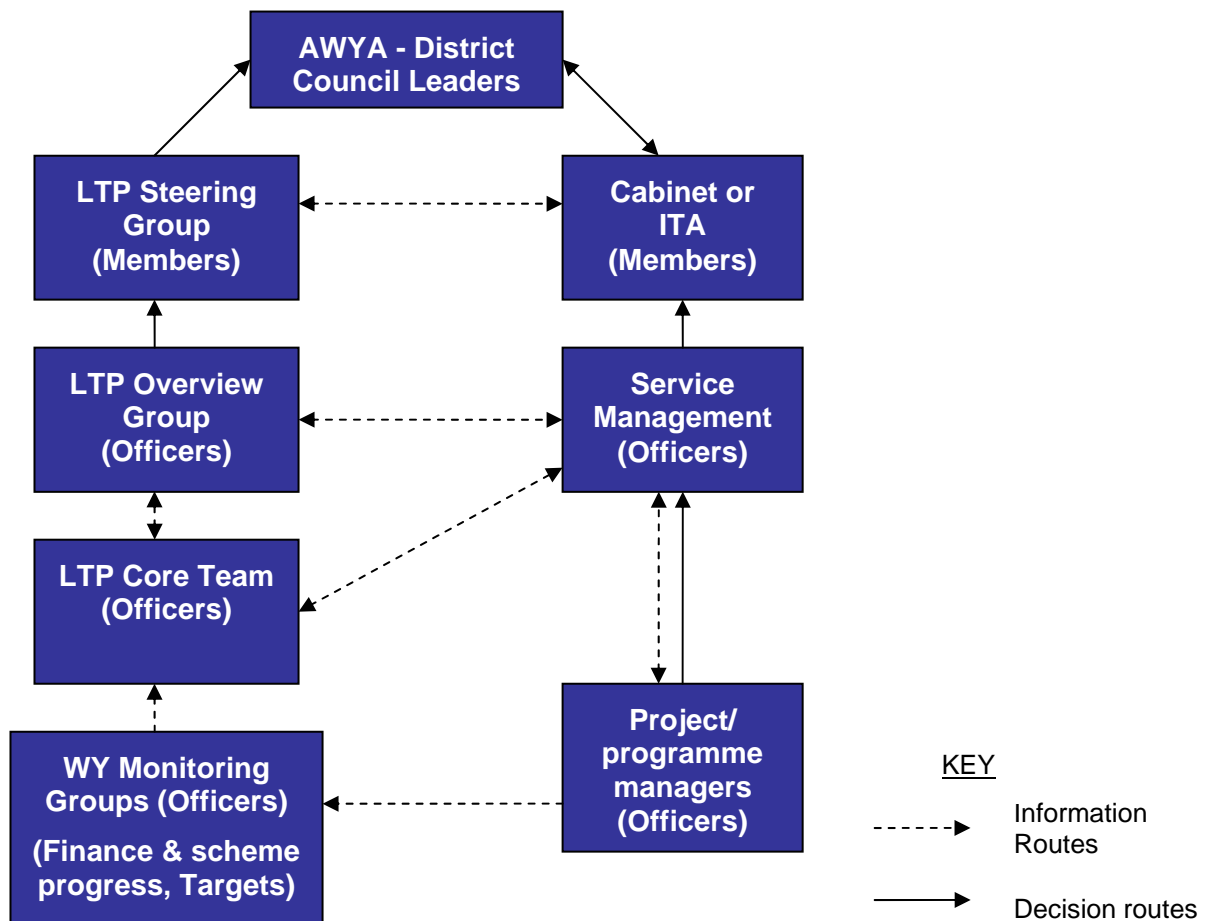
4 GOVERNANCE, MANAGEMENT AND REPORTING

4.1 Process for decision making

As the LTP targets are for the whole of West Yorkshire there is a need for a joint monitoring and decision-making structure which runs in parallel with, and links to, the decision making structure within each of the authorities. This ensures that decisions are made collectively where appropriate so that targets and other outcomes can be achieved.

The decision making structure is shown in outline in Figure 4.1.

Figure 4.1 Decision making structure



The left side of the diagram shows the collective LTP decision making structure of the West Yorkshire authorities. More detail of this is given below.

Locally within each authority there is a parallel decision making structure that varies in detail between authorities. This is shown on the right of the diagram. Recommendations and decisions on individual schemes and funding are as appropriate by the project/programme managers, Service Management and Cabinets/Boards.

4.1.1 LTP Steering Group

The members of this group are the Lead Councillors on transport planning from each of the District Councils (Bradford, Calderdale, Kirklees, Leeds and Wakefield) and from the ITA. The chair of the Steering Group is the vice chair of the West Yorkshire ITA. The group is supported by the officers of the LTP Overview Group.

The overall ownership for the congestion (and all other LTP2) targets rests with the LTP Steering Group. Overall responsibility for the Congestion Delivery Plan also rests with the LTP Steering Group.

The decisions of the Steering Group on financial issues are passed for ratification by the 5 District Council Leaders at the Association of West Yorkshire Authorities. If there is a contentious issue that the Steering Group could not resolve (unlikely for elements of the congestion delivery plan) this is passed to the Leaders meeting for a decision.

4.1.2 Responsible Officer

David Hoggarth, Director of Development at Metro is the formal named officer responsible for the LTP Steering Group within the ITA's procedures. David has been nominated to take overall responsibility for the Congestion Delivery Plan.

All reports to the LTP Steering Group, having been agreed by the Overview Group, have to be signed off by David Hoggarth before they can be issued. He will be responsible for reporting directly to the LTP Steering group for any failures in delivering the Congestion Delivery Plan.

4.1.3 LTP Overview Group

This group consists of senior managers from each of the authorities. These are currently:

- John Blackburn, Bradford;
- Nigel Pickles, Calderdale;
- Richard Hadfield, Kirklees;
- Dave Gilson, Leeds;
- Keith Bloomfield, Wakefield; and
- Jeff English, Metro

The Group, which meets monthly, has a rotating Chair. The Group also has representatives from the Highways Agency and the Government Office for Yorkshire and the Humber.

A key function of this group is to assess information and proposals from the Core Team and on turn makes recommendations to the LTP Steering Group for any changes to funding allocations or programme emphasis.

The group is also responsible for commissioning work of the Core Team.

4.1.4 LTP Core Team

This recently established group consists of officers from each of the authorities. These are currently:

- Aftab Rashid, Bradford;
- Peter Stubbs, Calderdale;
- Simon Taylor, Kirklees;
- Louise Porter, Leeds;
- Ian Goldthorpe, Wakefield;
- Steve Heckley, Metro.
- Ray Heywood, LTP Monitoring Group
- David Cherry, LTP Air Quality Group
- Andrew Parkin, LTP Maintenance & Asset Management Group; and

- Steven Thornton; LTP Safer Roads Group

The team meets (in offices provided by Metro) as often as the workload on LTP related matters demands. A key function of this team is to oversee the implementation of the LTP work programme which includes the Congestion Delivery Plan.

The remit of the Core Team covers;

- commission/ undertake research and analysis of transport issues and problems;
- develop and revise integrated and co-ordinated strategies to deal with identified transport issues and problems;
- investigate and disseminate best practice on outcome based implementation and assessment;
- assess and analyse the information provided by the two monitoring groups;
- oversee implementation of, and review, the LTP work programme (including sub elements e.g. congestion delivery plan);
- co-ordinate the work of / liaise with other task groups;
- develop or assist in developing bidding/ reporting documents; and
- consultation with stakeholders, etc.

The team will report directly to the LTP Overview Group and the work programme of the Team will be set/ agreed by the Overview Group

4.1.5 Monitoring Groups

There are 2 Monitoring Groups:

- Finance and Scheme Progress led by Ben Whitaker, Capital Programme Manager, Metro.
- Targets and Indicators led by Ray Heywood, Policy Monitoring Manager, Leeds.

Each group has representatives from each of the authorities who are responsible for gathering the information which is then compiled and assessed by the group as a whole.

The groups are responsible for data collection and analysis. The target monitoring group also co-ordinates survey work and collects performance data held elsewhere within the authorities. The analysed data is passed to the LTP Overview Group (and to management teams within each authority) for consideration of the implications.

4.2 Timetable

The LTP Overview Group meets monthly and the LTP Steering Group on a six weekly cycle.

The LTP Steering Group will receive progress and performance data (finance, indicators/targets) reports for active management purposes and for submitting Progress Reports to DfT as follows:

Table 4.1: Timetable for LTP Steering Group CTDP matters

Meeting	LTP Steering Group	DfT Progress Report
January 10	Progress Report for interim 10/11 budget work	
February 10	CTDP Update Report	Submit to DfT

* LTPSG meeting schedule agreed by WYPTA

Progress on proxy key indicators (including traffic flows on key corridors and public transport patronage) will be reported via the LTP Overview Group to the LTP Steering Group 4 times per year. Urban Congestion Target data collection is annual. Other (proxy) data, e.g. traffic flows, can be collected more frequently (though there is not a straight correlation with congestion) and these will be used to influence decisions on programme changes.

In order to avoid “knee jerk” reactions to deviations from agreed trajectories for targets trends will be considered in terms of a 4 quarter rolling average and contextualised with relevant information.

The process effectively results in 2 dates in each year to make changes to the programme of interventions. This is classed as more than adequate because of;

- the lag between implementation of an intervention and ability to locally judge the effectiveness of many of the interventions;
- the variability in the data collected and the ability to assess changes in the trends because of this; and
- the time taken to develop additional or alternative initiatives.

Many interventions have a long lead in time (e.g. legal and consultation processes) others are relatively short. It is usually not possible to speed up the implementation of the larger schemes.

4.3 Management of the target

4.3.1 Risk ownership

As part of the overall programme and risk management process it is important we understand who will be responsible for managing the risks. We envisage the risks being managed at two levels;

- at an individual authority level; or
- as a partnership.

Table 4.2 summarises where responsibilities will fall.

Table 4.2 Management of key risk groups

Risk management group (See Table 3.1)	General tools/ actions	Ownership
General	<ul style="list-style-type: none"> • Effective programme and performance management • Reviews of programme priorities • Scheme effectiveness 	Individual Authority
External	<ul style="list-style-type: none"> • Reviews of programme priorities • Scheme effectiveness • Target monitoring and review 	West Yorkshire LTP Partnership
Partnership	<ul style="list-style-type: none"> • Reviews of programme priorities • Scheme effectiveness • Target monitoring and review 	West Yorkshire LTP Partnership
Programme	<ul style="list-style-type: none"> • Effective programme and performance management 	Individual Authority
Monitoring	<ul style="list-style-type: none"> • Target monitoring and review 	West Yorkshire Partnership

4.3.2 Performance monitoring framework

In order to maintain a high level of performance we intend to continue with proven practices from LTP1 within an enhanced performance management framework. As part of the overall LTP2 process the West Yorkshire authorities have developed a performance management system which will monitor progress towards all targets.

Within this process are the tools for managing the programme, target and risks. These include;

- reallocation of resources between partners to ensure that spend is maximised;
- the use of over-programming as a management tool, particularly in those programme areas where delays to schemes are common; and
- the use of framework contracts for consultants and contractors to cover for lack of resources particularly at peak times in scheme development and implementation.

Some areas of risk will be in our direct control, in particular those associated with the delivery of the capital programme. Others risks, particularly when external factors are involved, may require more radical approaches and may mean that the Partnership needs to revisit its priorities and predicted outcomes.

The performance monitoring framework includes assessments of;

- delivery against planned expenditure;
- delivery against planned schemes;
- progress towards targets and trajectories; and
- delivery against policy.

Expenditure monitoring

Each Authority produces their own annual spend profiles for their capital programmes. Progress against these are reviewed at least quarterly to identify where spend is slower than anticipated against the forecasts. The reasons behind the divergence from the planned profile are investigated. This either results in an action plan to address the divergence or a potential re-allocation of funding.

Programme delivery

At each reporting period, each Authority reviews how delivery of schemes compares with that set out in the programme at the beginning of the year. This identifies key scheme slippage and is used to assess the potential impact on achieving targets.

The Quarterly information gathered by the monitoring group informs the Overview Group and Steering Group as to the likely impact of the slippage and whether further action needs to be taken to ensure targets are met.

Policy delivery

A matrix of key policy areas is being developed to track progress by each authority. Work will be undertaken to assess the relationships between traffic levels and car parking charges in each of the main centres.

Targets and trajectories

The target monitoring information is used to compile a detailed report each year summarising:

- progress against the target trajectories;
- if the target is failing, suggestions for the action needed to bring the target back on track and the implications for the capital and revenue programmes;

- factors likely to influence future progress; and
- if there is the need to revise the target.

The report is considered by senior officers within each Authority and by the LTP Overview Group. A summary of key issues and recommended actions is prepared and presented to the LTP Steering Group.

Whilst the review of targets is seen as an important part of the risk management process, the re-evaluation of the targets will ensure that individual targets will be stretched when monitoring indicates that the target level will be achieved earlier than indicated.

4.3.3 Dynamic programme management

There is an annual review of each part of the programme. Informed by the performance monitoring framework, the reviews will take into consideration specific local and external influences.

Reviews will be undertaken jointly between the Partners and take into account other policy areas such as economic development and land use planning. The key players include the relevant Traffic Managers and UTC staff as well as bus and rail operators. This will ensure that the full range of policy levers can be addressed.

For those risk areas which are not directly programme related this process is a key management tool allowing programmes to be reprioritised accordingly.

4.3.4 Funding flexibilities

There are two objectives associated with greater funding flexibility:

- to maximise use of LTP funding and ensure 100% spend in any given year; and
- to reward good performance (in terms of delivery of schemes and policies).

Where a high risk of under-spend is identified, a transfer of funding between authorities will take place to ensure we maximise spending potential, as we did during LTP1. The programme management process is intended to ensure that transferred funds are spent on appropriate projects to achieve relevant targets.

4.4 Monitoring progress towards the target

4.4.1 Overview

Monitoring progress towards all our LTP2 objectives relies heavily on a robust and efficient system of data collection and analysis.

We developed a comprehensive monitoring regime that has been adapted to take account of the new objectives and revised indicators in LTP2. At present we have 24 indicators which are used to measure our local targets. We also have 22 background indicators which are used to measure broader trends such as economic growth, retail values or unemployment. The background indicators are an integral part of understanding how the LTP contributes to the wider agenda e.g. economic growth that has an impact on congestion.

4.4.2 Monitoring programme and reporting

Whilst some data is collected on a continuous basis, for example, traffic flows on key routes and public transport patronage, other areas require carefully programmed surveys to ensure that the indicators and targets can be updated.

For the 'Person Journey Time' indicator the main areas are traffic flows, vehicle type and occupancy and public transport occupancy. In order to minimise variability this data is collected annually for 3 days and averaged. However as can be seen from the trajectories on

some of the corridors (See Appendices) there can still be significant variation from year to year and the data collection process needs to be kept under review.

For CTDP bus numbers, patronage and speeds are obtained through roadside observations. Other vehicle speeds are obtained through the data provided by DfT. Because of the complexity of the processing involved the timescale for the delivery of this data slows down any reaction to changes in the trend.

4.4.3 Review of scheme effectiveness

The Partnership has established a system to review the impact of selected schemes and to assess the benefits of individual measures. This is disseminated in the form of Impact Reports and through working groups.

By utilising up to date best practice we will be able to ensure that the schemes we choose to go into our programme and any alterations to the programme can deliver the maximum outputs.

4.4.4 Reviewing targets and indicators

An important part of the overall process of monitoring is to continue to assess the appropriateness of our indicators and targets both in terms of the range and type of indicator but also the level at which each target will be set. This will be carried out on an annual basis as part of our performance management framework.

4.5 Impact on other targets

Despite the fact that this target is relevant to a limited a number of sections of 13 routes it cannot be seen in isolation from other LTP2 targets. The main ones with a direct link being:

- M6 Peak Period traffic flows to town centres.
- L3 AM peak period mode split to town centres.

More tenuous links exist with the following targets:

- M7 Mode share of journeys to school.
- M8 All day public transport patronage.
- M13 Change in area wide traffic flows.
- L2 Cycle trips to urban centres.

Full details of the targets and the rationale behind their development can be found in LTP2 Part 4 and Appendix F.

4.6 Preliminary Performance Assessment

During the autumn 2008 the DfT assessed the overall performance of the West Yorkshire Congestion Target Delivery Plan (CTDP). This was done because the initial results for 2006/07 did not match expectations; the actual preliminary personal journey time indicator was 2 seconds above the trajectory, although provisional results for 2007/08 were more promising with the actual result being 2 seconds below the trajectory. The assessment covered a wide range of processes covering the governance, performance and monitoring of the Plan. The Action Plan, agreed with DfT as a result of this assessment, is set out in Table 4.2. Since October 2008 the key changes relating to the governance of the Plan have been implemented to strengthen the effectiveness of our active performance management arrangements. Work continues on a number of detailed and technical matters relating to route inventories and the use of real time bus journey data for monitoring.

Since this assessment the DfT has published revised base trajectory and target values for the person journey time indicator using TrafficMaster rather than ITIS data. On this basis our

performance for 2006/07 matched the trajectory and for 2007/08 performance has improved, with the actual indicator being 3 seconds below the trajectory. The provisional figure for 2008/09 is some 21 seconds below the trajectory . Although some of this reduction is due to the effects of the recession – throughput has reduced by 4.1% since the baseline, In addition anticipated delays on the A65 due to the start of works on the A65 QBI have not materialised due to revised scheme start dates.

Table 4.3 ACTION PLAN: For Active Management Of Congestion Target Delivery Plan

Issue	Proposed Action	Timescale	Lead authority	Lead officer
Progress monitoring mainly within individual authorities. Central focus tends to have been on data with a number of parties involved with confused lines of contact	A single officer has been designated to; <ul style="list-style-type: none"> • co-ordinate all data issues make progress reports on behalf of all partners	Completed July 2008	Leeds City Council	Ray Heywood, Policy Monitoring Manager
	A single officer has been designated to: <ul style="list-style-type: none"> • co-ordinate all policy issues make progress reports on behalf of all partners	Completed July 2008	Metro	Jeff English Assistant Director Integrated Transport
Monitoring of delivery of CTD milestones embedded in overall performance management	Specific quarterly report on progress against congestion milestones to be prepared for LTP Overview Group	To commence Autumn 2008	Metro	Jeff English Assistant Director Integrated Transport
CTDP review process to date has not followed a specific timetable	Formal 6 monthly review to be established To include at least 2 reports per session to LTP (Members) Steering Group	To commence Autumn 2008	Metro	Jeff English Assistant Director Integrated Transport
Examples of good practice (e.g. Metro and Kirklees) not yet adopted by all districts	Revised process for monitoring and review to be agreed and adopted by LTP Overview Group To include bi-monthly circulation of revised Progress Pro-forma by Metro to all partners	October 2008	Metro / all	Jeff English Assistant Director Integrated Transport
Greater ownership of the plan by senior officers	Metro Matrix district liaison to be used to focus strategic directors on congestion plan	October 2008	Metro	Jeff English Assistant Director Integrated Transport
	Highlight the profile of the congestion target across West Yorkshire through the LAA process *	October 2008	All	Jeff English Assistant Director Integrated Transport

GOVERNANCE AND REPORTING

Overall structure for LTP delivery	Review underway (- Outline report already tabled at AWYA Chief Executives meeting)	April 2009	Metro	David Hoggarth Director Development Department
Review of the basis of the CTD ^P *	A re-assessment of the CTD ^P routes (up date route inventories)		All	Jeff English Assistant Director Integrated Transport
	Sensitivity analysis of the data used in calculating the Person Journey Time Indicator and Congestion Target.	Completed June 2009	Leeds	Ray Heywood, Policy Monitoring Manage

* Identified in the LTP Progress Report 08

5 DELIVERY CHAIN AND COMMUNICATIONS

5.1 Stakeholders

There are a number of organisations and groups that will have a role (whether they are aware of it or not) on delivering the target. Without them it would not be possible to deliver the target.

The key stakeholder organisations and the main communication routes are identified in Table 5.1.

Table 5.1 Key stakeholders

Stakeholder	Responsibilities	Communication routes
Bus operators	Provision of bus services and information	<ul style="list-style-type: none"> Bus Partnership Groups (WY and District Based) e.g. Yorkshire Bus and Performance Improvement Partnerships Monthly/quarterly meetings within partnership groups Ad-hoc/ planned meetings on individual projects Regular liaison meetings with Metro
Rail operators	Provision of rail services and information	<ul style="list-style-type: none"> Regular liaison meetings with Metro
Schools	Delivering school travel plans Travel and environmental awareness education	<ul style="list-style-type: none"> LA School travel plan officers LA Road Safety Training Officers
Developers	Travel planning	<ul style="list-style-type: none"> Discussions on planning applications and with LA Travel Plan Officers WY Travel Plan Network
Local Strategic Partnerships (LSPs)	Delivery of improvements in quality of life of local residents.	<ul style="list-style-type: none"> Liaison re delivery of Local Area Agreements (LAAs), particularly NI167 which is included in all 5 LAAs in West Yorkshire

The key stakeholders and WY Authorities are not the only organisations that need to be involved there is also a role for other organisations. These groups are identified in Table 5.2

Table 5.2 Other stakeholders

Stakeholder	Responsibilities	Communication routes
Statutory Undertakers	<ul style="list-style-type: none"> Minimising the disruption from road works 	<ul style="list-style-type: none"> LA NRASWA officers Road works co-ordination systems (electronic)
Highways Agency	<ul style="list-style-type: none"> Traffic management on the motorways and trunk roads Incident management Travel planning 	<ul style="list-style-type: none"> City Region Congestion Partnership Ad-hoc meetings on individual projects

DELIVERY CHAIN AND COMMUNICATIONS

Stakeholder	Responsibilities	Communication routes
Police	<ul style="list-style-type: none"> Incident management Assessment of highway schemes and TROs 	<ul style="list-style-type: none"> Quarterly liaison meetings Ad-hoc meetings and correspondence on individual projects
Existing businesses	<ul style="list-style-type: none"> Travel planning 	<ul style="list-style-type: none"> WY Travel Plan Network LA Travel Plan Officers
Department for Transport	<ul style="list-style-type: none"> National campaigns Facilitating sharing of best practice Finance, support and monitoring data 	<ul style="list-style-type: none"> DfT Liaison Officers

For all the stakeholders there is considerable ongoing officer to officer contact on a wide range of issues and in the development of individual projects. This is usually informal one to one contact in addition to the more formal partnership/ liaison meetings.

5.1.1 Awareness and responsibility for delivery

The public transport operators are aware of the need to reduce congestion but do not necessarily have priorities aligned with LTP targets or specific proposals to contribute to them.

Most developers, existing businesses and individual schools will not be aware of the target but there is general support for reducing congestion.

The Lead Members through the LTP Steering Group are ultimately responsible for the delivery of the action plan. Within each authority the Lead Member is responsible for delivery of that authority's schemes. In practice each project has a project manager who will report to a programme manager and they will jointly be responsible for ensuring the delivery of the project.

We have a partnership approach both between the authorities and with the key stakeholders

5.1.2 Stakeholder dependencies

Success in delivering the Plan will be influenced by a number of important stakeholders. Table 5.3 summarises, for the different major stakeholders who have an influential role to play, the expectations and assumptions made about the level of their input and support, and the measures and the risk mitigation associated with those inputs.

Table 5.3 Stakeholder contributions and influences

Stakeholder Group	Potential contributions and influences	Ways to influence the delivery of these contributions	Ways to mitigate against the risk of under delivery
Bus operators	<p>Increasing bus patronage and accommodating growth on buses will be a key part of the plan delivery. Modal transfer from cars, and attracting new patronage, will be influenced by three major factors:</p> <ul style="list-style-type: none"> • Reliability of services in terms of cancellations and punctuality • Fare levels on public transport, and • The quality of vehicles, driving standards and waiting facilities 	<p>The development of Performance Improvement Plans (PIPs) in partnership between Metro, Operators and District Councils.</p> <p>Through the development of revised partnership working (see section 5.3) individual route based objectives outcomes will include the ongoing renewal of the bus fleet and the reduction of the average fleet age, timetable reviews to improve punctuality and a range of measures by the partners to provide bus priority through bus lanes, HOV lanes bus gates and signal priorities based on the real time system.</p> <p>Driver standards are being tackled through the West Yorkshire Transport and Education Skills Alliance, which is a cross sector partnership to improve driver training and consequent passenger experiences.</p>	<p>The current framework does not give Local authorities power over commercial operators in setting fare levels.</p> <p>The promotion of reliability and partnership working to promote patronage increases will reduce the need for operators to consider fare increase as a means of maintaining profit levels.</p> <p>Real Time data will be used to identify locations where congestion is affecting bus performance and provide evidence of the need for improvements.</p> <p>Having the appropriate partnership mechanisms will allow direct action to be identified, planned and implemented effectively. This will be achieved through the new Bus Partnership Group arrangements.</p>
Rail operators	<p>Providing alternatives with the required capacity on some corridors.</p> <p>Influencing drivers to change modes.</p>	<p>This will take place via the Franchise Agreement (to which Metro is a co-signatory).</p> <p>Through the adoption of a joint 'Partnership Development Plan'</p>	<p>Through the monitoring of the performance regime in the franchise agreement.</p> <p>Through specific contracts for the provision of capacity in West Yorkshire.</p>
Enforcement agencies, Highway Authorities and the Police	<p>Ensuring traffic flows freely will be influenced by a number of issues, including:</p> <ul style="list-style-type: none"> • Illegal/obstructive parking • Abuse of bus priority facilities • Road traffic accidents 	<p>All five West Yorkshire Authorities have decriminalised parking enforcement powers; this was achieved during 2009. Partners have developed a consistent approach to bus stop design including the roll out of Clearways and consistent design for priority bus lane facilities which will reduce 'unintentional abuse'. Local enforcement powers allow quick and effective responses to abuse and evidence shows abuse is being reduced.</p> <p>Leeds City Council is developing the application of CCTV technology to be applied to moving vehicle offences,</p>	<p>District Councils are part of the overall governance and delivery arrangements.</p> <p>A West Yorkshire Members Liaison Group oversees the development of consistent and effective policies to support congestion mitigation policies in line with the LTP objectives.</p>

DELIVERY CHAIN AND COMMUNICATIONS

Stakeholder Group	Potential contributions and influences	Ways to influence the delivery of these contributions	Ways to mitigate against the risk of under delivery
		focussing initially on bus lane abuse.	
Planning Authorities and Developers	Encouraging sustainable travel for new developments will be influenced by a number of factors including: <ul style="list-style-type: none"> • Appropriate planning conditions • Adoption of effective travel plans • Allocation of land use activities appropriate to the location and road layout 	The West Yorkshire LTP Partners are working together to influence Planning Authorities consistently in a way that can deliver sustainable developments. The LDF process, and new Transport Assessment process, will improve the way planning conditions are set and the level and nature of planning gain. The development of Supplementary Planning Guidance on public transport contribution promotes public transport usage. Travel Plan initiatives, such as the discounted MetroCard scheme, will promote public transport and other sustainable modes as a means of access to/from new developments.	The Member Highways and Planning Liaison Group oversee the development of consistent and effective policies to support congestion mitigation policies in line with the LTP objectives. Evaluation of the effectiveness of these measures will inform the nature of future obligations set for future planning conditions.
Utility companies	Ensuring traffic flows freely and the minimisation of adverse impacts associated with any temporary reduction in capacity will be affected by: <ul style="list-style-type: none"> • Road works • Utility works 	Traffic Managers will play a key part in controlling the impact of road works and highway maintenance on congestion across West Yorkshires roads. Clearer design and specifications for works on the highway is being promoted to minimise adverse impacts and ensure delays are minimised.	Effective dialogue between the Traffic Manager, Metro and the operators will allow the public to be kept informed of changes to services and timetable. The real time system will keep bus passengers up to date with bus times.
Business sector	Large businesses can generate large volumes of traffic and this can be crucial at either specific locations or across a whole network.	The newly created Travel Plan Network, resourced through Yorkshire Forward funding will provide individualised inputs to major employees to support sustainable travel choices for employees, business travel and good servicing. Working with Chambers of Commerce through the Congestion (Connectivity) Partnership for example.	Ongoing snap shot surveys on business mode splits will allow the effectiveness of Travel Plan interventions to be monitored , and updated or prioritised as appropriate
Local Strategic Partnerships (LSPs)	Responsible for the delivery of improvements in the quality of life of local residents; including reduction in congestion	Local Authorities, Local business sector and the community work together on the delivery of measures tackling key local issues. Each of the 5 LAAs agreed in West Yorkshire includes NI 167 as a specific target for comprehensive assessment.	On-going programme and performance management to ensure that under delivery is not happening at the time of the regular comprehensive area assessment.

5.1.3 Influencing Stakeholders through effective partnership

It is worth noting that the current legal framework for delivering bus services in West Yorkshire does not give Local Transport Authorities any significant powers to control or regulate many of the activities of commercial bus operators. Therefore important factors such as fare levels, bus frequency and bus quality (which have an impact on patronage, modal share and therefore congestion) cannot be controlled by the Authorities responsible for delivering the Congestion Plan.

It is therefore essential that the current working arrangement to promote partnership working are developed and enhanced to ensure the Urban Congestion Delivery Plan is supported by the commercial bus operators.

The LTP Partnership has established working relationships with a range of stakeholders and these mechanisms have been used in the development and delivery of the LTP. Given the timing of the Urban Congestion Delivery Plan, it is recognised that further work may be required to achieve the necessary buy-in to the outcome of the Plan and to try and influence stakeholders to act accordingly.

The Plan identifies a substantial role for bus services in assisting with the achievement of the target. A long-established West Yorkshire Operators Group has been the mechanism for formal liaison with the bus (and rail) operators of West Yorkshire. From April 2007 a new Bus Partnership Group (a sub-group of the main operators group, building on a former Yorkshire Bus Initiative group) has been established to oversee delivery of bus infrastructure across West Yorkshire.

Members of the group include senior representatives from Metro, bus operators and the district councils. The Police will also attend to deal with safety and enforcement issues as appropriate. This Group will be an appropriate mechanism for securing buy-in to the Urban Congestion Delivery Plan at a West Yorkshire level. There will be regular progress reports (on the LTP and specifically on the Urban Congestion Delivery Plan). There are also individual partnership groups within each of the five West Yorkshire districts where progress on individual corridors within the Plan will be monitored.

Formal 'buy-in' for the bus operators will be through quality partnerships (where applicable – for example a partnership agreement for Route 4 in Leeds came into effect in August 2008), Performance Improvement Plans (which are under development for all operators and all operating areas within West Yorkshire). Commitment to delivering wider aspects of the LTP (including bus strategy) has been previously sought, and has not been forthcoming, but the bus strategy sets out the alternative approaches, including Quality Contracts, that may need to be facilitate the introduction of these.

The Highways Agency is a member of the LTP 'Overview Group' (see section on governance arrangements) and this Group will be monitoring delivery of the plan on a regular basis.

The partnership has also established a 'Congestion' Partnership (now re-named the Connectivity Partnership). This covers the wider Leeds City Region area and includes representatives from Metro, the 11 authorities within the City Region, Businesses, Yorkshire Forward, government representatives and bus/rail operators. This partnership will be an appropriate forum for ensuring wider stakeholder buy-in to the Plan. This Partnership also draws in the respective Chambers of Commerce within West Yorkshire. At a high level, they support the delivery of the Plan through being informed and disseminating information. At a more widespread level, and with the aid of Yorkshire Forward grants, the Travel Plan Network is being expanded.

The Travel Plan Network, which will benefit from additional staff resources, provides a direct service to employers and employees on promoting sustainable travel choices for commuters, business travel and customers. Excellent partnership relationships with major employees in West Yorkshire, including many along the corridors in the Plan, have already been established

(HBOS on the A629 for example). Using the established model, with the benefit of additional resources, co-ordinated at a West Yorkshire level will allow targeted activity to promote sustainable travel choices in combination with the improvements to services and infrastructure identified. The focus of the Travel Plan Network will be on softer measures such as information, car sharing and the promotion of ticketing.

Issues identified through the Travel Plan Network and following consultation with the business sector has shown the need for more flexible ticketing products, and the opportunities for enhanced/more flexible MetroCard ticketing products will be explored with bus and train operators. In the short term this will include a focus on developing transferable MetroCards aimed at the 'business related travel' sector.

5.2 Public communications

The public needs to be kept involved in and informed of what is being undertaken to reduce congestion. The communications will also help the public to get the best out of new facilities and how people can contribute to reducing congestion.

This is being undertaken via a mixture of:

- consultation on outline ideas and firmer proposals for individual projects/ corridors;
- press releases and other promotion for individual projects;
- promotion campaigns for using alternatives to the car – mainly in conjunction with the Yorkshire Forward funded Travel for Work project;
- consultation with interest and community groups; and
- the West Yorkshire LTP website (www.wyltp.com).

In addition work has commenced on a consultation and Communications Strategy for engaging with the public on the West Yorkshire Urban Congestion Target and related interventions. This strategy is being developed in parallel with, and informed by, a number of other work strands currently under way including a review of previous WYLTP and other LTP authority "best practice" approaches to communications and consultations.

This review and development of a new approach involves assessment of key markets, messages and media with an expectation to develop more innovative, targeted techniques for engaging with the public. A task group has been established consisting of Transportation and Public Relations Officers from the LTP partners. Developing a closer working relationship with the local press is also envisaged.

In addition the partnership is trialling more sophisticated and targeted marketing of public transport focussed on communities and individual users.

5.3 West Yorkshire Partnership communications and responsibilities

Communication within the LTP Partnership is as important as communication with external groups and the public. The partners have complementary roles to play and need to jointly manage programmes of interventions and to coordinate activities. Table 5.4 shows the main responsibilities and communication routes appropriate for the tackling congestion. In addition to these formal communications there are frequent ad-hoc communications between officers of all levels.

Table 5.4 Partnership roles and communications

Authority	Responsibilities	Communication routes
The 5 West Yorkshire District Councils	<ul style="list-style-type: none"> • Project/ programme management • Traffic management (including role of Traffic Managers) • Cycle and pedestrian planning • Urban traffic control • Highway maintenance and co-ordination of road works • Parking • Travel planning • Land use policy and control • Transport policy • Promotion and publicity • Local Area Agreements 	<ul style="list-style-type: none"> • LTP Steering Group • LTP Overview Group • Transportation Officers Group • City Region Congestion Partnership • Traffic Managers Network concentrating esp. on coordination of works, developing the elements required by the TM Act • WY Travel Plan Network • Regular coordination meetings e.g. on land use planning, UTC • Progress reports to LSP Meetings
Metro (WYITA/PTE)	<ul style="list-style-type: none"> • Facilitating and encouraging travel by public transport • Provision of information on public transport • Co-ordinating public transport across West Yorkshire • Funding rail services and non-commercial bus services • Providing and maintaining bus stations, stops and shelters • Administrating pre-paid tickets 	<ul style="list-style-type: none"> • LTP Steering Group • LTP Overview Group • Transportation Officers Group • City Region Congestion Partnership • WY Travel Plan Network • Yorkshire Forward

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The general approach to tackling congestion across West Yorkshire is given in the Local Transport Plan. This is summarised in section 6.1.

Progress on West Yorkshire Wide initiatives is given in section 6.2. The approach being undertaken in relation to the individual corridors being monitored is given in sections 6.3 to 6.7 and in the Appendices. Costs of interventions have been provided where known. Some costs are being met by developers and other costs are not yet known because of the preliminary nature of some of the proposals.

There are a number of issues and initiatives that will have an impact on the demand for travel to/from and through the city/town centres, which will impact on the monitored corridors, whilst not being directly associated with these corridors. These are described at the beginning of each section.

Tackling congestion is not seen as purely a 5 year action. It is very much a long term process that will need to continue for many years. A number of the corridor specific interventions that are described below (and in the trajectories in the appendices) will have an impact towards the end of the 2010/11 period of the LTP and this Delivery Plan. Some interventions may have their most significant impact after 2010/11. The nature of many of these longer term interventions is such that it is not realistic to accelerate their introduction.

When setting the West Yorkshire congestion target the timescales for implementation and effectiveness were taken into account and the target set accordingly.

The longer term interventions have been included in the delivery plan because they will have an impact on the target (even if small) and also to show the extent of the work that is being undertaken to tackle congestion.

6.1 LTP approach

The LTP core strategy approaches to address the effects of congestion are:

- C1 Encourage modal switch to public transport
- C2 Manage the demand for travel
- C3 Make the best use of existing capacity
- C4 Improve the highway network
- C5 Encourage more cycling and walking
- C6 Promote Smarter Choices in travel
- C7 Promote sustainable land use planning policies and practices

The contents of these 7 approaches are summarised below and can be found in more detail in the LTP2 document (pages 77-82). They form a basket of potential actions that will be implemented as appropriate according to local conditions across West Yorkshire and not just in relation to the corridors being monitored.

6.1.1 C1 Encourage mode switch to public transport

- West Yorkshire's Bus Strategy
- The Yorkshire Bus Initiative
- Improving bus service performance
 - Real Time Passenger Information (RTPI)
 - West Yorkshire Transport Education and Skills Alliance (WYTESA)

- Punctuality Improvement Partnerships (PIPS)
- The Rail Strategy
- The public transport ticketing and information strategies
- Travel to school by bus
- Park and Ride

6.1.2 C2 Manage the demand for travel

Demand management to encourage mode switch to public transport, walking and cycling and to deter inefficient use of the road network.

Car parking

- continuing to reduce the number of long stay spaces;
- preference given to short stay over long stay parking;
- extending control zones outwards;
- the price of parking particularly long stay parking, will be raised in real terms;
- on street parking subject to charging,
- residents' parking zones;
- de-criminalisation of parking offences;
- maximum guidelines to the number of parking spaces at new developments;
- overall reductions in parking provision in main town centres; and
- ensuring appropriate parking standards are included in the LDFs.

Other charging mechanisms

- Over the course of LTP2 research work will be undertaken to develop a better understanding of the circumstances under which bolder demand management measures would improve economic performance.

Reallocation of road space

- Implement the most appropriate form of road space allocation on a local basis, to maximise vehicle or person throughput;
- HOV lanes, no-car lanes and/or gates; and
- Urban Traffic Management and Control (UTMC) and queue relocation.

6.1.3 C3 Making the best use of existing capacity

- Network Management;
- day-to-day Network Management, including UTMC, to more actively manage traffic;
- provision of information; and
- making best use of existing road space (see also C2)

6.1.4 C4 Improve the highway network

- Improve reliability of public transport and make better use of highway capacity such as signal priority for buses and additional bus/HOV lanes;

- selective road widening and junction improvements to alleviate serious traffic bottlenecks will continue to be implemented where appropriate; and
- maintenance regimes such as road surface improvements including the maintenance of off-road cycleways and footpath networks

6.1.5 C5 Encourage more walking and cycling

- Completion of the strategic cycling network;
- the development of the walking strategy and stakeholder engagement with schools, Primary Care Trusts and community groups;
- cycle lanes with Advanced Stop Lines where appropriate;
- new on and off highway cycle routes;
- signing of quieter alternative routes for cyclists;
- cycle parking facilities;
- encouraging employers to provide shower and changing facilities;
- direction signing of paths;
- linking city centres by foot to inner residential areas; and
- promotion of the use of RoWs as a viable alternative for short journeys, such as to work or for shopping and particularly to complement our Safer Routes to School programmes. Each of the District Council completed a Public Rights of Way Improvement Plan in November 2008 which identifies investment and maintenance priorities to ensure that RoWs are fit for purpose.

6.1.6 C6 Promote smarter choices in travel

- increase the number of work place travel plans including the expansion and development of the West Yorkshire Travel Plan Network;
- implement a Travel for Work project;
- implement the authority's in-house travel plans;
- increase the number of school travel plans;
- promote travel awareness;
- introduce pilot 'personalised travel planning' schemes at selected major developments;
- encourage dedicated parking spaces at workplaces for car sharers;
- develop car club schemes to promote car-pooling; and
- provide on-line car-sharing schemes for employers and employees (now available at www.wycarshare.com)

6.1.7 C7 Promote sustainable land use planning policies and practices

- Control over the location and scale of developments near congestion hot spots;
- requirements for developers to provide or improve cycle and walking facilities;
- parking standards that discourage car use, combined with public transport improvements if necessary;
- requirements for developers to fund network improvements (road and public transport); and

- requirements for developers to fund sustainable transport 'soft' measures

6.2 West Yorkshire wide initiatives

6.2.1 Studies and developments

Since the production of LTP2 there has been noticeable progress made on a number of congestion related initiatives:

- Performance Improvement Partnerships have been established mainly to improve punctuality of buses.
- A study into road space reallocation has been undertaken and pilot schemes for a range of different schemes are now being considered.
- Yorkshire Traffic Managers Group is developing processes for coordination of works, a road hierarchy and other elements required by the Traffic Management Act.
- There have been improvements to the way we work with bus operators including the setting up of new Bus Partnership Groups (both WY and District based).
- Leeds and Metro have secured DfT support for TIF pump priming research to understand the scale, distribution, impacts and possible solutions to congestion in Leeds. This research includes;
 - a comprehensive set of transport and traffic data collection surveys;
 - the development of a set of models (a strategic transport model, a multi-modal transport assignment/demand model, a bus financial performance model and an economic impact model;
 - consultation with the public, business, operators and others stakeholders to understand current issues and the acceptability of different solutions; and
 - the development of a range of solutions based around demand management

The current programme is for the suite of models to be ready in summer 2009, and for a TIF business case submission to be made to DfT in summer 2010.

6.2.2. Leeds City Region Transport Vision

The development of the City Region Transport Vision has identified the need to deliver significant transport interventions to support the economic growth strategy. Interventions identified include a bus-based alternative to Leeds Supertram, some further highway schemes, introduction of a tram-train network, further heavy rail electrification and rolling stock improvements as well as a supporting network of high quality bus services and interchanges.

Work is currently underway to develop appropriate funding packages and business cases for these schemes. Whilst the urban congestion delivery plan does not assume that funding will be available for these schemes (except where already committed), it is expected that some of the short-term schemes will be developed and/or introduced during the life of the plan.

6.2.3 Metro, West Yorkshire PTE

Encouraging more people to switch to public transport is a key way of reducing congestion.

The West Yorkshire Bus strategy has been developed as part of LTP2 and contains measures to encourage mode switch to bus services by making bus services more attractive. The Bus Strategy envisages a more radical approach towards delivering higher quality bus services, with an emphasis on service delivery. The desired outputs include:

- improved punctuality and performance;
- simplified ticketing, fares and routes to reduce boarding time delays;

- improved networks;
- greater service stability;
- better customer service; and
- higher fleet investment and quality standards.

Metro's rail strategy, RailPlan 6, has been developed as part of LTP2. It contains measures to encourage mode switch to rail by making rail services more attractive, including additional peak capacity, providing better access to and at rail stations, improving integration at rail stations and improving the quality of facilities and trains.

Metro's market research has identified the complexity of the current public transport system as a major barrier to greater usage. The ticketing strategy seeks to improve and simplify ticketing products and offer a properly integrated solution. An Information Strategy has also been developed as part of LTP2 which seeks to make public transport information easy to use, easy to get and easy to understand and ensure that lack of information is not a barrier to the use of public transport.

In addition to the corridor specific schemes described below Metro is improving the attractiveness of public transport by carrying out a range of generic improvements. These measures are shown in Table 6.1.

Table 6.2 describes the progress to date of these measures as of February 2010.

Table 6.1 Metro initiatives

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
1	Providing timetable cases at more bus stops;	£800k	Agreement on revenue costs	Operators Group	Increased satisfaction with bus services. Modal shift towards the bus and away from the car. Increased patronage	✓	Phase 2 approved 2009/10	Yes
2	Installing and replacing bus shelters to ensure they meet modern standards and are DDA compatible;	£9,895k	Work not coordinated with District Corridor programmes Resources not available to deliver work Public objections	Bus Partnership Group External call-off consultancy arrangements District Bus Partnership Steering Group	Increased satisfaction with bus services. Modal shift towards the bus and away from the car. Increased patronage	✓	Programme approved annually	Yes
3	New and enhanced interchanges (e.g. Brighouse and Pudsey)	£8,515k	Project / Construction risks Highway Constraints (need for TROs etc)	External call-off consultancy arrangements Risk Workshops Metro Project Management Procedures Close partnership with Highway Authorities	Increased patronage modal shift towards the bus and away from the car Increased satisfaction with bus services. improved accessibility to bus services Improved confidence in bus services through improved perception/actual safety and security.	✓	Brighouse Bus Station completed. Pudsey Bus Station due to commence Oct 2009 complete June 2010.	Yes
4	Real Time Passenger Information - including installing Real Time	£1,402k	Overhanging trees damaging aerials	Real Time Steering	Increased patronage and mode share for	✓✓	Approved	Yes

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
	Passenger information (RTPI) units at the most used bus stops on key routes and improving accessibility to this information and Linking the RTPI system in to UTMC systems to provide priority for buses at signalised junctions.		disrupting communications between buses and RTI system Resources for RTPI data extraction and analysis	Group County-wide tree cutting programme New low profile aerials being tested Additional resources proposed through Congestion Fund Further resource and system enhancements	buses resulting from: improved reliability and punctuality increased satisfaction with bus services improved confidence in bus services			
5	Encouraging developers to provide free MetroCards to residents of new developments during their first year of occupation;	n/a	Metro is not a statutory consultee for planning applications	Review of process for responding to planning applications and more systematic approach to Supplementary Planning Guidance documents	Modal shift towards bus and train and away from the car.	✓	Review of scheme completed Aug 2009 Scheme refresh launched Dec 2009.	Yes
6	Improving CCTV coverage in rail and bus stations and in some bus shelters to improve passenger safety and their perception of safety;	£2,220k	Systems compatibility Revenue cost of operation Issues with image exchange and radio links with District CCTV rooms	Schemes developed in consultation with Districts and West Yorkshire Police Metro and Leeds City Council working in partnership to develop a joint digital CCTV control room with operational costs being shared by the partners.	Increase in Public Transport Patronage as a result of improved confidence in bus services through improved perception/actual safety and security.	✓	CCTV control room estimated to be operational in July 2010	Yes
7	Increasing rail station platform length to accommodate longer trains and	£1,158k	Sufficient Government	Seek operational solutions	Longer trains allow for further growth in	✓✓	2010/11	Yes

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
	thus enable increased rail capacity;		funding Physical Constraints on site Expensive infrastructure works required	Incorporate mitigation measures in new rolling stock designs Seek funding to extend as part of HLOS.	rail patronage Encourage modal switch to public transport			
8	Adding park and ride capacity at rail stations; and	£200k	Unable to obtain land required Need for agreement on funding mechanisms Unable to reach agreement with Network Rail / Northern over increased revenue costs Local traffic problems due to increase numbers of vehicles accessing Availability of funding	Alternative design options – e.g. multi storey Revenue generation measures Car Park extensions as part of Leeds City Region Rail Growth Package Address with local authority through planning process Incorporate interchange facilities in to design (bus / walk / cycle) Seek third party funding e.g. Section 106, Regional Funding Allocation	Increased car parking will attract commuters, currently travelling to city centres by car, to use rail.	✓✓	2011/12 2012/13	Yes
9	Improving rail station facilities (i.e. accessibility improvements, further provision of electronic passenger information displays and enhanced waiting facilities)	£3,923k	Unable to reach agreement with Network Rail / TOC over increased revenue costs. Cost of providing	Develop forward programme to identify feasible schemes and possible partnership funding. Continue to seek	Encourage modal switch to public transport Improved confidence in public transport through improved	✓	Match Funding through DfT 'Access for all' to be sought on an annual basis	Yes

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
			level access improvement at stations Scheme costs increase significantly from initial estimates	funding through DfT's Access for All programme Agree fixed cost contributions with TOC / Network Rail Influence the National Programme funded through DfT's Access for all programme.	perception/actual safety and security Improved accessibility to rail services			
10	Marketing on Congestion Routes	£120k Breakdown £60k - marketing £60k - ticketing	Company interest / uptake	Go Greener campaign launched to public in July & August respectively and to TPN members end of August. Outdoor media advertising booked printing completed. Issued 450 free taster MetroCards to TPN member employees (350 paid for by Congestion budget, 100 from TfW budget. TPN side of campaign a big success in terms of applications for free tickets. Currently evaluating feedback.	Encourage modal shift to public transport	✓✓	June/July 2009 campaign started	Yes

Table 6.2 Metro initiatives; Progress to date

Interventions		Progress to date
1	Providing timetable cases at more bus stops;	3000 cases will have been installed by the end of March 2010. Evaluation will take place to determine whether a further 3,000 cases will be installed during 2010/11
2	Installing and replacing bus shelters to ensure they meet modern standards and are DDA compatible;	Metro is continuing with its programme to replace old stock and provide modern facilities at 95% of locations. 160 shelters have been installed so far in the financial period 2009/10.
3	New and enhanced interchanges (e.g. Brighouse and Pudsey)	Brighouse Bus Station became fully operational during May 2009. Work on Pudsey programmed to commence October 2009 and complete summer 2010. Proposals being developed for a new bus and rail Interchange in Castleford. Subject to DfT funding being made available scheme commence during 2010 and complete late 2011.
4	Real Time Passenger Information - including installing Real Time Passenger information (RTPI) units at the most used bus stops on key routes and improving accessibility to this information and Linking the RTPI system in to UTMC systems to provide priority for buses at signalised junctions.	921 on street displays in bus shelters installed across West Yorkshire and real time information displayed at all West Yorkshire bus stations. Traffic Light Priority has been installed at 102 local sites across West Yorkshire and is used centrally by Leeds UTMC. £3.5m has been allocated to the TLP task and finish group to expand delivery of TLP across all the West Yorkshire districts.
5	Encouraging developers to provide free MetroCards to residents of new developments during their first year of occupation;	Currently 8 new residential sites who have signed up to the scheme have had residents apply for a MetroCard. The total uptake for the first year across these 8 sites is 341 MetroCards. Metro are currently implementing a revised set of T&C along with making improvements to its marketing strategy to improve take up in the future.
6	Improving CCTV coverage in rail and bus stations and in some bus shelters to improve passenger safety and their perception of safety;	Metro CCTV room moving to new base in Middleton and switching to digital CCTV in July 2010. Installation of digital CCTV at 30 selected shelters to be completed in Jan/Feb 2010.

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7	Increasing rail station platform length to accommodate longer trains and thus enable increased rail capacity;	<p>All relevant platforms on the Harrogate and Calderdale lines have been extended to accommodate 4 car trains.</p> <p>Locations for further platform extensions have been identified. Grip Stage 3 works are completed for these locations.</p> <p>Platforms at Crossgates and Garforth have been extended.</p>
8	Adding park and ride capacity at rail stations; and	Outline design (Grip stage 4 work) plans to extend car parks at five rail stations are complete.
9	Improving rail station facilities (i.e. accessibility improvements, further provision of electronic passenger information displays and enhanced waiting facilities)	<p>Further DfT small scheme funding bids have been submitted to seek further DfT match funding to provide CIS at 10 rail stations within West Yorkshire.</p> <p>A new centralised CIS/LLPA system is now in place.</p>
10	Marketing on Congestion Routes	<p>Go Greener Marketing campaign was carried out on all main routes in July 2009. Ticket issuance still being carried out as part of the campaign. Give your car a break TPN side of the campaign was launched in August 2009 with ticket issuance in September. Applications for tickets has been very good from employees. Now evaluating feedback from TPN side.</p>

6.3 Bradford

6.3.1 *Proposals affecting Bradford routes*

Economic regeneration and growth

Bradford has been the subject of major master planning work looking at three key areas of change and regeneration:

- Bradford City Centre
- Airedale
- Canal Road Corridor

Bradford Centre Regeneration was established in 2002 to transform the City Centre. A Masterplan for the City Centre was produced by Alsop Architects in 2003 which sets out a new vision of the city centre. This envisaged the creation of a large city centre resident population and the development of a number of new villages in different neighbourhoods. The Masterplan identifies four separate neighbourhoods or 'fingers of intervention':

The Bowl – proposes a large shallow pool of water outside City Hall at the centre of a new park. Radiating out from the Pool will be a Pier attached to the National Museum, a new Business Forest, and the other three neighbourhoods.

The Channel – proposes reintroducing the Bradford Canal to the city centre alongside which is a new canal side community.

The Market – proposes an alternative multi-cultural retail circuit with new public spaces.

The Valley – proposes bringing Bradford Beck back to the surface, with a green corridor along Thornton Road including Wetlands and an Orchard.

Neighbourhood Development Frameworks (NDFs) have been produced for each of the four neighbourhoods.

An Action Area Plan will be produced as part of the emerging Local development Framework. The above Masterplan has changed over time following consultations and the effects of the economic downturn. At present only the Bowl is being taken forward with the development of a City Park which includes the provision of a mirror pool adjacent to City Hall. The scheme will lead to the closure of Channing Way and Norfolk Gardens, which will have a major impact on certain city centre bus services. To compensate a new right turn between Little Horton Lane and Prince's Way is due to open by Spring 2010 to allow bus services better access to Hall Ings. In addition two new pedestrian crossings will be constructed to provide improved connectivity for pedestrians between the City Centre and the National Media Museum / University.

The development of a new shopping centre by Westfield known as the 'Broadway' centre has been put on hold as a result of the recession. The centre is seen to be a key part of the regeneration of Bradford City Centre and originally was due to open by 2010.

The **Airedale Masterplan and Strategy** identifies the area as a focus for economic development focused on high tech companies and digital communications. This is distributed along the Airedale corridor with key roles for Keighley, Shipley and Bingley. The Short term interventions seek to secure an additional 1,700 jobs and 470,000 (sq ft) of new floor space along the corridor to 2008. The medium term interventions anticipate an additional 3,900 jobs and 900,000 (sq ft) of new floor space along the corridor from 2008 to 2012.

Bradford Council has ambitions to reinstate the canal into Bradford from Shipley. A Masterplan has been produced exploring the opportunity of redeveloping the **Canal Road Corridor** from the City Centre to Shipley on the back of the canal proposals, linking with both the City Centre and Airedale Masterplan ambitions. This proposes major land use changes along the corridor

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including significant additional housing. An Action Area Plan will be produced as part of the emerging Local Development Framework.

As part of the Airedale Masterplan a number of improvements to the A650 were proposed and included in a bid to the Regional Transport Board for funding. Unfortunately the bid was not successful; however funds have been made available from Local Transport Plan uplift monies to fund a revised scheme. This has led to a delay in improvements at key junctions on the A650 including Saltaire roundabout. Design and consultation on a revised scheme is due to begin in the last quarter of 2009 with possible implementation in 2011/12.

Improvements to the junction between Little Horton Lane and the A6177 Southfield Lane (including the provision of a new bus lane on St Enoch's Road) were due to begin in the summer of 2009. This has been delayed due to problems with land purchase which is still not resolved. It is hoped that work on this scheme will begin in 2010.

Housing

The Current Replacement Unitary Development Plan for Bradford ensures a supply of housing land to meet 1400 houses a year to 2014. The focus of this development is within the main urban area of Bradford. The emerging Regional Spatial Strategy for Yorkshire seeks to increase the supply to 1560 dwellings a year to 2011, 1920 dwellings a year from 2011 to 2016 and 2180 dwellings a year 2016 to 2026. The focus in the RSS is for this to be accommodated in the main urban area of Bradford. The emerging Core Strategy for Bradford is at a too early stage to provide more detailed picture of the likely distribution at this stage.

General traffic trends

Trend data on traffic volumes from the Bradford Monitoring Cordon indicates that inbound peak period (0700-1000) traffic levels are less now than they were ten years ago. Traffic volumes fell between 2001 and 2007 (despite a rise between 2003 and 2005). The flows in 2007 were still some 5% lower than in 2001 and 3% below the 1997 level. For the shorter peak period (0800-0900), inbound flows in 2007 were some 8.0% below the 1997 level.

Modal share data from the Monitoring Cordon indicates increased rail patronage (up 13%) and a slight increase in bus use (up 3%) since 2005 in the inbound morning peak.

Forecast increases in employment for Bradford District, however, could potentially increase peak period traffic across the cordon by as much as 8% between 2005 and 2011. The LTP target to restrict this to 3% or less assumes that growth will be limited by a significant expansion in City Centre living, accompanied by the effects of increased rail use and car sharing (under the Liftshare scheme).

The Bradford SATURN model shows that the person journey times on the three Bradford routes would rise by around 5% which is well within the overall West Yorkshire target of 7%.

Traffic levels on the routes into Bradford can be influenced by a number of factors which can result in changes to travel patterns. These include;

- The cost of commuter car parking (increased by 84% since 2007)
- Changes to Bus services (a number of routes have seen reduced service frequency)
- Increased costs of Public Transport
- Commuters starting work earlier / later to avoid peak time traffic
- The impacts of the economic recession – fewer jobs results in less commuters
- Route switching – drivers switching to less congested routes
- Workplace travel planning – employers encouraging staff to use more sustainable forms of transport

6.3.2 Bradford routes

Table 6.3 A650 Manningham Lane, Bradford

WY01	A650 Manningham Lane, Bradford	
Context	Recognised issues	
<p>This radial route runs from the Bingley Relief Rd to the A6181 Central Ring Road. The route is entirely urban in nature, passing through the densely populated areas of Shipley and Manningham. It has housing and shop frontages along most of its length.</p> <p>The route from Bankfield roundabout to just beyond the Branch junction is still a trunk road under the Highways Agency control. De-trunking issues are currently being addressed.</p> <p>There are no significant LTP schemes planned for this route. Inbound bus lanes are already in place at a number of locations, the most recent being on the approach to Saltaire roundabout, which was implemented recently by the Highways Agency. Journey time data indicates that this bus lane is having a significant impact on bus journey times – average inbound times are similar for buses and non-buses on this segment, whereas elsewhere non-bus times are substantially faster.</p>	<p>Public transport</p> <p>Buses being delayed by other traffic at specific locations such as Saltaire Roundabout and the Branch junction.</p> <p>General</p> <p>Congestion at specific locations such as Saltaire Roundabout, the Branch, and at junctions where orbital and radial routes meet. The congestion at these junctions creates delays for buses, road safety problems, pollution, severance, and causes traffic to seek alternative routes through environmentally sensitive residential areas. Opportunities for improving these junctions to cater for all users, without significant highway improvements, are limited.</p> <p>Traffic volumes – highest inbound traffic flow between Bankfield Rbt and Saltaire Rbt 1300 veh/hr; elsewhere average 700 veh/hr</p> <p>Other</p> <p>Airedale Regeneration Master Plan City Centre Regeneration Master Plan Manningham Regeneration Master Plan Listers Mill Redevelopment</p>	

ENABLING ACTIONS AND DELIVERY LEVERS

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	<p>Saltaire Roundabout Improvement</p> <p>New junction arrangements proposed which will reduce delays to buses and help to manage congestion. Improved safety and pedestrian access.</p> <p>Includes possibility of bus lane extension at Bankfield Roundabout</p>	£2600k	<p>Requires some land and business relocation – could require CPO</p> <p>Public reaction to changing traffic patterns and impact on adjacent residential areas</p> <p>Lack of internal staff resources to design and implement schemes</p>	<p>Ongoing negotiation with business</p> <p>Consult local people with a view to implementing traffic and safety measures in residential areas</p> <p>Possibly use external resources to progress the scheme</p>	<p>Minimises delays at major congestion hot spot</p> <p>Opportunity to provide bus priority</p>	✓✓✓✓	<p>2006/07 Consultation</p> <p>Progress slipped - lack of funding.</p> <p>Revised scheme to be funded form LTP uplift monies.</p> <p>2009/10 local consultation panel meeting on a regular basis and aiming to go to public consultation early 2010</p>	Yes
2	<p>Minor area wide traffic management and bus priority measures</p> <p>Rolling programme of Lighting, signing, road markings and minor road layout works</p> <p>Includes possibility of bus lane extension at Bankfield Roundabout</p>	£250k p.a.	Lack of internal staff resources to design and implement schemes	Possibly use external resources to progress the scheme	Improves efficiency and safety of highway network	✓✓	<p>2006/07 – 2009/10 Traffic Management Rolling Programme</p> <p>2009/10 Bankfield feasibility</p>	Yes
3	<p>MOVA/ACIS signal control at key junctions</p> <p>This will improve efficiency of traffic signal operation and provides priority for buses</p>	£115K	COMPLETED		Improves efficiency of highway network and reduces bus delays	✓✓	<p>2007/08 MOVA at 2 junctions</p> <p>2008/09 MOVA at 2 junctions</p> <p>Bus TLP at Puffins</p>	<p>COMPLETED 2008</p> <p>Initial after studies suggest a 20% improvement in journey times.</p>
4	<p>Improved Enforcement</p> <p>Parking controls and bus lanes</p>	2009/10 £10k	<p>Police priorities</p> <p>Road works</p>	Implement decriminalised	Improves efficiency of	✓✓	Decriminalised parking controls	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

		Enforcement £20k allocated for mobile camera purchase		parking controls Traffic Manager Duty	highway network and reduces bus delays		introduced April 09 Ongoing police enforcement of bus lanes. Use of fixed enforcement cameras awaiting new powers spring 2010	
Demand management								
5	Parking restrictions in City Centre Reduce the volume of long stay spaces available Increase long stay car parking charges by more than the rate of inflation	Not appropriate	Political support Selling message to Members of Council, public and businesses.	Ongoing dialogue with political leadership	Would reduce car travel to city centre	✓✓	2001/02 car parking strategy Maximum parking standards. Encouraging development on PNR parking sites. Increased long stay charges Sept. 07. Parking charges increased Aug 09	Yes
6	Encourage more car sharing through Liftshare scheme Web based car share scheme	£2k allocated to promotion	Ongoing promotion	Further promotion to large employers of the initiative. Dedicated parking bays for car sharers in car parks.	Increase in registered users and hence number of car sharers	✓✓	2006/07 implemented District wide scheme has bow over 920 members. 2009/10 will be promoted via fixed signs on radial routes	Yes
7	Car clubs To discourage car ownership	£35k CRF and £35k from Metro	Political Support Corporate Support	Further promotion to large employers. Provision of car free housing areas through planning policy.	Reduces travel by car in general and for commuting	✓✓	Scheme will be funded 50/50 with Metro using congestion monies	Yes Slipped from 2007/08 due to funding and Whizzgo take over by City Car

ENABLING ACTIONS AND DELIVERY LEVERS

								Clubs. Aiming to launch April / May 2010. Spaces identified and TRO's being progressed.
8	Personalised Travel Planning To reduce the number of car trips and modal shift	£50k	Lack of internal staff resources to implement	Possibly use external resources to progress the scheme	Reduces travel by car in general and for commuting	✓✓	Funding approved April 2009	No – progress delayed due to lack of internal resources
Travel choices and behaviour								
9	School Travel Plans To reduce travel to schools by car	School travel plan officer funded by DfT	Not all schools have travel plan Special status schools change traffic patterns	Continue working with schools to develop travel plan Expand school transport	Achieves modal shift away from car use	✓✓	149 STP's implemented up to March 2008. 176 STP's up to March 2009	Yes
10	Work Place Travel Plans To encourage modal shift	Work place travel plan officer funded by Metro / Yorkshire Forward	Failure to achieve modal shift, if employers not putting in place travel plans	Enforce planning obligations. Employment of West Yorkshire travel planning officer. Continued development of Council Travel Plan to lead by example	Achieves modal shift away from car use	✓✓	2006/07 West Yorkshire Travel Plan coordinator appointed. Over 30 employers are signed up to West Yorkshire Travel Plan network.	Yes
11	City Centre Living To discourage car ownership	Not appropriate	Insufficient interest in living in city centre Depends on developers to bring forward schemes for implementation	Encourage round the clock activities to make place liveable	Reduces commuting by car	✓	Approximately 1500 units delivered between 1997 and 2007. A large number of units are currently going through the planning process	No - Potential developments on hold due to the recession
Goals								
The goal is to contain any increase in person journey time to 7% or less								

Table 6.4 A647 Leeds Road, Bradford

WY02		A647 Leeds Road, Bradford						
Context		Recognised issues						
<p>This radial route runs from Galloway Lane to the A650 Shipley Airedale Road. It is part of the main highway route between Bradford and Leeds.</p> <p>The route is entirely urban in nature with housing and shop frontages along most of its length.</p> <p>The planned junction improvement at the Leeds Road / Outer Ring Road junction is not programmed to be completed until after the end of LTP2 and there will consequently be no impact on the target.</p>		<p>Public transport Buses being delayed by other traffic</p> <p>General Congestion at specific locations such as Galloway Lane roundabout, Thornbury gyratory and at the A647/A6177 junction where orbital and radial routes meet. The congestion at these junctions creates delays for buses, road safety problems, pollution, severance, and causes traffic to seek alternative routes through environmentally sensitive residential areas. Opportunities for improving these junctions to cater for all users, without significant highway improvements, are limited.</p> <p>Traffic volumes – highest inbound flow between Galloway Lane and Thornbury Gyratory 2400 veh/hr; elsewhere average 700 veh/hr</p> <p>Other Phoenix Park Expansion City Centre Regeneration Master Plan</p>						
Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	<p>A6177 Killinghall Rd / A647 Leeds Rd junction improvement</p> <p>Increased capacity at junction to provide facilities for pedestrians and buses, with no increase in congestion for general traffic</p>	£50k allocated from CRF for design – scheme cost unknown at moment	Funding as it will require a large proportion of LTP3 block funding. Lack of internal staff to design / implement scheme	Examine potential of minor congestion relief measures Use external resources	Opportunity to provide bus priority and improved pedestrian facilities	✓✓✓	LTP2 programme for land & property purchase. 2009/10 Review of a reduced scheme underway utilising congestion funds.	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

2	Improved Enforcement Parking controls and bus lanes	2009/10 £10k Enforcement £20k allocated for mobile camera purchase	Police priorities Road works	Implement decriminalised parking controls Traffic Manager Duty	Improves efficiency of highway network and reduces delays for buses	✓✓	Decriminalised parking controls introduced April 09. Ongoing police enforcement of bus lanes. Use of fixed enforcement cameras awaiting new powers (Late 09)	Yes
3	ACIS signal control at key junctions This will improve efficiency of traffic signal operation and provides priority for buses	£28k	COMPLETED		Improves efficiency of highway network and reduces bus delays	✓	2007/08 TLP 1 junction and 4 puffins.	COMPLETED 2008
Demand management								
4	Parking restrictions in City Centre Reduce the volume of long stay spaces available Increase long stay car parking charges by more than the rate of inflation	Not appropriate	Political support Selling message to Members of council, public and businesses	Ongoing dialogue with political leadership	Would reduce car travel to city centre	✓✓	2001/02 car parking strategy approved. Maximum parking standards. Encouraging development on PNR parking sites. Increased long stay charges Sept 2007 Parking charges increased Aug 09	Yes
5	Encourage more car sharing through Liftshare scheme Web based car share scheme	£2k allocated to promotion	Ongoing promotion	Further promotion to large employers of the initiative. Dedicated parking bays for car sharers in car parks.	Increase in registered users and hence number of car sharers	✓✓	06/07 implemented. 920 members district wide. 09/10 will be promoted via fixed signs on radial routes	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

6	Park and Ride Rail based park and ride at Apperly Bridge rail station	£8m (approx)	Network Rail	Ongoing discussions with Network Rail	Reduces car travel in corridor and to city centre	✓	In programme. Public consultation May 09 Planning application submitted Dec 09 Scheduled to open 2012	Yes
7	Increased rail capacity Increase in peak capacity on Caldervale Line	£8.7m	Insufficient funding for new rolling stock	Yorkshire forward recently committed funding to project	Encourages modal shift away from car	✓	Additional carriages added 2007	COMPLETED
Travel choices and behaviour								
8	School Travel Plans To reduce travel to schools by car	School travel plan officer funded by DfT	Not all schools have travel plan Special status schools change traffic patterns	Continue working with schools to develop travel plan Expand school transport	Achieves modal shift away from car use	✓✓	149 STP's implemented up to March 2008. 176 STP's implemented March 2009	Yes
9	Work Place Travel Plans To encourage modal shift	Work place travel plan officer funded by Metro / Yorkshire Forward	Failure to achieve modal shift, if employers not putting in place travel plans	Enforce planning obligations. Employment of West Yorkshire travel planning officer. Continued development of Council Travel Plan to lead by example	Achieves modal shift away from car use	✓✓	2006/07 West Yorkshire Travel Plan coordinator appointed. Over 30 employers are signed up to West Yorkshire Travel Plan network.	Yes
10	City Centre Living To discourage car ownership	Not appropriate	Insufficient interest in living in city centre Depends on developers to bring forward schemes for implementation	Encourage round the clock activities to make place liveable	Reduces commuting by car	✓	Approximately 1500 units delivered between 1997 and 2007.	No – Potential development is on hold due to the recession.
Goals								
The goal is to contain any increase in person journey time to 7% or less								

Table 6.5 Little Horton Lane, Bradford

WY03		Little Horton Lane, Bradford						
Context				Recognised issues				
<p>This radial route runs from Wibsey, bisecting the A6177 orbital route, to the city centre. It passes through the densely populated area of Little Horton.</p> <p>St Lukes Hospital is situated midway along the route. There is also a secondary school situated adjacent to St Enochs Road.</p> <p>The introduction of an inbound bus lane on St Enoch's Road should improve bus journey times. Realistically, a journey time saving of 30 seconds for buses would be a reasonable assumption. This would give a reduction of around 3 seconds in overall route journey time.</p> <p>The accompanying junction improvement with the ring road is designed to provide pedestrian facilities without worsening congestion. However, any additional capacity provided would be allocated to the orbital ring road move rather than Little Horton Lane – on the basis that radial movements have the option of using public transport while orbital movements do not.</p>				Public transport				
				Buses being delayed by other traffic				
				General				
				Congestion at specific locations such as the A6177 Outer Ring Rd junction The congestion at these junctions creates delays for buses, road safety problems, pollution, severance, and causes traffic to seek alternative routes through environmentally sensitive residential areas. Opportunities for improving these junctions to cater for all users, without significant highway improvements, are limited.				
				Congestion related to indiscriminate on-street parking Traffic volume – traffic flows inbound towards city centre average 800 veh/hr				
				Other				
				Bradford City Centre Regeneration Master Plan				
Interventions	Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track	
Use of existing highway infrastructure								
1	A6177 / Little Horton Lane junction improvement and Bus Lane on St Enochs Rd	£1200k	Land and property requirements, may need CPO if	Continue to negotiate with land owners	Provides bus priority thereby improving journey	✓✓✓	Scheme approved in 2004/05. Implementation	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

	Increased capacity at junction to provide facilities for pedestrians with no increase in congestion for general traffic Inbound bus lane on St Enochs Rd will enable buses to by pass queues		negotiations are unsuccessful [NOTE COLOUR CHANGE FROM GREEN TO RED]		time		delayed due to problems purchasing land. Implementation to start 2009/10	
2	Improved Enforcement Parking controls and bus lanes	2009/10 £10k Enforcement £20k allocated for mobile camera purchase	Police priorities Road works	Implement decriminalised parking controls Traffic Manager Duty	Improves efficiency of highway network and reduces delays for buses	✓✓	Decriminalised parking controls introduced April 2009. Ongoing police enforcement of bus lanes. Use of fixed enforcement cameras awaiting new powers (Late 2009)	Yes
3	Bus only right turn facility – Little Horton Lane / Prince’s Way	£90K contribution from CRF	Part of larger scheme development	Dedicated project manager who is aware that right turn facility is key a part of the mirror pool project.	Improves city centre penetration for bus services	✓	Part of City Park & Prince’s Way developments. Out to tender – work due to commence Nov 2009. Delays in awarding the contract – new start date Jan 2010 and complete in the Spring.	Yes - slight delay
4	MOVA/ACIS signal control at key junctions This will improve efficiency of traffic signal operation and provides priority for buses	£21k	COMPLETED		Improves efficiency of highway network and reduces bus delays	✓	2007/08 Bus TLP at 4 puffin crossings.	COMPLETED 2008

ENABLING ACTIONS AND DELIVERY LEVERS

Demand management								
5	Parking restrictions in City Centre Reduce the volume of long stay spaces available Increase long stay car parking charges by more than the rate of inflation	Not appropriate	Political support Selling message to Members of Council, public and business.	Ongoing dialogue with political leadership	Would reduce car travel to city centre	✓✓	2001/02 car parking strategy approved. Maximum parking standards. Encouraging development on PNR parking sites. Increased to long stay charges Sept 2007. Parking charges increased Aug 2009.	Yes
6	Encourage more car sharing through Liftshare scheme Web based car share scheme	£2k allocated to promotion	Ongoing promotion	Further promotion to large employers of the initiative. Dedicated parking bays for car sharers in car parks.	Increase in registered users and hence number of car sharers	✓✓	2006/07 implemented. District wide scheme has now over 920 members. 2009/10 will be promoted via fixed signs on radial routes.	Yes
Travel choices and behaviour								
7	School Travel Plans To reduce travel to schools by car	School travel plan officer funded by DfT	Not all schools have travel plan Special status schools change traffic patterns	Continue working with schools to develop travel plan Expand school transport	Achieves modal shift away from car use	✓✓	149 STP's implemented up to March 2008. 176 STP's up to March 2009.	Yes
8	Work Place Travel Plans To encourage modal shift	Work place travel plan officer funded by	Failure to achieve modal shift, if employers not putting in place travel plans	Enforce planning obligations. Employment of West Yorkshire travel planning officer.	Achieves modal shift away from car use	✓✓	2006/07 West Yorkshire Travel Plan coordinator appointed.	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

		Metro / Yorkshire Forward		Continued development of Council Travel Plan to lead by example			Over 30 employers are signed up to West Yorkshire Travel Plan network.	
9	City Centre Living To discourage car ownership	Not appropriate	Insufficient interest in living in city centre Depends on developers to bring forward schemes for implementation	Encourage round the clock activities to make place liveable	Reduces commuting by car	✓	Approximately 1500 units delivered between 1997 and 2007.	No – Potential development on hold due to the recession.
Goals								
The goal is to contain any increase in person journey time to 7% or less								

6.4 Calderdale

6.4.1 Factors affecting Calderdale routes

Economic regeneration and growth

Plans are approved for a mixed retail, office and leisure development on a 4 hectare site at Broad Street, to the northern edge of the town centre. Preliminary works were begun in 2008 but the development is currently stalled due to the economic downturn.

Provisional proposals for the redevelopment of Shaw Lodge Mills, a 12 hectare site to the east of Spring Hall on the A629 corridor are also on hold.

Work is nearing completion on a redeveloped east stand and corporate facilities at the Shay sports stadium to the south of the town centre.

All of these developments may generate increased travel demand along all corridors into Halifax.

Housing

The Replacement Calderdale UDP (adopted August 2006) makes provision for approximately 450 additional dwellings per year to be created within the district during LTP2, with a target of some 85% to be built on previously developed land or through conversion of existing buildings. The Yorkshire and Humber Regional Spatial Strategy sets net housing provision across the district at 670 dwellings per year during 2009-16, however Calderdale is one of four Yorkshire districts that have been awarded Growth Point status, with expected delivery 21% above this level.

The most significant housing developments that impact immediately upon Calderdale's congestion corridors are as follows:

- Former Halifax High School site at junction of Prescott Street / A629 – permission for 102 units;
- Former Ford Garage at junction of Caygill Terrace / A629 – permission for 49 units;
- Former Delph Mills at junction of Luddenden Lane / A646 – permission for 30 houses.

Public transport

The annual Halifax cordon modal split surveys indicate a fluctuating bus modal share into Halifax town centre, with a steady decrease in the period 2000 to 2005 (down from 19.3% to 17.5%) followed by a sharp increase to 22.1% in 2007 and 20.7% in 2008. Inbound bus lanes have been in operation along both routes for a number of years. Under the Calderdale Bus Partnership (formerly Yorkshire Bus Initiative) bus stop clearways and infrastructure improvements were implemented along the A629 corridor during 2004/05. A further refreshment / renewal programme along this corridor commenced during 2009 and a similar programme of improvements was substantially completed along the A646 during 2009.

There has been a significant increase in the number of Calderdale residents using rail to travel to work in recent years, with overall share rising from 2.3% in 2001 to 5.9% in 2008. The December 2008 timetable seeks to build on this by introducing an additional hourly service from Manchester to Leeds via Hebden Bridge and Brighouse. It also accelerates one of the existing services via Halifax albeit by removal of stops from smaller stations at Sowerby Bridge, Mytholmroyd and Walsden. Operator Northern expects to generate additional traffic which may see a corresponding reduction in car commuting along the A646. Car parking at stations along the line is currently at capacity and may act as a constraint upon growth. Cycle parking provision has recently been adjusted to reflect levels of demand.

Demand management

Calderdale Council has undertaken a district-wide parking review which reported in July 2009. This examines the link between parking provision and control and issues such as the economic wellbeing of an area, air quality, modal shift, individual independence, access to jobs and services, tourism, investment, congestion and land-use planning. The findings will inform development of a comprehensive parking strategy for the district.

Civil Parking Enforcement was introduced from January 2007. From the same date parking charges were increased in all Council-owned off-street car parks in Halifax. The influence of parking charges on modal shift is limited as only 28% of all day commuter parking in the town centre is under Council control.

Calderdale Forward, the Local Strategic Partnership, has adopted a Transport Vision promoting practical steps that partners can take to support LTP objectives and achieve a modal shift, encouraging alternatives to the private car.

Plan progress and updates to trajectories

Although there are no significant highways schemes planned for either of the Calderdale routes a number of studies and minor projects have been commissioned during 2009 which address issues relating to air quality, congestion and public transport priorities. These have been incorporated into the Congestion Delivery Plan.

Calderdale Air Quality Action Plan (AQAP) was endorsed by the Council in March 2009 and proposes a number of actions along the A629 corridor. These include provision of a bus lay-by at the main inbound stop adjacent to Calderdale Royal Hospital which will remove standing vehicles from the carriageway and improve traffic flows and air quality. This and further proposed AQAP measures will be incorporated into the Congestion Delivery Plan as they are programmed. As it is these specific measures that may deliver benefits to the traffic flows it is felt that it is more appropriate to adopt them as key milestones rather than the endorsement of the AQAP itself.

The Council is progressing a scheme to provide CCTV coverage of all major signal controlled junctions along the A629 and A646 corridors. This will allow traffic conditions to be monitored and enable 'real-time' adjustment of signal timings in response to any unusual conditions. The Council is also investigating provision of Variable Message Signs (VMS) at strategic points along the A646. The nature of this route means that it is highly susceptible to disruption due to bad weather or traffic incidents. VMS will advise drivers of any problems and enable them to adjust their routes accordingly.

Calderdale Bus Partnership Action Plan and the Calderdale Performance Improvement Partnership Agreement prioritise the A629 Huddersfield Road bus corridor for bus priorities and refreshment / enhancement of bus stop infrastructure during 2009/10 and 2010/11. The Council has commissioned complementary studies to investigate potential improvements to the major Calder and Hebble junction and, in partnership with Metro, to other identified congestion hot-spots between Halifax town centre and the Kirklees boundary at Ainley Top.

Delivery of the Halifax Traffic Model in summer 2008 has prompted commissioning of a further study into traffic flows and priorities within and around Halifax Town Centre and this may lead to future proposals that may influence traffic flows along the congestion corridors. Monitoring of traffic flows along the A646 corridor for the Congestion Delivery Plan has also identified a number of pinch-points where traffic delays frequently occur. A minor study into bus stop facilities, waiting restrictions and pedestrian access at Luddenden Foot is programmed for Spring 2010, to be funded through the Congestion Performance Fund.

6.4.2 Calderdale routes

Table 6.6 A629 Huddersfield Road, Halifax

WY04	A629 Huddersfield Road: Calder and Hebble junction – Ward's End junction	
Context	Recognised issues	
<p>The main radial route between Huddersfield, the M62 and Halifax town centre. It also carries a significant proportion of through traffic travelling to north Halifax and beyond.</p> <p>The section commences at the end of the Elland By-pass – a dual carriageway running from the M62 at Ainley Top. This merges into a 3-lane single-carriageway at its junction with the A6026 and B6112 before climbing steeply (2 lanes inbound) to signal-controlled junctions with access to the main district hospital. The route continues on the level into Halifax with mixed residential, commercial and recreational frontages and an inbound bus lane to Wards End.</p>	<p>Public transport</p> <ul style="list-style-type: none"> • High frequency bus corridor – most bus stops in main carriageway with impact on traffic flows. <p>General</p> <ul style="list-style-type: none"> • Air Quality Management Area (NO2) – A629 and adjacent streets from the bottom of Salterhebble Hill to Spring Hall. • Traffic flows significantly influenced by HGV and PCV traffic on Salterhebble Hill. • Significant queues along Elland By-pass before merger into single carriageway and start of monitored section. 	

ENABLING ACTIONS AND DELIVERY LEVERS

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	Calderdale Air Quality Action Plan (AQMA No.1 Salterhebble Hill) Package of measures to influence traffic volumes, speeds and flows.	Overall cost not quantified – subject to feasibility studies of individual measures	Potential conflict with economic regeneration objectives. Potential opposition to identified measures – politicians, developers, transport operators, local residents, general public.	Halifax Traffic Model to test interventions. Fully involve CMBC Regeneration in plan development. Establish sound argument for need to develop/deliver plan; encourage active participation by all stakeholders – Air Quality Partnership. Consider national initiatives and statutory measures.	Improve traffic flows along the A629 corridor.	✓✓	Adopted March 2009. Up to £135k capital programmed (2009/10)	Yes: Further development subject to resources.
	Salterhebble AQMA bus Lay-by (AQAP Action S1)	£60k estimate	Subject to land covenant issues.	Develop alternative design options.	Remove standing vehicles from carriageway and improve traffic flows.	✓✓	09/10: £25k (Congestion Fund) Programmed - design brief issued for delivery 2010/11.	Yes
2	CCTV / Real-time Traffic Control and VMS CCTV coverage and real-time control of all major junctions along A629 and A646 congestion corridors.	£195k estimate	Annual revenue cost implications of day-to-day operations. VMS subject to bid for additional funding (Congestion Fund)	Adjustment of revenue budgets between Council directorates. Bid for additional funding.	Improved management of unusual traffic conditions	✓	09/10: £100k (Congestion Fund) Programmed – design brief issued for delivery March 2010	No. Final delivery slipped to Summer 2010 (subject to revenue implications being addressed)

ENABLING ACTIONS AND DELIVERY LEVERS

3	Calder and Hebble Junction Study Study into traffic flows through the junction and potential improvements to layout / operation with particular regard to public transport priority.	£10.5k	Delivery subject to feasibility – restricted site, potential barriers due to geography and available finance.	Develop robust business case. Bid for additional funding.	Improve public transport journey times and punctuality.	✓	Study complete. Awaiting outcome of A629 bus corridor study.	Yes: Subject to feasibility
4	Halifax Town Centre Study Study to investigate and prioritise pedestrian and traffic movements around the town centre.	£20k	Recommendations may not address aims of Congestion Delivery Plan. Potential opposition to identified measures –political / local business / residents / general public.	Halifax Traffic Model to test interventions. Establish sound argument for need to develop/deliver recommendations - encourage active participation by all stakeholders.	Improve traffic flows around the town centre and thus reduce delays at town centre gateway on the A629 corridor.	✓	May 2009: study brief issued	Yes: Subject to feasibility
Demand management								
5	Bus Partnership initiative AVL Prioritisation at traffic signals and crossings.	£40k	COMPLETED	Monitor impact	Improve punctuality of bus services	✓	June 2009	COMPLETED
	A629 Huddersfield Road bus corridor study. Development of package of bus priority measures between Ainley Top and Halifax.	£25k	Delivery subject to feasibility – restricted sites, potential barriers due to geography and available finance.	Develop robust business case. Bid for additional funding.	Increase bus mode share on corridor through punctuality improvements	✓	October 2009: study brief issued. In progress.	Yes: Subject to feasibility
	A629 Huddersfield Road bus corridor refresh	£25k (CMBC) plus additional Metro (not quantified)	Staff resources	Ensure robust programme management in place	Increase bus mode share on corridor through quality improvements.	✓	May 2009: design brief issued. In progress.	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

	Bus service improvements, including introduction of modern low-floor vehicles, punctuality and information initiatives.	Not quantified - Operator & Metro.	Private investment subject to market conditions	Continued dialogue through Bus Partnership Group.	Increase bus mode share on corridor through quality and reliability improvements	✓	Provisional – limited progress	No
6	Walking and cycling Calder Valley Cycleway surfacing improvements, link to Hebble Trail and extension to Cooper Bridge - provide alternative off-road strategic route into Halifax town centre.	£110k (2008/09) £330k (2009/10)	Tensions between cycle use and other users of canal corridor. Access agreements and land negotiations required. Environmental issues. British Waterways regional policy differences.	License agreements with British Waterways. Consultation with user groups. Negotiate with landowners. Identify alternative route options. Liaise with British Waterways Ecology officers and CMBC Countryside & Forestry.	Increase walking and cycling mode-share for short-/mid-distance commute.	✓	2008/09: £110 Copley – Calder & Hebble Basin complete. 2009/10 - £80k Calder & Hebble to Woodhouse Mill complete; Woodhouse Mill – Brighouse and Sowerby Bridge – Luddenden Foot programmed – design brief issued.	Calder & Hebble Navigation (BWB Leeds) – Yes. Rochdale Canal (BWB North West) – No.
7	Healthy Halifax 'Walk It': community-based promotion of walking into Halifax town centre as an alternative to the car; development of high quality pedestrian routes.	£94k (2009/10 – 2010/11) revenue plus capital match from LTP (not quantified)	Lack of 'buy-in' by local communities. Limited staff resources.	Appoint project co-ordinator. Work closely with Park and Ovenden / Mixenden community management initiatives.	Increase walking mode-share for shorter commute.	✓	Revenue secured through successful bid to 'Healthy Halifax'. Up to 75 capital programmed (09/10)	Yes
Travel choices and behaviour								
9	Workplace Travel Plans Calderdale Royal Hospital	Hospital Trust ongoing revenue commitment	Lack of 'buy-in' by staff. Lack of commitment from management.	CMBC / Metro / WYTWP officer support through Hospital Travel Steering Group.	Reduce car commute mode share by provision and promotion of alternatives.	✓✓	Development of 'Green Travel Strategy' endorsed October 2002 – ongoing development.	No

ENABLING ACTIONS AND DELIVERY LEVERS

Calderdale Council	£100k ongoing District-wide revenue commitment over 5 years.	Lack of 'buy-in' by staff. Lack of commitment from management.	Staff resource to develop, promote and monitor travel schemes and flexible / home working policies.	Reduce car commute mode share by provision and promotion of alternatives.	✓	July 2005 adopted – ongoing.	Yes
HBOS plc – Copley Travel Plan and Group Green Travel Initiative	HBOS ongoing revenue commitment	Lack of 'buy-in' by staff. Lack of commitment from management.	Staff resource to develop, promote and monitor travel schemes and flexible / home working policies.	Reduce car commute mode share by provision and promotion of alternatives.	✓	Copley Travel Plan - adopted 1999, updated 2004.	Yes
West Yorkshire Travel for Work Partnership (WYTWP) – promotion of Workplace Travel Plans in Calderdale.	£175k – Yorkshire Forward district-wide commitment over 3 years	Lack of interest or resources amongst local employers. Perceived lack of alternatives to the car for travel to work.	Dedicated officer – consultation and promotion. Enforce planning obligations where applicable.	Reduce car commute mode share by provision and promotion of alternatives.	✓	3-year programme – April 2007 to March 2010	Yes

Goals

A projected increase of 3% in throughput resulting in a maximum 5% increase in journey times by 2011.

Table 6.7 A646 Burnley Road, Halifax

WY05 A646 Burnley Road : Mytholmroyd New Road junction – King Cross junction							
Context			Recognised issues				
<p>Part of the A646 trans-Pennine route linking Halifax with the Upper Calder Valley and Lancashire/Greater Manchester. This section commences at Mytholmroyd and is essentially a single carriageway rural route until the outskirts of Halifax where there is an inbound bus lane on the approach to King Cross.</p> <p>It forms a low-level alternative to the M62 in times of bad weather.</p> <p>Restrictive geography dictates very little scope for highway improvements and there are major pinch-points where the route passes through valley settlements at Mytholmroyd, Luddendenfoot and Friendly.</p>			<p>Public transport</p> <ul style="list-style-type: none"> High frequency bus corridor – most stops in main carriageway with impact on traffic flows <p>General</p> <ul style="list-style-type: none"> Restrictive route geography – traffic flows significantly influenced by HGV and PCV traffic, highway works and bad weather Air Quality Management Area (NO2) declared in Sowerby Bridge, close to route. Package of measures to be developed may influence traffic flows on corridor 				
Interventions	Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure							
1	<p>Luddenden Foot highway and access improvements.</p> <p>Review of bus stop siting, waiting restrictions and pedestrian crossing facilities.</p>	<p>£20k (original estimate). Scheme now expanded to investigate broader issues.</p>	<p>Limited staff resources.</p>	<p>Ensure robust programme management in place</p>	<p>Improved traffic flows. Improved access to public transport facilities.</p>	<p>✓</p> <p>2009/10 £20k (Congestion Fund) Programmed.</p>	<p>No: Delayed due to staff resources.</p>

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2	CCTV / Real-time Traffic Control and VMS CCTV coverage and real-time control of all major junctions along A629 and A646 congestion corridors. Provision of VMS at strategic points along the A646.	£195k estimate	Annual revenue cost implications of day-to-day operations. VMS subject to bid for additional funding (Congestion Fund)	Adjustment of revenue budgets between Council directorates. Bid for additional funding.	Improved management of unusual traffic conditions	✓	09/10: £100k (Congestion Fund) Programmed – design brief issued for delivery March 2010	No. Final delivery slipped to Summer 2010 (subject to revenue implications being addressed)
Demand management								
3	Bus Partnership / Performance Improvement Partnership Bus stop clearways; improvements to passenger access and waiting facilities.	£215k	Design and implementation ongoing.	Promote facilities. Investigate additional bus priority opportunities.	Encourage mode shift from car to bus for travel along the corridor.	✓	2007/08 £133k 2008/09 £117k 2009/10 £25K capital programmed.	No: A number of sites delayed due to specific issues – completion end 2009/10.
	Minor bus priority measures. Bus service improvements, including introduction of modern low-floor vehicles, punctuality and information initiatives.	Not quantified - CMBC, Operator and Metro	Priority measures subject to feasibility studies Private investment subject to market conditions	Continued dialogue through Bus Partnership Group.	Increase bus mode share on corridor through quality and reliability improvements.	✓	Provisional – limited progress	No
4	Caldervale Rail Line Rail service enhancement / increased capacity.	Not quantified – Operator	Ongoing service development	Promote and monitor.	Increase rail mode share. Reduce longer distance car commute.	✓	December 2007: peak hour trains strengthened December 2008: additional Leeds – Manchester and accelerated services	Yes

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5	Walking and cycling initiatives Calder Valley Cycleway spur extensions at Brearley and Mytholmroyd - Safer Route to Calder High School.	£70k (2010/11)	Lack of school resources to promote new cycle route.	Support from CMBC School Travel Plan Officer and Cycling Officer.	Increase cycling mode share for travel to Calder High School. Reduce congestion around school site.	✓	Provisional subject to negotiations with British Waterways.	No
	Calder Valley Cycleway surfacing improvements, link to Hebble Trail and extension to Cooper Bridge - provide alternative off-road strategic route into Halifax town centre.	£110k (2008/09) £330k (2009/10)	Tensions between cycle use and other users of canal corridor. Access agreements and land negotiations required. Environmental issues. British Waterways regional policy differences.	License agreements with British Waterways. Consultation with user groups. Negotiate with landowners. Identify alternative route options. Liaise with British Waterways Ecology officers and CMBC Countryside & Forestry.	Increase walking and cycling mode-share for short-/mid-distance commute.	✓	2008/09: £110k Copley – Calder & Hebble Basin complete. 2009/10 £80k Calder & Hebble to Woodhouse Mill complete; Woodhouse Mill – Brighouse and Sowerby Bridge – Luddenden Foot programmed – design brief issued.	Calder & Hebble Navigation (BWB Leeds) – Yes. Rochdale Canal (BWB North West) – No.
Travel choices and behaviour								
7	School Travel Plans Calder High and Sowerby Bridge High School STP's.	Officer support.	Lack of school resources to implement Travel Plan measures. Parental perceptions.	Support from CMBC School Travel Plan Officer and Cycling Officer.	Reduce car mode share for journeys to school. Reduce congestion around school site.	✓✓	March 2004: adopted – ongoing.	Yes
	Luddendenfoot J & I School STP Includes 'park-and-stride' scheme to remove parking from main road.	Officer support	Lack of school resources to implement Travel Plan measures. Parental perceptions.	Support from CMBC School Travel Plan Officer.	Reduce car mode share for journeys to school. Reduce congestion around school	✓	March 2009: adopted. Development of measures from start of 2009/10 school year.	Yes

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			Recruitment / retention of school crossing patrol		site.			
8	Workplace Travel Plans Calderdale Council	£100k ongoing District-wide revenue commitment over 5 yrs.	Lack of 'buy-in' by staff. Lack of commitment from management.	Staff resource to develop, promote and monitor travel schemes and flexible / home working policies.	Reduce car commute mode share by provision and promotion of alternatives.	✓	July 2005: adopted – ongoing.	Yes
	HBOS plc – Copley Travel Plan and Group Green Travel Initiative	HBOS ongoing revenue commitment	Lack of 'buy-in' by staff.	Staff resource to develop, promote and monitor travel schemes and flexible / home working policies.	Reduce car commute mode share by provision and promotion of alternatives.	✓	Copley Travel Plan - adopted 1999, updated 2004.	Yes
	West Yorkshire Travel for Work Partnership (WYTWP) – promotion of Workplace Travel Plans in Calderdale.	£175k – Yorkshire Forward county-wide commitment over 3 years	Lack of interest or resources amongst local employers. Perceived lack of alternatives to the car for travel to work.	Dedicated officer – consultation and promotion. Enforce planning obligations where applicable.	Reduce car commute mode share by provision and promotion of alternatives.	✓	3-year programme – April 2007 to March 2010	Yes

Goals

A projected increase of 3% in throughput resulting in a maximum 5% increase in journey times by 2011.

6.5 Kirklees

6.5.1 *Proposals affecting Kirklees routes*

Economic regeneration and growth

The key focus for regeneration affecting one of the two identified Congestion Corridors in Kirklees is the Kirklees Strategic Economic Zone (KSEZ) focusing around the A62 Leeds Road Corridor between Huddersfield Ring Road and the River Calder at Cooper Bridge. The KSEZ is identified as one of the key areas that can help achieve economic regeneration within Kirklees, in line with the Regional Economic Strategy.

As part of Round 2 of the Regional Funding Allocation (RFA) process, a Regional Transport Board funding submission to the Yorkshire and Humber Regional Assembly was produced in October 2008 for a transport scheme supporting the KSEZ initiative. The proposal has been identified as one of a reserve list of schemes to take up any funding available in the future.

The KSEZ forms a significant portion of the estimated 180 hectares of land within the urban area, with expectations that half of this amount will be developed over the next ten years, either by new businesses moving into the area or existing businesses in search of new premises relocating to the area to improve their operations and competitiveness, potentially creating around 4,000 jobs. The various sites are mainly existing industrial sites which can be redeveloped, for employment uses, or sites allocated in the Unitary Development Plan (UDP). The profile of the land is in the main flat and is suitable for the development of large foot print buildings, suitable for 21st century industry and business, thus alleviating the need to develop less preferable Greenfield sites.

Kirklees Council's aim is to work with partners to create one of the most significant and sustainable concentrations of employment-related activity within West Yorkshire.

The KSEZ is situated within a Regional Priority Area (as designated by the Regional Spatial Strategy), while the whole A62 Corridor has also been identified by the Leeds City Region as an area where transport infrastructure improvements are needed in order to meet the anticipated travel needs of the city region and improve links between the key regional city (Leeds) and a designated sub regional town (Huddersfield).

The KSEZ Scheme would include a combination of the following transport infrastructure improvements:

- Bus Lanes
- High Occupancy Vehicle (HOV) Lanes
- Junction Improvements
- Demand Management Measures
- Urban Traffic Control
- Non-Motorised User (NMU) Improvements

The KSEZ is identified within Part 3 of the West Yorkshire LTP2 as one of seven major transport schemes to be progressed during the LTP2 plan period (2006 – 2011).

Employment

The bulk of the employment growth associated with the Huddersfield area is located around the A62 corridor.

In addition to the development sites identified in the KSEZ, a number of other development opportunities have been identified close to or within Huddersfield town centre. These include retail opportunities as well as office, residential and leisure proposals. These will have

implications for the attractiveness of the town centre as a whole and the way the highway network operates locally.

Within and close to Huddersfield town centre, there are a large number of committed developments with the potential to provide 760 new homes and in excess of 1000 jobs. The effect of the current economic downturn means that these committed developments may not now be fulfilled within their original timeframes although this remains to be seen.

Housing

In 2007, forecast increases in town centre living in Huddersfield were for some 760 residents within the following five years. However, the uncertainty for developers, estate agents, mortgage lenders and potential house buyers created by the current economic downturn may have an impact on this.

Bus

Mode share information shows that the number of bus passengers travelling into Huddersfield town centre on the key radials has increased since 1998. In particular, between 2004 and 2008, there has been a 3.8% increase in mode share.

Significant steps have been taken to upgrade facilities for bus passengers along core corridors within the Kirklees District,, such as the provision of easy access kerbs, new shelters and real time information displays at bus stops.

A 5 year programme is being pursued to further improve facilities at bus stops and bus priority measures which would have the potential to further increase the mode share of bus travel by 2010/11.

As part of the KSEZ, bus lanes are in development at a number of locations:

1. Outbound between Deighton Road and Oak Road. Construction on this scheme is due to start in March 2010
2. Inbound and outbound between Old Fieldhouse Lane and Whitacre Street

Comprehensive implementation of SCOOT Urban Traffic Control is also proposed to improve the flow of general traffic on the A62 and A629 and reduce delay. SCOOT also offers the potential to implement intelligent bus priority, via the triggering of signalling equipment located at junctions to offer greater priority to buses.

On the A629, three bus lanes are in development. However there remain a number of issues to overcome before implementation, not least those surrounding highway safety and public and political acceptance.

Smarter Choices/ Softer Measures

Significant progress has been made in this area. Comprehensive marketing and promotion of Huddersfield Car Share has been undertaken and the Huddersfield Car Club has been extended to include an extra car, taking the number available from 7 to 8.

Demand management

In January 2008, the Council resolved unanimously to embrace all aspects of demand management, which underpins a whole variety of transportation initiatives for Kirklees including the KSEZ proposal.

As a result of this, a Travel Plan Co-ordinator for the KSEZ Area and other major projects (e.g. Mirfield 25, Galpharm) has been appointed. Parallel to this has been the development of Travel Plan Guidance. Collectively, these have permitted better liaison with the Highways Agency on a number of demand management issues.

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Long-stay parking charges at public car parks in the town centre have largely remained static for the last two years of LTP1. In line with current policy these were increased by 42% to £4.00 per day in February 2007.

Investigation of park and ride facilities, car sharing and other such initiatives is now underway. These will feed into the Corridor action Plan process identified below. To complement this, and to help support negotiation with developers and other key partners the Council is now developing and rolling out its own program of sustainable travel initiatives in a bid to adjust staff travel behaviours. This is underpinned by the Corporate Travel Plan initiative. This will be a significant contribution to travel patterns into the main centres as the Council currently employs 17,000 staff.

Understanding Congestion and Delay

Greater use of available journey time data through CJAMS is being used to build up a better picture of congestion on a wide variety of routes within Kirklees.

To complement this, Kirklees are rolling out Corridor Action Plans (CAP), which seek to identify future network issues, using models, and develop solutions. The first 4 CAPs will be completed by March 2010 and will include the A62 Leeds Road and the A629 Wakefield Road.

Updated Trajectories and Plans

The graphs showing trajectories for both passenger throughput and passenger journey time have been split so the top graph shows factors that influence person miles along the corridor. As far as the A62 is concerned, the impact milestones relating to development traffic remain. With respect to the A629 and using this approach, the trajectory is now incorrectly labelled, insofar as the impact milestones are scheme, not development related (as per the A62).

Thus the original milestones on the A629 throughput trajectory have been removed and replaced with more appropriate milestones. Unlike the A62 and KSEZ, there is, in this case no specific development traffic programmed. Thus the milestones are generic and they seek to explain the general upward trend in the estimated throughput trajectory:

1. Development pressures associated with Huddersfield town centre; and
2. The rise in commuting to Leeds (reflecting its growing importance as a regional and national city) from the South Kirklees area and the subsequent use of Huddersfield Station as a rail head for onward commuting.

The measures put in place or proposed to mitigate the afore-(re)defined impact milestones for both corridors are detailed in the Person Journey Time trajectory graphs. These measures include both specific proposals from the Urban Congestion Delivery Fund and from Kirklees Council's own Highways Capital Plan.

With respect to the A62, the impact-related development-milestones have been removed because they are mirrored in the throughput trajectory graph. As a result of an increase in the resources committed to looking at the A62 (primarily due to LTP 2 uplift monies from the RFA under spend, but also as part of further work undertaken through the Council's Highways Capital Plan, a significantly more detailed programme of schemes along this corridor has been developed. This is reflected both on the graphs and in the intervention tables below.

As far as the A629 is concerned, an increase in resources from the Council's Highways Capital Plan has led to a more detailed programme of schemes developed along this corridor. In one instance one scheme has already been delivered; a signal upgrade to include the introduction of MOVA at Dalton Green junction. Similarly to the A62, this programme is reflected both on the graphs and in the intervention tables on the following pages.

Both the A62 and the A629 now have dedicated route managers who oversee not only the implementation of the programme of works, but also use the available congestion data to test

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and assess each potential scheme's impact on the Person Journey Time Indicator. This will also involve an element of after scheme monitoring. This route-led approach will allow a more comprehensive implementation of a range of measures, both scheme and smarter-choice to achieve the best possible impact on the person journey time indicator.

6.5.2 Kirklees routes

Table 6.8 A629 Wakefield Road, Huddersfield

WY06		A629 Wakefield Road Huddersfield	
Context	Recognised issues		
<p>The A629 connects the Barnsley and Sheffield areas with Huddersfield Town Centre. The measured part concentrates itself on the urban section through Waterloo to the Ring Road in Huddersfield and also collects traffic from the Wakefield area via the A642.</p> <p>The route contains a mix of land uses with residential, commercial and retail uses having direct access onto the route.</p>	Public transport		
	<ul style="list-style-type: none"> • Link between Huddersfield, South Kirklees and Wakefield area. • Bus priority is already in place on some links 		
	General		
	<ul style="list-style-type: none"> • Queuing traffic is experienced at all the key junctions along its length in both peaks. • Many junctions at capacity • Typical weekday 2 way AM Peak Hour (08:00 – 09:00) Flow on A629 east of Somerset Road (2007): 3970 vehicles • Typical weekday 2 way PM Peak Hour (17:00 – 18:00) Flow on A629 east of Somerset Road (2007): 3770 vehicles 		
Development Potential			
<p>Although there are some outlying residential developments to take into account the development potential for most of this corridor is limited. However an important consideration is the fact that this is a key route into the town centre. Consequently the significant development pressures associated with Huddersfield town centre itself will impact on the volume of traffic using this route.</p>			

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	<p>Kirklees Council has an aspiration to create a showcase congestion tackling route on Wakefield Road between Waterloo and Shorehead roundabout.</p> <p>Capital allocations are already committed to this project using a mixture of LTP funds, developer contributions and Congestion Delivery Plan funding. This offers the opportunity to build on these commitments and to add positive bus priority value to the showcase route. The rows below describe the showcase route elements:</p>	£445k (initial estimate)	This is the overall programme, the elements of which are detailed below	N/A	More efficient junction operation potentially decreasing journey time on sections of the link.	✓	Ongoing	Yes
a	<p>A629 Wakefield Road Bus Lanes – Congestion Initiative</p> <p>Development Fees for Wakefield Road</p> <p>Three bus lanes between Southfield Road and Huddersfield Ring Road.</p>	£20k	Simulation shows schemes will provide significant benefits to public transport but there are issues to resolve around highway safety and public acceptance.	Project Manager and Engineer allocated to this scheme	Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓	<p>New intervention</p> <p>Ongoing</p> <p>Designs Complete by March 2010</p> <p>Schemes on site-subject to detailed design, public consultation and political approval, by March 2011</p>	Yes
b	<p>A629 Wakefield Road ITS</p> <p>Renewal of the junction at Dalton Green Lane and inclusion of SCOOT and MOVA infrastructure</p>	£80k	COMPLETED		Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓	Implemented August 2009	COMPLETED

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c	A629 Wakefield Road SCOOT including ACIS traffic signal priority on all junctions	£20k	Programmed for delivery 2010		Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓	SCOOT implemented by December. 2010 ACIS implemented by March 2011- programme dependant on West Yorkshire Traffic Signal Priority	Yes
d	Huddersfield Public Transport Journey Time Initiative Package of measures to reduce bus journey time between Wakefield & Huddersfield Bus Station Study details all Council (Capital) Funded schemes- not just UCDF schemes.	£60k study Total scheme costs £2.6 million see note adjacent	Staff resources and political acceptance	Allocated project manager for the route	Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓✓	Ongoing Study Finished by March 2010. Schemes implemented by March 2012	Yes although there are a number of issues that could quite easily bring this to an early standstill such as funding and political approval
Demand Management								
2	Increase Parking Charges Increase parking charges in Huddersfield Town Centre to stimulate modal shift. Long stay charges already increased from £2.80 to £4.00 in first year of LTP2	£15k including staff time and signage changes	COMPLETED	Early increase is a positive start to policy. Further increases will require better publicity to secure public support. Use of maximum car parking standards for future new development and investigation of better charging/management regimes to be secured through the planning process	Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓✓	Implemented by March 2008.	COMPLETED

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Travel choices and behaviour								
3	<p>Travel Plan Co-ordinator</p> <p>Assistance for employers undertaking new or refreshing existing Employee/Site Travel plans at sites on corridor.</p> <p>A Travel Plan Co-ordinator for major projects has been appointed. Parallel to this has been the development of Travel Plan Guidance. Collectively, these have permitted better liaison on a number of demand management issues.</p>	£60,000	<p>Slow take up by existing traffic generating sites.</p> <p>Poor implementation of travel plan initiatives and resistance to enforcement and adequate buy from businesses.</p> <p>Ongoing funding of position an issue.</p>	<p>Kirklees Council now has a specific resource allocated to this.</p> <p>Additional resources through West Yorkshire Travel for Work Partnership to market and promote benefits of travel planning as well as targeting new sites.</p> <p>Use of planning enforcement process to ensure proper implementation.</p>	<p>Promotes modal shift to bus and other non car modes with potential benefits to journey times.</p>	✓	<p>Ongoing</p> <p>Resource allocation started June 2008 extended to April 2010</p> <p>Looking for other funding sources to extend the resourcing.</p>	Yes
4	<p>A629 Wakefield Road Smarter Choices</p> <p>Promotion of a number of smarter choice alternatives through marketing and possible Personalised Journey Planning</p>	£35k	<p>Take up by the public</p>	<p>Allocated project manager for the route.</p> <p>Initiative resources allocated.</p>	<p>Promotes modal shift to bus and other non car modes with potential benefits to journey times.</p>	✓	<p>Ongoing</p> <p>Concepts finalised by March 2010.</p> <p>Initiatives rolled out by March 2011.</p>	Yes
Goals								
Relieve queuing traffic and improve journey times.								

Table 6.9 A62 Leeds Road, Huddersfield

WY07 A62 Leeds Road Huddersfield	
Context	Recognised issues
<p>This route connects Cooper Bridge with the centre of Huddersfield along the main A62. This is the key route between central Huddersfield, North Kirklees and the M62 junction 25.</p> <p>The route is characterised by a mix of commercial and residential uses including large sites dedicated to heavy industry many of which are in decline and ready for redevelopment.</p> <p>Residential properties front directly onto the A62 along many sections.</p>	<p>Public transport</p> <ul style="list-style-type: none"> • Key link between North Kirklees and Huddersfield. • Six bus routes operate along the full length of the A62 Leeds Road on weekdays providing frequent peak services between Huddersfield, the Heavy Woollen Area and the Leeds District • Potential for bus priority in some locations (e.g. HOV Lanes between Cooper Bridge and Bradley Road (towards Huddersfield) and between Trident Bus Park and Bradley Road (towards Cooper Bridge))
	<p>General</p> <ul style="list-style-type: none"> • There are no alternative local routes between North Kirklees and Huddersfield. • Queuing traffic is experienced at all the key junctions along its length in both peaks • Typical weekday 2 way AM Peak Hour (08:00 – 09:00) Flow on A62 near St. Andrews Road (2007): 1630 vehicles • Typical weekday 2 way PM Peak Hour (17:00 – 18:00) Flow on A62 near St. Andrews Road (2007): 1670 vehicles • 7% of traffic is HGVs with 84% of cars being single occupancy • Air Quality is constantly monitored along the length of the corridor, with an AQMA designated in December 2008 situated between Bradley Road and Cooper Bridge (northern section of corridor) • Air Quality Action Plan in development

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		Development Potential						
		The development potential along this route is the greatest in Kirklees. To date approximately 90 hectares of land has been identified on the corridor itself with further development potential outside the corridor and other land coming forward within it particularly at the southern end closest to Huddersfield. It is likely that general development in Huddersfield Town Centre will have an impact over the next 10 years.						
Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Responsibility	Approval
Use of existing highway infrastructure								
1	A62 Leeds Road Bus Lanes – Congestion Initiative Major scheme business case preparation, includes elements set out below: 1a- Major Scheme funding 1b and 1c- LTP Uplift funding	£1.1m	Subject to DfT programme entry.	Secure developer contributions from planned development. Supplementary Planning Document allowing collection of developer contributions approved. Council contributions to capital cost. Explore other funding avenues including Yorkshire Forward and Major scheme route Supplementary Planning Document within LDF process. Use of CPO powers.	Measures combine to improve journey times along route corridor and mitigate effects of additional traffic brought about by new development. Inclusion of extensive bus lanes improves journey times and encourages use of public transport. HOV lanes encourage car sharing and would also improve journey times.	✓✓✓	Kirklees Programme Manager	Needs DfT programme entry. MSBC Complete Dec 2011.
1a	Enlarged gyratory at Cooper Bridge / Three Nuns including bus / HOV lanes, a major railway bridge widening and improvements to Bradley Road Junction	£40m	Acceptance for RFA2 Funding	Consultant appointed and dedicated MSBC project manager	As above	✓✓✓	Ultimately the DfT	Assuming DfT programme entry Construction Complete June 2014

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1b	A62 Leeds Road Bus Lanes – Congestion Initiative Road widening to accommodate an outbound bus lane between Deighton Road and Oak Road on the A62.	£1.2m	Construction due to commence March 2010 and be complete by December 2010	Dedicated KSEZ Delivery Manager	Promotes modal shift to bus and other non car modes with potential benefits to journey times.	✓✓	Project and Design Engineer	Yes
1c	A62 Leeds Road Bus Lanes- Congestion Initiative Road widening to accommodate inbound and outbound bus lanes (on alternative stretches) between Whitacre Street and Red Doles Lane.	£2.4m	Political and Public Acceptance	Clr and public Involvement at an early stage	Promotes modal shift to bus and other non car modes with potential benefits to journey times.	✓✓	Cabinet Approval to consult June 2009. Cabinet approval to construct Jan 2009. Construction due for completion June 2011	Yes
2	A62 Leeds Road Sustainable Modes Improvements Improved crossings and links into residential areas for pedestrians and cyclists. Cycle facilities exist for the entire length of the corridor with links to Mirfield, Huddersfield and Bradley.	£150k	COMPLETED	Better promotion and marketing of opportunities particularly with new businesses. This should link to travel plan initiatives shown below.	Shift to non car modes benefiting overall journey times.	✓	Implemented March 2009	COMPLETED
3	A62 Leeds Road SCOOT including ACIS traffic signal priority on all junctions	£20k	Programmed for delivery 2010		Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓	SCOOT implemented by December. 2010 ACIS implemented by March 2011- programme dependant on West Yorkshire Traffic Signal Priority	Yes
Demand management								
4	An innovative Air Quality Management Strategy.	£250k, inc. staff time for policy development)	AQMA designation means that this now has higher priority		Shift to non car modes benefiting overall journey times.	✓✓	Policy Development March 2010 Implementation March 2015	Yes

ENABLING ACTIONS AND DELIVERY LEVERS

5	Increase parking charges in Huddersfield Town Centre to stimulate modal shift. Long stay charges already increased from £2.80 to £4.00 in first year of LTP2	(15k) see point 2 from A629	COMPLETED	<p>Early increase is a positive start to policy. Further increases will require better publicity to secure public support.</p> <p>Use of maximum car parking standards for future new development and investigation of better charging/management regimes to be secured through the planning process</p>	Promotes modal shift to bus and other non car modes with potential benefits to journey times	✓✓	Implemented by March 2008	COMPLETED
Travel choices and behaviour								
6	<p>Travel Planning Support</p> <p>Assistance for employers undertaking new or refreshing existing Employee/Site Travel plans at sites on corridor.</p> <p>A Travel Plan Co-ordinator for major projects has been appointed. Parallel to this has been the development of Travel Plan Guidance. Collectively, these have permitted better liaison on a number of demand management issues.</p>	£60,000	<p>Slow take up by existing traffic generating sites.</p> <p>Poor implementation of travel plan initiatives and resistance to enforcement and adequate buy from businesses</p> <p>Ongoing funding of position an issue</p>	<p>Kirklees Council now has a specific resource allocated to this</p> <p>Additional resources through West Yorkshire Travel for Work Partnership to market and promote benefits of travel planning as well as targeting new sites.</p> <p>Use of planning enforcement process to ensure proper implementation.</p>	Promotes modal shift to bus and other non car modes with potential benefits to journey times.	✓	<p>Ongoing</p> <p>Resource allocation started June 2008 extended to April 2010</p> <p>Looking for other funding sources to extend the resourcing.</p>	<p>Travel Planning Support</p> <p>Assistance for employers undertaking new or refreshing existing Employee/Site Travel plans at sites on corridor.</p> <p>A Travel Plan Co-ordinator for major projects has been appointed. Parallel to this has been the development of Travel Plan Guidance.</p>

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								Collectively, these have permitted better liaison on a number of demand management issues.
7	Huddersfield Car Club Extend Town Centre Car club to non Council employees	£27k	Slow Take up		Promotes sustainable travel and reduces the number of cars on the highway and thus congestion	✓	Car Club implemented May 2009. Initiative ongoing. Proposal to monitor use/take up every 6 months	Yes
8	Car Share Marketing & promotion	£10k	Slow Take up		Promotes sustainable travel and reduces the number of cars on the highway and thus congestion	✓	Marketing implemented April 2008. Initiative ongoing. Proposal to monitor use/take up every 6 months	Yes
Goals								
Manage additional traffic brought about by development pressures								

A62 Manchester Road, Huddersfield This corridor was originally intended to be included in the target but it was decided not to progress with it, partially because data was not available in time for setting the target.

6.6 Leeds

6.6.1 *Proposals affecting Leeds routes*

Economic regeneration and growth

The Gross Added Value (GVA) in Leeds is expected to increase to £18.1bn by 2016 and economic development in the City centre continues, although the current economic recession may start to impact in the coming year.

Employment

The forecast growth in employment between 2006 and 2011 for Leeds is +13,200 jobs (Source: Cambridge Econometrics). The greatest increases are expected to be in both full and part-time female staff. The overall increase is similar to that for Bradford (+12,400 jobs) but is significantly lower than that which occurred between 1991 and 2001 (+51,000 jobs). These forecasts may be subject to revision given the current economic climate.

Housing

The forecast increases in City Centre living in Leeds are significant with some 2,900 additional units currently under construction and a further 4,500 with planning permission. There are, however, anecdotal signs that this sector of the housing market in Leeds is approaching a saturation point.

The A64 York Road corridor passes through the heart the East and South East Leeds (EASEL) regeneration initiative. This comprehensive initiative which is a Leeds City Council joint venture is targeted at major housing renewal and economic regeneration over the next 15 to 25 years. A planning framework for the area is presently being prepared which includes three options: minor intervention; moderate intervention; and transformational change

The minor option envisages re-developing 63 hectares of land for either residential or mixed use. This land will be "created" from the demolition/clearance of existing housing stock; the conversion of two high school sites for other purposes and released land adjacent to Seacroft Hospital. For housing, 48 hectares of new housing is planned, which could accommodate approximately 1,920 homes. The remaining 15 hectares is designated as mixed use (housing, employment and local facilities).

Some of the new homes mentioned above will replace existing housing stock. There are, however, two large sites of committed housing, in Osmondthorpe and to the south of Seacroft hospital. The Seacroft hospital site is 17.5 hectares and is to the south of the start of the York Road route and would have access onto the route.

To the north west of the city there is a major housing development involving the conversion of the site of the former High Royds mental hospital into a residential village. This village is approximately 5 miles before the start of the Kirkstall Road route and is just over half a mile away from an exiting railway station.

In the west of the city and on the Kirkstall Road route there are plans to re-develop the Kirkstall Forge site from industrial to mixed residential, office and leisure uses. The plans include new homes, office space and a park and ride site for 150 car. A 10 year development programme is anticipated with development likely to start in 2010 to coincide with the introduction of a new rail halt at the site in 2012.

Commercial developments

To the west of the city centre and on the Kirkstall Road route there are a number of locations covering 7.4 hectares which have been earmarked for redevelopment. These existing sites include a dairy, a bus garage and a chemical works. At the present moment only the chemicals site has any firm proposals attached to it – mixed use with a substantial residential

component. Possibilities for the two other sites include a casino, office space or residential flats. Clearly each of these possibilities will generate or attract different patterns of traffic movements, making this a difficult impact to quantify, however development is now not expected to commence during the course of LTP2.

Bus

Park and Ride is an actively considered option for many locations in Leeds. There are two locations that could affect traffic on the A64, York Road and to a lesser extent the A58, Wetherby Road.

An ongoing review is in process looking at the future role of High Occupancy Vehicle (HOV) lanes. This includes considering what role HOV lanes might play at future locations where priority measures are proposed and also whether at some locations the conversion of existing (generally lightly used) bus lanes might function more effectively as HOV lanes. To this end LCC are trialling an enforcement camera on an existing HOV lane - funded by the Congestion Performance Fund (CPF) - which may be used on the A58 at Easterly Road in the future.

A Quality Bus Corridor strategy is planned for the A65 Kirkstall Road. There are three phases to the scheme: QBC major scheme, now with DfT Programme Entry; Abbey Road bus lane, now completed; and A65 west of the A6120 proposals yet to be considered. This major scheme will involve the installation of extensive stretches of bus lane in both an inbound and outbound direction. The total length of bus lane in each direction would be near 2 miles. Studies by consultants have suggested that, in the morning peak period this scheme could save up to 6 minutes of journey time and increase bus patronage by 900 people. Additional congestion will be experienced during the construction phase and this is reflected in the trajectory. The scheme is now planned to start early in 2010 for completion in early 2012. Various reasons have necessitated the redesign of elements of the scheme and the subsequent detailed design work has required more time than initially anticipated which has led to a delay in the start of the construction of this scheme. Additionally, the process to deal with the necessary Compulsory Purchase Orders and resulting Public Inquiry has also taken longer than originally expected.

Powers are in place for the authority to enforce moving vehicle offences in bus lanes. A scheme to pilot the use of camera enforcement of selected bus priorities is in the process of development for implementation in the spring of 2010. Once the impacts of the pilot scheme have been assessed the roll out of the measures to further priority locations on the bus lane network will be considered. The Council is also continuing to consider how the enforcement of HOV lanes could be carried out more efficiently and the options of new innovations in this area are being followed closely. A trial of HOV lane enforcement cameras on the A647 is due to commence in 2009 (see above).

Rail

The largest capacity constraints are currently on peak services to/from Leeds and there is evidence of suppressed demand. The strategy is therefore likely to have the largest impact on congestion on routes within the Leeds urban area. Within Leeds, new stations are identified at Horsforth Woodside and Kirkstall Forge. The latter station is being developed in conjunction with a station at Apperley Bridge (on the border of the Leeds and Bradford districts) which will serve as a park and ride station for parts of Leeds and Bradford. It is expected that Kirkstall Forge and Apperley Bridge will be implemented towards the end of LTP2.

Road construction

Although not directly affecting the three target routes, the completion of the final stage of the Leeds Inner Ring Road should reduce the amount of through traffic in the city centre and potentially improve journey speeds on the key routes.

Similarly, the East Leeds Link Road, which opened in February 2009 will not significantly reduce traffic on the A64.

Demand Management

The authority currently has decriminalised parking powers and continues to increase long stay parking charges above the rate of inflation. Average parking charges in Leeds are the highest in West Yorkshire at £7.50 per day. The number of long stay spaces in Leeds is being reduced in line with LTP2 policy. However over 50% of long stay spaces in central Leeds are provided by employers at the workplace and are not available to the general public. In addition two thirds of the publicly available spaces are outside local authority control so the potential impact on congestion through the control of long stay spaces is limited.

Leeds is currently installing ANPR cameras to gather live journey time information on key routes. This information will be made available to the public via an established website (www.leedstravel.info) and also stored for further analysis. Funding has been allocated from the Congestion Fund to install the first cameras on the three congestion routes in Leeds commencing in 2009 and the first cameras have been installed on the A65.

6.6.2 Leeds routes

Table 6.10 A64 York Road, Leeds

WY09 A64 York Road, Leeds	
<p>The diagram illustrates the A64 route from the Crossgates Roundabout in the west to the Woodpecker junction in the east. It is divided into three main sections: Killingbeck/Seacroft, EASEL, and Woodpecker junction. A63 joins the A64 from the south in the first section. Signalized junctions are marked with squares along the route.</p>	
Context	Recognised issues
<p>The A64 is a 3¾ mile long urban arterial route connecting the first major junction inside the outer Ring Road in the east of the city to the City Centre. The route is entirely dual carriageway with two or more lanes of traffic in each direction.</p> <p>The route has extensive sections of bus guideway, primarily located in the median along with stretches of kerbside bus lane. At the end of the second section the A63 joins the A64 and its traffic is “carried” by the A64. All the major junctions on the route are signalised with physical and signal priority measures for buses.</p>	Public transport
	<p>This is a route with a high number of buses using it for almost its entire length to travel to Leeds City Centre. Most buses use the median guideway to bypass queues, although some longer distance buses still use the general carriageway.</p>
	General
	<p>This is a high capacity route which, at the time of the installation of the guideways was re-modelled and junction improvements carried out.</p>
	Other
	<p>This route travels through the designated development area of EASEL. There are three Area Action Plan options that typify the scale of the work envisaged for this area: a low, medium and high impact. It is not yet know which of these options would best typify this scale but most of the development would involve the demolition of existing poor housing stock and replacing this with new build housing.</p> <p>This route was chosen as a route on which there had already being extensive traffic and public transport interventions and it was of interest what the contribution of these interventions was in managing congestion relative to the other two routes in Leeds.</p>

ENABLING ACTIONS AND DELIVERY LEVERS

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	Improvements to Traffic signal timings to give priority to buses.	£10k	COMPLETED		Improved bus speeds	✓	June 2009	COMPLETED
Demand management								
2	The scope and timing of EASEL development is unknown but the redevelopment of the old Killingbeck and Seacroft hospital sites and surplus education sites for housing would have a direct impact on this route.	Costs unknown as proposal is subject to change	Development programme may be accelerated	Enforce planning obligations Travel planning Improve PT services	Better take up of MetroCard initiative. Development of new bus services	✓✓	Subject to diverse funding arrangements. 2007 to 2015	Yes
Travel choices and behaviour								
3	Travel planning for Killingbeck and Seacroft developments as part of planning process.	N/A	Dependent on take up of development opportunities at Killingbeck and Seacroft	Political and developer support for travel planning	High modal share for non car modes.	✓	Subject to diverse funding arrangements in line with progress of developments	Yes
Goals								
<ol style="list-style-type: none"> 1. Protect the existing priority arrangements for buses 2. Explore opportunities for further enhanced bus priority measures 3. Not adversely affect the journey times for non-public transport users 								

Table 6.11 A58 Wetherby Road, Leeds

WY10	A58 Wetherby Road, Leeds	
<p>The diagram illustrates the A58 route starting from a diamond junction on the left. It proceeds east through Roundhay Road, crossing the A61, and ending at North Street. Two rectangular areas labeled 'EASEL' are shown along the route. The route is divided into three sections: a two-lane dual carriageway, a single carriageway through terraced housing, and a section with a contra-flow bus lane. A dashed line indicates a route branching off towards North Street.</p>		
Context	Recognised issues	
<p>The A58 route is a 3½ mile long urban arterial route starting just inside the outer Ring Road in the north east of the city and finishing at the edge of the City Centre. The first section of this route is mainly two lane dual carriageway surrounded by medium density, semi-detached housing. The second section is single carriageway through dense terraced type housing with some light industry at the end of the section. At the start of the third section, private and bus traffic take different routes into the City Centre. Private transport uses a dual carriageway, two lane section of road whilst buses use a different one-way street, North Street, with a contra-flow bus lane.</p>	<p>Public transport</p> <p>The only form of bus priority is the contra-flow bus lane that forms the route of the third section for bus traffic. Private traffic can not follow this route into the City Centre.</p> <p>General</p> <p>There are slower speeds on the middle, second section, mainly due to the nature of the carriageway. The end of the second section is a complex gyratory style junction with a cut-through/short cut for buses.</p> <p>Other</p> <p>This route forms the northern boundary of a designated development area, EASEL. There are three options that typify the scale of the work envisaged for this area: a low, medium and high impact. It is not yet know which of these options would best typify this scale but most of the development would involve the demolition of existing poor housing stock and replacing this with new build housing. This route was chosen as a route on which few interventions were planned, thereby allowing it act as a “control” and measure the contribution of “background” developments to congestion. The CPF is currently funding the Feasibility of 2 schemes one on Roundhay Road south of Fforde Green, and another inbound on Easterly Road to Fforde Green which if worthwhile schemes were identified, could be implemented during LTP3.</p>	

ENABLING ACTIONS AND DELIVERY LEVERS

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
Demand management								
1	The scope and timing of EASEL development is unknown but the redevelopments envisaged would not be concentrated at a particular location relative to this route. The impact is therefore likely to be dissipated along this and other routes.	Costs unknown as proposal is subject to change	Development programme may change	Enforce planning obligations Travel planning Improve PT services	Better take up of MetroCard initiative. Development of new bus services	✓	Jan 2009 - Phase 1 approved, Design Brief issued	Yes
2	Easterly Road inbound priority lane	£500	Funding not yet established	Bus and HOV lanes, signal priority etc.	Increases PT use, increased car occupancy, improved throughput	✓✓	Seek funding from CPF	Yes
Travel choices and behaviour								
3	Travel planning as part of EASEL development	N/A	Dependent on take up of development opportunities	Political and developer support for travel planning	High modal share for non car modes.	✓✓	In line with progress of developments	Yes
4	Impact of City Centre Living – some evidence supply is already outstripping demand. Also out commuting becoming an issue By end Q1 2007 there were 5701 apartments completed with 3812 under construction and 5622 with planning permission. Current population of city centre is estimated at 12,400 (including students)	N/A	Less take up may lead to more in-commuting. Problem of outbound congestion	No LCC resources allocated	Reduced car usage	✓	Ongoing	Yes - although further developments on hold due to economic situation.
Goals								
1. Preserve the existing nature of the route								

Table 6.12 A65 Kirkstall Road, Leeds

WY11		A65 Kirkstall Road, Leeds						
Context		Recognised issues						
<p>The A65 is a long, 4¾, mile urban arterial route connecting the outer Ring Road to the north west of the city to the City Centre. To the south of the route run a railway, a canal and a river, limiting crossing movements on one side. At the start of the route most of the built up land is residential and to the north of the route, although closer to the city centre, light industry surrounds the route. There is a major retail development at the end of the first section. A quality bus corridor is planned for an extensive stretch covering sections 2, 3 and possibly 4.</p>		<p>Public transport</p> <p>Little or no priority for buses currently exists along this route. A recently upgraded railway lines runs parallel and to the south of the route but there are no stations along the relevant stretch of route. Recently completed bus priority measures on Burley Road may affect traffic levels on A65</p> <p>General</p> <p>The nature of the route varies along its length. It is primarily single carriageway with a limited but critical number of junctions along its length. This route was selected because it is likely to benefit from considerable re-design and investment for public transport priority towards the end of LTP2.</p> <p>Other</p> <p>A range of developments are planned. Primarily residential at the High Royds site and the old Kirkstall Forge. A rail station is planned for the end of LTP2. Retail developments are planned at the Kirkstall district centre. A mixed residential and commercial development is planned for the Yorkshire Chemicals site and also possibly the dairy and bus garage sites close by. Discussions are taking place regarding the Cardigan Fields site and the potential for bringing the waste transfer station back into use. (PFI scheme)</p>						
Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	A Major Quality Bus Initiative scheme is in development to widen the carriageway for significant lengths of this route and install	£22,000k	Scheme not given final approval by DfT Construction may	Bus lanes, signal priority etc.	Main benefits expected post 2011	✓✓✓✓	Oct 2008 - Contractor appointed (ECI Phase 1).	Scheme currently awaiting near simultaneous Conditional & Full

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	bus/cycle lanes. Also a bus gate will operate to give buses and cyclists priority access to narrow stretches of the route where widening is not an option. Timescales suggest that the benefit of this scheme will not become apparent until into LTP3.		increase congestion				<p>Oct 2008 - Public inquiry.</p> <p>Aug 2009 - CPO decision.</p> <p>Sep 2009 - Conditional Approval submission to DfT.</p> <p>Feb 2010 - Start on Site.</p> <p>£834k preparatory costs (LCC)</p> <p>£2.5m approved by the Council's Exec. Board to acquire land.</p> <p>Further £18m expected to be approved from Executive Board later in 2009 subject to full approval being granted.</p>	<p>Approval from the DfT.</p> <p>If approved construction to start in Spring 2010.</p>
Demand management								
2	The re-development of the chemical works, dairy and bus garage sites takes place during the life time of LTP2.	Scheme not yet finalised	Delayed beyond 2011 due to economic climate.	<p>Enforce planning obligations</p> <p>Travel planning</p> <p>Improve PT services</p>		✓✓	Sites allocated for substantial development – anticipated post 2011	No – economic climate.
3	High Royds development	N/A	COMPLETED 2008	<p>Enforce planning obligations</p> <p>Improve PT services</p>	Monitoring on-going	✓		COMPLETED 2008
4	Kirkstall Forge development	N/A	Delayed beyond 2011 due to	Enforce planning obligations		✓	Sites allocated for substantial	No – economic climate.

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			economic climate.	Travel planning Improve PT services			development – anticipated post 2011	
Travel choices and behaviour								
5	Travel planning as part of development work	N/A	Dependent on take up of development opportunities	Political and developer support for travel planning		✓✓	Ongoing	
6	Impact of City Centre Living – some evidence supply is already outstripping demand. Also out commuting an issue.	N/A	Less take up may lead to more in- commuting. Problem of outbound congestion	No LCC resources allocated	Reduced car usage	✓	Ongoing	Yes - although further developments on hold due to economic situation.
Goals								
1. Deliver reduction of 6 minutes in bus journey times								
2. To increase bus use by at least 9%								
3. Deliver small reductions in private vehicle journey times.								
If journey time reductions are achieved this would give an overall 2% reduction in the west Yorkshire PJT indicator								

6.7 Wakefield

6.7.1 *Proposals affecting Wakefield routes*

Economic regeneration and growth

Over the LTP2 period work began and will continue on three major Key Development Areas (KDAs) in or close to the City centre that are planned to help regenerate the City. These may all generate increased significant additional demand for travel and are known as: Trinity Walk (Marsh Way); Merchant Gate (Westgate); and Waterfront.

Trinity Walk includes a supermarket, department store, retail units, residential units, new market hall, relocated open market, library and car parking. The scheme entails re-routing part of Marsh Way (a dual carriageway road on the eastern side of the City centre) which is now finished. During the economic slow down work on Trinity Walk has been suspended but there is now a financial package in place to enable completion of the development in full but on a revised schedule with phased opening commencing May 2011.

Merchant Gate is a commercial redevelopment project centred on the Westgate area and includes the redevelopment of Westgate railway station. It will include a hotel, offices, leisure and substantial new housing, a multi-storey car park, landscaping and highway works. Phase 1 of the redevelopment is well underway and on schedule to complete in May 2010 including the opening of the link road through the development.

The Waterfront is located at the southern gateway to the City centre. The core site is a five hectare brown-field site located in the Waterfront conservation area. The development includes restoration of listed warehouses/mills, some new build and public realm works for commercial, cultural, leisure, residential and open space land uses. A significant new visitor attraction, the Hepworth Gallery, will be built on the waterfront headland. This will be complemented with a connecting pedestrian bridge over the river to new car parking. Significant progress has been made with Phase one of the developments completed in November 2008 and the Hepworth Art Gallery is on schedule and due to open Autumn 2010.

Employment

At the beginning of the Congestion Delivery Plan econometric forecasts by Yorkshire Futures were for employment in the district to grow by around 4,000 by the end of the LTP2 period, most of which is new employment in the KDAs. Since then recent forecasts, unsurprisingly, show a downturn of 2,200 for Wakefield District but it is not anticipated at this stage that these job losses will have a big impact on new employment within the Wakefield City area.

The transport assessments for the three KDAs reveal that they will attract and generate substantial levels of additional travel. The total trip generation is forecast at 1,700 trips in the morning peak and 2,200 trips in the evening peak.

Housing

In 2007 we reported for the North Wakefield area that the Local Development Framework Core Strategy preferred option for net additional housing in individual settlements is 310 per year for the plan period of LTP2 and forecast increases in City centre living in Wakefield to be 1,600 residents within the next five years.

The current RSS housing requirement is now a minimum net requirement of 1600 dwellings per annum for the whole District up to 2026. This equates to at least 480 dwellings per annum (at least 8160 in total up to 2026) for the Wakefield City Centre and suburbs. Of this the Central Wakefield Area Action Plan suggests that somewhere in the region of 2068 dwellings could be accommodated with the city centre area up to 2021 (note the shorter time period).

Bus

Peak time public transport usage in the Wakefield city centre showed a decline in 2009, however a number of strategic initiatives are being progressed under the auspices of the West Yorkshire and Wakefield Bus Partnerships. A rolling programme of corridor based bus stop accessibility upgrades is being implemented and several core corridors have already been completed. Work is currently progressing to develop a bus Performance Improvement Partnership with Arriva Yorkshire who is the district's main operator. Work is progressing in partnership with Metro (WYPTE) and Arriva to strategically identify opportunities to improve punctuality and performance on two major bus corridors in a zone to the west of Wakefield City. A formal Performance Improvement Partnership agreement (PIP) containing objective targets is due to be signed early in 2010.

Rail use

Rail travel to Wakefield City centre doubled between 1998 and 2004 and this strong trend is expected to continue in line with the economic growth prospects of the City and Leeds. This will potentially have a small impact on traffic levels, on the A61 (North) in particular.

The success of the hourly limited stop passenger trains linking Sheffield and Leeds (calling at Kirkgate) in 2006 has led to the introduction of a further service in December 08 linking Nottingham and Leeds. This is in addition to the frequent East Coast, Cross Country (ARRIVA) and Northern Rail services via Westgate. This provides sufficient capacity to easily accommodate the forecast growth in rail patronage. Kirkgate station is ideally located to serve the Waterfront KDA, and is close to the Marsh Way site. A further service out of Kirkgate is to commence from Easter 2010 providing an additional route to London. It is envisaged that the three return services a day between Bradford Interchange, Halifax, Brighouse, Wakefield, Pontefract, Doncaster and London King's Cross will start in May.

Demand management

Long-stay parking charges at public car parks in the City centre remain on average the second highest in West Yorkshire (Leeds prices being the highest).

WMDC is still committed to the long term LTP2 policy to:

- increase long stay car parking charges by more than the rate of inflation; and
- reduce the volume of long stay spaces available.

Prices were increased in November 2006, with long stay prices increased by 12.5% and by a further 11% in April 2007.

As previously stated, the impact of controlling long stay parking is limited by the high proportion of non residential parking. This, coupled with the existing economic climate and the large scale disruption from the redevelopment of the City Centre, has resulted in no further increases to long stay since April 2007. However, a reduction of 250 long stay places in real terms has taken place and the development of an action plan to implement our City centre parking strategy is ongoing that will include an appropriate pricing structure.

Proforma information

It should be noted that several schemes listed in the route specific pro-forma sheets are only at a preliminary stage of development. Detailed feasibility work, including transport modelling, and public consultation where appropriate, needs to be undertaken before these schemes progress further.

6.7.2 Wakefield routes

Table 6.13 A655 Black Road, Wakefield

WY12 A655 Black Road: Wakefield (Hell lane to A638 Doncaster Road)	
Context	Recognised issues
<p>This route runs from Hell Lane to the South East of Wakefield along the A655 to the signalised Junction with the A638 at Heath Common. This is the main radial road between Castleford, Normanton and Wakefield.</p> <p>In the last 18months a 1km length of inbound bus lane has been introduced on the majority of this length of route. A new set of traffic signals were also installed at the junction of the A655 Black Road and A638 Doncaster Road, at Heath Common. These signals are at the end of the bus lane and give buses priority over general traffic. These signals and the bus lane have significantly reduced inbound bus journey times in the morning peak period.</p> <p>The route has virtually no frontages, with open common land on both sides.</p>	Public transport
	Poor bus service usage
	General
	Inbound queues over the entire monitored length of A655 Black Road in morning peak times 400 vehs/hour (AM peak) inbound towards Wakefield centre
	Other
	There is a development site on the site of the former Wakefield Power station, close to the City end of this route. The latest planning application for the site includes a mix of housing and office space.

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Demand management								
1	<p>Long term LTP2 Car Parking policy to:</p> <p>increase long stay car parking charges by more than the rate of inflation; and reduce the volume of long stay spaces available.</p>	£10k	Risk that parking charges aren't increased and long stay parking supply is not restricted.	<p>Political support for the policy is in place.</p> <p>Regeneration and removal of public parking stock for new developments.</p> <p>Study almost completed and will require Cabinet approval</p>	Increasing land values will make temporary private car parks less attractive than commercial developments.	✓✓	<p>Action plan being put in place to ensure adequate supply of long stay parking outside city centre</p> <p>To be agreed 2009/10</p>	Yes
2	<p>Quality Bus Initiatives</p> <p>1km length of 24 hour inbound bus lane has been introduced on the majority of this length of route, by taking out an outbound section of climbing lane. Additional signals provided at end of bus lane to give buses priority.</p>	£155k	COMPLETED	<p>Promotion of improved bus journey times to residents adjacent to relevant bus routes.</p>	Increased usage of buses, including modal switch by former car users.	✓✓	Fully Approved	COMPLETED 2006
New infrastructure and other measures								
3	<p>Wakefield Eastern Bypass to be investigated. Road would link from the A638 / A655 junction, with a new river Calder crossing, to link to the A642 north of Pinderfields hospital. This would remove through traffic (from south east to north) from Doncaster road and City centre.</p>	£20,000k+	The scheme is not in the list of RFA approved schemes. No evaluation of costs / benefits yet completed. Potentially high cost and environmental impact yet to be assessed. A full major scheme	<p>The Wakefield Eastern bypass is a priority for development and detailed scheme cost/benefit evaluation in the short term.</p> <p>Resources to be allocated to undertake the evaluation.</p>	An effective scheme is developed that delivers benefits, is acceptable to the public and secures funds from Central Government.	✓✓✓✓	<p>To be investigated, no formal status yet.</p> <p>Likely to progress following LDF site allocations. Looking for significant developer contribution.</p>	No - Likely to progress following LDF site allocations. Looking for significant developer contribution.

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			business case would need to be developed.					
Travel choices and behaviour								
4	Travel Plans to encourage modal shift (including WMDC, Pinderfields Hospitals, Wakefield College)	£30k	Employers in the public and private sectors may choose not to produce and promote travel plans where there are no planning conditions.	Enforce planning obligations. Employment of West Yorkshire travel planning officer. Mainstream WMDC travel plan.	Better take up of workplace Metro card initiative. Successful and continued provision of bus services to new developments such as Paragon business park.	✓	On going	Yes: On track with travel plans. 2+ work place car park spaces introduced. Bus to Paragon continuing.
5	WakefieldCarShare.com website , to encourage car sharing by Wakefield residents.	£60k	Risk that continuous funding may not be available to keep the website maintained. Risk that car users won't see the need to use the site.	Further promotion to large employers of the initiative. Dedicated parking bays for car sharers in car parks.	A further 79 registered users during the period June to November.	✓	On going	Yes: On track with continued funding
Goals								
VISSIM modelling work in the 2002 Wakefield Bus Priority study forecast that a package of bus priority and other measures could reduce inbound bus journey times by up to 2min 50secs in the AM peak between Hell lane and Elm Tree street (just west of Agbrigg road). The Agbrigg road measures to be implemented 07/08 are the last part of the package modelled in 2002. The long term goal must be to reduce the volume of private car traffic wanting to use Black road to access the A638 and the City centre.								

Table 6.14 A638 Doncaster Road, Wakefield

WY13 A638 Doncaster Road: Wakefield (Lodge lane to Chantry House Roundabout)	
Context	Recognised issues
<p>This route runs from Lodge lane, Crofton to the South East of Wakefield along the A638 to the Chantry House roundabout on the edge of Wakefield City centre.</p> <p>This is the main radial road between Doncaster and Wakefield (with major roads from Pontefract, Featherstone, South Elmsall and Hemsworth feeding into it).</p> <p>The route is a mixture of urban and semi rural, with housing frontages along much of its length. In the urban area some terraced housing is very close to the highway. On the more rural section, housing is generally set back.</p> <p>In the last 18months a 1km length of PM peak outbound bus lane has been introduced on part of the urban section that impacts on outbound congestion in the PM peak.</p>	<p>Public transport</p> <p>Delays to bus services caused by congestion on outer part of the route</p>
	<p>General</p> <p>Queues over length of A638 Doncaster Road in morning peak times, from Lodge Lane to beyond Agbrigg road. The junction of A638 and Agbrigg road causes delays to vehicles exacerbated by the constraint of a railway bridge.</p> <p>There is a bottle neck where the road narrows to one lane in either direction between Dunbar Street and Elm Tree Street, limiting capacity.</p> <p>There are delays on the approach to City centre where radials meet the inner ring road</p> <p>There are about 1,200 vehs/hour (AM peak) inbound towards Wakefield centre (inner cordon)</p>
	<p>Other</p> <p>There is a development site on the site of the former Wakefield Power station, close to middle of this route. The latest planning application for the site includes a mix of housing and office space.</p> <p>The Wakefield Waterfront site is immediately adjacent to the route at the City centre end of the route with phase one development.</p>

ENABLING ACTIONS AND DELIVERY LEVERS

Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	LTP-IT funded minor traffic management improvements to several junctions. Lighting, signing, road markings and minor road layout works	£40k	The schemes are low cost, easy to design and implement and unlikely to be objected to by local residents.	On going consultation		✓	Fully Approved and programmed 2009	Yes
2	Junction of Agbrigg road and the A638. The signals timings were amended (no of stages reduced) and the no of lanes and flare lengths increased in 2005/06 Further work at signals with a short section of inbound bus lane expected to reduce inbound bus journey times in the morning peak period, with minimal impact on car journey times.	£5k	COMPLETED	A trial scheme will be implemented and evaluated after 6months. The impact on car and bus journey times will be assessed, to ensure that the scheme doesn't create new problems for buses elsewhere.	An effective scheme that reduces bus journey times, and encourages modal shift.	✓✓✓	Fully Approved	COMPLETED August 2008
3	Halfords Gyratory This scheme is approaching completion and has increased capacity at the junctions, and provided new pedestrian and cycle facilities	£1,500k - developer contribution	COMPLETED	None required.		✓✓	Approved Circa £1.5m	COMPLETED March 2007
New infrastructure and other measures								
4	Widening of A638 between Agbrigg road and Elm Tree Street, to provide extra lane (possibly to allow additional bus priority measures)	£8,000k	Part of the eastern bypass appraisal as an alternative measure.	Put on hold subject to Eastern Gateway appraisal		✓✓		No

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5	Wakefield Eastern Bypass to be investigated. Road would link from the A638 / A655 junction, with a new river Calder crossing, to link to the A642 north of Pinderfields hospital. This would remove through traffic (from south east to north, and vice versa) from Doncaster road and the City centre.	£20,000k	The scheme is not in the list of RFA approved schemes. No evaluation of costs / benefits yet completed. Potentially high cost and environmental impact yet to be assessed. A full major scheme business case would need to be developed.	The Wakefield Eastern bypass is a priority for development and detailed scheme cost/benefit evaluation in the short term. Resources to be allocated to undertake the evaluation.	An effective scheme is developed that delivers benefits, is acceptable to the public and secures funds from Central Government.	✓✓✓✓	To be investigated, no formal approval yet sought. Likely to progress following LDF site allocations. Looking for significant developer contribution.	No Likely to progress following LDF site allocations. Looking for significant developer contribution.
6	Chantry House Roundabout Part of the Emerald ring – The subways and centre would be filled in and levelled replacing the roundabout with signalised junctions and at surface crossings	£3,000k	Funding not yet allocated	This scheme will be one of the last pieces to complete the Emerald ring	Required to complete the Emerald ring providing improved facilities for cycling and walking both around the route and across the route.	✓✓	Looking for significant developer contribution.	No
Demand management								
7	Long term LTP2 Car Parking policy to: Increase long stay car parking charges by more than the rate of inflation; and reduce the volume of long stay spaces available.	£10k	Risk that parking charges aren't increased and long stay parking supply is not restricted.	Political support for the policy is in place. Regeneration and removal of public parking stock for new developments. Study almost completed and will require Cabinet approval	Increasing land values will make temporary private car parks less attractive than commercial developments.	✓✓	Action plan being put in place to ensure adequate supply of long stay parking outside city centre. To be agreed 2009/10	Yes

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8	Quality Bus Initiatives 1km length of PM peak hour outbound bus lane has been introduced on the part of the urban section of route, where parking was already prohibited at peak hours (note linked to scheme 2)	£20k	COMPLETED			✓✓		COMPLETED 2007
9	Extension of Bus Lanes on A638 (inbound) Investigation of further sections of bus lane south of existing bus lane near Oakenshaw lane.	£2,000k	Part of the eastern bypass appraisal as an alternative measure ³	On hold pending East Gateway appraisal		✓✓✓	2010/11	No
10	Park and Ride site at Red Beck Targeting commuter travel and encouraging mode shift Frequent and reliable bus service to encourage patronage Reduces accidents and vehicles downstream	£3,000k+	A major scheme business case has yet to be developed. The demand for use has had preliminary assessments only.	The feasibility, costs and benefits of a Park and Ride site are a priority for assessment. Now included in Parking action plan	A decision will be able to be made whether to progress with a Park and Ride site or not.	✓✓✓	To be investigated, no formal approval yet sought.	N/A Included in Parking action plan
Travel choices and behaviour								
11	Travel Plans to encourage modal shift (including WMDC, Pinderfields Hospitals, Wakefield College)	£30k	Employers in the public and private sectors may choose not to produce and promote travel plans where there are no planning conditions.	Enforce planning obligations. Employment of West Yorkshire travel planning officer. Mainstream WMDC travel plan.	Better take up of workplace Metro card initiative. Successful and continued provision of bus services to new developments such as Paragon business park.	✓	On going	Yes: On track with travel plans. 2+ work place car park spaces introduced. Bus to Paragon continuing.
12	WakefieldCarShare.com website , to encourage car sharing by Wakefield residents.	£60k	Risk that continuous funding may not be available to keep	Further promotion to large employers of the initiative. Dedicated parking	A further 79 registered users during the period June to	✓	On going	Yes: On track with continuing funding

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			the website maintained. Risk that car users won't see the need to use the site.	bays for car sharers in car parks.	November.			
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Goals

VISSIM modelling work in the 2002 Wakefield Bus Priority study forecast that a package of bus priority and other measures could reduce inbound bus journey times by up to 2mins 30secs in the AM peak between Lodge lane and Elm Tree street (just west of Agbrigg road). The outbound lane was forecast to reduce bus JT by 2mins in the PM peak between the A61 Barnsley road and the A655 junction at Heath Common.

Table 6.15 A61 Leeds Road, Wakefield

WY14 A61 Leeds Road: Wakefield (Broadmeadows to Northgate/Marshway)	
Context	Recognised issues
<p>This route runs from Broadmeadows (Outwood) to the North of Wakefield City centre along the A61 to the roundabout with Marshway on the northern edge of Wakefield City centre.</p> <p>This is the main (non motorway) radial road between Leeds and Wakefield (with a major road from Bradford and the M1 Motorway feeding into it).</p> <p>The route is entirely urban, with housing frontages along most of its length. In the middle section of the route some terraced housing is very close to the highway and there are many shops, parking bays and bus stops in the centre of Outwood.</p>	<p>Public transport</p> <p>Delays to bus services caused by congestion on inner part of the route</p> <p>General</p> <p>Queues over inner part of A61 Leeds Road in morning peak times, from around Newton Hill primary school to the end of the route at junction with Marshway</p> <p>Frequent use of the pelican crossing outside the Queen Elizabeth Grammar school, causes queues to vehicles</p> <p>Delays on approach to City centre where radials meet the inner ring road</p> <p>800 vehs/hour (AM peak) inbound towards Wakefield centre</p> <p>Other</p> <p>300 new jobs will be created on the Paragon business park on the A650 close to the corridor, when current building work is completed.</p> <p>There is a large development proposed for the Marsh Way KDA, which comprises retail (including supermarket and department store), a new library, and residential units. The Westgate KDA is also close by.</p>

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Interventions		Cost (£000s)	Risk to delivery	Management Measures	Effect	Impact	Approval / Programmed funding (£000s)	On Track
Use of existing highway infrastructure								
1	LTP-IT funded minor traffic management improvements to junctions and sections of road. Lighting, signing, road markings and minor road layout works	£21k	The schemes are low cost, easy to design and implement and unlikely to be objected to by local residents.	The consultation will emphasize benefits to residents as well as road users.		✓✓	In programme 2008	Yes
2	North Wakefield Gateway. Work at signals with sections of inbound bus lane expected to reduce inbound bus journey times in the morning peak period, with minimal impact on car journey times.	£4,200	The scheme may be controversial for local residents and receive objections.	The scheme is out for consultation.	The scheme will reduce congestion and improve cycling and walking.	✓✓✓	Consultation ongoing	No: Slipped due to complicated consultations. Earliest start date is Summer 2010
Demand management								
3	Long term LTP2 Car Parking policy to: Increase long stay car parking charges by more than the rate of inflation; and Reduce the volume of long stay spaces available.	£10k	Risk that parking charges aren't increased and long stay parking supply is not restricted.	Political support for the policy is in place. Regeneration and removal of public parking stock for new developments. Study almost completed and will require Cabinet approval	Increasing land values will make temporary private car parks less attractive than commercial developments.	✓✓	Action plan being put in place to ensure adequate supply of long stay parking outside city centre. To be agreed 2009/10	Yes
4	Quality Bus Initiatives In and outbound bus lane has been proposed as part of the North Wakefield Gyratory (note linked to scheme 2)	(Costs included in North Wakefield Gateway)	The same issues apply as for the North Wakefield gyratory (scheme 2).	See North Wakefield Gateway		✓✓	In programme, design yet to be finalised and consulted o	See North Wakefield Gateway

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5	Park and Ride site near Newton Bar Targeting commuter travel and encouraging mode shift Frequent and reliable bus service to encourage patronage Reduces accidents and vehicles downstream	£2,000k+	Part of Northern Gateway Scheme, needs the bus priority measures proposed in the gyratory scheme.	Scheme is linked to North Wakefield Gateway and Car park action plan	Reduced reliance on car.	✓✓✓	Dependant on outcome of Northern Gateway consultation. 2010	Yes
Travel choices and behaviour								
6	Travel Plans to encourage modal shift (including WMDC, Pinderfields Hospitals, Wakefield College)	£30k	Employers in the public and private sectors may choose not to produce and promote travel plans where there are no planning conditions.	Enforce planning obligations. Employment of West Yorkshire travel planning officer. Mainstream WMDC travel plan.	Better take up of workplace Metro card initiative. Successful and continued provision of bus services to new developments such as Paragon business park.	✓	On going	Yes: On track with travel plans. 2+ work place car park spaces introduced. Bus to Paragon continuing.
7	WakefieldCarShare.com website , to encourage car sharing by Wakefield residents.	£60k	Risk that continuous funding may not be available to keep the website maintained. Risk that car users won't see the need to use the site.	Further promotion to large employers of the initiative. Dedicated parking bays for car sharers in car parks.	A further 79 registered users during the period June to November.	✓	On going	Yes: On track with continuing funding
Goals								
Small journey time savings for all vehicles forecast due to the minor junction measures. Benefits of the North Wakefield gyratory yet to be modelled.								

6.8 Quantification of impacts and value for money

6.8.1 Impact

The effects of individual capital projects such as road widening and junction improvements can be modelled with a degree of accuracy. Where this approach is used then appropriate modelling has been used to assess the impact.

Other impacts such as some public transport improvements and Smarter Choices interventions are much more difficult to quantify. We do not fully understand the scale of the impact of individual or collections of measures and the transferability from locations where the impact has been measured to other locations. An initial assessment has had to be made for each corridor of the possible impact of such measures. There is a high risk that the assessments will not be accurate.

The impact of the interventions is identified on the tables for each corridor (see Sections 6.3 to 6.7) and the Appendices.

6.8.2 Value for money

Individual schemes will be subject to value for money assessments commensurate with the value and impact of the scheme. The partnership is building up knowledge of scheme impacts and the best ways of achieving value for money through monitoring of LTP schemes. Use is also made of case studies and best practice from other authorities in deciding which schemes to implement

We are continuing to carry out assessment of the impact of projects with a 'before and after implementation' monitoring regime. This has been carried out across West Yorkshire for a number of years (See Annual Monitoring Reports) and we are gradually building up a picture of what is effective and the likely benefits if implemented elsewhere. In addition, we intend to learn further from the best practice of other District Councils and PTEs.

The Partnership will seek opportunities to make sensible and accountable use of public funding. Opportunities for greater efficiency will also be pursued in line with the 'Gershon Report' Releasing Resources for the Frontline: Independent Review of Public Sector Efficiency.

In terms of delivery of the interventions in this delivery plan appropriate staff, consultants and contractors will be used to achieve the best result for the finance available. Value for money will be achieved through:

- efficient planning and delivery of schemes with focus on achieving shared priorities and LTP objectives;
- achieving added value through combining schemes, for example implementing integrated transport schemes as part of highway maintenance schemes;
- maximising capital investment through revenue and other sources of funding;
- working in partnership with other organisations to achieve wider benefits and additional match funding;
- benchmarking with other comparable authorities to tackle excessive costs and poor performance;
- making more effective use of technology to plan and manage improvements to the existing transport system rather than building new infrastructure wherever possible; and
- more emphasis on 'smarter choices' to win hearts and minds of people which will make it easier to implement controversial but essential proposals.

6.9 Resources

6.9.1 Staff

Each authority has a limited pool of skilled staff capable of developing and delivering most of the interventions identified in this delivery plan. Where there are shortages of numbers of staff or specialist skills then consultants will be used to fill the gaps.

There are framework agreements in place in most of the district councils and in Metro with transportation and highway design consultants who have wide skills bases available to call on. The costs of employing consultants will be met from the individual project budgets.

6.9.2 Finance

The costs of delivering the interventions are shown in Table 6.1 to Table 6.15. Most of the corridor specific projects are funded mainly through the LTP capital allocations or DfT major scheme funding. Funding for the revenue schemes for 2007/08 has been identified in the authorities' revenue budgets and similar levels of funding are anticipated to continue in future years.

6.9.3 Construction

Where construction is required then either the authorities' direct labour organisations or framework contractors can be used at fairly short notice. For larger construction projects, formal tendering procedures will be used to select an appropriate contractor.

6.10 What we could do with additional funding

In our choice of corridors for monitoring the congestion target we selected a number of routes where there were few interventions planned through the LTP funding. On these and other corridors there is scope for identifying additional interventions that could be delivered before the end of LTP2.

With further funding, the possibility of achieving more than the set target will be considerably increased. However the level and certainty of future year's funding are critical to this as we are already one year into the 5 year LTP2 period and there can be a long lead in time to delivering new projects.

It is proposed to implement most effective schemes on corridors where they will do most good in the time available for the delivery of the target. The implication of this is that we will try to identify and then implement 'quick wins' on the busiest corridors. At this stage it is not possible to identify the schemes which would be implemented but some studies to identify potential schemes and their impact have started.

6.10.1 Revenue

Because of the uncertainty of continuity of the level funding, any revenue funding would have to be used on a number of discreet projects rather than providing long term ongoing support.

We propose to use the funding (depending on the amount available) for:

- "Kick start" subsidy of bus services, e.g. to new industrial areas, and substantial publicity to try and turn them into commercial services;
- promotion of Smarter Choices;
- support for travel plan development;
- start up costs for schemes such as car share; and
- investigations and implementation of 'quick win' projects, e.g. improvements to signal timings and linking using existing installations.

6.10.2 Capital

The amount and timing of capital allocations is also uncertain. We have not had the luxury of being able to design schemes in anticipation of funding, so lead in time becomes an issue. We need to know availability of funding at least 1 year in advance for sizeable projects, e.g. a Traffic Regulation Order for a bus lane takes 9 months, and a Compulsory Purchase Order can easily take 24 months.

We propose to use funding for:

- acceleration of current programme, where possible;
- additional permanent automatic traffic count equipment to be able to track changes in throughput on the corridors being monitored as part of the target; and
- development of new 'quick win' projects e.g. improvements to junctions within the existing highway boundary.

For future years we will use the funding for:

- acceleration of current programme, where possible; and
- develop and implement new capital projects, e.g. junction improvements, HOV lanes public transport information.

In LTP2 we identified a number of schemes that we would develop if funding was made available. A number of these relate to the corridors being monitored for the Congestion Target. Most of these schemes were included in the recent review of Regional Funding Allocations but with mixed outcomes:

- A647 Leeds Road/A6177 Killinghall junction, Bradford (estimated cost £1.2m) was included in a bid submission for the "Bradford-Leeds Corridor" which was not prioritised by the Regional Transport Board (RTB)
- A629 Wakefield Road, Huddersfield Bus Priority, Huddersfield (£0.8m) was included in the "Wakefield/Huddersfield/Halifax Connectivity" package for post 2014 funding. This scheme has not been prioritised by the RTB for implementation, but was included on a "reserve list" as part of the RTB's response to requirements of the Government's Developing a Sustainable Transport System (DaSTS) during 2009.
- Newton Bar Park and Ride/ Bus Priority/ Gyrotory, Wakefield (£3.8m) this was included in the bid submitted for the "North Wakefield Gateway": the RTB has identified this as a reserve scheme for any pre 2014 funding that might become available.
- Huddersfield-Dewsbury-Leeds QBC (£1.2m) was included in the bid submitted for "Huddersfield to Leeds Connectivity for post 2014 funding. - This scheme has not been prioritised by the RTB for implementation, but could be included on a "reserve List" as part of the RTB's response to requirements of the Government's DaSTS process during 2009.
- Bus / rail Park and Ride sites (not all on the target routes) (£2.8m) were included in the bid for "Leeds Rail Growth Package". This has been accepted by the RTB as a priority for pre 2014 funding. This will deliver new rail stations at Apperley Bridge and Kirkstall Forge. Additional parking is to be provided at Crossflatts, Sowerby Bridge, Pontefract Monkhill, Mirfield, Todmorden and Sandal and Agbrigg. These measures are expected to be delivered between 2011/12 and 2012/13

We will continue to explore opportunities to identify/secure funding for those measures not prioritised in the recent review of the RFA.

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We would also like to introduce Smartcard ticketing to significantly reduce bus boarding times as this is judged as by far the most effective way of speeding up bus movements in most urban areas. The “YorCard” scheme is currently the subject of a DfT funded pilot in South Yorkshire; future Major Scheme funding for this smartcard will be dependant on successful outcomes of this trial. There is also extensive use of the family of MetroCard pre-paid tickets.

The Leeds City Region Transport Vision and the Leeds TIF project have identified a number of potential congestion related projects. Work is continuing to develop these schemes more fully and to secure funding for them. It is unlikely that any of these will be implemented before 2012.

7 PROGRESS

The performance of the Delivery Plan is acceptable as steady progress is being made toward the target (as revised following the introduction of TrafficMaster data). The overall Person Journey Time indicator for West Yorkshire is on target i.e. the actual PJT is 21 seconds less than the trajectory for 2008/09 but with a 4.1% reduction in the total throughput since the baseline compared to a 2.2% predicted increase.

In future versions of the Delivery Plan we will be reporting on:

- trajectories;
- milestones;
- proportion of the plan that has been delivered;
- resource allocations; and
- review of the delivery plan including experience gained in delivering the plan

There are a number of actions that have already been implemented and these are identified in the tables (see sections 6.3 to 6.7) and trajectory charts (see Appendices) for each corridor.

7.1 Milestones

Key milestones are shown on individual route trajectories (see Appendices). Approval milestones are identified in the route tables in sections 6.3 to 6.7.

7.2 Trajectories

7.2.1 Individual Corridors

The Trajectories for individual corridors are shown in the Appendices.

Some of the impacts for individual capital projects along the corridors have been quantified in producing the trajectories for the corridors. Where appropriate traffic models are available they have been used to predict the do-nothing and full delivery plan scenarios.

The effects of road widening and junction improvements can be modelled with a degree of accuracy. Other impacts such as some public transport improvements and Smarter Choices interventions are much more difficult to quantify. We do not fully understand the scale of the impact of individual or collections of measures and the transferability from locations where the impact has been measured to other locations. An initial assessment has had to be made for each corridor of the possible impact of such measures. There is a high risk that the assessments will not be accurate.

Another key issue is that the timing of private developments is very uncertain and outside our control. Once planning permission has been granted, the developer has up to 5 years to start the development and could also take many years before the development is completed. This has an effect on when trips will be generated and also when any associated congestion reduction measures would be implemented

7.2.2 Combined Trajectories

The combined trajectories for all the corridors (see the Appendices) are given in Figure 7.1 and Figure 7.2. These have been revised since the CTDP was submitted to reflect the re-basing of the data in May 2009 by DfT following the change in data supplier from iTIS to Trafficmaster. The actual position is plotted for 2006/07 and 2007/08 as the DfT has confirmed the performance data for these years.

The provisional PJT performance for 2008/09 is 3 minutes 56 seconds. This PJT is now on target i.e. the actual PJT (43 minutes 56 seconds) is less than the Trafficmaster based trajectory PJT (4 minutes 17seconds) by 21 seconds. The performance data also indicates a reduction of 4.1 % in the total throughput, less than most other metropolitan and core cities areas within the DfT's PSA target.

The overall West Yorkshire trajectory for throughput has been calculated by summing the throughputs for the 13 individual routes. For the West Yorkshire person journey time trajectory a weighted average of the 13 individual route journey times is calculated, the weight for each route being its throughput. This calculation means that both the trajectories will be most sensitive to the routes with the largest throughputs.

Analysis of the congestion data for West Yorkshire released by the DfT during 2009 shows:

- The routes in Leeds account for 40% of the total throughput, whilst the shares of throughput across the other Districts are broadly similar.
- Interventions focused on routes in Leeds will have a greater impact (roughly double) on the West Yorkshire PJT target than interventions elsewhere because of the more significant throughput on the Leeds routes.
- The highest PJT (5.29 minutes per person per mile) is on the A655 in Wakefield, but even halving this will only have a marginal effect on the overall West Yorkshire performance because of the very low levels of throughput on this route.
- Increasing the speed of buses and multiple occupancy cars will have a beneficial impact on PJT.
- Increasing bus patronage (without providing bus priority improvements and improvements to address boarding times) will slow down PJT (bus speeds will slow as bus stop dwell times increase to accommodate higher numbers boarding/alighting).

The main conclusions from this analysis is that the focus of interventions to meet the target during the remainder of LTP2 should be on increasing bus speeds (e.g. bus priority, faster bus boarding and reducing bus stop dwell times) particularly in Leeds.

Figure 7.1 West Yorkshire combined throughput trajectory

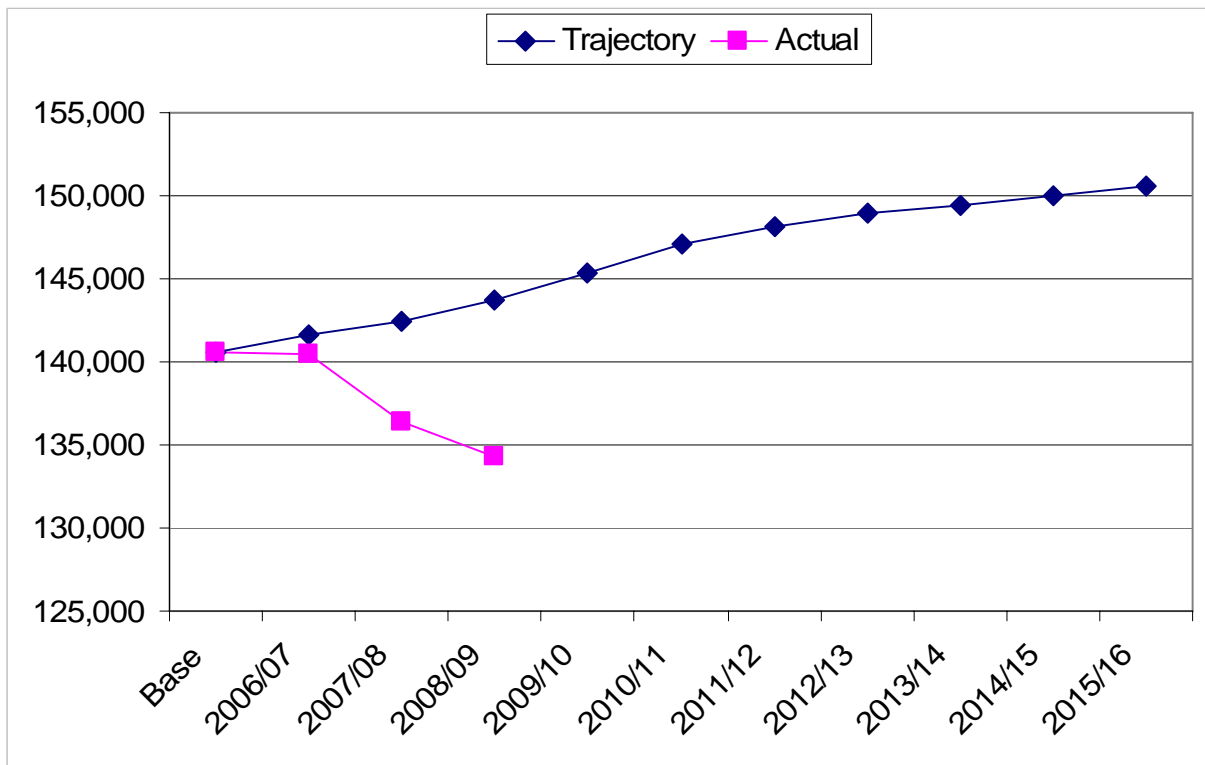


Figure 7.2 West Yorkshire combined person journey time trajectory

