

**WEST YORKSHIRE LOCAL TRANSPORT PLAN**

**ANNUAL PROGRESS REPORT 2003 / 2004**

**APPENDIX 1**

**MONITORING REPORT**



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## CHAPTER 1 INTRODUCTION

1.1 The West Yorkshire Local Transport Plan (LTP) Partner Authorities have produced this Monitoring Appendix to the 2003 / 2004 Annual Progress Report (APR) in order to:

- comply with the emphasis on monitoring set out in the Annual Progress Report guidance without overburdening the main document with detail;
- to provide more detail relating to progress towards LTP targets covered in Chapter 3, Annex A and Annex B of the main APR;
- to provide information on an individual Authority basis where relevant;
- to provide longer term trend information where relevant;
- to outline developments to the monitoring process which will be reported in future Annual Progress Reports.

1.2 In Chapter 2 the detailed monitoring of a representative sample of schemes is reported through Impact Reports which use causal chain diagrams to demonstrate linkages with the LTP objectives.

1.3 Chapter 3 reports in detail the monitoring of the indicators developed to demonstrate the combined effects of the strategy and progress towards the Local Transport Plan and National targets as described in Chapter 3 and Annexes A and B of the main APR document.

1.4 For completeness Annexes A and B are appended to this report together with a summary of progress towards targets as required by the Department for Transport.



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## CHAPTER 2 IMPACT REPORTS

### 2.1 INTRODUCTION

2.1.1 The following Impact Reports describe in detail schemes which were implemented or started in West Yorkshire during 2003 / 2004 and which are listed in Table 2.1.

2.1.2 The report does not contain all LTP schemes but includes a representative sample for which detailed monitoring has been carried out. This monitoring is carried out to demonstrate the effectiveness of a particular measure or group of measures in contributing to the Plan objectives. Such monitoring also provides essential feedback to the Plan programme, allowing successful schemes to be identified.

2.1.3 Each scheme report comprises a causal chain, a description of the scheme and the results from the monitoring of scheme impacts, with a discussion covering the effectiveness of the schemes. The causal chain shows how the scheme supports the wider LTP objectives and how the monitored data measures the effectiveness of the scheme.

2.1.4 Schemes for which Impact Reports have been presented between 1997 and 2002 / 2003 are summarised in Table 2.11.1. These previously reported schemes are presented in a common format, allowing impacts to be clearly identified. This process of detailed examination enables the effectiveness of the measures to be clearly demonstrated and also allows the future Plan strategy and programme to be adjusted towards those types of measure which prove to be most effective. Whenever significant subsequent monitoring is undertaken the scheme will be reported in future years in greater detail.

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***Countywide Schemes***

Use of Safety Cameras Within West Yorkshire - Initial results

***Urban Area Schemes***

Leeds / Liverpool Canal Towpath Improvement - update

Refurbishment of Horsforth Station

School Travel Planning in Ilkley

Wakefield Safe Routes to Schools initiative

Refurbishment of Leeds Travel Centre

Safety and Security at Leeds Bus Station

Pontefract Bus Station Refurbishment

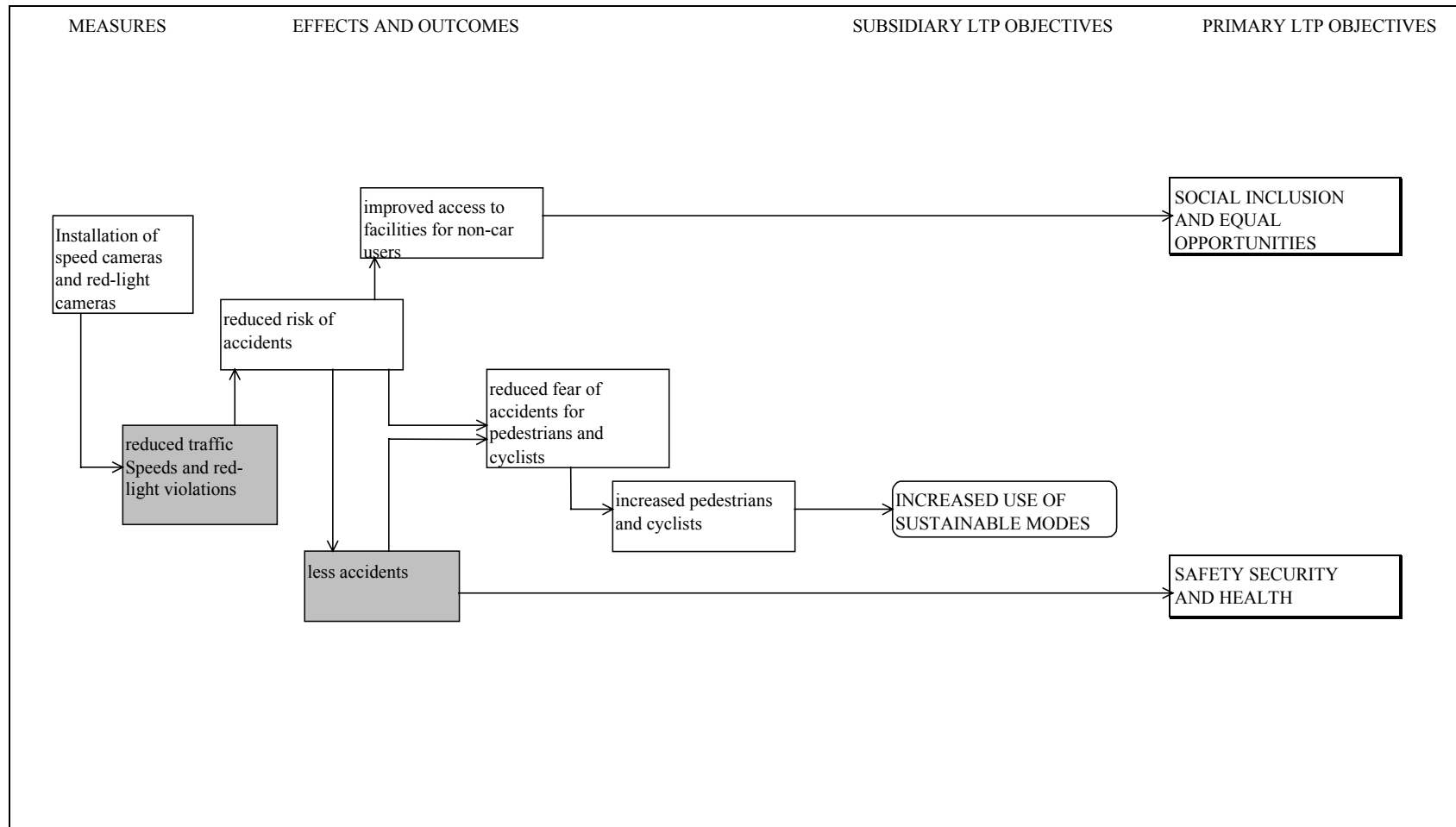
Hebden Bridge District Centre Review - Consultation Phase

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*Table 2.1 Schemes Contained Within the Impact Report*

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**SAFETY CAMERAS WITHIN WEST YORKSHIRE - CAUSAL CHAIN**



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## COUNTYWIDE SCHEME

### 2.2 Installation of Safety Cameras Within West Yorkshire

#### *Objectives*

- to reduce the number of injury accidents caused by exceeding the speed limit;
- to reduce the number of injury accidents caused by going through a red light.

#### *Scheme Description*

2.2.1 Evidence from the Department for Transport (DfT) shows that up to one third of the injury accidents on the roads are caused by excessive speed. Throughout West Yorkshire we are looking to ensure that all motorists drive at the appropriate speed and in particular do not exceed the posted speed limit. In addition it has been shown that there is a direct relationship between speed and the severity of injury (i.e. higher speeds tend to lead to more deaths and serious injuries). Reducing the speed of vehicles will also reduce the severity of the accidents.

2.2.2 An analysis of the injury accident statistics shows that several signal-controlled junctions within West Yorkshire have injury accidents at them caused by drivers deliberately going through a red light.

2.2.3 In order to prevent the casualties from both these types of accidents, safety cameras are being installed at locations that meet the criteria laid down by the DfT.

2.2.4 In 2002 the West Yorkshire Casualty Reduction Partnership officially received notification from the DfT, that they could participate in the national “netting off” scheme. This means that the revenue raised from the safety camera “fines” can be fed back to the partnership to help fund the whole process. Importantly, this means that Police Officers can be allocated to service the cameras and therefore ensure that cameras can be fully utilised.

2.2.5 The full membership of this partnership includes: West Yorkshire Police, Bradford MDC, Calderdale MBC, Kirklees DC, Leeds CC, Wakefield MDC, Yorkshire Health Authority, West Yorkshire Magistrates Court Service and The Highways Agency.

2.2.6 Prior to 2002, there were approximately 60 speed cameras installed within West Yorkshire. During 2002 / 2003, this total was increased by 75 with a further 80 during 2003 / 2004. In addition to this there are already 25 red light violation cameras in operation and during the next 12 months a further 17 will be installed. The West Yorkshire Police will also increase their operation of mobile speed cameras at locations which have been identified as having injury accidents.

### **Monitoring**

2.2.7 After safety cameras have been installed there is a regular monitoring regime to confirm that they do have a positive effect. With all camera installations it is important to ensure that they have contributed to a reduction in the total number of accidents and in particular to the number of incidents resulting in fatal and serious injuries.

2.2.8 It is too early to be statistically certain about the injury accident savings from the installations, but the early evidence is all positive. The total number of road deaths in West Yorkshire has fallen from 144 in 2001 to 102 in 2003, which coincides with increased activity to reduce dangerous road speeds and violation of red lights at junctions. Table 2.2.1 shows casualty reductions achieved at sites for which data are available.

Location	Length	District	Commission	Average/ year 3 years before	2003	% Change
A616 Woodhead Road Huddersfield	Lockwood Scar to Sunny Brow	Kirklees	2001	42	12	-71
A629 Wakefield Road, Huddersfield	Ravensknowle Road to Waterloo Rise	Kirklees	2001	29	6	-79
B6145 Thornton Road, Greenside	Hoyle Ing Rd to Bell Dean Road	Bradford	2003	12	4	-67
A638 Dewsbury Road, Wakefield	M1 to Hirst Rd	Wakefield	2003	11	3	-73
A638 Dewsbury Road, Wakefield	Hirst Rd to Horbury Road	Wakefield	2003	10	1	-90
B6154 Tong Road, Wortley	Carr Crofts to Oldfield Lane	Leeds	2003	14	4	-71
A642 Horbury Road, Wakefield:	M1 to Thornes Lane	Wakefield	2003	7	2	-71
A629 Calderdale Way, Elland	Ainley Top to Elland Bridge	Calderdale	2002	6	2	-67

*Table 2.2.1 Casualty Reduction at West Yorkshire Camera Sites*

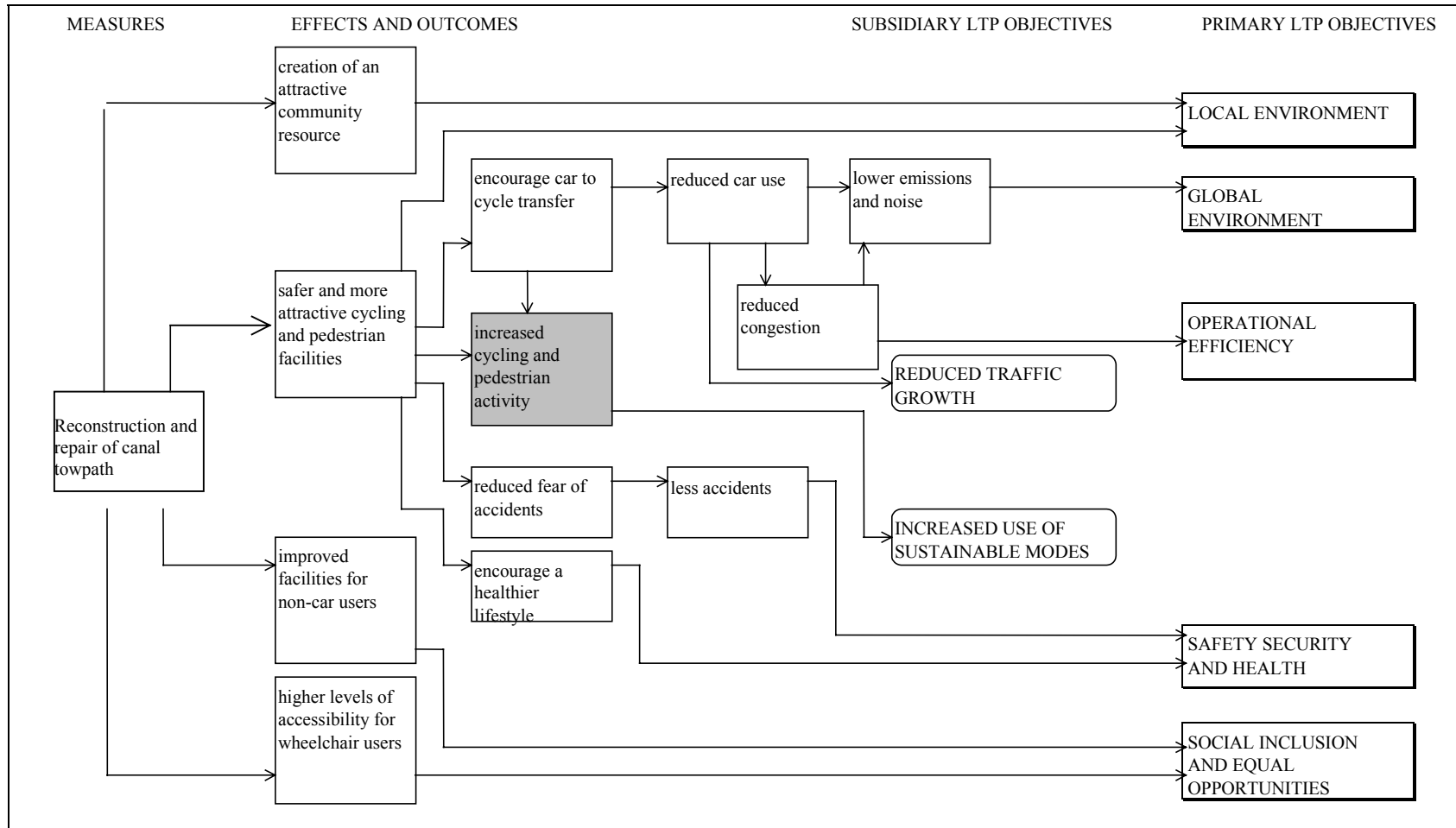
2.2.9 Where speed cameras have been installed the speed of vehicles along the length is also regularly checked. It is too early to give robust information on the speed reductions achieved at these locations but indications are that the number of motorists exceeding the speed limit has drastically reduced.



**Discussion**

2.2.10 The total number of casualties saved should increase as the number of camera housings installed increases over the next few years. In a recently published report the DfT especially commended West Yorkshire for its casualty reduction at sites where speed cameras have been installed. There is certainly a demand from local residents to have cameras installed in their area. Speed cameras should not, however, be seen as the first resort in reducing speed on the roads of West Yorkshire. DfT guidelines make it perfectly clear that all other methods of reducing accidents have to be considered *before* cameras can be installed.

**LEEDS - LIVERPOOL CANAL TOWPATH IMPROVEMENTS - CAUSAL CHAIN**



PRIMARY OBJECTIVE

SUBSIDIARY OBJECTIVE

potential negative effect

data monitored

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## URBAN AREA SCHEME

### 2.3 Leeds and Liverpool Canal Towpath Improvement - update

#### *Objectives*

- to improve access for all to areas of attractive countryside;
- to maximise the canal as a community resource;
- to encourage walking and cycling for recreation and utility purpose.

#### *Scheme Description*

2.3.1 This impact report provides an update on last year's report, including changes in usage within both Leeds and Bradford.

2.3.2 The Leeds and Liverpool canal provides a green corridor link westwards from Leeds City Centre along the route of the river Aire through Leeds and Bradford Metropolitan Districts and ultimately across the Pennines to Lancashire. On its way it passes a series of historical attractions, including Kirkstall Abbey and Saltaire World Heritage Site. Although it passes through major urban areas, much of the route itself is rural in nature with a number of nature conservation areas.

2.3.3 Over its full 127 mile length from Leeds to Liverpool the canal has become a major tourist attraction – the Leeds and Liverpool Canal Society quotes over 12.5 million visitors last year, 10% of the total for all Britain's canals.

2.3.4 In West Yorkshire the canal towpath is continuous, but many sections had become narrow and overgrown. Poor drainage and uneven surfaces contributed to reducing its attractiveness to pedestrians and cyclists.

2.3.5 Parallel roads, notably the A65, A657 and A650, are busy and make unattractive routes for non-car modes. In contrast, the canal has the potential to offer a level, relatively direct, traffic-free route for many journeys that could be made on foot or cycle, as well as providing an excellent day out for leisure activities.

2.3.6 Improvements to the towpath are being implemented in a series of phases:

- Autumn 2001 – removal of barriers and modification of others to remove obstructions to cyclists, pushchairs and wheelchairs;
- March-August 2002 – reconstruction and repair of 22km of towpath from Leeds to Saltaire, including removal of vegetation to ensure a clear minimum width of 1.8m;

- Footpath widening to a minimum 1.8m width together with resurfacing to improve ride quality for cyclists from Saltaire to Bingley (2002/03) and from Bingley towards Silsden (2003/04);
- Resurfacing to improve ride quality between Leeds and Saltaire will be implemented in future years, together with improved signage.

2.3.7 Costs to the end of 2003/04 are £290,000 in Bradford and £216,000 in Leeds.

### **Monitoring**

2.3.8 Counts of towpath usage were carried out in March 2002 at four sites in Leeds. These were repeated in March 2003 together with six further sites in Bradford. Each location was counted between 0730-0930 and 1130-1430 on Wednesdays and between 1100-1400 on Sundays. Each site was counted on one Wednesday and one Sunday. All the Leeds sites were counted on the same days, however, the Bradford surveys were split between three Sundays and three Wednesdays.

2.3.9 The Bradford surveys were repeated in July and Leeds in August 2003 to obtain an indication of summer usage. The Leeds and Bradford sites were re-surveyed in March 2004.

### **Survey Results**

#### Cycling

2.3.10 Tables 2.3.1 and 2.3.2 show the total level of cycling activity recorded at all four Leeds sites and five Bradford sites at each of the surveys carried out to date. (Due to a towpath closure in March 2004 no data was collected at the sixth Bradford site – this site has been excluded from the analysis).

Survey day	Time period	Survey date				% change March to March	
		Mar 02	Mar 03	Aug 03	Mar 04	2002-03	2003-04
Wednesday	0730-0930	34	37	103	82	9%	122%
Wednesday	1130-1400	49	27	133	47	-45%	74%
Sunday	1100-1400	76	351	208	361	362%	3%

*Table 2.3.1 Towpath Cycling Usage (Leeds) – All 4 sites combined 2002-2004*

Survey day	Time period	Survey date				% change March to March	
		Mar 02	Mar 03	Jul 03	Mar 04	2002-03	2003-04
Wednesday	0730-0930	n/a	48	98	46	n/a	-4%
Wednesday	1130-1400	n/a	81	159	54	n/a	-33%
Sunday	1100-1400	n/a	362	557	171	n/a	-53%

*Table 2.3.2 Towpath Cycling Usage (Bradford) – All 5 sites combined 2003-2004*

(Data is not available for one site in March 2004 due to towpath closure –site excluded from analysis)

2.3.11 The observed changes in cycling levels illustrate the difficulties associated with monitoring such a minority activity, although the same problems also apply to the pedestrian monitoring discussed below. Weather effects clearly influence cycling levels and the March 2004 Bradford surveys were affected by poor weather on several days, whereas the March 2003 were not. The 2004 Leeds Sunday survey was also affected by wet weather and was subsequently re-surveyed in April. The second survey recorded 361 cyclists compared with just 68 on the wet day.

2.3.12 In addition to the weather, towpath closures affected the Bradford surveys in both March 2003 and March 2004, albeit at different locations. In both cases the lack of a through route may have affected flows, with cycling probably more likely to be affected than walking due to the greater distances travelled.

2.3.13 The substantial rise in Sunday cycling levels between March 2002 and March 2003 in Leeds has been maintained in the 2004 survey, although this has not been mirrored in Bradford, probably for the reasons mentioned above. Weekday peak period cycling is up in Leeds, although off peak levels have remained broadly at similar levels in all the surveys.

2.3.14 Sunday usage is clearly higher than that during the week, although the differences in volumes between the two Wednesday survey periods is small when compared with pedestrian activity – see below. In Bradford, the summer survey recorded significantly more cycling activity than both the spring surveys with the highest flows per site of all the surveys – an average of around 110 per site.

### Walking

2.3.15 Tables 2.3.3 and 2.3.4 show the total level of pedestrian activity (walkers, anglers, pushchairs and wheelchair users) recorded at the Leeds and Bradford sites during each of the surveys carried out to date. (Due to a towpath closure in March 2004 no data was collected at the sixth Bradford site – this site has been excluded from the analysis).

Survey day	Time period	Survey date				% change March to March	
		Mar 02	Mar 03	Aug 03	Mar 04	2002-03	2003-04
Wednesday	0730-0930	92	70	84	82	-24%	17%
Wednesday	1130-1400	359	305	355	310	-15%	2%
Sunday	1100-1400	520	882	391	818	70%	-7%

*Table 2.3.3 Towpath Pedestrian Usage (Leeds) – All 4 sites combined 2002-2004*

Survey day	Time period	Survey date				% change March to March	
		Mar 02	Mar 03	Jul 03	Mar 04	2002-03	2003-04
Wednesday	0730-0930	n/a	152	153	130	n/a	-14%
Wednesday	1130-1400	n/a	315	548	381	n/a	21%
Sunday	1100-1400	n/a	1589	1270	608	n/a	-62%

*Table 2.3.4 Towpath Pedestrian Usage (Bradford) – All 5 sites combined 2003-2004*

(Data not available for one site in March 2004 due to towpath closure, excluded from analysis)

2.3.16 The variations in pedestrian activity are much less marked than for cycling, although the impacts of poor weather certainly influenced the March 2004 Bradford surveys. In common with the cycling, the repeated Leeds Sunday survey showed substantially more activity on the dry day than the wet – 818 compared with 284.

2.3.17 Weekday pedestrian volumes in both the Leeds and Bradford sections have remained at broadly the same levels at each of the surveys. In Leeds the impact of better weather in the summer has had no apparent influence on activity, although in Bradford the inter peak flows are notably higher.

2.3.18 Sunday pedestrian levels in Leeds show a significant rise between March 2002 and 2003 and this has been sustained in 2004, although the August 2003 survey shows the lowest levels of all. In contrast, Sunday volumes have fallen consistently on the Bradford section from the very high levels of March 2003. A substantial part of this fall is due to changes at Saltaire where activity has fallen from 765 to 208 and has had a disproportionate effect on overall levels. This was almost certainly attributable to wet weather in 2004.

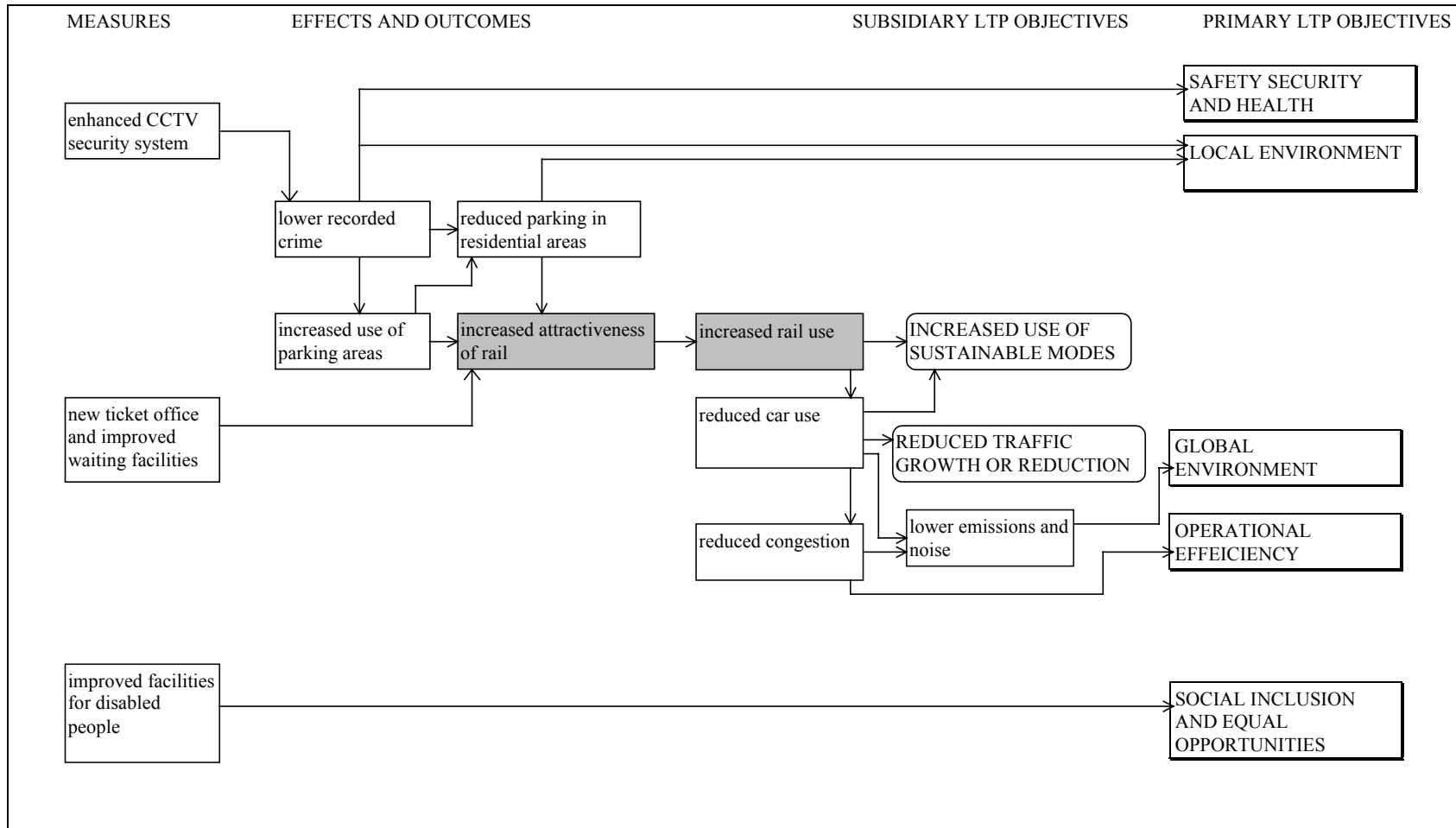
### ***Discussion***

2.3.19 The improvements have been well received by towpath users, judging by comments made to the promoting organisations, Sustrans Rangers - who patrol the towpath on a voluntary capacity - and the contractors carrying out the works. The enhanced quality of the surfacing has in particular been very much appreciated. However, concerns have been raised by some users about speeding cyclists, although no reports of collisions have been received.

2.3.20 The need for an enhanced maintenance regime to accompany the works has been identified and discussions are ongoing with British Waterways to deliver improvements in this area.

2.3.21 It is too early to judge whether the improvements have increased towpath usage. It is clear from the survey results that outside factors such as the weather and towpath closures during the surveys have influenced the levels of both walking and cycling recorded. There are some encouraging signs of increased Sunday usage in the Leeds section, although this has not been reflected elsewhere. It is planned to continue the existing survey programme for the foreseeable future.

**HORSFORTH RAIL STATION IMPROVEMENTS - CAUSAL CHAIN**





## **URBAN AREA SCHEME**

### **2.4 Refurbishment of Horsforth Station**

#### ***Objectives***

- To encourage increased use of the station;
- To provide better information and assistance to passengers;
- To improve passenger and vehicle safety and security;

#### ***Scheme Description***

2.4.1 The main aim of the project was to significantly improve station facilities, with particular focus on the passenger waiting environment, which was very basic. The success and monitoring outcomes of a similar scheme at Menston Station were borne in mind when planning the new facilities at Horsforth. The facilities comprise:

- New waiting rooms on both platforms;
- New ticket office facilities on the Leeds-bound platform;
- To provide the sale of the full range of train tickets and Metro prepaid tickets;
- CCTV surveillance monitored during opening hours from the ticket office and 24 hour recording at other times.

#### ***Monitoring***

2.4.2 Questionnaires were distributed to passengers at the station throughout the day. 196 completed questionnaires were returned equating to a response rate of 39%. The main findings were:

- 54% of respondents use the station 5 – 7 days per week and 29% use the station 2 – 4 days per week;
- 76% of respondents were travelling to work;
- 56% walked to the station and 41% arrived in a car;
- 93% of respondents rated the new waiting facilities as very good or good;
- 31% of respondents said they had increased their use of Horsforth station during the last year and of these 20% had done so because of the improvements to the station;
- Station security was rated good or very good by 39% and adequate by 40%;
- 87% found the ease of obtaining tickets was very good or good;
- The new ticket office is used often by 65% of respondents;

- 27% of people using the train for less than a year had previously made the journey by car;
- The waiting rooms are used often or sometimes by 83% of respondents;
- 61% of respondents found the ease of access to the station either good or very good.

### ***Affected Parties***

2.4.3 The overall positive response to the improvements to the stations was further underlined by a question on the general appearance of the station. 93% of respondents rated the general appearance of the station good or very good. Security was not rated as high at the station as the other improvements possibly because such improvements are not as visible to the general public.

### **Discussion**

2.4.4 The results of the survey work are encouraging, particularly as increased patronage is shown to be directly attributable to the station improvements. This justifies the commitment in the LTP to a rolling programme of improvements to station facilities, including the introduction of staffing and ticket offices where it is justifiable by patronage levels.

### ***Pre-Renovation***



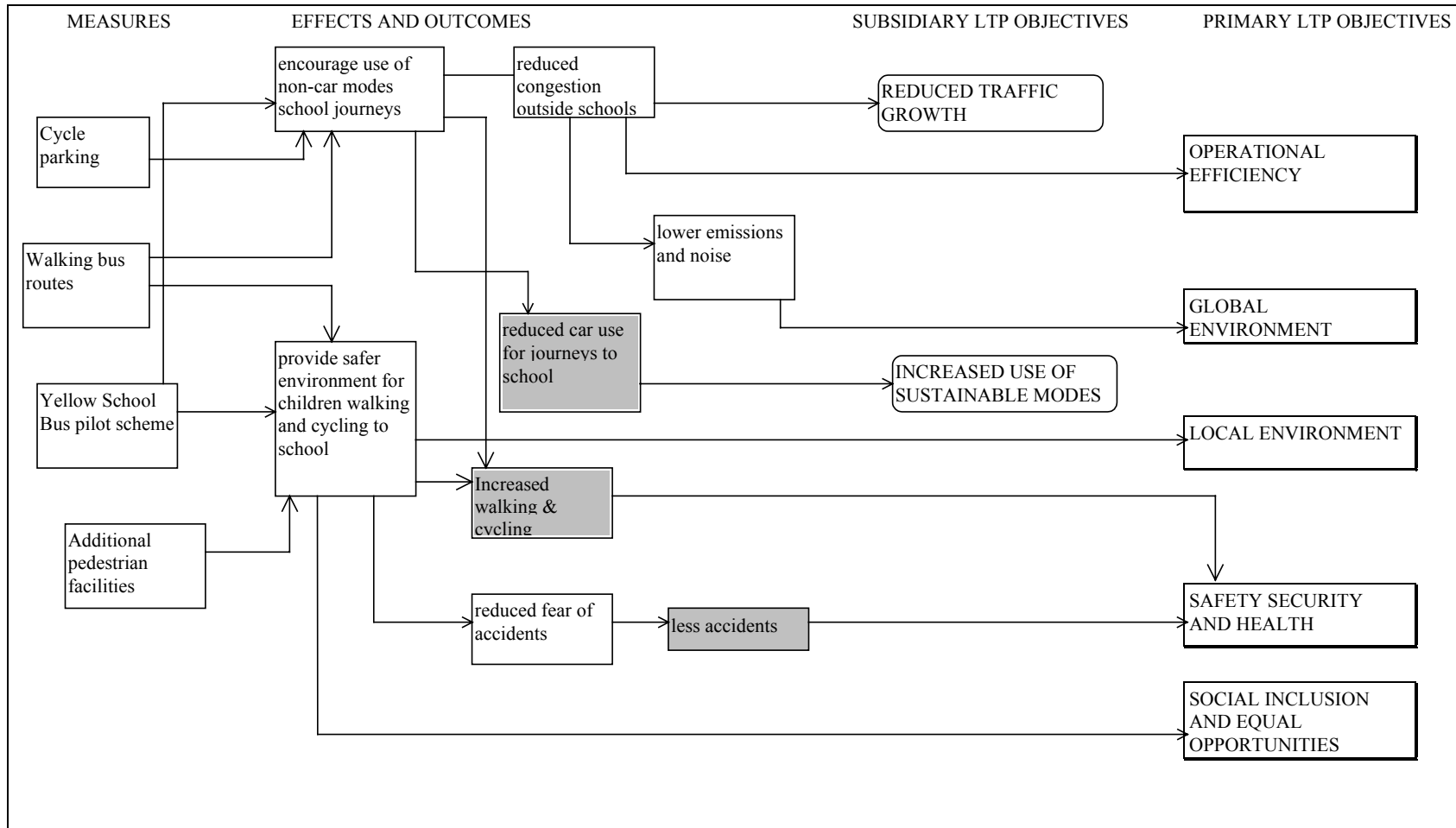
### ***Post-Renovation***



*Figure 2.4.1 Horsforth Rail Station Improvements*

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**SCHOOL TRAVEL PLANNING IN ILKLEY - CAUSAL CHAIN**



PRIMARY OBJECTIVE

SUBSIDIARY OBJECTIVE

potential negative effect

data monitored

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## URBAN AREA SCHEME

### 2.5 School Travel Planning in Ilkley

#### *Objectives*

- to increase the health and fitness of pupils
- to improve pupils awareness of road safety and sustainable transport
- to reduce 'school run' traffic and school gate parking congestion
- to reduce the amount of education staff time spent on non core issues
- to tackle issues of social exclusion
- to reduce car dependency and educate a new generation of road users to be safe walkers, cyclists and public transport users

#### *Scheme Description*

2.5.1 Ilkley is a small town in a rural setting on the fringes of both the Bradford district and the Yorkshire Dales National Park. It is generally an affluent 'middle class' community although it contains pockets of deprivation and socially excluded communities. In common with most schools across the district, and the country, the schools and local community have suffered the many negative effects of the increased use of the car for the journey from home to school. Over the past 3 years considerable time and effort has been spent on delivering the school travel plans written at 3 of the 4 local primary schools developed between 1999 and 2001, as a result of the schools re-organisation process.

2.5.2 School Travel Plan Measures implemented include:

- Pedestrian crossing over the A65 at Ashland's School;
- Toucan Crossing over the A65 at All Saints CE;
- Zebra Crossing and "school zone treatment" to the B6382 at Ben Rhydding School;
- Installation of cycle storage at all three schools (cycling training scheme already in place);
- The replacement of a local bus service with a yellow bus pilot scheme, jointly serving all 4 of the local primary schools;
- 3 walking bus routes (further routes under development);
- Improvements to school layouts to segregate walkers and cyclists, from bus passengers and pupils arriving by car;
- Incorporation of road safety education and sustainable transport into the curriculum.

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2.5.3 Expenditure up to the end of 2003/04 has been approximately £150,000 on safer routes to schools measures, plus some subsidy for the yellow bus and staff time.

### ***Monitoring***

2.5.4 The schools have participated in the annual travel to school survey each October. Qualitative data on the views of yellow bus passengers has been collected along with anecdotal evidence from schools / parents / local residents.

### ***Survey Results***

2.5.5 The hands up surveys show a steady reduction in the modal share of the car at all three of the primary schools across the town. Averaging the results across all three primary schools shows that car use has fallen from a 55% share of journeys in October 2000 to a 33% share in October 2003. Bus use has increased from 3% to 11% thanks to the introduction of the yellow bus, cycling has risen from 0% to 3%, and walking has increased from 45% to 56%. Anecdotal evidence from the school suggest that the walking and cycling levels have continued to rise since the October 2003 survey, with the schools now reporting overflowing bike sheds. At two schools there has been a complete cessation of complaints from residents about parental parking.

2.5.6 Analysis of the Yellow Bus user data shows that 60% are former car users (15% are former bus users) and it has been rated as excellent in all areas by 80% of parents using the scheme. Several other parents who are not on the current bus route have expressed an interest in using a second bus should one be developed.

### ***Discussion***

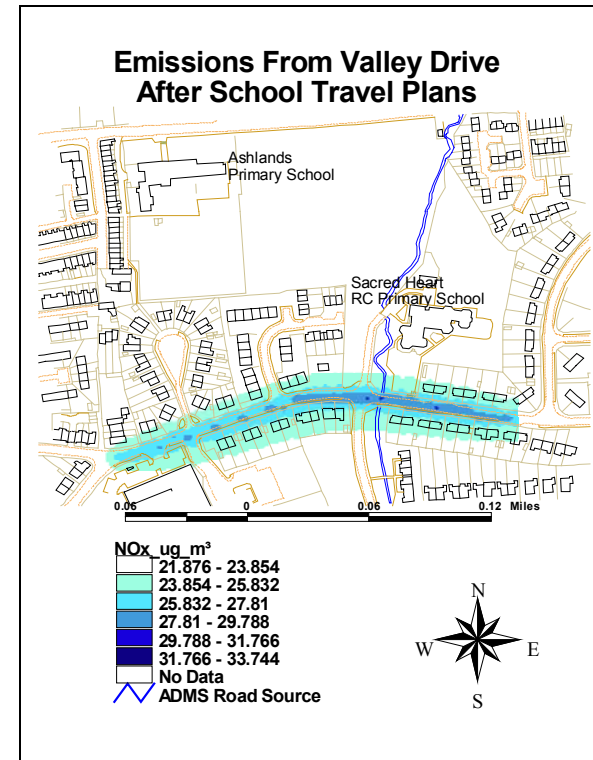
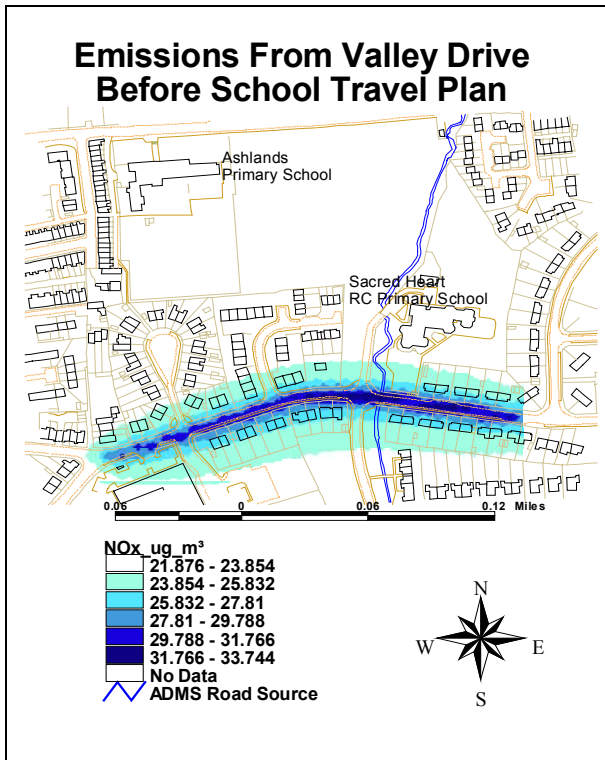
2.5.7 The improvements have been well received by the schools and the townspeople and have attracted considerable media attention (aside from numerous mentions in the local and regional media the schools have also featured in the Guardian, the Independent and ITV's Britain on the Move program). We have also attracted enquiries from school travel planners as far afield as Ghana, New Zealand and Canada.

2.5.8 The key to the success of the project has been for the schools to take ownership of the school run situation by the means of the school travel plan, and for the support of the local authorities partnerships to help the schools achieve steady progress as the various walking / cycling and public transport schemes are delivered.

2.5.9 The schools are now developing their 2<sup>nd</sup> generation school travel plans reflecting the improvements made. Areas identified for further improvements are the walking and cycling networks across the town, extensions to the cycling (and scooter) storage facilities and the feasibility of an additional yellow bus route.



Figure 2.5.1 Photographs of School Travel Initiatives in Ilkley



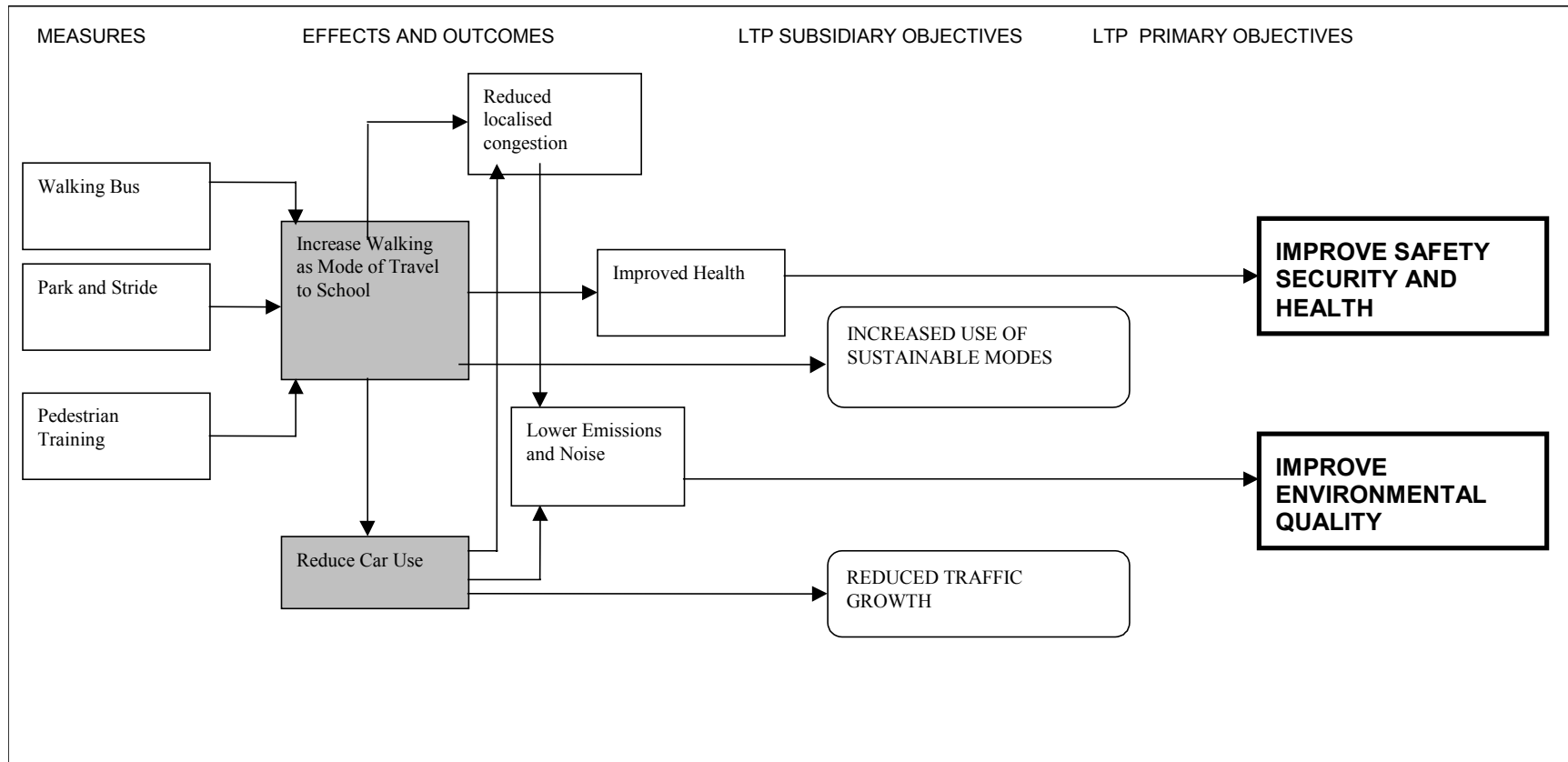
The following assumptions have been made: 550 LDV's in the pre school travel plans 330 LDV's and 2 buses in the post school travel plans All these vehicles are traveling on Valley Drive rather than across the town and LDV's are traveling at 20mph and buses at 15 mph. The background level of NO<sub>2</sub> is given as 21.7ug/m<sup>3</sup> (annual mean 2002 at Grove promenade, Ilkley) the modeling has included 1 years MET data from Leeds weather station for the year 2000.

Figure 2.5.2 Changes in emissions from Valley Drive



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**WAKEFIELD SAFER ROUTES TO SCHOOL PROGRAMME – CAUSAL CHAIN**



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## URBAN AREA SCHEME

### 2.6 Wakefield Safe Route to Schools Initiative

#### ***Objectives***

- To encourage walking as a sustainable form of transport;
- To improve health of school children;
- To reduce morning peak hour congestion problems.

#### ***Background***

2.6.1 Wakefield currently employ a school travel plan adviser. This has helped promote alternative modes of travel to school in a number of schools across the district. Up until 2003 12 schools were actively engaged. Once the additional Department for Education and Science (DfES) bursary becomes available then it is envisaged that this will increase.

#### ***Scheme Description***

Wheldon Infant School - The school has 120 full time and 65 part time pupils.

2.6.2 A Walking Bus Scheme began in September 2001. The main aim was to help to alleviate traffic congestion outside the school and promote a general shift away from car orientated travel. Of particular concern was a small cul-de-sac outside the school where parents dropping off pupils were forced to turn. This caused disruption to local residents as parents regularly parked in resident only parking areas. Additionally, parents clashed with large delivery lorries who also use the area for parking and turning. The combination of measures outlined below was implemented at a cost of £10500.

- Focus group of about 12 people established. The group included; local councillor; local residents; headteacher; class teachers; parents, Wakefield MDC representatives.
- Local shopping centre 'Carlton Lanes' contacted to establish walking bus route along with free parking and drop off area for children.
- High visibility safety barrier erected along walking route through car park area.
- Control box fitted for double pelican crossing along route. This allowed key operated crossing facility so that lights could be controlled and the walking bus could cross quickly in one go.
- Signs designed by children to designate parking areas erected in relevant parking areas.
- Parents issued with parking passes to display on dashboards allowing free morning afternoon and evening parking to correspond with school / nursery

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drop off and collections. British Legion parking attendants briefed on scheme.

- Repair work to drains and pavements along route carried out.
- Footprint trails and 'Stop, Look Listen' mats installed along route.
- Barrier rail installed along sections of route.
- Children issued with fluorescent tabards and baseball caps.
- Publicise the walking / park and striding into school policy so new parents are informed of the scheme prior to their child's entry into the school. All new pupils are provided with a fluorescent tabard free of charge, this is then part of their school uniform. Lost tabards are charged to parents.

Darrington Primary - The school has 120 full time pupils

2.6.3 The scheme, implemented at a cost of £8500, sought to create a park and stride facility from the Spread Eagle public house in the village and allow children to walk up and access the school from Philips Lane. The key elements of the scheme are:

- Permission sought form landlord of public house.
- Resurfacing of Philip's Lane.
- Dog fouling deterrent signage installed.
- Signs designed by children placed along route.
- Cleansing of route by environmental health.
- Footprints installed along route.
- Tabards issued to children.
- Scheme promoted to parents.
- Overhanging foliage removed.
- Walking bus leader employed by the school and trained by WMDC representatives.

### ***Monitoring***

2.6.4 Monitoring of modal shift through annual hands up surveys have produced the following results:

#### *Wheldon Infants*

	2000 (%)	2003 (%)
<b>Walk</b>	<b>59</b>	<b>76</b>
<b>Car</b>	<b>40</b>	<b>22</b>
<b>Other (Bus/Cycle)</b>	<b>1</b>	<b>2</b>

*Darrington Infants and Junior*

	2001 (%)	2003 (%)
Walk	48	74
Car	52	24
Other (Bus/Cycle)	0	2

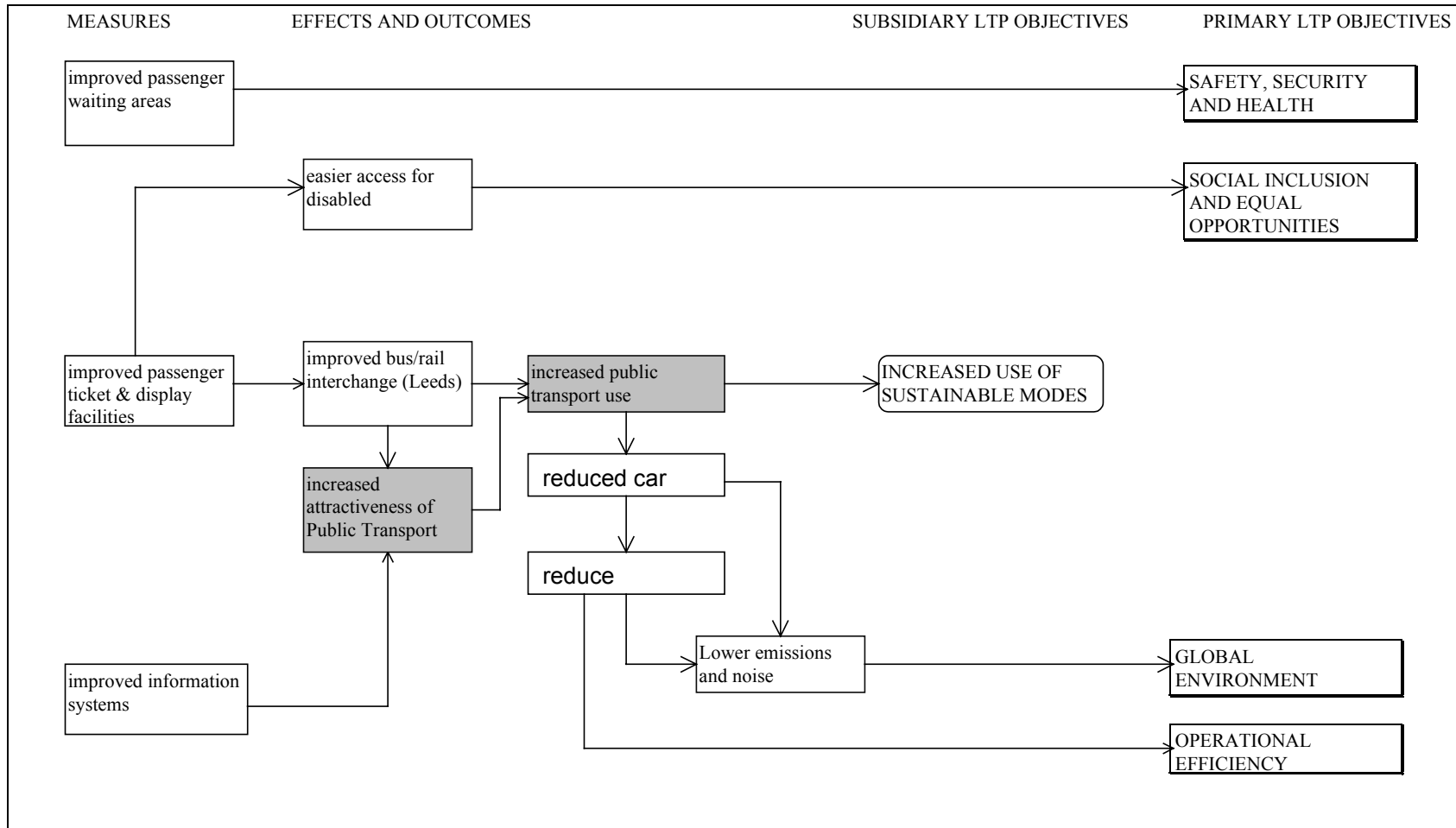
***Discussion***

2.6.5 Both schools have been engaged in promoting alternative means of travel to work for the last 2 to 3 years. The activities outlined above form part of a wider formal travel plan that has been devised by the school with the help of Council Officers. The two schools are strong examples of what can be achieved with promotion and engagement with local school pupils, teachers and parents. These models are already being used in other schools in the district. The recent DfES funding aimed at these initiatives will enable the programme to be consolidated and expanded.

2.6.6 The monitoring results are particularly encouraging with both schools showing a strong modal shift towards walking at the expense of car trips. The low levels of bus and cycle travel are more a result of pupil ages rather than a lack of opportunity in the area. Future schemes, particularly those involving students in the older age groups, will also emphasise cycle and bus travel.

2.6.7 In addition to the obvious modal shift to walking anecdotal evidence relating to congestion outside school areas has been collected. At Weldon Infants School congestion outside the school has been reduced with only 2 or 3 parents opting not to use the scheme. Up to 40 children use the walking bus and many more opt for the park and stride facility. At Darrington up to 60 children use the route as part of an organised walking bus scheme. Others use it independently with or without parents. Traffic congestion has largely been eliminated from outside the school.

**LEEDS TRAVEL CENTRE – CAUSAL CHAIN**



## **URBAN AREA SCHEME**

### **2.7 Refurbishment of Leeds Travel Centre (Central Bus Station)**

#### ***Objectives***

- To improve provision of passenger information;
- To improve efficiency of service offered;
- To improve access for disabled passengers, in particular wheelchair users;
- Increased public transport patronage.

#### ***Scheme Description***

2.7.1 The main aim of the project was the general redesign and improvement of the Travel Centre to provide a more attractive, accessible and efficient facility for both passengers and staff. In addition a survey of facilities from a passenger's perspective identified that wheelchair access to the travel centre was very difficult. This problem was corrected by the refurbishment. The scheme comprises:

- Improved display areas;
- New ergonomically designed serving counter;
- Improved access and Disability Discrimination Act (DDA) compliance;
- Comfort cooling and heating; and
- Better storage of information.

#### ***Monitoring***

2.7.2 Passenger surveys were carried out throughout the day. The main findings were:

- 130 questionnaires were completed;
- 41% of respondents use the travel centre once a month and 18% use the travel centre once a week;
- 65% of respondents use the travel centre for bus information;
- The travel centre is used for purchasing tickets by 38% of respondents;
- 97% of respondents found the timetable displays very good or good;
- The queuing system was rated good or very good by 69% and adequate by 28%;
- 71% of people rated the length of queuing time good or very good and 27% rated it as adequate.



*Figure 2.7.1 Photographs of Leeds Travel Centre since refurbishment*

2.7.3 The public's general perception of the travel centre was also very positive after the refurbishment:

- 99% found the helpfulness of staff was good or very good;
- The availability of leaflets was rated good or very good by 93%;
- 98% of respondents found the accuracy of information very good or good.

### ***Affected Parties***

2.7.4 The overall positive response to the improvements to the travel centre was further underlined by a question on its overall appearance. 99% of respondents rated the overall appearance of the travel centre good or very good.



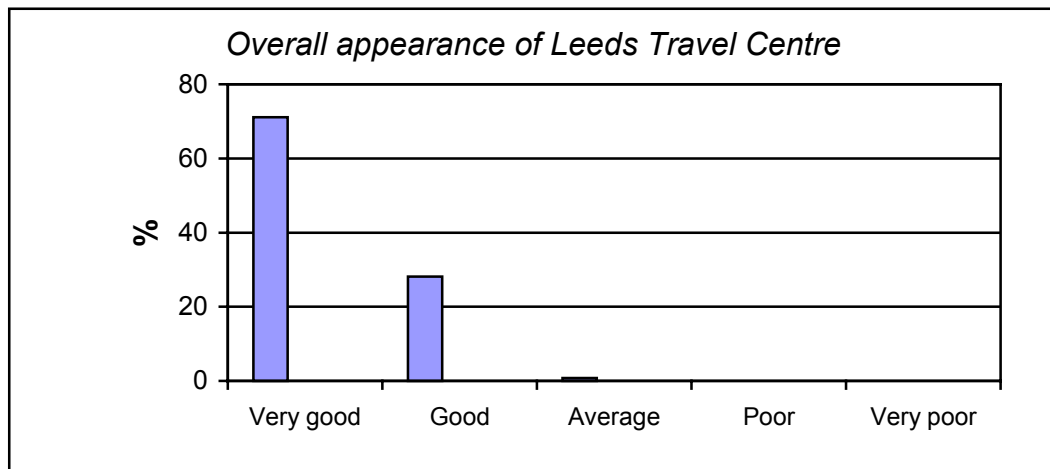
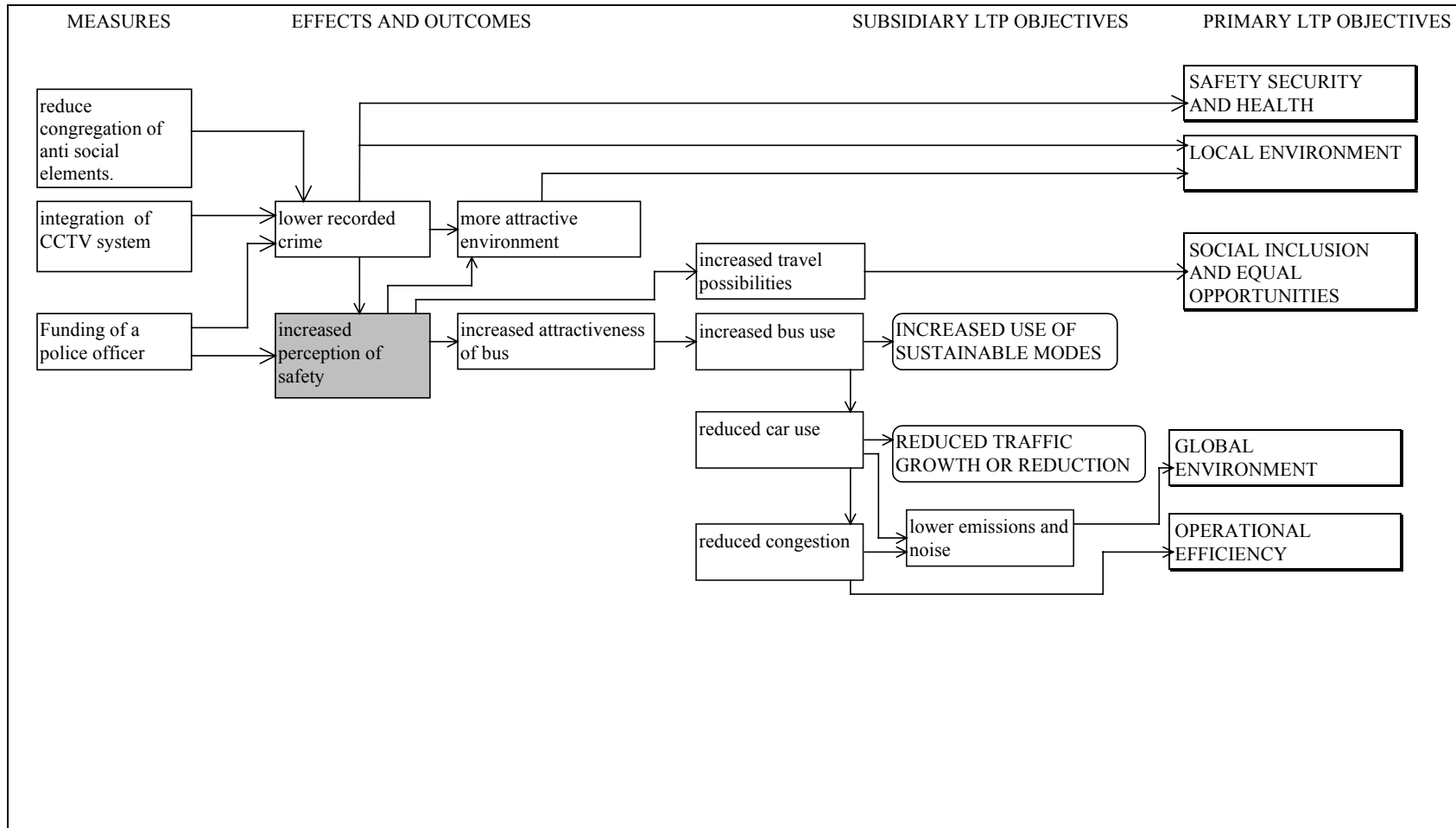


Figure 2.7.2 Responses to the Overall Appearance of Leeds Travel Centre

### **Discussion**

2.7.5 The results of the survey work are encouraging, particularly as the West Yorkshire LTP objectives include, "Improving the quality and availability of alternative modes to the car". The object of this scheme was to improve this provision by making the Travel Centre more attractive, accessible and more efficient to use for both passengers and staff. The results of the survey indicate this objective has been achieved. This justifies the commitment in the LTP to a rolling programme of a variety of improvements to station facilities.

**SAFETY AND SECURITY AT LEEDS BUS STATION - CAUSAL CHAIN**



## URBAN AREA SCHEME

### 2.8 Safety and Security at Leeds Bus Station

#### *Objectives*

- to reduce incidents of anti-social behaviour in Leeds Bus Station
- to raise the passenger perception of safety and security

#### *Scheme description*

2.8.1 A package of measures was developed to tackle the various elements of anti social behaviour, which include, drugs, drunkenness, assaults, crime, threatening behaviour and racism. These measures included:

- Funding of a police officer for 20 hours per week;
- sharing intelligence / information with police on targeting offenders;
- CCTV exchange with local authority CCTV;
- Review of bus station layout to discourage anti-social elements.

2.8.2 In order to increase passengers' perception of safety and security measures plasma screens were introduced at each main entrance. These are large high visibility screens installed at the entrances. They show what is caught on camera in that particular area, thus making the public immediately aware that CCTV surveillance is in operation.

#### *Monitoring*

2.8.3 The package of measures resulted in a substantial reduction in anti-social behaviour during 2003:

- Drugs incidents reduced by 58%;
- Threats / violence to staff reduced by 77%;
- Drunkenness reduced by 60%.

2.8.4 The plasma screens have increased public perception of safety and security. Of those interviewed 70% felt safer since they were installed and 71% felt that they would deter crime and anti-social behaviour. Interviewees were also asked whether the screens were easily visible. The results helped in the most effective siting of the screens.

#### *Affected parties*

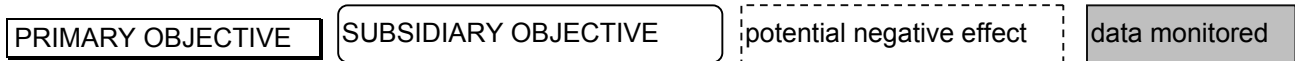
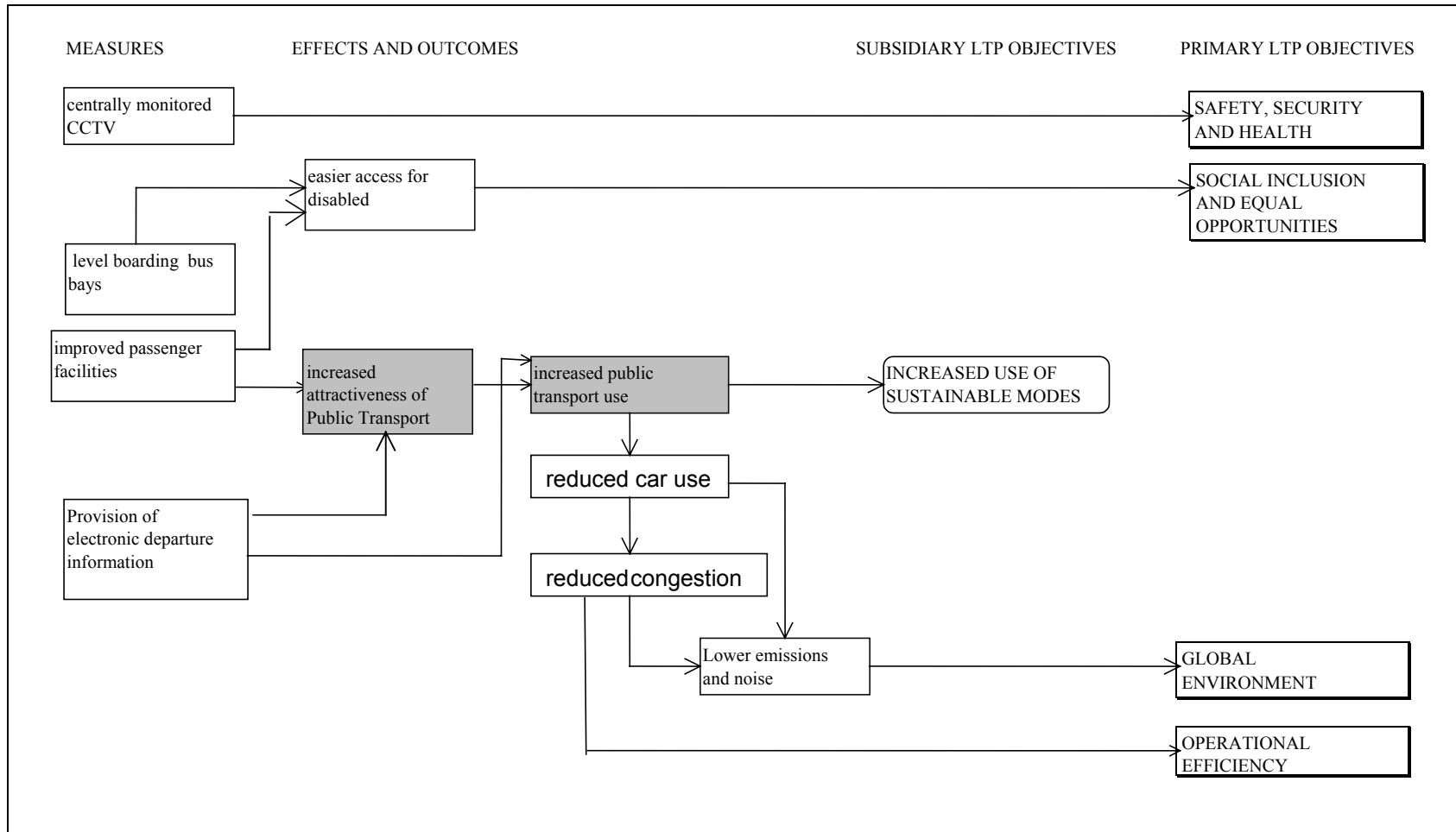
2.8.5 The scheme has been a success in reducing anti-social behaviour as well as helping in targeting criminals and improving perception of safety and security.

#### *Discussion*

2.8.6 Following the success at Leeds similar initiatives are to be taken at other bus stations throughout West Yorkshire.

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**PONTEFRACT BUS STATION – CAUSAL CHAIN**



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## URBAN AREA SCHEME

### 2.9 Refurbishment of Pontefract Bus Station

#### *Objectives*

- To significantly improve the passenger waiting experience and thus encourage increased use of the bus station;
- To provide improved public facilities including: toilets, travel centre and cafeteria;
- To improve passenger security through the provision of centrally monitored 24 hours CCTV;
- To ensure the facility is fully accessible by disabled people;
- To provide better information and assistance to passengers;
- To develop a safe and secure environment.

#### *Scheme Description*

2.9.1 The scheme involved the construction of a high quality bus station, on the same site as the previous outdated facility. Construction works commenced in March 2003 and a public event was held to celebrate the opening of the new facility in January 2004. The scheme comprised:

- Upgrading of all passenger facilities;
- Introduction of level boarding bus bays;
- Provision of electronic departure information;
- New electronic doors;
- CCTV centrally monitored 24 hours a day.

2.9.2 Interviews of bus passengers using the improved facilities were carried out three months after the station's official opening. Responses from 158 passengers were analysed and the main findings were:

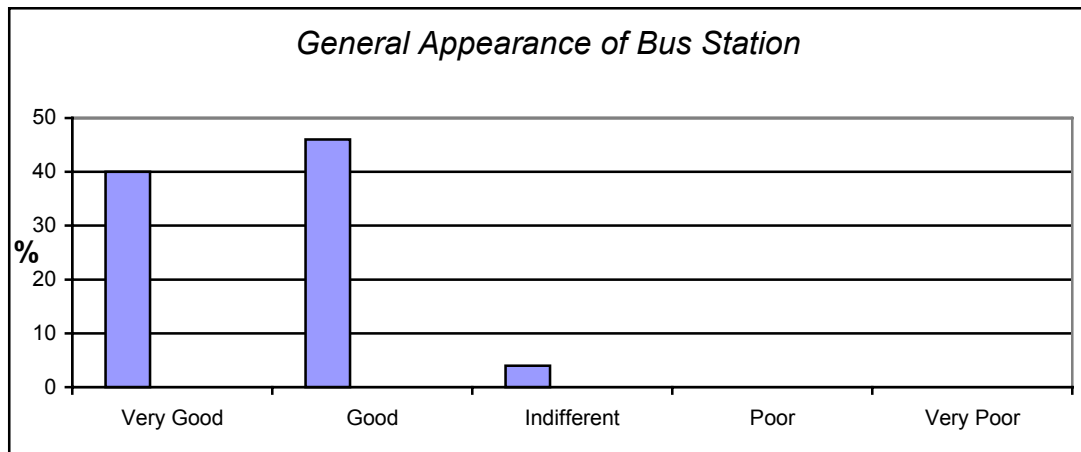
- 42% of interviewed passengers use the station 5 – 7 days per week and 39% use the station 2 – 4 days per week;
- 79% of passengers have been using the bus station for more than 2 years;
- 26% of passengers had access to a car to make their journey.
- 37% of passengers were travelling to work and 36% were going shopping;
- 28% of passengers were aged 16 – 25 and 19% were over the age of 60;
- 74% of passengers arrived at the station by bus and 23% walked.

2.9.3 The responses of users showed a very positive response to the changes:

- The new travel centre is used often or at least sometimes by 98% of interviewed passengers;
- Station security was rated good or very good by 90% of passengers;
- 97% of interviewed passengers found the ease of access to the station either good or very good;
- Passenger information was rated as good or very good by 92% of interviewed passengers:
- The new automatic doors were rated as good or very good by 96% of interviewed passengers;
- 79% of interviewed passengers found the new seats good or very good;
- 93% of interviewed passengers found the ease of boarding buses either good or very good.

### ***Affected Parties***

2.9.4 The overall positive response to the reconstruction of the station was further underlined by a question on the general appearance of the station. 96% of respondents rated the general appearance of the bus station good or very good.



*Figure 2.9.1 Responses to appearance of Pontefract Bus station*

### ***Discussion***

2.9.5 The results of the survey work are encouraging, particularly as increased patronage is shown to be directly attributable to the reconstruction of the bus station. 43% of respondents said they had increased their use of Pontefract Bus Station during the last year and of these 69% said they had done so because of the improvements to the station. This justifies the commitment in the LTP to a rolling programme of reconstruction and improvement of bus stations.



*Figure 2.9.2 Post reconstruction photograph of Pontefract Bus Station*

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## **URBAN AREA SCHEME**

### **2.10 Hebden Bridge District Centre Traffic Review Stage 2**

#### ***Objectives***

- to carry out public consultation on a substantial number of transport measures, amending the existing transport infrastructure of Hebden Bridge district centre;
- to identify the transport measures needed to provide Hebden Bridge with a transport infrastructure that would fulfil its current and future economic, environmental and social needs.

#### ***Background***

2.10.1 Stage 2 of the review commenced in February 2003 managed by a Steering Group through three working parties, all of which comprised members of Calderdale Council, Hebden Royd Town Council and the local business community.

2.10.2 The technical work of Stage 2 was completed in August 2003. From this the Steering Group proposed a wide range of transport measures for public consultation. The extensive public consultation exercise was undertaken in September and October 2003.

#### ***Scheme Description***

2.10.3 At the onset of Stage 2, the purpose of the review was the identification of detailed solutions to traffic issues and problems from a broad strategic point, rather than in a purely traffic management context. The following items were considered to be the significant infrastructure issues that would address the strategic transport requirements of Hebden Bridge:

- Traffic circulation
- Car parking provision
- Public transport

2.10.4 Secondary transport issues of vehicle noise and intrusion, road safety, pedestrian movement etc, were identified and added to the transport framework ensuring that all the proposals 'fitted together' to provide a comprehensive transport infrastructure.

2.10.5 The public consultation process was concerned with obtaining the views of the general public on the proposed transport measures through a consultation leaflet and a public exhibition, which explained the content and effect of the proposed transport measures. Some 9,000 leaflets were made available to the general public which included leaflets being hand delivered to some 3,500

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properties within and adjacent to the review area. The leaflet sought the comments of the general public on the proposed transport measures by asking:

- them to prioritise ten primary transport measures;
- whether they disagreed / agreed with 30 individual transport measures;
- for other comments.

2.10.6 A public exhibition comprised a display of drawings and photographs showing the transport measures to a greater degree of detail and provided a more expansive explanation of them than was possible through the consultation leaflet. Additionally members of the Steering Group, officers of Calderdale Council and representatives from the consultants were available throughout the two weeks of the exhibition to answer questions and explain the proposals to the general public.

### ***Public Consultation Outcome***

2.10.7 Some 850 people attended the exhibition. Having considered the results specific to the public consultation, which included the content of a petition, letters and comments received, the Steering Group concluded that the level of support for the transport proposals was exceptional. Of the 9,000 public consultation leaflets distributed, 823 responses were received, a return percentage of nearly 10%.

2.10.8 All but one of the 30 individual measures received over 60% agreement or strong agreement, many received support from 70%, 80% and even over 90%. The issue of a common charged-for residents parking scheme was supported by only 46% of respondents, but it is thought that the nature of the proposal was not fully explained in the leaflet/questionnaire.

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## ***Discussion***

2.10.9 Prioritising the 10 key measures was a worthwhile exercise that, together with the above indications of agreement, gave the Steering Group and officers a high level of confidence to proceed to the detailed design stage of the review. The prioritisation is shown in Table 2.10.1

<b>Priority Order</b>	<b>Transport Measures</b>
1	(a) Remove all traffic from St. George's Square
2	(c) Prohibit all parking along the A646
3	(b) Remove all traffic except small buses, servicing and cycles from Bridge Gate (St. George's Street to Car Park) and re-surface it
4	(j) Provide additional parking at the Railway Station
5	(i) Improve pedestrian facilities
6	(d) Provide a new long stay car park at Station Road
7	(g) Provide a 20 mph Zone with traffic calming measures
8	(h) Relocate the Open Market onto Lees Yard and St. George's Square
9	(e) Make Albert Street the major traffic route between the A646 and A6033
10	(f) All on-street parking shown on the plan to be charged for except for the first hour which is free

*Table 2.10.1 Prioritisation of Key Measures*

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## 2.11 SCHEMES COVERED IN PREVIOUS ANNUAL PROGRESS REPORTS

Table 2.11.1 summarises those schemes reported in previous Annual Progress Reports which have been completed since 1 January 1997. It shows the contribution of the various schemes to the Plan objectives and illustrates what effect the schemes have had on ten key indicators. The impact of the schemes is measured according to the following notation :

An objective of the scheme	●	
	<b>Measured</b>	<b>Perceived</b>
Significant improvement	✓✓	✓✓
Improvement	✓	✓
Neutral effect (where an objective of the scheme)	○	○
Worsening	×	×
Significant worsening	××	××

	Contribution to LTP Objectives									Scheme Monitoring									Comments						
	Primary					Subsidiary				Cost	Date	Indicators													
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility		
<b>Countywide Schemes</b>																									
Target 1 TravelWise Project		●				●		●	●				9-01												
Monitored CCTV at Bus Stations		●		●	●	●	●					1,600	3-00											Pre-scheme report – monitoring data to be included in subsequent years	
Cycle and Ride Lockers at Rail Stations						●	●	●	●			95					+	+		+	+			£110,000 spent 1996-2000	
Leeds Travel Blending		●		●		●			●			26	2-98				✓	×	×	✓	✓✓			Car use reduced, apparent shift to cycle and train, not bus	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments						
	Primary					Subsidiary					Cost	Date	Indicators												
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility		
Safety Cameras in West Yorkshire	•			•		•	•	•					02/03			✓✓							✓✓		
<b>Leeds Urban Area Schemes</b>																									
Leeds City Centre Loop & Public Transport Box	•			•	•	•	•	•	•			6,400	01			✓	✓✓								
The Methleys Homezone				•	•	•	•		•				01-02						✓✓				✓✓		TRL undertaking monitoring of Homezone pilots for DfT
East Leeds Quality Bus Initiative	•	•		•	•	•		•	•			9,100	11-01												Interim impact report
Leeds 1 <sup>st</sup>	•	•		•	•	•		•	•			165,000	5-02	✓	✓✓		✓✓	✓✓		✓✓		○	✓✓		Interim survey results
Cross Green-Colton Cycle Route				•	•	•	•	•				265	1999						+		+		+		Links to main employment areas and with other regeneration schemes

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
Leeds Liverpool canal Towpath Cycle Route				●	●	●	●	●											+		+		+	
Leeds Category C interchanges		●		●	●	●												✓✓	✓				✓✓	Shaftsbury junction and Armley
Briggate Pedestrianisation	●	●		●	●	●	●	●				951	8-98	+	+	+			++					
A61 Scott Hall Road Guided Busway (Phases 5 and 6)		●		●	●	●		●	●				7-98	✓✓	+		✓	✓	✓		+			
A647 Stanningley Road HOV Lane		●		●	●	●		●	●			585	5-98	✓✓	✓✓		✓	✓✓			+			Journey time savings for HOVs without extra delay for non-HOVs
A61 Scott Hall Road Guided Busway (Phases 1 to 3)		●		●	●	●			●			3,300	6-97	✓✓	+		+	✓✓		++			✓✓	
Burmantofts Street Bus Lane		●		●	●	●		●				884	6-97	++	+	+		+		+				

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports



	Contribution to LTP Objectives									Scheme Monitoring									Comments					
	Primary					Subsidiary				Cost	Date	Indicators												
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
M1-A1 Link Road	●	●		●		●		●				DBFO	2-99	+	+	✓✓	○							Successful at removing extraneous traffic and reducing accidents
Leeds City Centre Controlled Parking Zone Extension		●				●		●	●			200	6-01				○		○	+			+	Reduced long stay commuter parking, increased short stay parking in the zone. Some evidence of relocation of parking
Review of UTMC off-peak plans for City centre loop		●		●									03-02	✓	✓									
<b>Bradford Urban Area Schemes</b>																								
South Bradford QBI – Manchester Road Guided Bus		●		●	●	●		●	●			10,500	1-02											Interim report
Bradford Bus Station		●		●	●	●							2-01					✓✓		✓			✓✓	
Keighley Bus Station		●		●	●	●							2-02					✓✓		✓			✓✓	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
B6154 Thornton Road Bus, Cycle and Pedestrian Measures		●		●	●	●		●	●			1,765	9-98	✓✓	++			✓		+				
Bradford City Centre Pedestrian and Environmental Improvements	●			●	●	●	●	●	●			3,140	1998		✓✓									Traffic reduced by 50%
Manningham Lane Bus and Cycle Priority Measures		●		●	●	●	●	●	●	●		478	7-97	○	+		○			+			+	
Safer Routes to School – Heaton Middle School												27	4-97				xx	○	xx	xx		✓		

**Table 2.11.1 Schemes Reported in Previous Annual Progress Reports**

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
Bierley Traffic Calming				●			●					188	8-00									✓✓		Traffic levels reduced by 12%
<b>South Bradford QBI – Manchester Road Guided Bus</b>	●			●	●	●		●	●			10.5m	01-02											Interim impact report
Traffic Calming - Bradford				●			●					462.2	00									✓✓		5 schemes : West Bowling (2), Thornbury , Tong, Buttershaw
<b>Halifax Urban Area</b>																								
Calder High School 'Bike Train'	●			●	●	●	●	●	●				5-02				✓			✓	✓✓			Pilot Scheme
Yellow School Bus Pilot	●			●	●	●	●	●	●			36	2-02			+	++	++	+	++				Pilot Scheme
Halifax Town Centre Strategy		●		●	●	●	●	●	●	●		2,900	4-01			○	✓✓		✓✓				✓✓	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
Safer Routes to School				●	●		●		●			49	3-01			+	+			✓				Significant proportion of children walking to school – start of a wider roll-out
Halifax Town Centre – Wards End		●		●	●		●			●		801	1-01			+			++		+		++	Improved facilities for pedestrians
Halifax Town Centre – Market Street	●			●	●		●	●				810	12-00	+		+	++		+		+		++	Extraneous traffic removed and new pedestrian facilities provide a better environment
Bull Green Improvement		●		●			●			●		733	1-99	○	○	+		○	++		+		++	Important first phase of the five year town centre strategy needed to establish the “zones and loops” network
A58 Godley Lane Cycle Lanes, Halifax				●	●		●		●			51	5-98								+			Local cycle groups welcome the outcome
A629 Huddersfield Road Improvements		●		●	●		●		●	●		487	3-98	✓✓	+								+	No effect on general traffic speeds

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments						
	Primary					Subsidiary					Cost	Date	Indicators												
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility		
A629/A6026/ B6112 Calder and Hebble Junction Improvements	●			●		●	●		●		●	289	2-98	✓✓	✓✓	✓✓								+	Significant improvement for buses
Ovenden Way – Bus Accessibility Demonstration Access Corridor Phase 2	●			●	●	●	●		●		●	137	11-00			+		+					+	++	Improved accessibility to buses
Halifax Town Centre Automated Bollards	●			●		●	●					163	4-02						++						
King Cross Corridor and Calder Valley	●			●	●	●	●		●		●	53	3-97	✓✓	+										No effect on general traffic journey times

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring										Comments			
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
<b>Heavy Woollen Area Schemes</b>																								
Spenn Valley Greenway				●	●	●	●	●	●			730	3-01						✓✓	+	✓✓		+	Very successful cycle route scheme with strong community support
<b>Huddersfield Urban Area Schemes</b>																								
A629 Wakefield Road Integrated Corridor Improvements, Phases 2	●			●	●	●	●	●	●			1,022	9-99	✓	✓	○		✓✓	+	+	+	○	+	Quality bus partnership. Bus patronage has increased by 2-3%  Continuation of further schemes in this corridor.
A644/A62 Three Nuns Bus and Cycle Priority Scheme	●			●	●	●	●	●	●			214	1-98	✓✓	✓✓								✓	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
A629 Penistone Road Integrated Corridor Improvements	•			•	•	•	•	•	•			40	12-00	✓✓	✓	○		○	○	+	○	✓	+	
Rawthorpe to Lindley Bus Accessibility Measures			•	•	•	•	•	•	•			580								+	○	✓	✓✓	Other stages of the scheme to be completed before further monitoring is carried out
<b>Wakefield Urban Area Schemes</b>																								
Route 110 Announce Project				•	•	•	•						3-01					✓					✓	
A61 Intelligent Road Stud Trial				•								35	99			✓✓								Trial
A61 Demonstration Access Corridor				•	•	•			•			218	5-98	✓	✓	✓		✓		+			✓✓	Positive response to Metro survey of local population.
Sandal and Agbrigg Rail Park and Ride				•			•		•	•		112	5-98					✓✓		+			+	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
Wakefield UTMC System	●					●						172	3-98	✓	✓					✓				
<b>Aire Valley and Wharfedale Schemes</b>																								
Menston Station Refurbishment	●			●	●	●	●	●	●			556	9-99					✓✓	✓✓				+	
Shipley Audible Passenger Information					●				●			5.6	8-99										✓	
Steeton and Silsden Station Improvements	●					●		●	●			209	3-99					✓✓	✓✓					
Ilkley Bus Station Access Improvements	●	●	●	●	●	●		●	●			108	5-98				+	✓✓		+			++	
Shipley Market Square Infopoint	●				●					●		9	3-97					++	++				+	Easier to access information on public transport

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports



	Contribution to LTP Objectives										Scheme Monitoring								Comments						
	Primary					Subsidiary					Cost	Date	Indicators												
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/mode integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility		
<b>Coalfields Area Schemes</b>																									
Hemsworth Cross Hill Transponders	●			●		●		●	●			6	5-99	✓✓	✓✓	✓									Metro and local bus operators support the scheme
Pontefract Market Place Intelligent Bollards	●			●	●	●	●	●				100	10-98			✓	✓								
Pontefract Town Centre Improvements	●		●	●	●		●	●				100	9-98			✓✓			✓					++	Significant reduction in ped/vehicle accidents since introduction
Hemsworth Bus Station Access Improvements			●	●	●		●		●			50	4-98				+	✓✓		+				++	Significantly improves bus operations through key junctions in Hemsworth.
<b>Rural Area Schemes</b>																									
Rural Bus Services 903 & 923		●		●	●	●		●	●				12-99		✓				✓✓					✓✓	

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

	Contribution to LTP Objectives										Scheme Monitoring								Comments					
	Primary					Subsidiary					Cost	Date	Indicators											
	Sustainable economic growth	Operational efficiency	Maintain infrastructure	Safety, security and health	Social inclusion and equal opportunities	Global environment	Local environment	Reduced traffic growth or reduction	Modal shift from car	Rail/waterway freight	Policy/node integration	£000	Scheme completion	Improved bus journey times	Improved bus reliability	Accident reduction	Reduced car use	Increased PT use	Increased pedestrian activity	Encourage modal shift away from car	Increased cycle use	Reduced traffic speeds	Improved accessibility	
Denby Dale Integrated Transport Initiative	●			●	●	●		●	●			366	7-99				✓	✓✓		✓			✓	
Micklefield Rail Park and Ride	●			●	●	●	●	●	●		●	149	6-98					✓✓		+			+	
Sowerby Bridge Rail Park and Ride	●			●	●	●	●	●	●		●	142	6-98					✓		+	+		+	
<b>Carriageway Maintenance Schemes</b>																								
A62 Leeds Road, Huddersfield. Thistle St – Whitacre St	●	●	●	●	●	●		●	●			1,500		+	+	+		+	+		✓✓		+	
A647 Bradford Road, Leeds. Dawsons Corner to Galloway Lane	●	●	●	●	●	●		●	●			960	9-01											
A638 Bradford Road, Cleckheaton		●										1,530	2000											
A629 Keighley Road, Halifax		●																						

Table 2.11.1 Schemes Reported in Previous Annual Progress Reports

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## CHAPTER 3 BASELINE DATA AND TRENDS BY INDICATOR

### 3.1 Introduction

3.1.1 In the main APR document, Chapter 3 'Targets and Progress' and Annexes A and B describe progress towards local and national targets. This chapter provides detailed information on the 51 background and key indicators which have been identified to effectively monitor both LTP and associated national and local strategies. Note that not all indicators have associated targets; background indicators are used to inform the overall performance of the LTP strategy whereas key indicators relate directly to LTP or national targets. These indicators are summarised in Table 3.1

3.1.2 Where relevant the appropriate Best Value Performance Indicators (BVPI) are included. Progress is also reported, where applicable, against the Department for Transport's (DfT) Core Indicators.

3.1.3 Data is obtained from a variety of published sources, national databases or specifically developed data collection exercises.

3.1.4 The indicators used are subject to continuing review and revision. Areas for future development include :

- Indicators for monitoring traffic noise and measures taken to mitigate this
- Development of journey time and congestion data based on data from GPS systems
- Development of accessibility indicators.

3.1.5 The remainder of this chapter is structured around indicators developed to monitor the 7 strategy objectives of the Local Transport Plan with a final section devoted to monitoring subsidiary objectives.

LTP Ref.	LTP Objective	Key Indicator or Background Trend Indicator	LTP Target (see Chapter 3, APR)	Link to national target , core indicator or shared priority
Ec 1	To provide opportunities for fostering a strong, competitive economy and sustainable economic growth	A1 Unemployment A2 Local trade levels/ vacant premises A3 Rental values A4 Pedestrian activity		
Ec 2	To improve operational efficiency within the transport system	B1 Journey times by car and bus B2 Generalised costs B3 Travel distance to work B4 Cost per passenger of subsidised bus services		
Ec 3	To maintain the transport infrastructure to standards which allow the safe and efficient movement of people and goods.	C1 Maintenance management performance indicators <b>C2 Road maintenance programmes</b> C3 Local indicators and benchmarks C3a Repairs to dangerous defects C4 Bridge assessments completed C5 Bridges strengthened C6a Bridge inspections completed C6b Bridges with temporary weight or width restrictions C6c Highway structures requiring essential and preventative maintenance	L17	DfT core

LTP Ref.	LTP Objective	Key Indicator or Background Trend Indicator	LTP Target (see Chapter 3, APR)	Link to national target or core indicator-
So 1	To improve safety, security and health, in particular to reduce the number and severity of road casualties.	<p><b>D1 Road user casualty trends</b></p> <p><b>D2 Casualty trends for different user groups</b></p> <p><b>D3 Casualty trends for children</b></p> <p>D4 Town centre car park spaces with CCTV</p> <p>D5 CCTV cameras at rail station car parks</p> <p>D6 CCTV cameras at bus stations</p> <p>D7 Car park spaces with secured car park awards</p> <p>D8 Town &amp; city centre streets covered by CCTV</p>	<p>L11, L13</p> <p>L7, L9</p> <p>L12</p>	<p>N3,DfT Core</p> <p>N3,DfT Core</p> <p>N3,DfT Core</p>
So 2	To promote social inclusion and equal opportunities for access to transport	<p>E1 AccessBus patronage</p> <p>E2 Accessibility of bus fleets</p> <p>E3 Accessibility of rail stations</p> <p>E4 Accessibility of bus stations</p> <p>E5 Accessibility of bus stops</p> <p>E6 Provision at controlled pedestrian crossings</p>		<p>BVPI 165</p>
Ev 1	To improve environmental quality and reduce the impacts of transport on air quality and noise	<p><b>F1 Air quality monitoring in town</b></p> <p>F2 Noise mapping and city centres</p> <p>F3 Use of low noise road surfacing</p>	L10	N4

LTP Ref.	LTP Objective	Key Indicator or Background Trend Indicator	LTP Target (see Chapter 3, APR)	Link to national target or core indicator
Ev 2	To reduce the contribution of transport to overall greenhouse gas emissions	<b>G1 Daily traffic flow</b> <b>G4 CO2 emissions</b>	L1 L10	N1
Sb 1	To reduce the general rate of growth in road traffic	<b>H1 Town centre traffic flows</b>	L2, L3	N1
Sb 2	Encourage a greater proportion of journeys to be made by alternatives to the private car.	<b>I1 Modal split</b> I3 All day commuter parking supply and cost <b>I4 Cycle monitoring</b> <b>I6 Local bus services – passengers and vehicle kms.</b> <b>I6a Rail patronage</b> I7 % users satisfied with PT information I8 % users satisfied with local bus services I9 % users satisfied with local rail services <b>I10 % rural h'holds within 800m of an hourly or better bus service</b> I11 Age of Bus Fleet <b>I12 Bus punctuality</b> <b>I13 Bus reliability</b> I14 Travel to school I15 Travel to work	L6,L8  L6 L4  L5    L16  L14 L14	N5  N5, DfT core  BVPI 103 BVPI 104  DfT Core

Note : Key Indicators with LTP targets are shown in Bold Italics

*Table 3.1. Key and Background Indicators, Local Transport Plan and National Targets*

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## 3.2 REGENERATION AND SUSTAINABLE ECONOMIC GROWTH

### ***Primary Objective***

To provide opportunities for fostering a strong, competitive economy and sustainable economic growth.

### ***Summary of Key Trends***

- The background indicators demonstrate a continued improvement to the vitality and viability of centres in West Yorkshire;
- Generally unemployment continues to decrease and closely follows the national trend;
- Overall retail trading space has gradually increased in most districts during the life of the plan with vacant units decreasing in some centres;
- Generally rental values have shown an increase for industrial, shop and office premises in all districts to reflect the market.
- District centres continue to indicate a high level of pedestrian activity indicating a positive response to initiatives and improvement schemes carried out since the commencement of the plan.

### ***Role of Transport***

3.2.1 The revised Regional Economic Strategy (RES) for Yorkshire and the Humber sets out the economic objectives for the region and it is recognised that transport issues have a direct effect on competitiveness and the economic well being of the area. An efficient transport system with high quality facilities is vital. Providing appropriate access links to district centres, workplaces, retail centres, local communities and the other amenities in the region will have an affect on business success. However, there must be a commitment to minimise the negative aspects of transport investment to ensure sustainable development and quality of life.

3.2.2 Investment in local transport infrastructure can be an initial stimulus to regional economic development. Opening up market and employment opportunities benefits third parties such as local businesses and workers and infrastructure changes affect the cost of travel and so influence supplier and consumer behaviour. Continued improvement to local access, together with environmental enhancements to the district centres, is reflected in the indicators for vitality, regeneration and economic growth that can be monitored consistently at a local level across five metropolitan districts.

3.2.3 The impact of transport policies can be linked with changes in the indicators, and districts will continue to identify key areas for analysis, enabling the contribution of transport investment to regeneration and economic growth to be assessed with confidence during future years.

### Background Indicator A1: Claimant Count and Unemployment Rates

3.2.4 Release of the 2001 census data provides information pertinent to both the context of transport planning and its impact. Thus far, the data is only available at district level and does not include the “workplace” statistics. Even so, it enables a better appreciation of the local area, more so than a simple measure of unemployment year on year can provide.

3.2.5 Recent trends in unemployment at national level, regional level and for the individual centres in West Yorkshire are indicated in Table 3.2.1. The figures show the rates calculated as proportion of estimated resident population of working age. This differs from rates in previous submissions, which were based on workforce estimates, that is those residents who were economically active. The change has been made as a result of a change in the way Government is calculating and releasing the figures.

3.2.6 The figures show a continuation of the downtrend in unemployment rates in all districts although Bradford is still higher than the national and regional rates.

Area	Unemployment Rate %								
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Great Britain	6.2	4.8	3.9	3.7	3.3	2.8	2.7	2.7	2.5
Yorkshire and the Humber*	6.7	5.4	4.6	4.4	3.9	3.4	3.1	3.0	2.7
Bradford	7.0	5.8	4.9	4.9	4.6	4.1	4.0	3.9	3.3
Calderdale	5.7	4.9	4.0	4.1	3.7	3.3	3.1	3.0	2.5
Kirklees	5.7	4.4	3.7	3.8	3.3	2.8	2.6	2.6	2.2
Leeds	6.4	5.1	4.3	4.0	3.6	3.1	2.9	3.0	2.6
Wakefield	6.3	5.1	4.3	4.2	3.5	3.1	2.8	2.7	2.3

*Table 3.2.1 Unemployment rates calculated as proportion of estimated resident population of working age. March figures*

\* West Yorkshire replaced with Yorkshire and the Humber



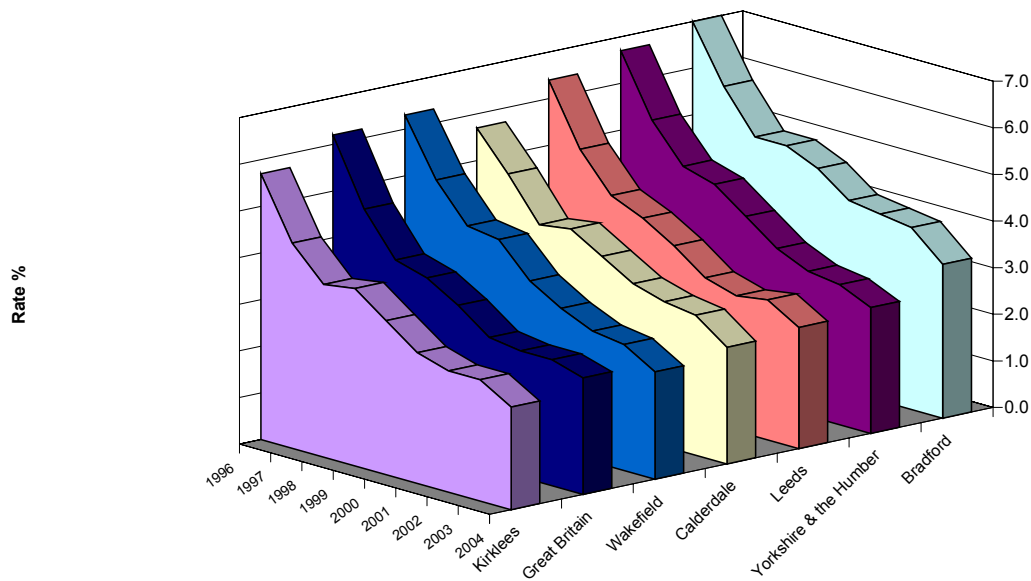


Figure 3.2.1 Claimants as a proportion of residents of working age

Source: ONS Crown Copyright

### **Desired Movement**

3.2.7 Transport has a role to play in influencing business to locate in West Yorkshire and improving people's access to jobs and amenities. Transport investment will broaden the access of employers to available labour markets and a successful and sustainable transport policy promoting confidence will continue to contribute towards falling unemployment levels.

### **Future Requirements**

3.2.8 Continue monitoring of economic activity and working patterns in West Yorkshire.

### **Background Indicator A2: Local Trade Levels / Vacant Premises**

3.2.9 Viability is a measure of the capacity to attract ongoing investment, for maintenance and improvement and to respond to changing needs. The response of owners and tenants to changing demands and sustaining the vitality and viability of shopping areas depends on flexibility in the use of retail floor space. Increased provision of retail space is important to encourage new businesses into the area and allow existing businesses to expand. The result of both is to create a multiplier effect on spending/income/investment. Overall it is a sign of investor confidence and the transport system needs to meet the expectations and needs of the retailers, suppliers and customers.

3.2.10 Retailer's interest in locating in the area is a valuable indicator of viability and vacancy levels, particularly vacancy in prime retail areas, provides an effective insight into the performance of the cities and towns of West Yorkshire. Table 3.2.2 shows

the latest data on the availability and occupancy of retail floor space in the main centres. The vacancy rate indicator is most useful as a ratio, particularly in view of the increase in provision.

District	Year	Floor space		Vacant Floor		Vacant Units	
		000m <sup>2</sup>	No.	000m <sup>2</sup>	%	No.	%
Bradford	1996	106	537	15	14	116	21.6
	1997	104	592	6	6.0	100	16.9
	2000	Na	Na	Na	Na	Na	Na
	2001	131	515	14	11	108	21
	2002	Na	Na	Na	Na	Na	Na
	2003	112	499	19	17	116	23
Halifax	1994	49	472	4	7.7	52	11.0
	1998	51	497	6	11.0	80	16.1
	2000	55	510	9	11.7	38	7.5
	2002*	59	629	5	8.4	81	12.8
	2002*	96	821	10	10.4	104	12.7
	2003	Na	Na	Na	Na	Na	Na
Huddersfield	1996	89	750	7	7.5	118	15.7
	2000	80	705	16	19.5	94	13.3
	2002	87	739	11	12.8	117	15.8
	2003	83	732	6	7.5	90	12.3
	2004	82	730	6	7.0	74	10.5
Dewsbury	1997	41	369	5	12.6	83	22.4
	2000	40	354	4	10.9	68	19.2
	2002	46	351	5	11.6	70	20.0
	2003	44	345	4	9.5	55	15.9
Leeds	1996	164	973	15.8	9.6	157	16.1
	2000	180	956	15.8	8.8	125	13.0
	2001	180	950	19.8	11.0	129	13.6
	2002	201	1006	22.8	11.4	148	14.7
	2003	Na	Na	Na	Na	Na	Na
Wakefield	1996	66	705	5	7.3	43	6.2
	2000	75	574	9	12.6	51	8.9
	2002	72	556	6	7.7	32	5.7
	2004	72	555	4	5.1	23	4.1

**Table 3.2.2: Availability and Occupancy of Retail Floor Area**

\* Halifax town centre was redefined in 2002. The figures shown set out the corresponding results for the new area. Measurements will be carried out in Autumn 2004

Note: No inference can be drawn from a comparison of the absolute figures since each centre has been defined according to local circumstances.

Rounding of figures to the nearest thousand square metres does not accurately indicate small changes in trends ie vacant floor space in Huddersfield was 6400 m<sup>2</sup> in 2003 and is now 5700 m<sup>2</sup>.

### ***Desired Movement***

3.2.11 An increase in the provision of retail trading space and a decrease in vacancy rates for floor space and units as local trade improves.

### ***Future Requirements***

3.2.12 Key areas such as diversity of use and retailer demand for premises need to be examined and analysed regularly in future years. The data on availability and occupancy of retail floor space will continue to be presented on an annual basis.

### **Background Indicator A3: Retail / Rateable Values**

3.2.13 The rental values of commercial premises in district centres can be taken as a measure of the marketability of the property and provide an indication of retailer desire to locate within an area. The data presented in Tables 3.2.3 to 3.2.5 is extracted from Valuation Office Property Market Report's (VOPMR), a national publication which collates rental values of commercial property in major towns and cities throughout the country. The main centres in West Yorkshire are included and comprehensive district centre audits provide rents and yields both from the VOPMR and from private sector specialist businesses

Location	Rental Values £/m <sup>2</sup>														
	Type 1 25 - 75m <sup>2</sup>			Type 2 150 – 200m <sup>2</sup>			Type 3 Circa 500m <sup>2</sup>			Type 4 Circa 1000m <sup>2</sup>			Type 5 Multi Storey		
	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03
Bradford	65	66	65	46	47	47	43	47	47	40	41	41	24		
Halifax		50	60		45	53		40	45		35	35		15	15
Huddersfield	53	55	60	48	53	55	40	43	48	33	40	40	15	20	20
Leeds	58	60	65	51	55	65	52	50	50	43	45	48	25	27	
Wakefield		48	58		40	58		38	48		33	47			

**Table 3.2.3: Rental Values for Industrial Premises**

*Note: Property types as defined in Valuation Office Property Market Report*

Location	Rental Values £/m <sup>2</sup>								
	Type 1 ZPI			Type 2 ZPI			Type 3 GIA		
	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03
Bradford	915	1,250	1,300	425	750	750	92	95	135
Halifax		750	800		400	400		100	150
Huddersfield	800	750	825	420	400	400	80	100	225
Leeds	1,450	2,500	2,400	400	550	600	85	200	260
Wakefield		850	(850)		460	(500)		88	(135)

*Table 3.2.4: Rental Values for Shops*

*Note: Property types as defined in Valuation Office Property Market Report  
(values indicated in brackets are from 2002 VOPMR)*

Location	Rental Values £/m <sup>2</sup>								
	Type 1			Type 2			Type 3		
	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03	Oct 96	Oct 00	Oct 03
Bradford	113	113	120		113	120	80	80	80
Halifax		70	90		65	85		70	70
Huddersfield	118	110	110	90	100	100	70	70	70
Leeds	180	200	220	180	190	220	140	140	160
Wakefield		70	125		90	145		70	100

*Table 3.2.5: Rental Values for Offices*

*Note: Property types as defined in Valuation Office Property Market Report*

### **Desired Movement**

3.2.14 Increasing rental values indicates an improving economic environment in district centres.

### **Future Requirements**

3.2.15 Information on this indicator will be gathered from the VOPMR and will continue to be reported in future years against the base values for 1996 and 2000.

### **Background Indicator A4: Pedestrian Activity**

3.2.16 In shopping areas, the level of pedestrian activity gives a good indication of the health of the retail sector of the economy. The methodology of pedestrian surveys undertaken varies from centre to centre. By repeating surveys at the same sites and on the same days of the week, the results can be converted to a single figure for each centre which can be compared year on year with the base figure.

3.2.17 Table 3.2.6 shows the change in the latest repeat survey compared with the levels of activity in the base year and the commencement of the plan.

Centre	Date	Flow	Index
Bradford	Nov-95	141,876	100.0
	Nov-99	591,119(***)	100.0(***)
	Nov-2000	567,114	95.9
	Nov-2001	568,980	96.3
	Nov-2002	513,265	86.8
	Nov-2003	520,462	88.0
Halifax	Sep-96	845,900	100.0
	Sept-2001	1,305,774	154.4
	Sept-2002	1,163,323 (**)	137.5 (**)
	Sept-2003	1,324,692	163.9
Huddersfield	Apr-96	72,920	100.0
	May-2000	62,064 (**)	85.1 (**)
	Apr-2003	86,867	117.3
	Apr-2004	81,691	110.3
Dewsbury	Oct -98	72,442	100.0
	Oct-2000	61,430	84.8
	Oct-2002	63,436	88.9
	Oct-2003	61,208	85.8
Leeds	Nov-96	627,500	100.0
	May / June-2000	505,100 (*)	100.0 (*)
	May / June-2002	513,900 (*)	101.7 (*)
	May / June-2003	512,724	101.5
Wakefield	May-98	909,300	100.0
	May-2002	339,842	100.0 (****)
	April-2003	321,638	94.6
	March-2004	311,048	91.5

Table 3.2.6 Pedestrian Activity In Centres

Notes on Table 3.2.6 : No comparison can be made between centres since different numbers of sites and numbers of counts were used.

(\*) The methodology of the counts in Leeds changed from May / June 2000,

(\*\*) Town centre works in Halifax and Huddersfield contributed to the temporary decline in footfall,

(\*\*\*) The Bradford figures have been rebased to November 1999. Prior to this the data came from the University student survey at less sites using less robust methodology.

(\*\*\*\*) The methodology of counts in Wakefield has changed from May 2002. The revised figures will provide the baseline for future years.

***Desired Movement***

3.2.18 Increased pedestrian activity in shopping areas would indicate a strong economy and assist in the retention and development of strong centres.

***Future Requirements***

3.2.19 Pedestrian activity will continue to be monitored and will be presented on an annual basis.

***Commentary***

3.2.20 Although no single indicator can effectively measure how well centres are performing in terms of their attraction, accessibility and amenity, a selection of indicators can provide a view of performance and offer a means of assessing vitality and viability. Using a broad-based audit process, we can identify strengths and weaknesses of the town centres.

3.2.21 The unemployment rate in West Yorkshire in March 2004 has again decreased over the year 2003/04 continuing the downward trend experienced since 1996 closely following the national and regional trends.

3.2.22 The availability and occupancy indicators of retail floor area may fluctuate and be temporarily affected by uncertainty over local redevelopment and regeneration proposals. This is always likely to be the case in each centre from year to year.

3.2.23 An increase in the level of pedestrian activity in district centres indicates a positive response to improvements. Recent amendments in the monitoring frequency and procedures to establish more reliable methodology means the underlying trends in some centres will not become apparent until repeat counts have been carried out over a number of years.

3.2.24 It is considered that the local performance indicators associated with the trend monitoring in this report are related to transport issues. As part of the town centre re-definition, the baseline audit for Halifax town centre was completed in November 2002 and the information is proving vital in underpinning strategic decisions about the continued development of the centre. A wider range of local indicators will emerge which reflect the impact of measures funded through the local transport plan expenditure as more comprehensive town centre audits are developed in the future.

### 3.3 OPERATIONAL EFFICIENCY

#### **Primary Objective**

To improve operational efficiency within the transport system.

#### **Role of Transport**

3.3.1 The provision of efficient and reliable public transport, particularly on radial routes and between centres, is seen as important in maximising network efficiency.

#### **Summary of Key Trends**

- The 5 year programme of journey time surveys has been completed in four Districts. Overall, 93% of routes have been surveyed;
- Leeds remains the only main centre where the generalised cost of bus commuting is less than using a car and paying to park;
- Average travel to work distances in West Yorkshire have increased by 25% between 1991 and 2001;
- In combination with an increase in employment, the number of person kms travelled by commuters has risen by 37% between 1991 and 2001;
- Average cost per passenger journey in 2004 on subsidised bus services is £0.95 (Best Value Performance Indicator 94)

#### **Background indicator B1: Journey Times by Car and Bus.**

3.3.2 A comprehensive five year programme of car and bus journey time surveys has been devised to cover all the principal routes within the urban area of West Yorkshire (including urban motorways but excluding the M62 and M1). The programme consists of morning peak, evening peak and inter peak surveys and was started in the autumn of 1998. Table 3.3.1 shows the survey lengths planned for each district, the proportion surveyed to date as part of the base survey, and any lengths re-surveyed.

<b>Authority</b>	<b>Bradford</b>	<b>Calderdale</b>	<b>Kirklees</b>	<b>Leeds</b>	<b>Wakefield</b>	<b>Total</b>
Length of road (km)	175	65	101	210	65	616
Surveyed (km)	175	65	101	165 (*)	65	571
Length re-surveyed (km)	30	0	0	23	13	66

*Table 3.3.1 West Yorkshire Journey Time Survey Five Year Programme*

(\* Includes data collected in 1995 and 1996 prior to the start of the current programme).

3.3.3 Tables 3.3.2 - 3.3.5 show the average bus and car speeds obtained from the base surveys (completed in four out of five Districts). The speeds are weighted by

route length but not by traffic volume. Morning peak period data was collected between 0730 - 0930, inter peak between 1400 - 1600 and evening peak period between 1600 - 1800.

Time / direction	Mean Bus speed (kph)	Mean Car Speed (kph)	% Difference (Car - Bus)/(Bus)
am peak inbound	20.7	32.5	57.1
am peak outbound	23.6	38.7	64.1
inter peak inbound	23.8	39.2	64.6
inter peak outbound	25.2	40.8	62.2
pm peak inbound	24.8	37.6	51.4
pm peak outbound	21.5	34.5	60.4
Distance surveyed (km)	<b>90.2</b>	<b>174.7</b>	

*Table 3.3.2 Bradford Base Journey Time Survey Results 1998 - 2002*

Based on surveys on radial and orbital routes in Bradford and the Aire Valley

Time / direction	Mean Bus speed (kph)	Mean Car Speed (kph)	% Difference (Car - Bus)/(Bus)
am peak inbound	23.1	32.7	41.6
am peak outbound	29.7	39.2	32.0
inter peak inbound	29.4	39.4	34.0
inter peak outbound	29.7	41.0	38.0
pm peak inbound	28.9	34.1	18.0
pm peak outbound	25.8	35.2	36.4
Distance surveyed (km)	<b>64.9</b>	<b>64.9</b>	

*Table 3.3.3 Calderdale Base Journey Time Survey Results 2000 - 2002*

Based on surveys on principal radial commuting routes into Halifax



Time / direction	Mean Bus speed (kph)	Mean Car Speed (kph)	% Difference (Car - Bus)/(Bus)
am peak inbound	22.6	31.4	38.9
am peak outbound	21.3	35.4	66.2
inter peak inbound	23.7	38.0	60.3
inter peak outbound	23.4	37.7	61.1
pm peak inbound	23.8	34.3	44.1
pm peak outbound	20.1	32.2	60.2
Distance surveyed (km)	<b>65.4 km</b>	<b>101.3 km</b>	

*Table 3.3.4 Kirklees Base Journey Time Survey Results 1998 - 2003*

Based on surveys on radial and orbital routes in Huddersfield and the Heavy Woollen District.

Time / direction	Mean Bus speed (kph)	Mean Car Speed (kph)	% Difference (Car - Bus)/(Bus)
am peak inbound	21.2	34.2	61.3
am peak outbound	25.3	42.6	68.4
inter peak inbound	24.7	44.2	78.9
inter peak outbound	24.8	44.4	79.0
pm peak inbound	26.7	40.8	52.8
pm peak outbound	22.4	36.8	64.3
Distance surveyed (km)	<b>61.8</b>	<b>164.5</b>	

*Table 3.3.5 Leeds Base Journey Time Survey Results 1995 – 2004*

Based on surveys on radial and orbital routes in Leeds

Time / direction	Mean Bus speed (kph)	Mean Car Speed (kph)	% Difference (Car - Bus)/(Bus)
am peak inbound	22.8	34.2	49.8
am peak outbound	28.4	42.4	49.4
inter peak inbound	28.6	43.4	52.0
inter peak outbound	29.5	43.3	46.7
pm peak inbound	27.9	39.4	41.0
pm peak outbound	26.0	37.0	42.3
Distance surveyed (km)	<b>63.0</b>	<b>65.1</b>	

*Table 3.3.6 Wakefield Base Journey Time Survey Results 2001 - 2003*

Based on surveys on radial and orbital routes in Wakefield and the Five Towns area.

3.3.4 In three of the Districts a proportion of the network has now been re-surveyed which permits an examination of changes in average speeds. The re-surveyed lengths vary between Districts, as do the years of the Base data, and so it is not possible to directly compare the changes between authorities.

3.3.5 Within Bradford 30km of highway network and 32km of bus network was re-surveyed in 2003. The Base data on all the re-surveyed routes was collected in 1998, and so the new data provides an indication of the changes in speeds over a five year period.

3.3.6 Figure 3.3.1 shows the changes in average bus and car speeds between 1998 and 2003 over the re-surveyed part of the Bradford network. Car speeds have fallen in all six time periods/directions, while bus speeds have fallen in four. The decline in car speeds is markedly greater than that for buses, although some of the changes in bus speeds are likely to be linked to the introduction of the Overground network in August 2001 when many routes were combined and frequencies altered.

3.3.7 The greatest decline in car speeds has been inbound in the inter peak and outbound in the evening peak where average speeds have fallen by 4.5 kph (12%) and 4.4 kph (14%) respectively.

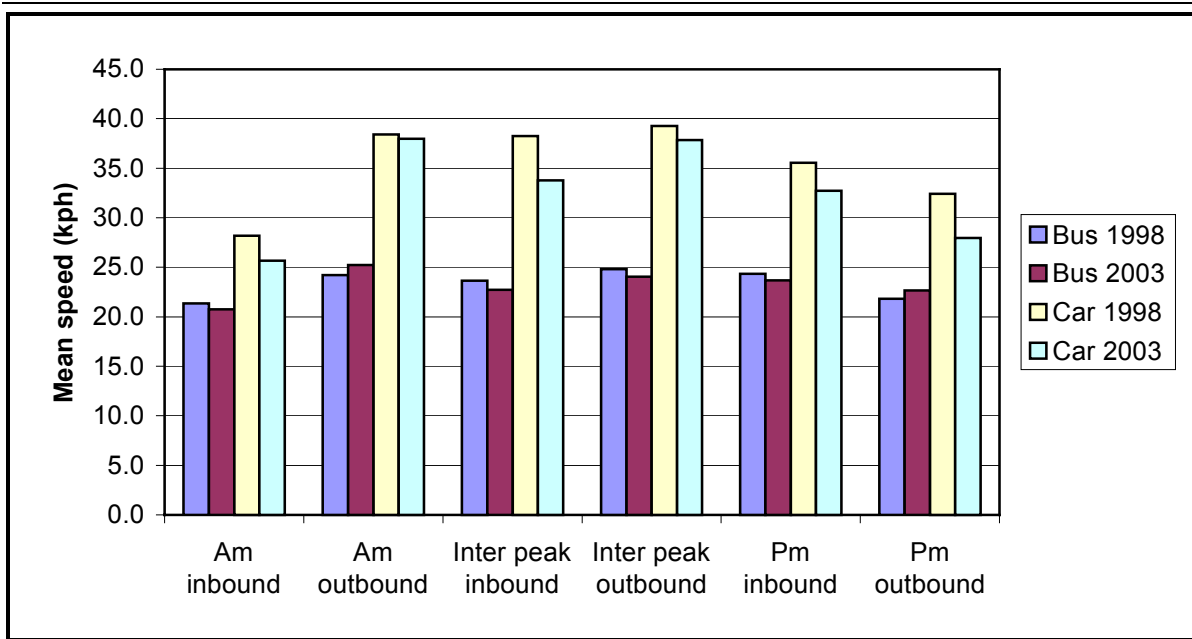


Figure 3.3.1 Changes in Average Vehicle Speeds in NE Bradford 1998-2003

(Based on surveys covering 30 km of highway and 32km of bus routes)

3.3.8 Within Leeds 23km of car network has been re-surveyed since data collection began in 1995. Figure 3.3.2 shows the aggregated changes in average car speeds between 1995 and 1997 for two routes, and 2001 for two others, over the re-surveyed part of the network. The principal changes relate to inbound morning peak speeds which have fallen by 5.4 kph (19%) and inbound evening peak speeds which have fallen by 4.3 kph (11%).

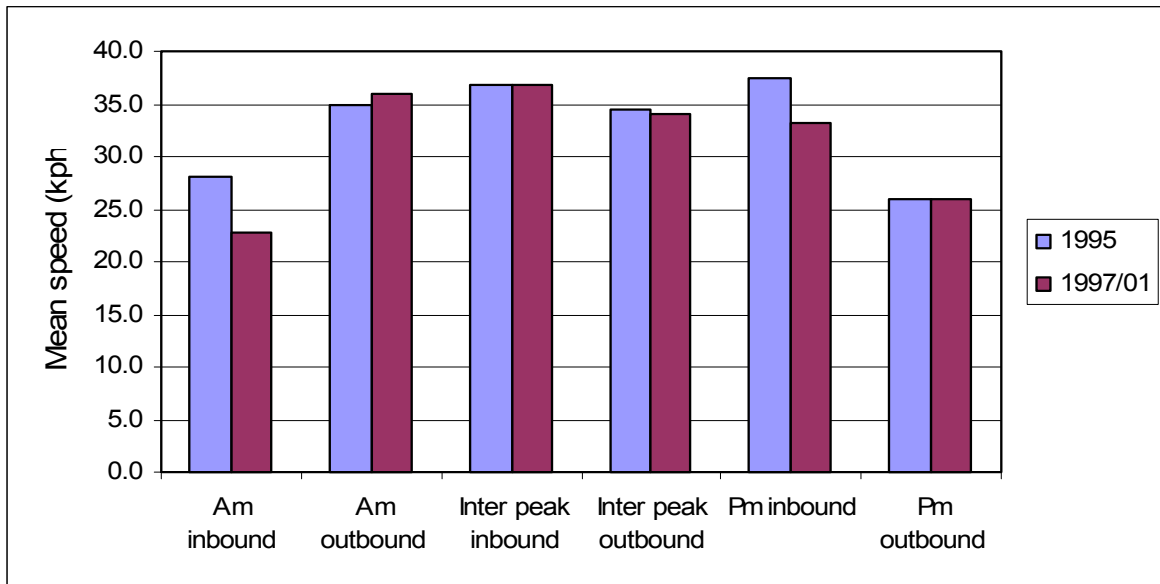


Figure 3.3.2 Changes in Average Car Speeds in N & W Leeds 1995-2001

(Based on surveys covering 23 km of radial routes)

3.3.9 Journey time surveys did not commence in Wakefield until 2001, however, two routes were re-surveyed in 2003 covering 13km of the network. Figure 3.3.3 shows

the changes in car speeds – bus journey times were carried out over a shorter length in 2001 and are therefore not comparable with the repeat surveys. The surveys show improvements in outbound speeds and a worsening of inbound speeds in all three time periods. The biggest changes has been a 16% improvement in the morning peak outbound, equivalent to a 5.4 kph increase in mean speed.

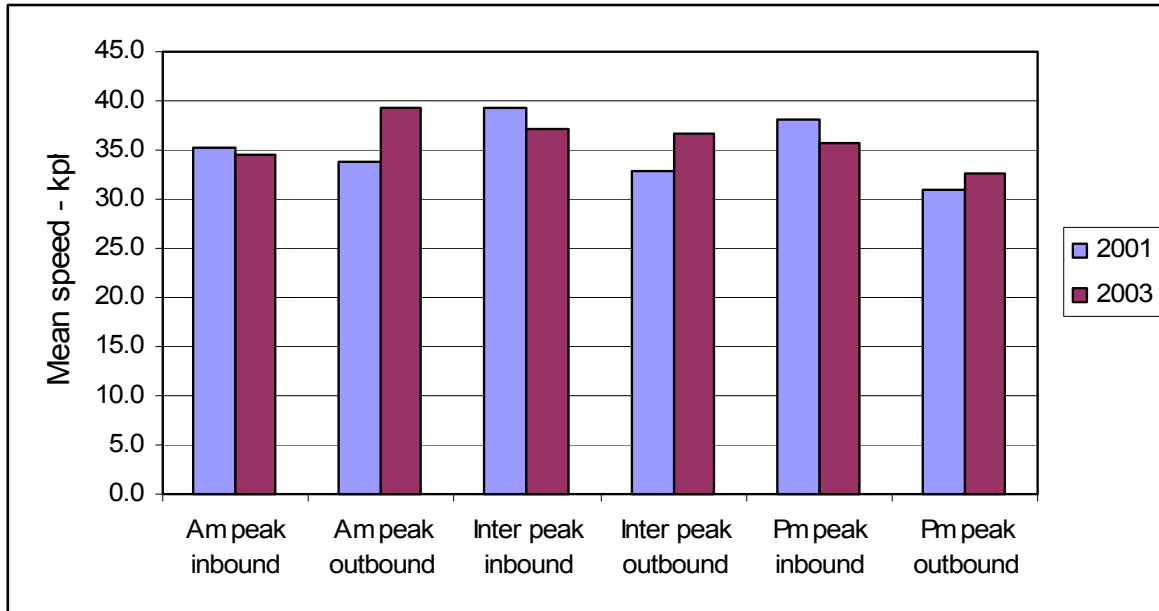


Figure 3.3.3 Changes in Average Car Speeds in Wakefield 2001-2003

(Based on surveys covering 13 km of radial and non-radial routes)

### **Desired Movement**

3.3.10 Congestion effects over time will lead to reductions in vehicle speeds on all corridors. It is anticipated that on corridors where bus priority measures are implemented average bus speeds will increase. The Local Transport Plan aims to increase the modal share carried by public transport. This should lead to reduced numbers of private vehicle trips, and consequent improvements in average speeds for cars as well as buses.

### **Background Indicator B2: Generalised Costs**

3.3.11 Peak period car and bus journey times for radial routes into the five main centres have been used to estimate indicative generalised commuting costs. Three costs have been calculated for each centre:

- Car commuter with free parking at place of work;
- Car commuter using Council controlled long stay off street parking;
- Bus commuter using an annual Countywide Bus Metrocard.

3.3.12 The generalised costs have been calculated for each centre based on the average commuting distance extracted from the 1991 Special Workplace Statistics, as data from the 2001 census is not yet available.

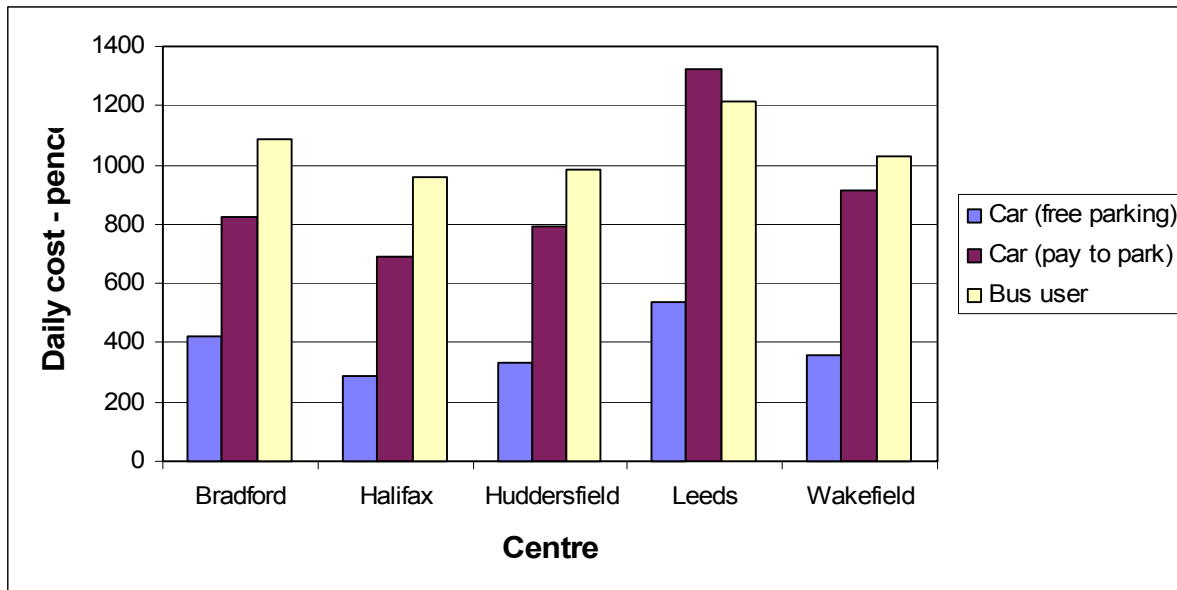
3.3.13 Table 3.3.7 shows the estimated indicative generalised costs for each of the

district centres where journey time data have been collected. These are also shown graphically in Figure 3.3.4.

Centre	Distance (km)	Parking charge (p)	Generalised cost (pence/day)		
			Car driver (Park free)	Car driver (Pay to Park)	Bus user
Bradford	7.58	2.01	419	827	1084
Halifax	5.82	2.00	287	693	956
Huddersfield	6.57	2.50	334	791	986
Leeds	10.88	5.80	534	1320	1212
Wakefield	7.18	3.50	359	916	1032

*Table 3.3.7 Estimated Generalised Central Area Commuting Costs 2004*

(based on average journey to work distance from the 1991 census)



*Figure 3.3.4 Estimated Generalised Central Area Commuting Costs 2004*

(based on average journey to work distance from the 1991 census)

3.3.14 Leeds remains the only centre where the cost of commuting by car (for those who have to pay) is greater than the cost of travel by bus. Significant increases in the cost of parking in both Leeds and Wakefield has improved the attractiveness of the bus relative to the car compared with last year

3.3.15 It is clear from the generalised cost calculations that commuters who have access to a free workplace parking space (or free on street parking) have a real cost advantage over those who have to pay to park or use public transport.

3.3.16 For shorter distance commuters, the penalties against bus use are proportionately greater because of the amount of walking and waiting time involved in their journey.

### **Desired Movement**

3.3.17 The impact of additional bus priority measures should, over time, increase average bus speeds in the peaks, however, it is likely that reducing boarding times at stops by the use of prepaid tickets and smartcard technology will have a potentially greater impact throughout the day. Bus user generalised costs are therefore expected to fall.

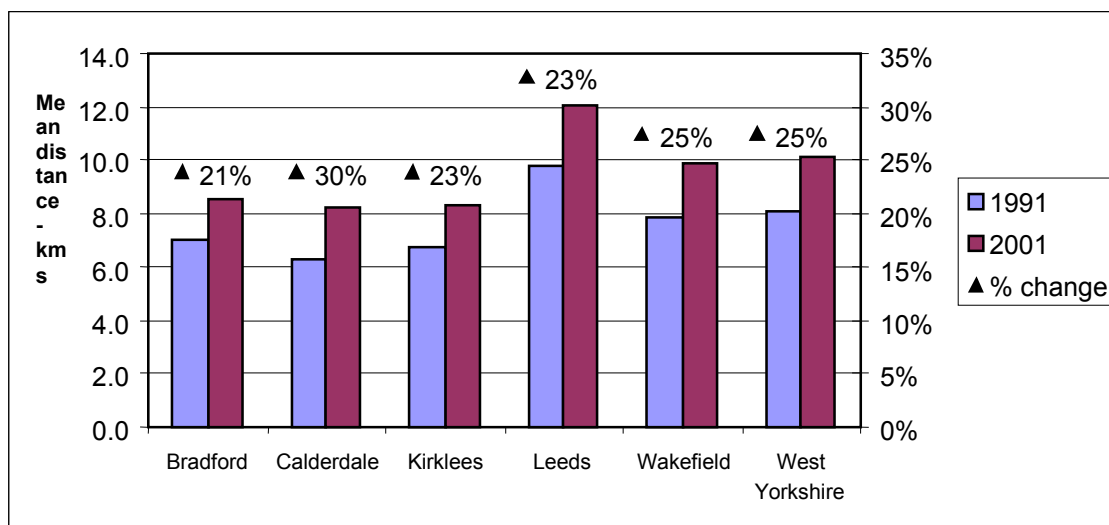
3.3.18 Petrol price increases, re-allocation of road space and increased parking charges will increase car user costs. However, the use of other measures to account for the social costs car driver, such as road pricing or workplace parking charges may also be required to achieve significant levels of modal shift.

### **Future Requirements**

3.3.19 The data collected from the ongoing journey time survey programme will be used to update the generalised costs for each centre.

### **Background Indicator B3: Travel Distance to Work**

3.3.20 Long term planning impacts should have an effect on journey length, however, local and national trends are for increased journey lengths for most trip purposes. Data from the 1991 and 2001 censuses show that average commuting distances have increased throughout West Yorkshire by 25%, with the greatest increase occurring for those working in Calderdale (30%). This is shown in Figure 3.3.5.



*Figure 3.3.5 Average Travel Distance to Work, West Yorkshire, 1991-2001*

(Source: 1991 Special Workplace Statistics Dataset B Table B4; 2001 census Table S129. Data relates to workplace population excluding those working at/from home. Average distances are derived from distance bands on the basis of midpoint distances with >40 km (1991) assumed to be 60km, >60km (2001) assumed to be 80km)

3.3.21 Figure 3.3.6 shows the changes for West Yorkshire in the proportion of people travelling in each distance band. There have been significant falls in the proportion of people travelling less than 5km to work, while increases have occurred in all the distance bands over 10km.

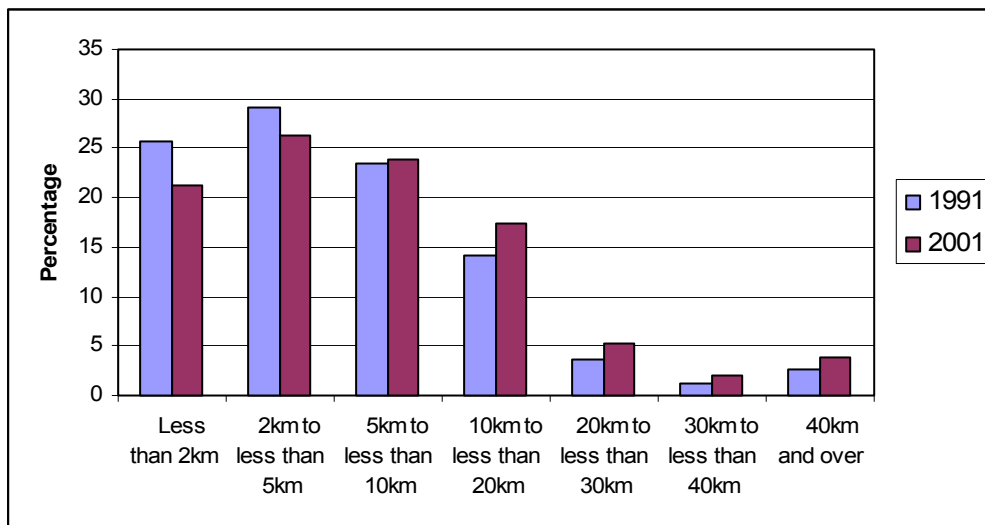


Figure 3.3.6 Travel Distances to Work, West Yorkshire, 1991-2001

(Source: 1991 Special Workplace Statistics Dataset B Table B4; 2001 census Table S129. Data relates to workplace population excluding those working at/from home)

3.3.22 Rising employment levels have added to the impact of increased journey lengths. Table 3.3.8 shows the changes in person-kilometres travelled by people working in each District between 1991 and 2001. Overall, there has been an increase of 37%, but this is significantly below the 45% increase in Leeds. The changes are illustrated in Figure 3.3.7.

District	Average. distance - kms		Workplace population		Person-kms (000)		% age change
	1991	2001	1991	2001	1991	2001	
Bradford	7.03	8.52	166,810	173,450	1,173	1,478	26%
Calderdale	6.30	8.22	70,100	72,677	442	597	35%
Kirklees	6.73	8.30	121,270	131,477	816	1,091	34%
Leeds	9.79	12.02	291,180	343,801	2,851	4,133	45%
Wakefield	7.89	9.88	112,680	117,205	889	1,159	30%
West Yorkshire	8.10	10.09	762,040	838,610	6,172	8,459	37%

Table 3.3.8 Distance Travelled to Work in West Yorkshire 1991-2001

(Source: 1991 Special Workplace Statistics Dataset B Table B4; 2001 census Table S129. Data relates to workplace population excluding those working at/from home. Average distances are derived from distance bands on the basis of midpoint distances with >40 km (1991) assumed to be 60km, >60km (2001) assumed to be 80km)

3.3.23 Over two thirds of the increase in employment (69%) has occurred in Leeds. In the absence of any increase in journey lengths this would have increased person-kilometres travelled to work in Leeds by 18%.

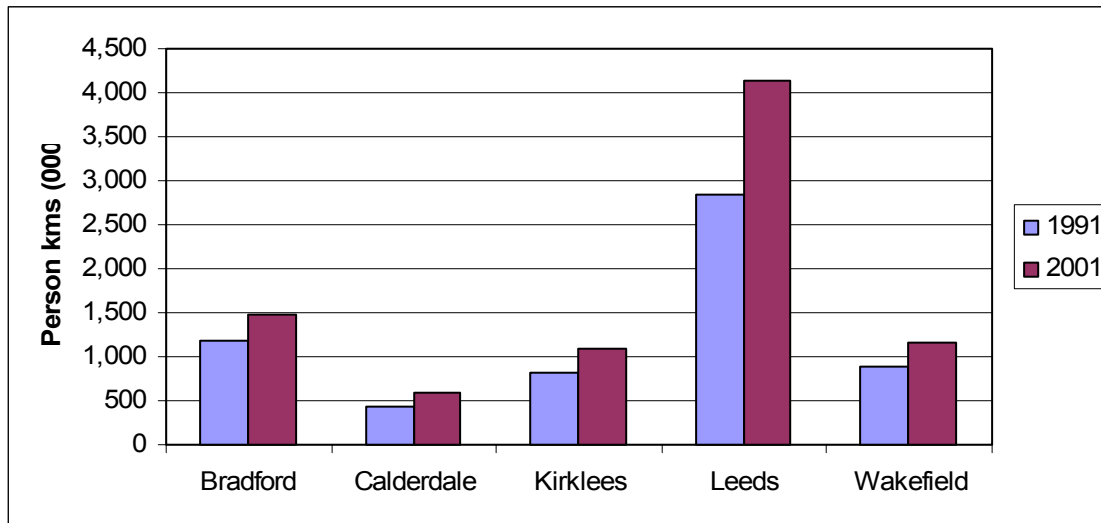


Figure 3.3.7 Person-kms Travelled to work in West Yorkshire, 1991-2001

(Source: 1991 Special Workplace Statistics Dataset B Table B4; 2001 census Table S129. Data relates to workplace population excluding those working at/from home. Average distances are derived from distance bands on the basis of midpoint distances with >40 km (1991) assumed to be 60km, >60km (2001) assumed to be 80km)

3.3.24 Data on journey length by mode is not readily available from the 1991 census, however, on the basis of the 2001 census it is likely that the increases shown above are attributable to increased car and train journey lengths. Average rail commuting distances were twice the average for all modes and three times the average for bus users, while car commuting accounts for around 80% of the total distance travelled to work in West Yorkshire.

### **Desired Movement**

3.3.25 The changes shown for travel to work in West Yorkshire reflect other national trends in increased journey length for a range of journey purposes. In the long term the effects of planning policies will have more impact on this indicator than measures contained in the transport package.

### **Background Indicator B4: Cost per passenger journey of subsidised bus services (BVPI94)**

3.3.26 In order to ensure that bus services are as effective as possible in meeting the travel needs of the people of West Yorkshire, the cost per passenger journey of subsidised bus services has been chosen as a best value performance indicator. Table 3.3.9 shows the current 2004 value compared with the 1999 baseline figure.



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	<b>1999</b>	<b>2004</b>	<b>% increase</b>
Cost (pence)	50	95*	90.0

\*estimate

*Table 3.3.9 Cost per Passenger Journey of Subsidised Bus Services*

3.3.27 The increase since 1999 is attributable to a reduction in the number of subsidised services as the more marginal routes have been transferred to the commercial market and are no longer supported by Metro. Whilst this action achieves better value for money overall the cost per passenger increases. In addition, tendered prices have risen significantly in recent years reflecting increases in operator staff costs.

### 3.4 MAINTAINING THE TRANSPORT INFRASTRUCTURE

#### *Primary Objective*

To maintain the transport infrastructure to standards to allow safe and efficient movement of people and goods.

#### **Summary of Key Trends**

- The Condition Indicators for Principal Roads identify that the network condition is no longer deteriorating and is in fact now showing slow but continuous year on year improvement. Further improvement is anticipated as the impact of major maintenance works is reflected in condition data.
- Trends in the condition of the non principal network are more difficult to determine as the method of analysis has varied. However funding of these roads and footways has increased and the ten year plan target to remove the backlog of maintenance is likely to be met on B and C classified roads. The length of the unclassified network is so great that real improvements will only be achieved over a long period of time. It will need a significant and sustained increase in maintenance funding to eliminate this backlog.
- Bridge assessments for 40 tonne vehicles including privately owned structures are nearing completion, allowing bridge strengthening to be targeted more effectively.
- There is a significant backlog of maintenance required for highway structures which cannot currently be addressed because at present resources are directed primarily towards the strengthening programme.
- The five West Yorkshire Districts have begun implementing the procedure to calculate Bridge Condition Indicators for their bridge stock developed through the CSS Bridges Group. Bridge Condition Indicators will show whether the condition of highway structures is deteriorating or not and will be used to target maintenance more effectively.

#### **Role of Transport Infrastructure**

3.4.1 Highway maintenance has a significant contribution to make in support of the initiatives underpinning the LTP. The proper maintenance of footways, carriageways, structures and street lighting is considered vital in meeting the LTP objectives.

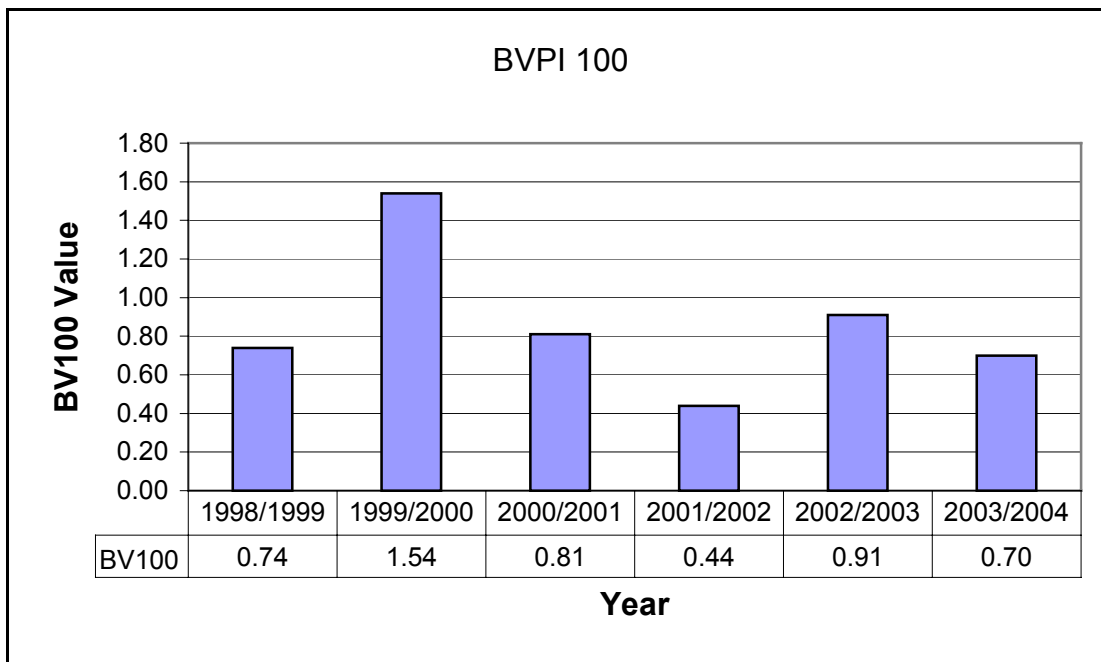
#### **Background Indicator C1: Maintenance Management Performance Indicators**

3.4.2 The only national performance indicator relating to maintenance measurement is BVPI 100. This identifies the number of days major Council road works were in place per km of busy road and is intended to measure effectiveness in managing road works to minimise disruption to the public. The West Yorkshire authorities all actively manage their works against this criteria by ensuring that wherever possible

works on traffic sensitive streets are completed outside of traffic sensitive times.

3.4.3 The weighted average result for the West Yorkshire authorities is 0.7 and has fluctuated in recent years around a median of 0.78. While this is higher than the median value for all Metropolitan Authorities of 0.50, it compares well with the median for all English Authorities of 0.8.

3.4.4 The fluctuation is dependant on the number of schemes on sensitive roads where traffic controls at sensitive times are unavoidable. It can be seen from the chart that there is no definite trend with the indicator reflecting the nature of the locations included in each years programme. Consequently it is not a true measure of performance and The West Yorkshire Authorities have been actively working with Government Departments to find a more satisfactory alternative to this indicator.



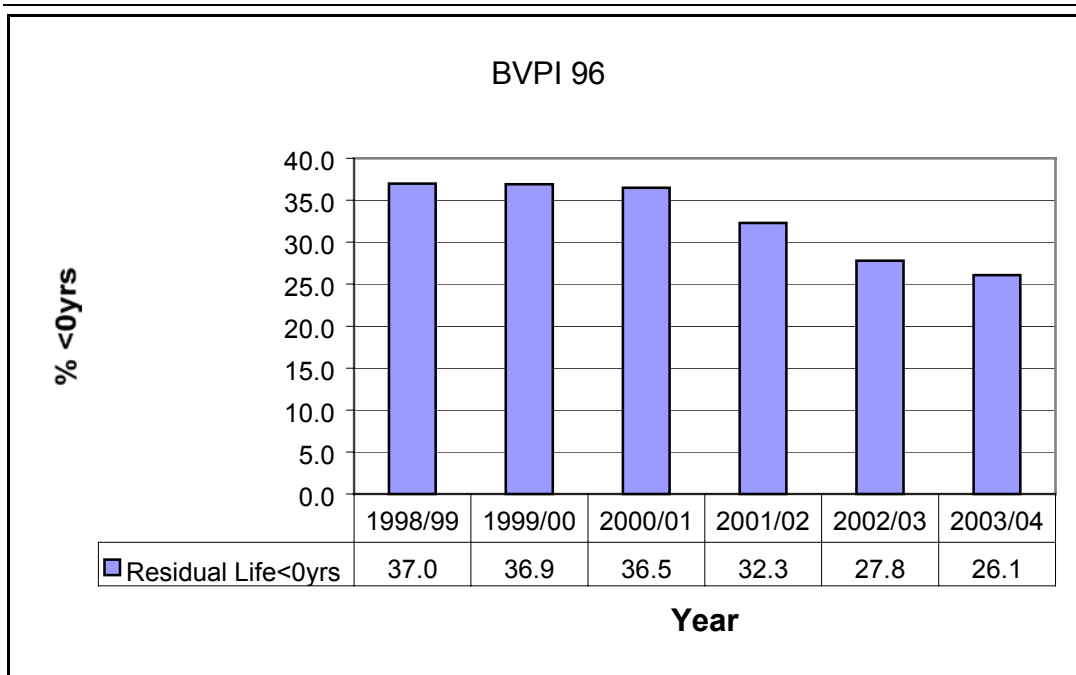
*Figure 3.4.1 BVPI 100 Number of Days of Temporary Traffic Controls or Road Closure on Traffic Sensitive Roads Caused by Local Authority Road Works per km of Traffic Sensitive Road.*

### **Key Indicator C2: Road Maintenance Programmes**

3.4.5 West Yorkshire averages for all condition performance indicators are calculated from weighted lengths, not an average of the five District values.

3.4.6 BVPI 96 measures the percentage of Principal Roads which have reached the point at which repairs to prolong their future life should be considered. It can be measured using either visual or deflectograph surveys.

3.4.7 All West Yorkshire authorities have undertaken deflectograph surveys of their Principal Roads. The weighted averages for 1998/99 to 2003/04 are shown in Figure 3.4.2 and show that the backlog has been reduced by 30% over a 5-year period with a steady year on year improvement. However, West Yorkshire is still in the bottom quartile for BVPI 96 measured by deflectograph for London Boroughs and Metropolitan Districts and the underlying structural condition of the network is still a concern.



*Figure 3.4.2 BVPI 96 Percentage of the Roads Network with Negative Residual Life, Derived from Deflectograph Surveys.*

3.4.8 In addition to carrying out deflectograph surveys, three of the five West Yorkshire Authorities have also carried out UKPMS CVI surveys of 100% of their principal road network. The weighted average CVI value for these 3 Authorities is 3.42% which is just outside the upper quartile range and show that the visual condition of the road surface is much better than the structural condition.

3.4.9 The authorities with CVI data will use this for reporting their BVPI 96. Combining these results with the remaining two deflectograph based results gives a BVPI 96 for West Yorkshire of 12.11%. On this basis the 10% target set for the five year LTP is achievable.

3.4.10 In terms of the future, TRACS type surveys will be the required survey method for 2004/05. Leeds and Bradford undertook these surveys during 2003/04 but as the machines were not accredited the results could not be used for BVPI 96. Both Authorities would have had much higher values for BVPI 96 were this data source to be used (47% & 45% respectively). Both had comparable deflectograph based values for BVPI 96 (26% approx). It is clear from the available data that there is no obvious correlation between performance indicators derived from the three alternative survey types.

3.4.11 BVPI 97 measures the percentage of Non-Principal Roads needing structural maintenance work. The indicator was introduced in 2000 for classified non-principal roads (97a) and in 2001 for unclassified roads (97b). It is calculated using UKPMS accredited visual surveys.

3.4.12 The weighted average value for BVPI97a is 13.37% and is in the bottom quartile to median range. The year on year results appear to indicate a deterioration in the condition of the network over the last four years. However these comparisons are not necessarily meaningful due to the changes in the UKPMS protocols. Maintenance has been carried out which should have produced an improvement and the authorities are all confident that deterioration will be arrested by 2004/05.

3.4.13 With respect to removing the backlog, there is considerable debate as to what this means. Until there is a National definition West Yorkshire are taking the view that B and C classified roads will probably need major work every 20 years. A BVPI of 5% therefore represents one year of work or zero backlog. This is considered to be achievable if funding levels are maintained.

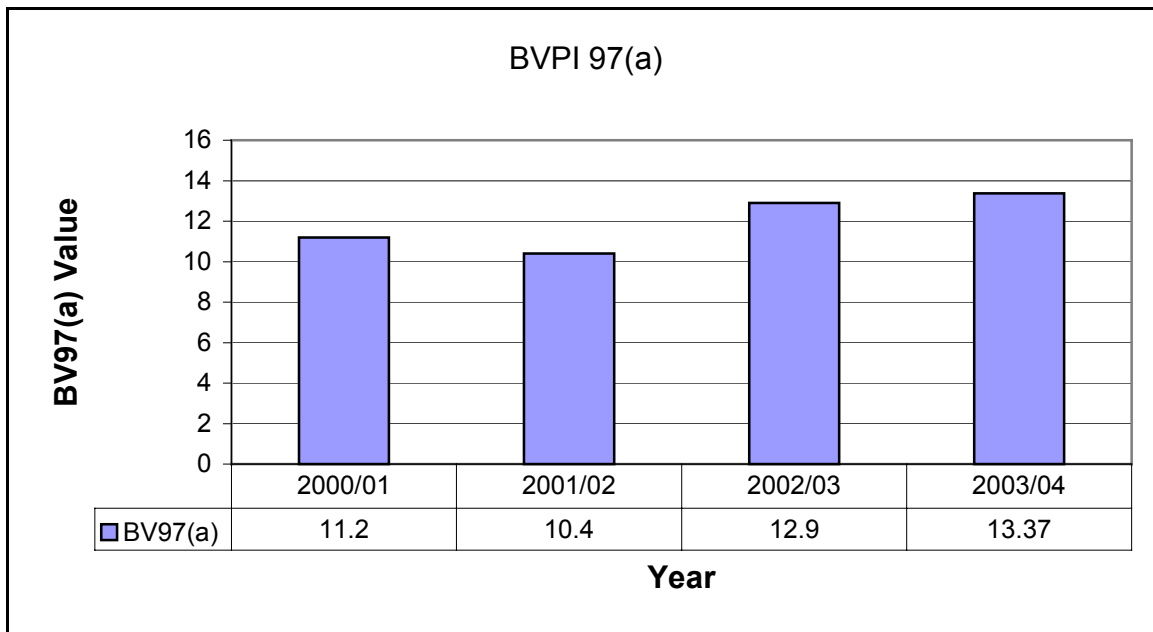


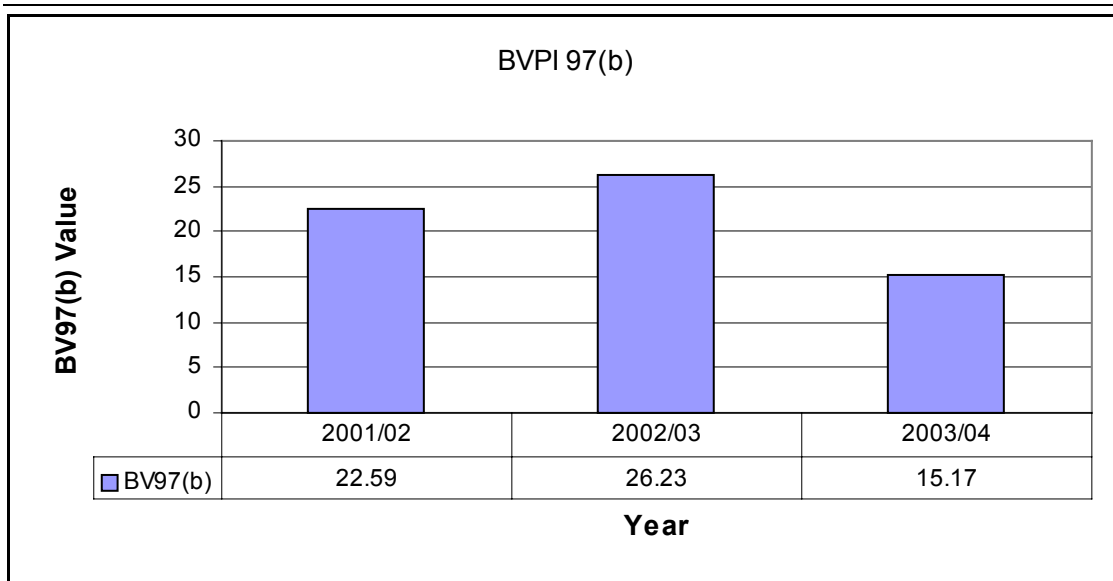
Figure 3.4.3 *BVPI 97(a) Percentage of Non-principal Classified Roads with Significant Defects (Visual Inspection).*

3.4.14 The weighted average value for BV97(b) is in the bottom quartile to median range. There would appear to be an overall improvement in condition of the unclassified network over the last three years. However again the overall trend has been affected by changes to the rules and parameters in the UKPMS system and relate to a 25% annual survey sample. The results therefore need to be treated with caution.

3.4.15 Next year the results will be based on the final 25% sample. However data will be available for the full unclassified network collected over no more than four years. The West Yorkshire authorities believe that a performance indicator based on the full 100% survey would be a more realistic overall measure of carriageway condition and intend to report this as a local indicator.

3.4.16 Even with the apparent improvement the condition of unclassified roads is not as good as the classified roads. This difference reflects their relative priority of the networks hierarchy.

3.4.17 The length of unclassified road currently in need of major maintenance is over 1000km (15.17% of over 7000km). The West Yorkshire Authorities take the view that unclassified roads need major work on average every 50 years. A BVPI of 2% therefore represents one year of work or zero backlog. Hence, although the data would indicate that the decline in the condition of the network has already been halted, the backlog will only be removed within the Ten Year Plan period if there is a considerable increase in funding.



*Figure 3.4.4 BVPI 97(b) Percentage of Non-principal Unclassified Roads with Significant Defects (Visual Inspection).*

3.4.18 BVPI 187 measures the condition of prestige, primary and secondary walking routes. Fifty percent of these footways are surveyed each year using UKPMS DVI surveys and two years of data have now been collected. The weighted West Yorkshire value of BVPI187 for 2002/03 was 20.66% for the first half of the network. For 2003/04 it was 24.22% for the second half of the network. As a result of the sampling requirements there were some big differences (both up and down) in some districts. A value of 22.5% has therefore been set as the benchmark against which the trend in the condition of the network will be judged.

3.4.19 These footways represent a relatively small percentage of the total footway network and eradicating the backlog of maintenance to all footways by 2010/11 will not be achieved without a considerable increase in funding.

### **Background Indicator C3: Local Indicators and Bench Marks**

3.4.20 To maximise the opportunity to benchmark with other authorities, local performance indicators have been selected from previous District Audit performance indicators. In particular monitoring continues on the response time to the repair of dangerous defects and performance is now consistently in excess of 95% made safe within 24 hours. In addition the West Yorkshire Authorities have benchmarked the highways public liability claims procedures.

3.4.21 Serviceability indicators are generally being customised by individual districts in response to their own Best Value consultations and reflect local needs unique to each district. They are therefore not appropriate for group benchmarking.

### **Performance indicators for Highway Structures**

3.4.22 Although highway structures schemes affect BVPI 100, there are no National BVPIs relating directly to highway structures. Local performance indicators have therefore been formulated to measure progress on bridge assessment, strengthening, inspection and maintenance.

### **Background Indicator C4: Bridge Assessments Completed**

3.4.23 Funding is provided through the LTP for the assessment and strengthening, where necessary of highway structures to ensure that they can safely carry vehicles up to 40 tonnes gross weight which have been allowed on roads in the UK since January 1999.

3.4.24 Background Indicator C4 shows the progress on assessment of all bridges greater than 1.5m span under ownership of Districts, Network Rail, Rail Property Ltd., British Waterways and other private organisations and includes all classes of road. The situation on 31 March 2003 and 31 March 2004 for each District is set out in Table 3.4.1. The accompanying chart, Figure 3.4.5 shows results for each of the last 5 years. The assessment programme in Wakefield is complete, with Kirklees and Leeds anticipating completion by March 2005, and Calderdale and Bradford completing the programme by March 2006.

District	TO MARCH 2003			TO MARCH 2004		
	No. Bridges in Prog. >1.5m	No. Bridges >1.5m Assessed	% Assessed	No. Bridges in Prog. >1.5m	No. Bridges >1.5m Assessed	% Assessed
Bradford	Council 237	209	88.2	237	209	88.2
	Other Owner 74	74	100.0	74	74	100.0
Calderdale	263	258	98.0	263	258	98.0
	66	59	89.0	66	59	89.0
Kirklees	293	230	78.5	290	271	93.4
	87	70	80.5	87	73	84.0
Leeds	227	225	99.1	229	229	100.0
	130	80	61.0	112	86	77.0
Wakefield	85	85	100.0	85	85	100.0
	60	60	100.0	60	60	100.0
<b>TOTAL</b>	Council 1105	1007	91.1	1104	1052	95.3
	Other Owner 417	343	82.3	399	352	88.2
<b>TOTAL</b>	All Owners 1522	1350	88.7	1503	1404	93.4

Table 3.4.1 Bridges with Completed Assessments.

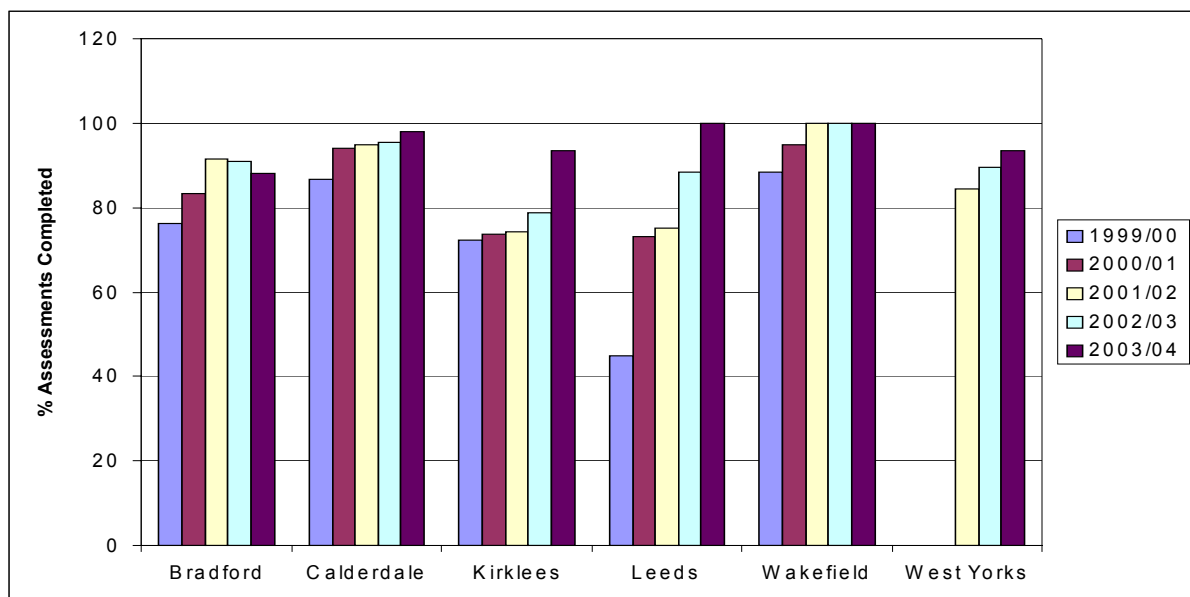


Figure 3.4.5 Bridges with Completed Assessments

### **Desired Movement**

3.4.25 An increase in the percentage of bridges assessed shows progress towards completion of the programme. Completion of the assessment programme will identify the full extent of the required bridge strengthening and allow funding to be targeted more effectively.

### **Future Requirements**

3.4.26 After completion of the current programme of bridge assessments, future assessments will be required whenever an inspection of the bridge shows changes in its condition that may have an adverse effect on its load-carrying capacity. However there will be no defined assessment programme and no further need for this indicator.

### **Background Indicator C5: Bridges Strengthened**

3.4.27 Where an assessment shows that a bridge fails to meet the requirements of Department of Transport Standard BD21, interim traffic management measures or a monitoring regime are applied as necessary. The bridge is put into the programme for strengthening or a permanent weight restriction (or other traffic management measures) is implemented.

3.4.28 Table 3.4.2 shows the progress made in strengthening bridges between March 2003 and March 2004. It includes all bridges under the ownership of Districts, Network Rail, Rail Property Ltd., British Waterways and other private owners and includes all classes of road. It is expressed as a percentage of all bridges in the assessment programme which have to date failed to reach the 40 tonne loading capacity. It includes bridges with temporary footway / verge restrictions as well as temporary carriageway restrictions and bridges which are subject to monitoring but excludes bridges where a permanent weight restriction at the level of the assessed capacity is acceptable.

3.4.29 Figure 3.4.6 shows results for the last five years and gives percentages of the



total number of bridges known to be less than the required capacity at March 2004 to give an accurate illustration of the trend. It is noteworthy that although the number of bridges assessed at less than required capacity in West Yorkshire has increased during the year by 19, the number of bridges strengthened has increased by 21.

District	TO MARCH 2003			TO MARCH 2004		
	No. of Bridges assessed at less than required capacity. (all owners)	No. of Bridges strengthened	% of Bridges strengthened	No. of Bridges assessed at less than required capacity. (all owners)	No. of Bridges strengthened	% of Bridges strengthened
Bradford	103	45	43.7	103	56	54.4
Calderdale	75	44	58.7	75	46	61.3
Kirklees	111	66	59.5	120	69	57.5
Leeds	92	34	37.0	102	36	35.3
Wakefield	43	21	48.8	43	26	60.5
<b>TOTAL</b>	<b>424</b>	<b>210</b>	<b>49.5</b>	<b>443</b>	<b>233</b>	<b>52.6</b>

Table 3.4.2 Percentage of Bridges Strengthened (All Roads, All Owners)

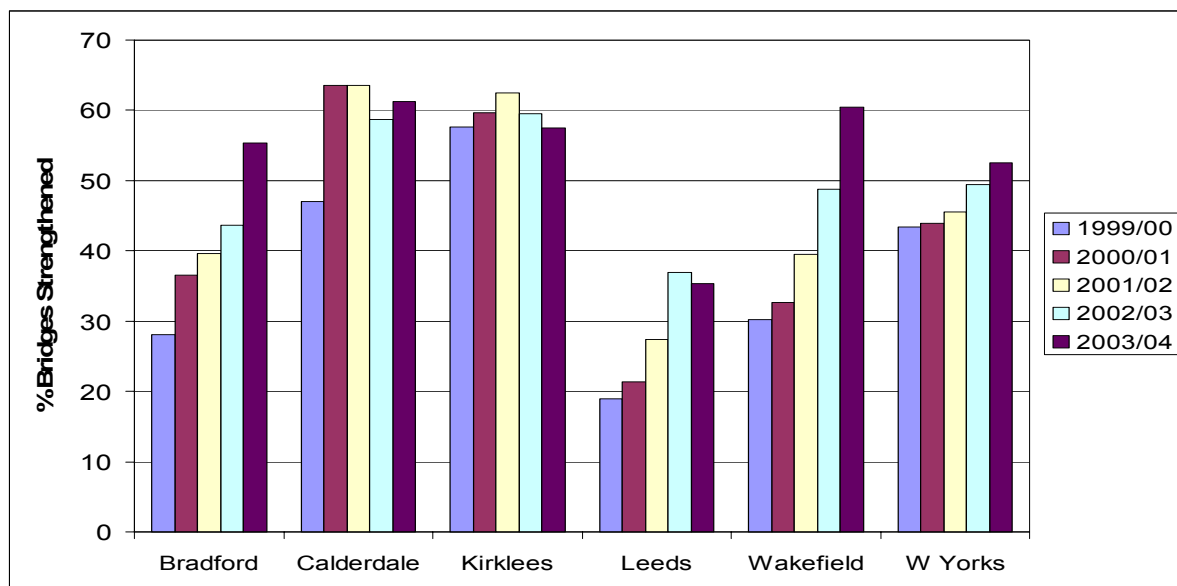


Figure 3.4.6 Percentage of Bridges Strengthened (All Roads All Owners)

### Desired Movement

3.4.30 An increase in the percentage of bridges strengthened shows progress towards completion of the bridge strengthening programme and decreasing interference with the movement of goods and people. This percentage is masked by the increasing number of bridges requiring strengthening as the assessment programme progresses towards completion.

### **Future Requirements**

3.4.31 At current levels of funding the bridge strengthening programme is expected to last another 4 or 5 years for Council-owned bridges and at least 7 years for privately-owned bridges. As the outstanding assessments are completed, newly identified weak bridges will be added to the list of bridges requiring strengthening, further increasing the timescale. In order to achieve a target of 100% bridges strengthened by 2011 a substantial increase in the level of funding will be required.

### **Background Indicator C6a: Bridge Inspections Completed**

3.4.32 The public expects bridges to be safe to use. As bridge collapses are extremely rare, this expectation of safety is almost absolute.

3.4.33 To ensure the public's expectation is met, as well as carrying out the bridge assessment programmes and implementing interim measures or monitoring sub-standard structures prior to strengthening, all Districts in West Yorkshire carry out programmes of general and principal inspections based on the recommendations of BD 63 "The Inspection of Highway Structures". Background Indicator C6a measures the percentage of planned inspections carried out in the year. The number of planned inspections is based on a 6-10 year cycle for principal inspections and a two year cycle for general inspections.

3.4.34 Table 3.4.3 shows the targets and outcomes for 2003 / 2004 and indicates that 83% of planned principal inspections and 90% of planned general inspections were completed across West Yorkshire.

District	Structures Inspections, 2003 / 2004							
	Principal Inspections				General Inspections			
	Number of Structures	Target per year	No. inspected	% of target	Number of Structures	Target per year	No inspected	% of target
Bradford	385	94	80	85	605	300	122	41
Calderdale	310	42	43	102	643	322	322	100
Kirklees	490	70	94	134	570	365	387	106
Leeds	740	100	30	30	716	490	490	100
Wakefield	149	20	23	115	217	110	110	100
West Yorks	2074	326	270	83	2751	1587	1431	90

*Table 3.4.3 Percentage of Structures Subject to General and Principal Inspections in 2003 / 2004*

### **Desired Movement**

3.4.35 Meeting the targets will indicate that the safety and condition of the structures stock is being monitored to allow efficient management.

### **Future Requirements**

3.4.36 Bridge Condition Indicators are being produced in association with the general and principal inspection programmes which will provide a more accurate measure of the condition of the highway bridge stock.

### Background Indicator C6b: Bridges With Temporary Weight or width Restrictions

3.4.37 The function of a bridge is to support the road, which in turn provides a transport facility for the user. If any part of the structure is closed or restricted for any reason, traffic will be disrupted and there will be resulting cost and inconvenience to the user. The overall functional requirement for bridge management, therefore, is to keep road user disruption to the minimum.

3.4.38 The percentage of structures with temporary weight or width restrictions is used as a simple indicator, Background Indicator C6b, to monitor performance in this area. The position at March 2003 and March 2004 is reported in Table 3.4.4. Overall, there is an increase in restrictions over the year, despite the ongoing strengthening programme. As the assessment programme nears completion, this trend should be reversed. However, timing of strengthening schemes for privately owned structures is often out of the Councils' control.

<i>West Yorkshire: Weight And Width Restricted Structures</i>												
District	TO MARCH 2003						TO MARCH 2004					
	Structures with temporary weight or width restriction. (Council Owned)			Structures with temporary weight or width restriction. (Privately Owned)			Structures with temporary weight or width restriction. (Council Owned)			Structures with temporary weight or width restriction. (Privately Owned)		
	Total No In Prog	No Rest.	%	Total No In Prog	No Rest.	%	Total No In Prog	No Rest.	%	Total No In Prog	No Rest.	%
Bradford	237	3	1.7	74	11	14.8	237	3	1.7	74	11	14.8
Calderdale	263	0	0	66	1	1.5	263	0	0	66	1	1.5
Kirklees	293	12	4.7	87	16	18.0	290	17	5.9	87	15	17.2
Leeds	227	6	2.6	130	2	1.5	229	5	2.2	112	1	0.9
Wakefield	85	0	0	60	6	10.0	85	0	0	60	6	10.0
TOTAL	1105	21	1.9	417	36	8.6	1104	25	2.3	399	34	8.5

*Table 3.4.4 Percentage of Structures with Temporary Weight or Width Restrictions*

#### **Desired Movement**

3.4.39 A decrease in the % of structures with temporary weight or width restrictions indicates decreasing interference with the movement of goods and people.

#### **Future Requirements**

3.4.40 Completion of the strengthening programme will allow all restrictions to be removed. Hence, for Council owned structures, the target date is the end of the second 5 year LTP in March 2011. However, continued pressure on private bridge owners is required to ensure that their weak structures are strengthened within a reasonable timescale.

### Background Indicator C6c: Highway Structures Requiring Essential and Preventative Maintenance

3.4.41 Steady state maintenance is required to maintain a bridge in serviceable condition. Steady state maintenance can be split into preventative and essential maintenance as defined in the report prepared by the CSS Bridges Group in February 2000, "Funding for Bridge Maintenance".

3.4.42 In recent years the LTP allocations for highway structures have been concentrated on strengthening rather than maintenance schemes resulting in a maintenance backlog which needs to be addressed to ensure the continued functionality and safety of the structures and therefore the highway network.

3.4.43 Background Indicator C6c monitors the percentage of highway structures requiring preventative and essential maintenance. The position at March 2003 and March 2004 is shown in Table 3.4.5.

3.4.44 The number of structures included in the table to March 2004 has been increased to include all spans rather than spans >1.5m. The number of structures requiring preventative or essential maintenance at March 2004 is 1077 or 59% of the bridge stock compared with 61% at March 2003. Although this indicates a marginal improvement over the year in the condition of the highway structures stock, excluding walls, it confirms that the level of outstanding maintenance remains high.

District	TO MARCH 2003						TO MARCH 2004					
	Highway structures requiring preventative maintenance			Highway structures requiring essential maintenance			Highway structures requiring preventative maintenance			Highway structures requiring essential maintenance		
	All Structures	No. Req. Prev. Maint.	%	All Structures	No. Req. Ess. Maint.	%	All Structures	No. Req. Prev. Maint.	%	All Structures	No. Req. Ess. Maint.	%
Bradford	385	93	24	385	93	24	432	128	30	432	23	5
Calderdale	310	93	30	310	34	11	310	95	30	310	32	10
Kirklees	405	175	43	405	138	34	414	215	52	414	99	24
Leeds	337	205	61	337	57	17	476	300	63	476	95	20
Wakefield	149	70	47	149	11	7	188	80	43	188	10	5
TOTAL	1586	636	40	1586	333	21	1820	818	45	1820	259	14

*Table 3.4.5: Percentage of Structures (excluding Retaining walls) Requiring Preventative or Essential Maintenance*

#### **Desired Movement**

3.4.45 A decrease in the percentage of structures which require either preventative or essential maintenance will result in greater confidence from the community in the overall condition of the structures stock and a reduction in the amount of maintenance required in future years.

#### **Future Requirements**

3.4.46 Preventative maintenance is seen as the most cost-effective way of keeping costs of replacement and rehabilitation of the structures stock at a manageable and steady level. It is estimated that expenditure on preventative measures of the order of

0.35% of the Gross Replacement Cost of the structures stock will be required annually to meet the target. It is estimated at present that the required annual expenditure on essential maintenance is around 0.5% of the Gross Replacement Cost of the structures stock.

3.4.47 These percentages are broadly in line with the recommendations of the Highways Agency Paper 'Performance Objectives, Indicators and Targets for the Maintenance of Highway Structures' and the CSS Bridges Group report 'Funding for Bridge Maintenance'. These expenditure figures take no account of the existing backlog of outstanding maintenance which would require additional expenditure before the steady state approach could be taken.

3.4.48 Bridge Condition Indicators will be used to target funding, to indicate whether the overall condition of the highway structures stock is deteriorating and whether adequate funding is being provided for the maintenance of highway structures.

### 3.5 SAFETY SECURITY AND HEALTH

#### *Primary Objective*

To improve safety, security and health, in particular to reduce the number and severity of road casualties.

#### *Role of Transport*

3.5.1 Danger reduction, through reducing car use and raising drivers' awareness, is seen as an important aspect of this policy, as well as the more specific safety and security measures. It is also recognised that car dependency has an adverse effect on the population's level of physical activity and directly contributes to increasing health problems.

#### **Summary of Key Trends**

- There was again a significant reduction in number of people injured on the roads of the County during the year.
- The slight casualty rate (in terms of casualties per 100 million vehicle kilometres) has fallen for 3 successive years and the 2003 total is almost at the 2010 target.
- The number of pedestrians injured on the roads of West Yorkshire fell significantly, and the total of 1,596 is once again the lowest ever recorded in the County.
- There was a disappointing blip in the downward trend of killed and seriously injured child pedestrian casualties. However the total is still on track to meet the stated targets.
- The total of 487 recorded pedal cycle casualties in the County is slightly up on the 2003 total, although the long-term trend is still downwards. The number killed or seriously injured increased significantly in 2003, which highlights the fluctuation in the annual figures.
- The steady long-term rise in the number of motor cycle casualties has levelled out in 2003, with the total of 830 being an increase of 8 on the 2002 total.
- There were 8,914 car occupant casualties in West Yorkshire. The rising trend in car occupant casualties halted in 1998 and since then there has been a slow downward trend
- The use of CCTV to combat crime on street, in car parks and at bus and rail stations continues to increase though at a slower rate than in previous years

### Key Indicator D1: Road User Casualty Trends

3.5.2 The number of people injured in road traffic accidents has been monitored for many years. Data is collected continuously on the numbers of fatal, serious and slight casualties throughout West Yorkshire. In 2003, 12,804 casualties were recorded on West Yorkshire's roads, a further slight decrease on the total recorded in 2002 and a slight reduction on the average over the years 1994 - 1998, which has been set by National Government as the base for all their casualty reduction targets. The road casualty trends for West Yorkshire are shown in Table 3.5.1 and Figure 3.5.1. In addition to looking at the absolute number of casualties, it is useful to compare an index of their change relative to the growth in traffic as shown in Figure 3.5.2. This graph shows that there has been a steady reduction in the slight casualty rate (in terms of casualties per 100 million vehicle miles), such that the 2010 target has almost been achieved.

Year	KSI *	Fatal	Serious	Slight	Total
1994 - 1998 average	1,484	115	1,369	11,391	12,876
2000	1,299	120	1,179	12,426	13,725
2001	1,331	144	1,187	11,807	13,138
2002	1,319	115	1,204	11,648	12,967
2003	1,238	102	1,136	11,566	12,804
% Change 2003 cf. 1994 - 1998 average	-17%	-11%	-19%	+1.5%	-0.6%
% Change 2003 cf. 2002	-5.4%	-11%	-6.0%	-0.7%	-1.3%

\* Killed or Seriously Injured

Table 3.5.1 West Yorkshire Road Casualty Trends

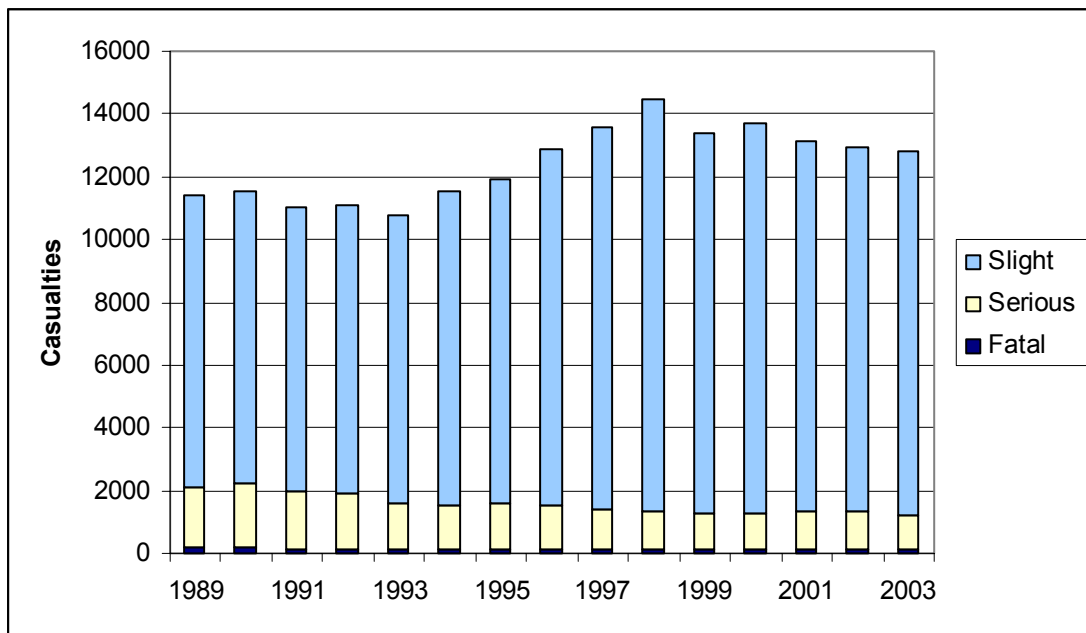


Figure 3.5.1 West Yorkshire Road Casualty Trends Since 1989

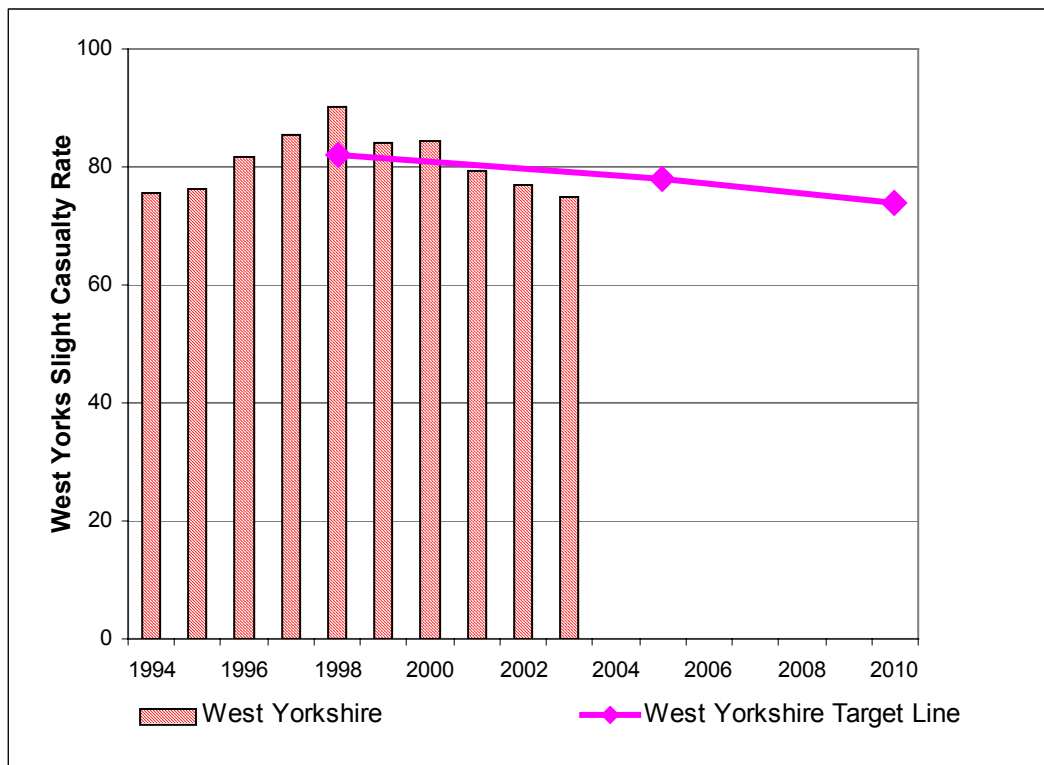


Figure 3.5.2 West Yorkshire Slight Casualty Rate Trend

**Desired Movement**

3.5.3 In 1987, the Government set a target of reducing road accident casualties by one third of the 1981 - 1985 average by the year 2000. We more than achieved this target for reducing deaths and serious injuries, however, the total numbers of injuries



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and slight injuries have increased. In 2000, the Government launched a new road safety strategy including a new set of targets to reduce road casualties further. The new national targets for 2010, compared to the average for 1994 - 1998 are:

- a 40% reduction in the number of people killed or seriously injured in road accidents;
- a 50% reduction in the number of children killed or seriously injured;
- a 10% reduction in the slight casualty rate, expressed as the number of people slightly injured per 100 million vehicle kilometres.

3.5.4 As shown in Table 3.5.1, compared with 1994 - 1998, the number of people killed rose sharply in 2001. This was probably due to random variation, as the accident total for 2002 fell to the same level as the 1994 - 1998 average and the 2003 total has fallen still further. The number of serious casualties continues to fluctuate marginally and the previous downward trend has levelled off in recent years. However West Yorkshire is still on track to meet the Government target. This is the first year that it has been possible to present figures for the slight casualty rate as data on local vehicle kilometres has only recently been made available by DfT. Figure 3.5.2 shows that since 1998 there has been a steady downward trend.

3.5.5 The West Yorkshire authorities will continue to target specific sites to reduce the number of casualties and aim to reduce the overall numbers of casualties within the constraints of having to treat increasingly difficult sites which have smaller casualty savings.

### ***Future Requirements***

3.5.6 The West Yorkshire authorities will continue to monitor data on road casualties to meet the new Government targets.

### Key Indicator D2: Casualty Trends for Different Groups of Road User

3.5.7 The number of casualties in the different priority groups has been monitored for a number of years and will continue to be monitored continuously. The West Yorkshire trends for different groups of road user are shown in Table 3.5.2 for KSI and in Figure 3.5.3 for all casualties.

Year	Pedestrians	Pedal Cyclists	M/cycle Rider	M/cycle Pillion	Car Driver	Car Passenger
1994 - 1998 average	525	106	145	13	378	232
2000	450	80	199	8	360	149
2001	378	91	206	20	379	202
2002	376	62	233	25	385	196
2003	340	101	216	19	323	182
% Change 2003 cf. 1994 - 1998 ave	-35%	-4.7%	+49%	+46%	-14.6%	-22%
% Change 2003 cf. 2002	-9.6%	+63%	-7.3%	-24%	-16%	-7.1%

Table 3.5.2 West Yorkshire Killed and Seriously Injured (KSI) Trends for Different Road Users

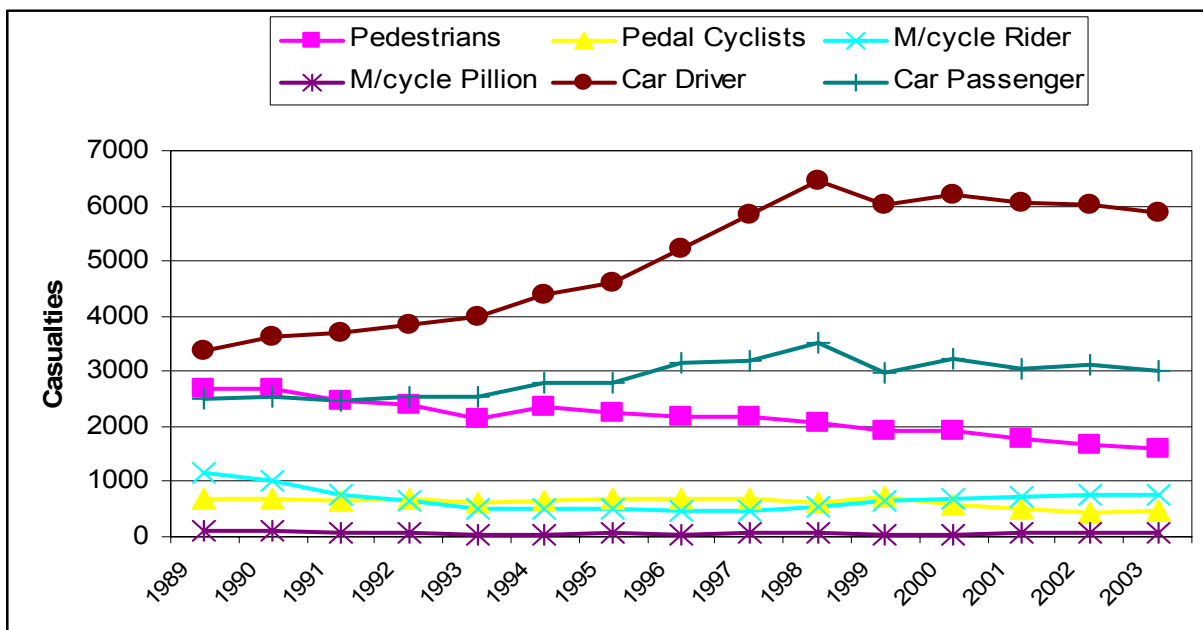


Figure 3.5.3 West Yorkshire Casualty Trends for Different Road Users Since 1989

#### Desired Movement

3.5.8 It is desired that the number of casualties in all groups reduces. The pedestrian casualty total for 2003 is the lowest ever recorded in West Yorkshire.

3.5.9 The annual total of car occupant casualties has remained fairly stable for the past 3 years, which suggests that the trend of rising car casualties has been checked.

### **Future Requirements**

3.5.10 The West Yorkshire authorities will continue to monitor data on road casualties. In particular, further efforts will have to be expended to reduce the number of injuries to riders of Powered Two-Wheeled vehicles as there is a re-emergence of casualties in this road user group.

### **Key Indicator D3: Casualty Trends for Children**

3.5.11 The number of children injured in road traffic accidents has been monitored for a number of years. The trends are shown in Table 3.5.3 and Figure 3.5.4

<b>Year</b>	<b>KSI *</b>	<b>Fatal</b>	<b>Serious</b>	<b>Slight</b>	<b>Total</b>
1994 - 1998 average	273	13	260	1,732	2,004
2000	230	8	222	1,700	1,930
2001	227	13	214	1,550	1,777
2002	161	7	154	1,448	1,600
2003	203	4	199	1,380	1,583
% Change 2003 cf. 1994 - 1998 average	-26%	-69%	-23%	-20%	-21%
% Change 2003 cf. 2002	+26%	-43%	+29%	-4.7%	-1.1%

\* *Killed or Seriously Injured*

*Table 3.5.3 West Yorkshire Road Casualty Trends for Children*

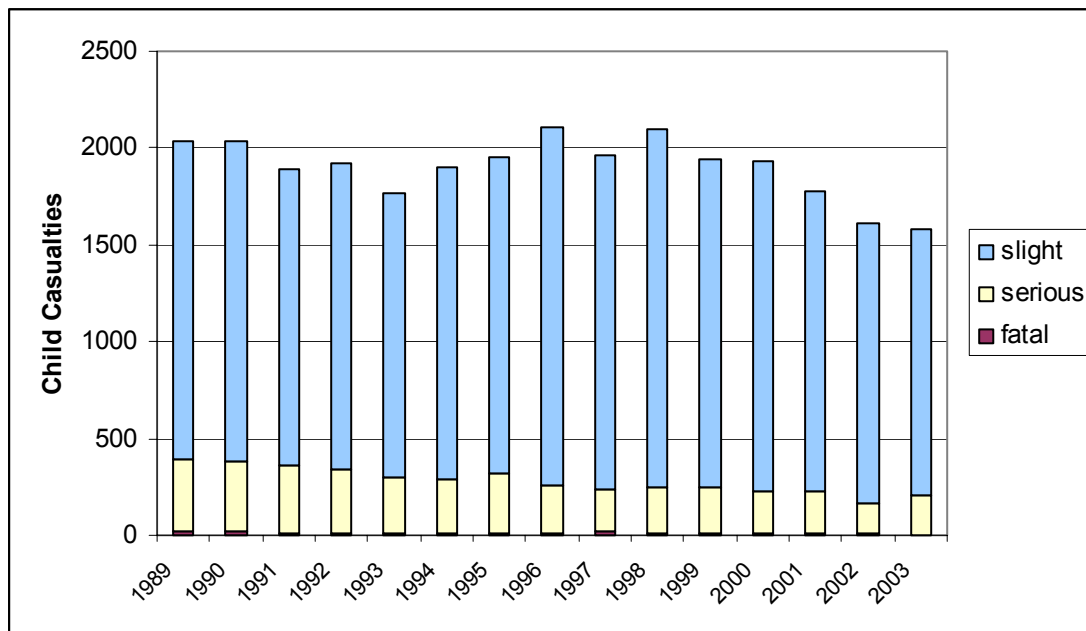


Figure 3.5.4 West Yorkshire Road Casualty Trends for Children since 1989

3.5.12 The situation for child casualties continues to show a reduction in the total number of injuries, as does the number of children killed. However the number of children seriously injured increased during 2003 compared with 2002 showing the volatility of the numbers. Overall the figures show that there has been reductions of over 20% compared with the 1994-98 average and the trend is still downwards. The number of slight injuries was again the lowest level since 1993.

### **Future Requirements**

3.5.13 The West Yorkshire authorities will continue to monitor data on accidents involving children and will consider revising the target for those killed or seriously injured if the significant downward trend continues.

### **Background Indicator D4: Town Centre Car Park Spaces with CCTV Cameras**

3.5.14 A comparison of the baseline data for 1996 and the latest data for the major town and city centres in West Yorkshire is presented in Table 3.5.4. The data refers to off street council owned car park spaces only. CCTV cameras have also been introduced in car parks outside the main centres, e.g. in Dewsbury, Batley, Honley and Holmfirth in Kirklees.

	Year	Bradford	Halifax	Huddersfield	Leeds	Wakefield
No. of Spaces with CCTV	1996	2,021	0	1,044	2,708	1,298
	1998	2,021	0	2,077	2,708	1,743
	1999	2,021	393	2,077	2,708	1,743
	2000	2,021	441	1,902	2,708	1,743
	2001	856	441	2,187	2,708	1,705
	2002	1,576	441	2,667	2,708	1,266
	2003	1,576	441	2,764	2,931	1,266
	2004	1,551	441	3,087	2,137	1,215
No. of Spaces without CCTV	1996	1,159	1,234	1,730	51	445
	1998	1,159	1,297	677	153	0
	1999	1,159	920	677	153	0
	2000	1,159	964	925	153	0
	2001	889	964	890	153	0
	2002	124	964	1,048	153	439
	2003	124	964	1,018	140	439
	2004	93	964	668	831	538
% of Spaces with CCTV	1996	63%	0%	38%	98%	74%
	1998	63%	0%	75%	95%	100%
	1999	63%	30%	75%	95%	100%
	2000	63%	34%	67%	95%	100%
	2001	49%	34%	71%	95%	100%
	2002	93%	31%	72%	95%	74%
	2003	93%	31%	73%	96%	74%
	2004	94%	31%	82%	72%	69%

*Table 3.5.4 Local Authority Off-Street Car Parks with CCTV Surveillance*

### **Desired Movement**

3.5.15 It is envisaged that the number and percentage of car parking spaces with CCTV cameras will increase in the future, not just in the main centres but also in other town centres in West Yorkshire.

**Background Indicator D5: CCTV Cameras at Rail Station Car Parks**

3.5.16 Since the baseline year of 1999 the proportion of station car parks with CCTV has remained stable. Fitment of CCTV at remaining station car parks on the West Yorkshire rail network is expected to take place as part of a county-wide scheme, to include all rail stations, from 2004/5.

	<b>Rail Station car parks with CCTV</b> <b>No. (%)</b>	<b>Of which staffed rail stations</b> <b>No. (%)</b>	<b>Of which unstaffed rail stations</b> <b>No. (%)</b>
1999	22 (43%)	10 (63%)	12 (34%)
2003	24 (45%)	12 (67%)	12 (33%)

*Table 3.5.5 Rail Station car parks with CCTV Surveillance*

**Desired Movement**

3.5.17 It is envisaged that the number of rail station car parks with CCTV cameras in operation will increase in the future.

**Future Requirements**

3.5.18 The number of rail station car parks with CCTV cameras will be monitored annually. Proposals are being developed for a countywide station CCTV system, (including car parks) permanently monitored from a central control room.

**Background Indicator D6: Security at Bus Stations**

3.5.19 This indicator includes large bus points such as Leeds Corn Exchange and bus stations owned by bus operators. In addition to bus stations and not reflected in the indicator are 25 bus shelters county wide that have been fitted with CCTV. A plasma screen has also been installed at Leeds Bus Station. This is a large, high visibility screen installed at the entrance showing pictures from CCTV cameras in the area, thus making the public immediately aware that CCTV surveillance is in operation.

	<b>Bus stations with CCTV</b> <b>No. (%)</b>	<b>Of which staffed stations/points</b> <b>No. (%)</b>	<b>Of which unstaffed stations/points</b> <b>No. (%)</b>	<b>Stations/points with Help points</b> <b>No. (%)</b>
1999	11(42%)	8(89%)	3(7%)	0(0%)
2003	24(89%)	9(100%)	15(83%)	18(67%)

*Table 3.5.6 Bus Stations with CCTV Surveillance*

***Desired Movement***

3.5.21 It is envisaged that the percentage of bus stations with CCTV surveillance will increase in the future. Following the success of the plasma screen pilot in Leeds, screens were installed at a further two bus stations during 2003-4. Further funding has been secured to extend CCTV coverage to include on-street bus points. Work has been completed to link the Metro CCTV system with all local authority CCTV schemes that will create seamless CCTV coverage for crime prevention. It is envisaged that the percentage of bus stations with CCTV surveillance will increase following the planned refurbishment of older bus stations during 2004-2006.

***Future Requirements***

3.5.22 Metro is developing a CCTV strategy as part of their comprehensive approach to Safety and Security. Metro aims to ensure that all bus stations have either Metro or other CCTV systems and will continue to monitor the situation annually. Plasma screens will be installed at further bus stations during 2004-5

***Future Requirements***

3.5.23 Metro is developing a CCTV strategy as part of their comprehensive approach to Safety and Security. This will test security surveillance at known "trouble spots" such as bus shelters experiencing vandalism and will implement CCTV at all on street bus points. Metro aims to ensure that all bus stations have either Metro or other CCTV systems and will continue to monitor the situation annually.

**Background Indicator D7: Car Park Spaces with Secured Car Park Award**

3.5.24 Table 3.5.7 shows the comparison of the baseline data to the latest data available for the number of off-street car parking spaces in each of the main town or city centres that have received awards. Secured Car Park Awards have also been received for car parks in other centres e.g. Dewsbury, Pontefract and Castleford.

		<b>Bradford</b>	<b>Halifax</b>	<b>Huddersfield</b>	<b>Leeds</b>	<b>Wakefield</b>
No. of spaces with Awards	1996	554	0	1,777	0	0
	1998	554	0	1,777	0	0
	1999	554	0	1,777	1,250	0
	2000	554	0	1,777	1,250	0
	2001	136	0	1,777	1,250	0
	2002	170	0	1,919	1,250	0
	2003	203	0	2,669	1,250	0
	2004	178	0	2,669	1,250	403
No. of spaces without Awards	1996	2,626	1,297	903	2,860	1,743
	1998	2,626	1,297	877	2,860	1,743
	1999	2,626	1,313	877	1,610	1,743
	2000	2,626	1,313	950	1,297	1,743
	2001	1,609	1,313	1,058	1,297	1,705
	2002	1,530	1,405	1,796	1,297	1,705
	2003	1,497	1,405	1,113	1,681	1,705
	2004	1,466	1,405	1,086	1,718	1,350
% of Spaces with Awards	1996	17%	0%	66%	0%	0%
	1998	17%	0%	67%	0%	0%
	1999	17%	0%	67%	44%	0%
	2000	17%	0%	65%	49%	0%
	2001	8%	0%	63%	49%	0%
	2002	10%	0%	52%	49%	0%
	2003	12%	0%	71%	43%	0%
	2004	11%	0%	71%	42%	23%

*Table 3.5.7 Local Authority Off-Street Parking Spaces with and without Awards*

### **Desired Movement**

3.5.25 Since 1996 there has been an increase in the number of car park spaces with awards and it is envisaged that the number will continue to increase as more security and personal safety issues are addressed within car parks. Wakefield is working towards secured status for a number of city centre car parks. Calderdale is currently developing an Action Plan aiming to achieve the Secured Car Park Award status for up to 20% of Local Authority off-street spaces by 2007. A bid for funding has received Council support and negotiations with potential partners is ongoing.



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**Background Indicator D8: Town and City Centre Streets covered by CCTV Security Cameras**

3.5.26 Table 3.5.8 shows the changes in CCTV coverage in the major town and city centres since the baseline of 1998 through the percentage of streets covered by cameras. In addition a number of the smaller towns have good CCTV coverage, e.g. Dewsbury.

	<b>Bradford</b>	<b>Halifax</b>	<b>Huddersfield</b>	<b>Leeds</b>	<b>Wakefield</b>
1998	40%	0	90%	60%	93%
1999	40%	5%	90%	60%	93%
2000	40%	15%	90%	70%	93%
2001	40%	30%	94%	70%	93%
2002	55%	40%	94%	73%	93%
2003	60%	40%	95%	80%	93%
2004	65%	40%	96%	87%	93%

*Table 3.5.8 Percentage of City Centre Streets Covered by CCTV*

***Desired Movement***

3.5.27 It is envisaged that the percentage of streets covered by CCTV in Bradford, Halifax and Leeds will continue to increase, but Huddersfield and Wakefield are probably close to their realistic maximum. It is also expected that more of the smaller towns will be covered by CCTV in the future.

## 3.6 EQUAL OPPORTUNITIES

### *Primary Objectives*

To promote equal opportunities for access to transport.

### *Role of Transport*

3.6.1 This objective embraces the need to provide access for disabled people but also recognises the need to address other inequalities in the transport system, particularly between those with and without access to cars.

#### **Summary of Key Trends**

- Good progress continues to be made in improving accessibility to transport for people travelling within West Yorkshire;
- 37% of buses are low floor, compared to 13% in 1999
- 31% of buses have a ramp fitted, compared to 9% in 1999
- All rail stations in West Yorkshire now have public address systems
- BV165 has been adopted for controlled crossings equipped with dropped kerbs, tactile paving and tactile indicators
- Accessbus patronage has dropped by 1.7% compared to 1999
- There has been an increase of 86% to 832 in the number of accessible bus stops since 2000.

#### **Background indicator E1: AccessBus patronage**

3.6.2 AccessBus patronage data relates to the use of the specialised door-to-door service for people unable to use conventional public transport, operating under contract to Metro in all districts. Current data collection includes the number of passenger trips made annually. The base line year is 1995, when 320,000 passenger trips were made. AccessBus patronage trends are shown in Figure 3.6.1

#### ***Desired Movement***

3.6.3 Metro is implementing a strategy for improved access to mainstream public transport services. The door-to-door nature of the AccessBus service and the extra assistance given by drivers, particularly in relation to shopping activities, means that demand for the service has increased with a 60% increase in patronage between 1995/96 and 2001/02. The last two years have shown reduced patronage levels, partly due to the new booking system which logs cancellations more accurately. This represents a decrease of 1.7% in the baseline of 1999/2000.

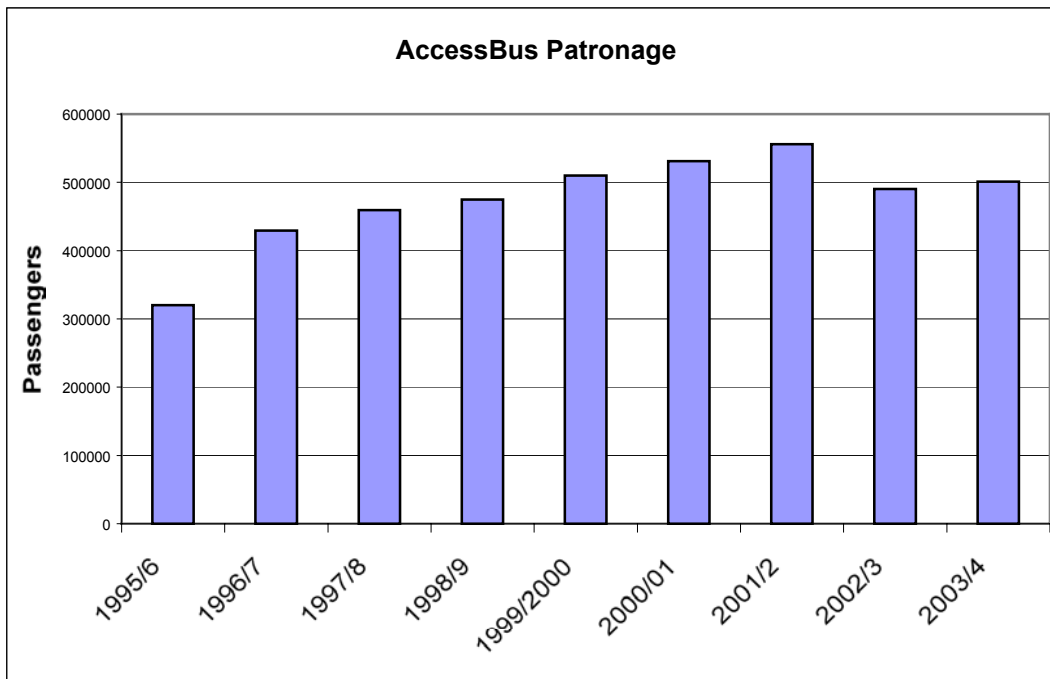


Figure 3.6.1 AccessBus Patronage Trends

### **Future Requirements**

3.6.4 Dependent on the results of best value review that is currently underway, Metro are planning to replace 11 of the 16 remaining tail-lift AccessBus vehicles with front end ramped access vehicles during the lifetime of the current LTP. This will bring the total number of ramped access vehicles in operation to 30, significantly improving the safety and quality of the AccessBus service. The new AccessBus booking system, that incorporates the latest CTI (Computer Telephony Integration) technology, will be further upgraded this year to enable vehicle tracking and facilitate call centre style call handling and demand monitoring of the service.

### **Background Indicator E2: Accessibility of Bus Fleets**

3.6.5 The total percentage of buses in West Yorkshire compliant with the requirements of Disabled Persons Transport Advisory Committee (DPTAC) is 37% compared to 10% in 1999. The percentage of DDA compliant buses i.e. low floor with a ramp fitted, was 7% in 1999, increasing to 31% in 2004. It should be noted that these figures are based on voluntary returns from bus operators.

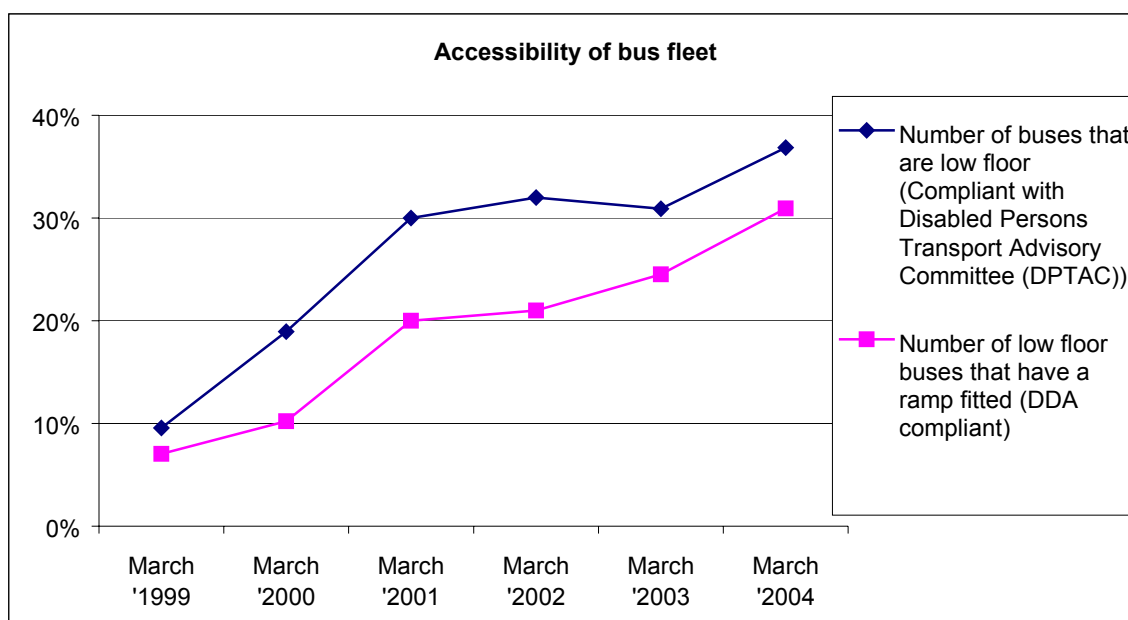


Figure 3.6.2 Accessibility of Bus Fleet

### Background Indicator E3: Accessibility of Rail Stations

3.6.6 The accessibility of rail stations in West Yorkshire, with particular reference to the facilities available to assist disabled persons, is reported below. Progress made since 1997 is shown in Figure 3.6.3 and Table 3.6.1. In 2002 all remaining stations in West Yorkshire were equipped with a full public address system.

Station Facility	No of Stations with Facilities		% of stations	
	1997	2003	1997	2003
<b>Staffed (17 Stations)</b>				
Level/ramped access to all platforms	9	13	56	77
Level/ramped access to some platforms	3	4	19	23
Information Screens	10	13	63	77
Full public address	10	17	63	100
<b>Unstaffed (48 Stations)</b>				
Level/ramped access to all platforms	30	37	63	77
Level/ramped access to some platforms	11	10	23	21
Information Screens	0	8	0	16
Full public address	21	48	44	100

Table 3.6.1: Station Facilities within West Yorkshire

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***Desired Movement***

3.6.7 We will consider the potential for further investment in rail station accessibility measures in conjunction with the operator of the Northern Franchise. All our other modifications to rail stations will meet the latest accessibility requirements.

***Future Requirements***

3.6.8 The database is continually updated and will therefore allow future monitoring and reporting to be carried out efficiently.

**Background Indicator E4: Accessibility of Bus Stations**

3.6.9 During 2003/04 an audit of bus station accessibility was carried out. This was based on eight criteria which, if met, would make the bus stations fully accessible to disabled users. Eight of the West Yorkshire bus stations (33% of the total) were found to be fully accessible. A further twelve (44%) were 87% accessible and eight (33%) were 75% accessible.

***Desired Movement***

3.6.10 Major refurbishment works are programmed to take place during 2004 /05 at Batley, Cleckheaton, Ossett and Brighouse bus stations making them fully accessible. Work at Leeds, Otley and Shipley Market Place will take place during the life of the current LTP. The majority of those which are 87% accessible will also have refurbishment / DDA works during the current LTP period.

***Future Requirements***

3.6.11 Audits will be carried out regularly to monitor progress towards full accessibility at all bus stations.

**Background indicator E5: Accessibility of bus stops**

3.6.12 Work on a number of corridors throughout West Yorkshire aims to improve accessibility of stops as part of the Yorkshire Bus Initiative. These include such measures as raised kerbs, tactile paving and improved lighting. Routes with accessible stops, such as the bus guideways, are operated exclusively by low floor buses, giving a fully accessible service. In 2000 there were 448 accessible bus stops; in 2003 there were 832, an increase of 86%.

***Desired Movement***

3.6.13 The vast majority of bus stops require expenditure in order to bring them up to a minimum required accessibility standard. The accessibility of bus stops and their environment is the prime focus of the strategy to improve access to public transport. It is proposed that the accessibility of bus stops be improved through targeted investment on corridors, city and town centres and as part of the Interchange Strategy and that minimum standards are applied to all bus stops with additional expenditure on 'advanced' features being targeted at corridors and town centres on a prioritised basis.

**Future Requirements**

3.6.14 Work is continuing to develop criteria of accessibility for bus stops in order to improve reporting on this indicator.

**Background indicator E6: Provision at Controlled Pedestrian Crossings**

3.6.15 Baseline year is now 2002/2003 in line with the introduction of Performance Indicator BV165. Progress made in improving facilities at controlled crossings is shown in Table 3.6.2.

	<b>Bradford</b>			
<b>Type</b>	<b>With dropped kerbs, tactile paving and tactile indicators</b>			
	<b>2002/03</b>		<b>2003/04</b>	
	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
Pelican/ Puffin	52	46	91	73
Signal Control	25	34	43	53

	<b>Calderdale</b>			
<b>Type</b>	<b>With dropped kerbs, tactile paving and tactile indicators</b>			
	<b>2002/03</b>		<b>2003/04</b>	
	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
Pelican/ Puffin	16	57	25	89
Signal Control	16	50	24	77

	<b>Kirklees</b>			
<b>Type</b>	<b>With dropped kerbs, tactile paving and tactile indicators</b>			
	<b>2002/03</b>		<b>2003/04</b>	
	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
Pelican/ Puffin	24	48	45	68
Signal Control	42	76	68	92

	<b>Leeds</b>			
<b>Type</b>	<b>With dropped kerbs, tactile paving and tactile indicators</b>			
	<b>2002/03</b>		<b>2003/04</b>	
	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
Pelican/ Puffin	98	49	166	75
Signal Control	151	57	199	89

	<b>Wakefield</b>			
<b>Type</b>	<b>With dropped kerbs, tactile paving and tactile indicators</b>			
	<b>2002/03</b>		<b>2003/04</b>	
	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
Pelican/ Puffin	63	80	67	80
Signal Control	31	42	38	45

*Table 3.6.2 Provision at Controlled Crossings*

### ***Desired Movement***

3.6.16 Some controlled crossings require expenditure of differing amounts in order to bring them up to a minimum required accessibility standard. Controlled crossings will become more accessible as a result of higher design standards and future investment and the percentage of fully accessible facilities will continue to increase.

### ***Future Requirements***

3.6.17 The progress of upgrading of controlled crossings and installation of new crossings will be reflected in future reporting.

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## 3.7 ENVIRONMENTAL QUALITY

### *Primary Objectives*

To improve environmental quality and reduce transport related impacts on air quality and noise.

### *Role of Transport*

3.7.1 To reduce transport noise and air pollution by controlling traffic growth, reducing congestion and removing traffic from sensitive areas.

#### ***Summary of Key Trends***

- All Districts have completed the second round of the Updated Screening Assessment and started progressing the Detailed Air Quality Assessment
- NO<sub>2</sub> and PM<sub>10</sub> remain the transport pollutants of concern.
- A long term (6 year) general trend of improved NO<sub>2</sub> air quality continues in West Yorkshire. All relevant standards were met, except for a slight annual average exceedance for Wakefield.
- Elevated levels of PM<sub>10</sub> were monitored across West Yorkshire, this was mainly caused by prevailing weather conditions. All relevant standards were met, except for the number of daily exceedances at Kirklees.
- Leeds has completed their transport oriented Air Quality Action Plan. Wakefield continues to develop their Action Plan. Both plans will aid mitigation of traffic related Air Quality Management Areas (AQMA's).
- Since the year 2000, road transport emissions of NO<sub>x</sub> and PM<sub>10</sub> within West Yorkshire have fallen by 20% and 22% respectively. Over the same period, emissions of CO<sub>2</sub> have slightly increased by 3%.
- Kirklees and Leeds have achieved EMAS accreditation. Bradford is making good progress and hopes to achieve EMAS accreditation by September 2005.
- The partnership between Leeds City Council and Leeds University continues to develop and improve transport air quality and noise audit tools.
- A West Yorkshire Working Group has been set up to co-ordinate the methodology for the Strategic Environmental Assessment (SEA) for LTP 2.



## Key Indicator F1: Air Quality Monitoring in Town and City Centres

3.7.2 Road transport emissions remain the most significant source of urban air pollution. High levels of exhaust emissions can result from the effects of traffic congestion, which is most common during peak periods.

3.7.3 Road transport emissions of nitrogen dioxide (NO<sub>2</sub>) and particulates (PM<sub>10</sub>) contribute in the region of 75% and 50% respectively, towards total urban emissions. NO<sub>2</sub> and PM<sub>10</sub> represent the two major transport pollutants of concern.

### Nitrogen Dioxide Monitoring

3.7.4 Figure 3.7.1 illustrates the results of the annual average NO<sub>2</sub> monitoring within urban centres of each District. During the year 2003, all Districts except Wakefield complied with the annual average standard of 40 µg/m<sup>3</sup>. The settled weather conditions and reduced pollutant dispersion experienced in 2003 will have contributed to some local increases in background NO<sub>2</sub>. Over the 6 year period, there is a general trend of improving air quality, with respect to background levels of NO<sub>2</sub>. This trend provides an indication that road transport emissions of NO<sub>2</sub> are slowly declining.

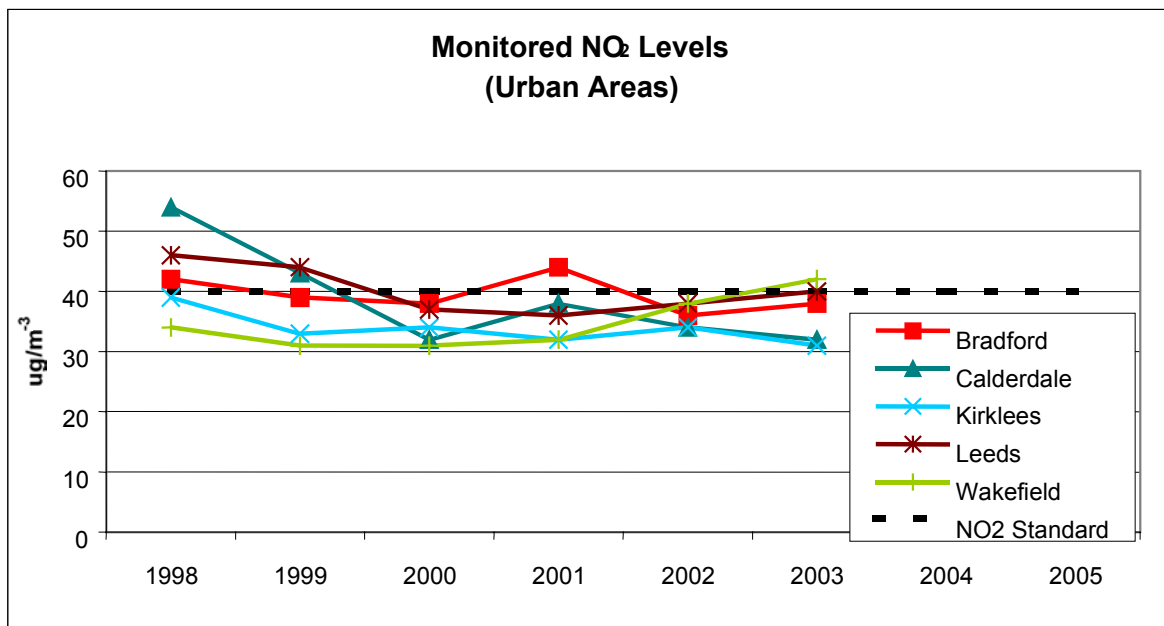


Figure:3.7.1 West Yorkshire Annual Average NO<sub>2</sub> Monitoring – Summary Data

3.7.5 Figure 3.7.2 illustrates the number of exceedances of the hourly NO<sub>2</sub> standard of 200 µg/m<sup>3</sup>. (This standard allows up to 18 exceedances per year). Since monitoring began in 1998, there have been only 5 exceedances recorded at these West Yorkshire sites. During the year 2003, a single exceedance was reported at the Bradford site. All Districts complied easily with the relevant air quality standard. No hourly NO<sub>2</sub> data was available for Calderdale.

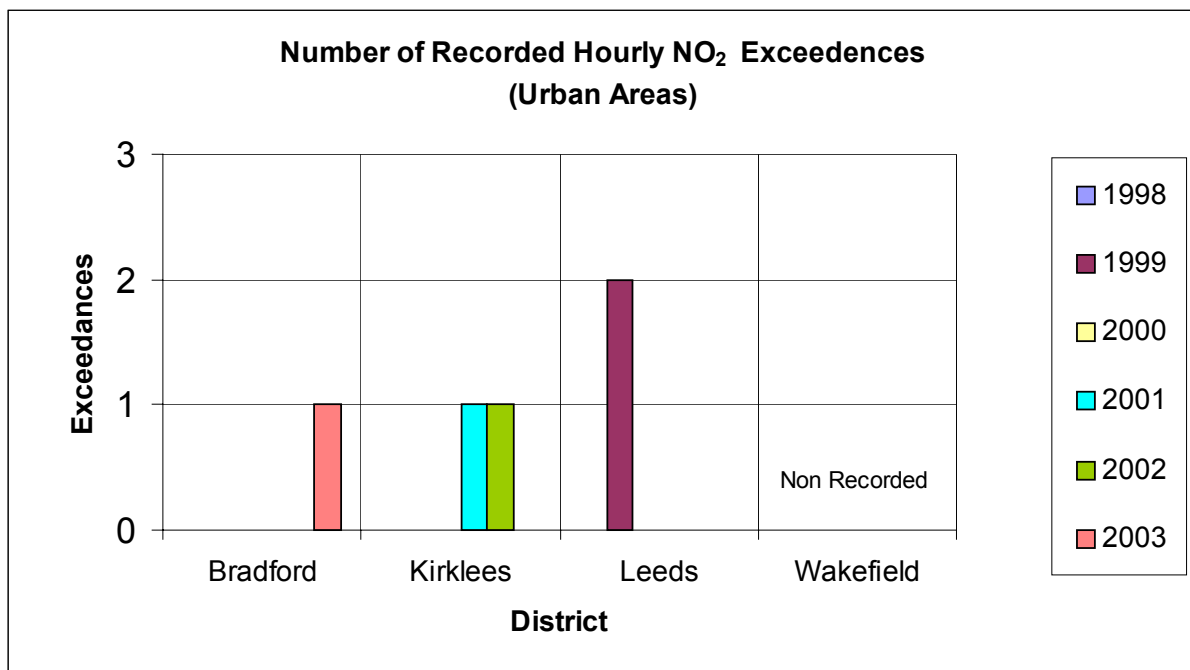


Figure 3.7.2 Total Number of Hourly NO<sub>2</sub> Exceedences

### Particulates (PM<sub>10</sub>) Monitoring

3.7.6 Figure 3.7.3 indicates that all Districts comply with the annual average PM<sub>10</sub> standard of 40 µg/m<sup>3</sup>. Since monitoring began in 1998 there has been little change in general background PM<sub>10</sub> air quality within urban centres.

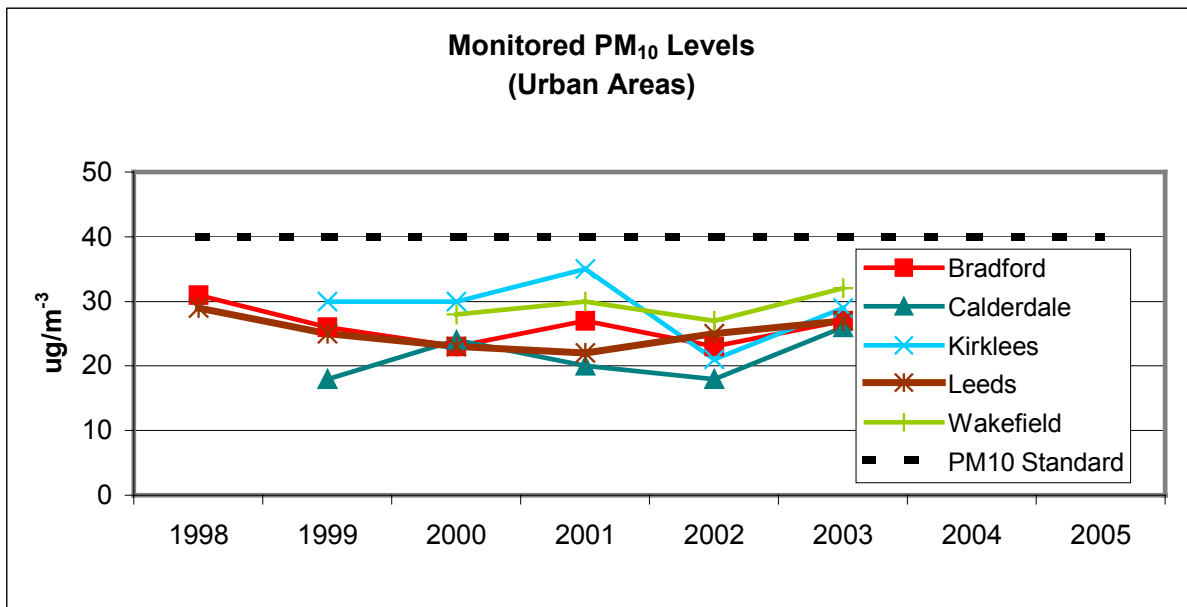


Figure 3.7.3 West Yorkshire Annual average PM<sub>10</sub> Monitoring – Summary Data

3.7.7 During 2003 the whole region was affected by elevated levels of PM<sub>10</sub>. This regional increase in background PM<sub>10</sub> was again caused by poor dispersion of local PM<sub>10</sub> sources. However, recent research has indicated that regional PM<sub>10</sub> air quality can be affected by trans-boundary effects, e.g. importing dust from continental Europe.

3.7.8 Figure 3.7.4 indicates the number of daily PM<sub>10</sub> exceedances within the urban monitoring network of West Yorkshire. (This standard allows 35 daily exceedances greater than 50 µg/m<sup>3</sup>). The whole region reported a significant increase in daily PM<sub>10</sub> exceedances. All Districts except Kirklees did comply with the relevant PM<sub>10</sub> standard. The Kirklees site reported a total of 44 exceedances - this large increase was mainly caused by local road construction processes. However, the regional increase in daily exceedances was also likely to be attributed to climatic and trans-boundary effects.

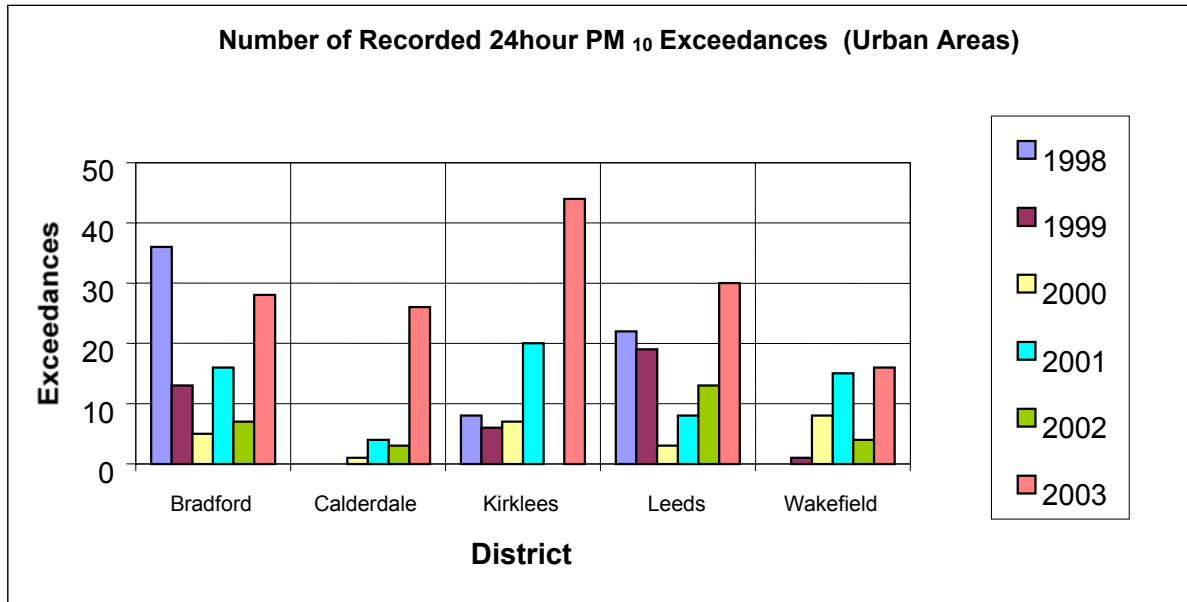


Figure 3.7.4 Total Number of Daily Exceedances - Summary Data

### **Road Transport Emission Trends in West Yorkshire**

3.7.9 Road transport emissions of oxides of nitrogen (NO<sub>x</sub>) which contains a mixture of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>), fine particulates (PM<sub>10</sub>) and carbon dioxide (CO<sub>2</sub>), the primary “greenhouse gas”, have been predicted for the West Yorkshire trunk / principal road network. Annual emission rates were predicted for NO<sub>x</sub> and PM<sub>10</sub> using the new DETR / DEFRA approved vehicle emission factors (published in 2002 by Casella Stanger and AEA Technology). The DMRB vehicle emission factors published in 1999, were used to predict emissions of CO<sub>2</sub>.

3.7.10 All calculated emission rates took account of the observed annual traffic growth for all road types in each District. Appropriate vehicle speeds and percentage HGV's were assigned for the whole of the West Yorkshire trunk / principal road network, including motorways.

3.7.11 Table 3.7.1 provides a summary of predicted road transport emissions for the West Yorkshire trunk / principal road network. Approximately 19,600 tonnes, 570 tonnes and 2.86 million tonnes / year of NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub> emissions respectively, have been predicted for the year 2003. The annual emission rates for NO<sub>x</sub> and PM<sub>10</sub> continues to fall across the region, whilst there is a small increase for CO<sub>2</sub> emissions. Compared with the base year of 2000, annual emission rates for NO<sub>x</sub> and PM<sub>10</sub> have

fallen by 20% and 22% respectively. Since 2000 there has been almost a 3% increase in CO<sub>2</sub> emissions.

Year	2000		2001		2002		2003	
Pollutant	Tonnes / yr	% Change	Tonnes / yr	% Change	Tonnes / yr	% Change	Tonnes / yr	% Change
NO <sub>x</sub>	24,459	N/A	22,500	- 8.0%	20,802	- 14.8	19617	-19.8%
PM <sub>10</sub>	724	N/A	658	- 9.1%	604	- 16.4	568	-21.5%
CO <sub>2</sub>	2.787*10 <sup>-6</sup>	N/A	2.780*10 <sup>-6</sup>	+ 0.25%	2.787*10 <sup>-6</sup>	+ 0.1	2.864*10 <sup>-6</sup>	+2.7%

Table 3.7.1 Summary of Road Transport Emissions

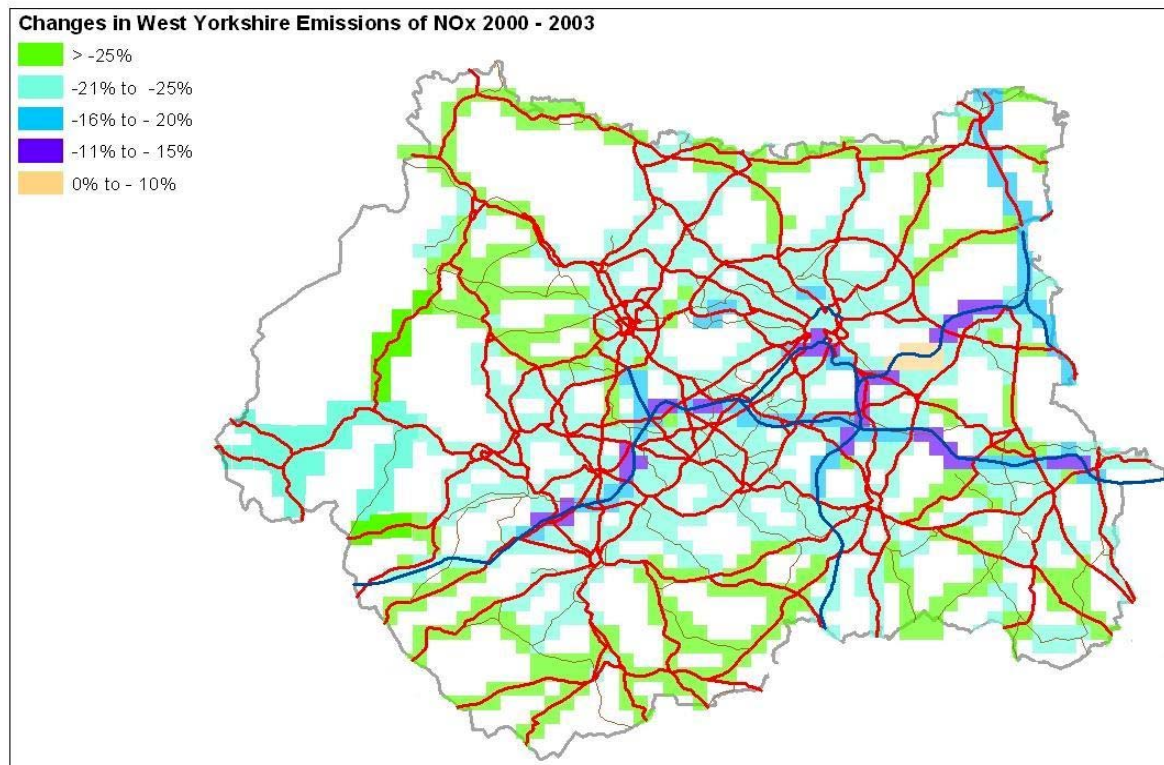


Figure 3.7.5 Changes in emissions of NO<sub>x</sub> 2000 –2003

3.7.12 Figure 3.7.5 contains a NO<sub>x</sub> emission map for the West Yorkshire trunk / principal road network. This emission map highlights categories of percentage reduction in predicted annual emission rates, between the base year 2000, and the year 2003. Most central urban areas have experienced a 21 to 25% reduction in NO<sub>x</sub> emissions. Further reductions exceeding 25% of NO<sub>x</sub> emissions were found in the outer less populated areas of the region. However, in areas bordering the motorway network, there were smaller reductions in NO<sub>x</sub> emissions of between 11 to 15% and 16 to 20%. This is a result of higher vehicle speeds combined with a greater percentage of HGV's.

3.7.13 The reduction in emissions for NO<sub>x</sub> and PM<sub>10</sub> have mainly resulted from the 'cleaning up' of the national vehicle fleet in response to the EU Auto-Oil Programme.

This has involved a progressive tightening of emission standards for new vehicles and improvements in fuel quality. These measures have less effect on reducing carbon dioxide emissions. For example, modern oxidation / catalytic converters significantly reduce regulated emissions (e.g. oxides of nitrogen, hydrocarbons and carbon monoxide) but contribute towards an increase in carbon dioxide.

3.7.14 Future strategies to reduce CO<sub>2</sub> emissions will rely on improved engine technology / efficiency to reduce fuel consumption. Examples include the common rail diesel engine and a variety of hybrid vehicles that include a combination of alternative propulsion methods. Other initiatives such as the promotion of non-aggressive driving, and a whole range of methods contained within the LTP that target initiatives to reduce vehicle use and peak period congestion, will aid reductions in road transport CO<sub>2</sub> emissions.

### **National Air Quality Strategy**

3.7.15 The National Air Quality Strategy (NAQS) 2000 requires the Districts of West Yorkshire to review and assess their local air quality. This audit process involves a combination of air quality monitoring and modelling, against a series of health based standards / objectives. These standards contained within the Air Quality Regulations 2000 remain as summarised in the previous 2001 / 2002 APR report. It is likely that a more stringent standard for PM<sub>10</sub> may be introduced in the near future.

3.7.16 All Districts have effectively completed Round 1 of the Air Quality Review and Assessment process. A summary of the findings has been tabulated in Table 3.7.2. Bradford, Calderdale, and Kirklees complied with all relevant air quality standards/ objectives for the year 2005, and did not need to progress into Stage 4 and beyond.

3.7.17 Leeds and Wakefield identified a risk of exceeding relevant air quality standards by declaring 7 and 2 (respectively) traffic related NO<sub>2</sub> Air Quality Management Area's (AQMA's). Leeds declared one non-traffic related PM<sub>10</sub> AQMA.

<b>District</b>	<b>Round 1</b>			<b>Round 2</b>	
	<b>Stage 4</b>	<b>AQMAs Identified</b>	<b>Action Plans</b>	<b>USA</b>	<b>Detailed Assessment</b>
Bradford	N/A	N/A	N/A	NO <sub>x</sub> (Roads) PM <sub>10</sub> & SO <sub>2</sub> (Steam train)	On going
Calderdale	N/A	N/A	N/A	NO <sub>x</sub> (roads) PM <sub>10</sub> (roads) SO <sub>2</sub> (industry)	On going
Kirklees	N/A	N/A	N/A	NO <sub>x</sub> (Roads) SO <sub>2</sub> (Industry)	On going
Leeds	✓	(7) NO <sub>2</sub> (1) PM <sub>10</sub>	Completed & Approved	NO <sub>x</sub> (Roads) PM <sub>10</sub> (Roads & domestic)	On going
Wakefield	✓	(2) NO <sub>2</sub>	On going	NO <sub>x</sub> (Roads) PM <sub>10</sub> (Roads, domestic, industrial) SO <sub>2</sub> (Domestic, industrial)	On going. Potential new AQMAs.

*Table 3.7.2 Summary of the Air Quality Review And Assessment Progress.*

3.7.18 An approved Action Plan, predominately transportation based, has been developed for the Leeds District to help reduce traffic related emissions of NO<sub>2</sub>. A similar transport based Action Plan is currently being developed by Wakefield.

3.7.19 All Districts have progressed onto Round 2 and completed the Updated Screening Assessment (USA). The findings of this screening process continue to identify road transport to be a significant source of NO<sub>x</sub> and PM<sub>10</sub>. Industrial and local domestic emissions were highlighted as significant sources of PM<sub>10</sub> and sulphur dioxide (SO<sub>2</sub>). All Districts are currently working on their Detailed Assessments, focusing on the USA pollutants identified within each District.

### ***Air Quality Monitoring / Modelling***

3.7.20 All Districts within West Yorkshire have either maintained or slightly improved their air quality auditing capability. Each District employs a combination of “real-time” and passive (diffusion tube) monitoring to assess existing air quality and past trends. Table 3.7.3 summarises the air quality monitoring and modelling upgrades for each District. Most Districts have invested in additional NO<sub>x</sub> analysers to help improve their monitoring capability for road transport emissions. These upgrades in NO<sub>2</sub> monitoring have been instigated by the findings of the updated screening assessment (USA). Kirklees has also strengthened its roadside PM<sub>10</sub> monitoring programme.

<b>District</b>	<b>Monitoring</b>	<b>Modelling</b>
Bradford	1 no. NO <sub>x</sub> Analyser 4 no. hired NO <sub>x</sub> Analysers	Improved emission inventory ADMS Urban
Calderdale	2 no. NO <sub>x</sub> Analysers	No change ADMS Urban
Kirklees	2 no. NO <sub>x</sub> Analysers 2 no. PM <sub>10</sub> Analysers	No change ADMS Urban
Leeds	1 no. NO <sub>x</sub> Analyser	Intranet-based Airviro system
Wakefield	No change	No change

*Table 3.7.3 Air Quality Audit Upgrades*

3.7.21 All Districts make use of modern computerised dispersion models – either ADMS Urban or Airviro systems. Both Bradford and Leeds have recently upgraded their own dispersion modelling systems.

### ***Desired Movement***

3.7.22 The West Yorkshire LTP contains a co-ordinated mix of transport measures / action plans and travelwise initiatives. A flow chart summarising the main transport action plans was contained in the 2001 / 2002 APR. These action plans can be split into three general themes, including:

- demand management measures;
- measures to encourage modal change or reduce the need to travel ;
- actions to reduce / clean up vehicle emissions.

3.7.23 Progressive implementation of demand management measures and Travelwise initiatives throughout West Yorkshire will contribute towards reducing car dependency and resultant levels of peak period congestion . Such measures coupled with improved Urban Traffic Control (UTC) systems and modern engine and exhaust technologies, will collectively help mitigate emissions and improve local air quality.

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### ***Future Requirements***

3.7.24 Air quality modelling and emission mapping techniques will continue to be developed and refined. The impact of the LTP strategy, and in particular the effectiveness of transport action plans in improving local and regional air quality will be monitored and the results reported in future Annual Progress Reports. This process is of particular importance to the Districts of Leeds and Wakefield who have developed, or are in the process of developing, their Air Quality Action Plans as a direct response to mitigate traffic related AQMA's.

### ***Background Indicator F2: Noise Mapping***

#### ***Transportation Noise***

3.7.25 Transport noise currently affects around two thirds of the population in the UK with road traffic noise being the most extensive source of environmental noise pollution. The level of disturbance generated by road traffic depends on the actual noise level, it's variability, time of occurrence, and the sensitivity of the site.

#### ***Proposed Directive for Environmental Noise***

3.7.26 An EU Directive (2002/49/EC) has been proposed for the Assessment and Management of Environmental Noise. It is proposed to introduce two noise indicators based on period average noise levels. 'Annoyance' will be indicated by the noise level covering the day, evening and night (LDEN). 'Sleep Disturbance' will be characterised by an LNIGHT indicator. Each member state will be required to publish their limit values in terms of LDEN and LNIGHT, for road traffic noise, rail noise, aircraft noise around airports and industrial noise.

3.7.27 Included in the proposal is the technique of noise mapping. This process will audit existing levels of environmental noise against proposed limit values. Noise mapping will form the basis for the development of Action Plans and strategies at a local, national and EU level to combat the increasing problem of noise pollution.

3.7.28 Each member state must identify all major roads, railways and airports and agglomerations with more than 250,000 inhabitants. By 31 December 2004, noise maps for the preceding calendar year must have been completed and approved. However, recent developments indicate the timescale for this proposed Directive is under review.

#### ***Noise Mapping of West Yorkshire***

3.7.29 DEFRA appointed the consultants Schal, to identify relevant stakeholders within West Yorkshire, to prepare the way forward regarding the process of noise mapping. A Regional Project Board was set up during spring 2003 to help co-ordinate the proposed noise mapping audit. Unfortunately this group was unable to function as the noise mapping project was put on hold due to funding difficulties between DEFRA and Schal. This issue was mainly as a result of technical problems, lack of relevant data sets and over ambitious levels of detail.

3.7.30 Recent discussions with DEFRA indicate that a new Noise Mapping initiative has been developed and piloted within London. The revised methodology will be more strategy-based and less detailed, thereby reducing the need for intensive data input and resources.

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3.7.31 DEFRA are currently re-tendering for appropriate consultants to co-ordinate and guide Local Authorities through the updated noise mapping process. This process is likely to be split into regions, but the final outcomes are still being assessed by DEFRA. It is anticipated that all regions within England shall be noise mapped before the end of spring 2005.

3.7.32 A comprehensive noise mapping model will still need to be developed for the whole of the West Yorkshire region. This process will highlight sensitive areas exposed to high ambient noise levels. A Regional Project Board or similar group, will review the findings and develop appropriate mitigation measures, targeted at the worst effected areas.

### ***Mitigation Measures***

3.7.33 The Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999, ensure the Environmental Impact Assessment (EIA) process will aid major scheme design. This process will help indicate where appropriate realignment of the carriageway, or the design of purpose built earthmounds / roadside noise barriers are necessary to protect sensitive locations.

3.7.34 There is no statutory EIA process to deal with small transportation schemes, e.g. traffic management or traffic calming schemes. The Development Department of Leeds City Council are currently investigating this issue. An EIA 'screening model' has been developed to ensure environmental issues are highlighted and dealt with at an early stage in the development of all transportation schemes. When more information is available, it is hoped the findings will be disseminated to the West Yorkshire Districts.

3.7.35 Table 3.7.4 provides a summary of the noise insulation carried out under the Noise Insulation Regulations, 1988. A total of 147 eligible residential properties were offered insulation against traffic noise during 2003. Of those properties offered insulation, 61 have so far accepted the offer. There has been a considerable reduction in noise insulation work throughout the region during 2003. This is mainly due to the lack of major schemes being implemented within West Yorkshire.



District \ Year	2000		2001		2002		2003	
	Offered	Accepted	Offered	Accepted	Offered	Accepted	Offered	Accepted
Bradford	100	70	324	180	155	114	55	39
Calderdale	0	0	0	0	0	0	0	0
Kirklees	4	4	0	0	0	0	21	7
Leeds	649 (1)	387 (2)	149	75	220	109	20	2
Wakefield	0	0	0	0	6	0	51	13

Table 3.7.4: Summary of Noise Insulation

(1) Includes 149 properties eligible due to the A1-M1 Link (2) Includes 60 properties eligible due to the A1-M1 Link

### Background Indicator F3: Use of Low Noise Road Surfacing

3.7.36 Figure 3.7.6 shows the approximate lengths of trunk / principal roads that have been re-surfaced with 'low noise' asphalt over the previous three years. Approximately 270km of 'low noise' asphalt have been laid in West Yorkshire between the years 2000 - 2003. Despite a steady annual increase in the amount of low noise asphalt used, rising from 42km in 2000 to reach a peak of 86km during 2002, there was a slight decrease in low noise asphalt laid during 2003, with 72km being laid throughout the region.

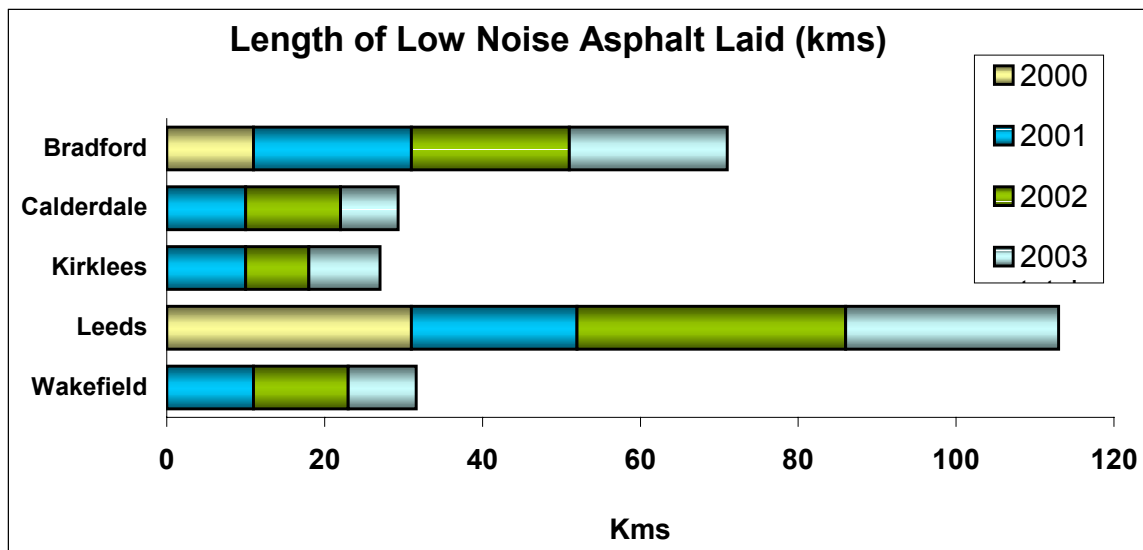
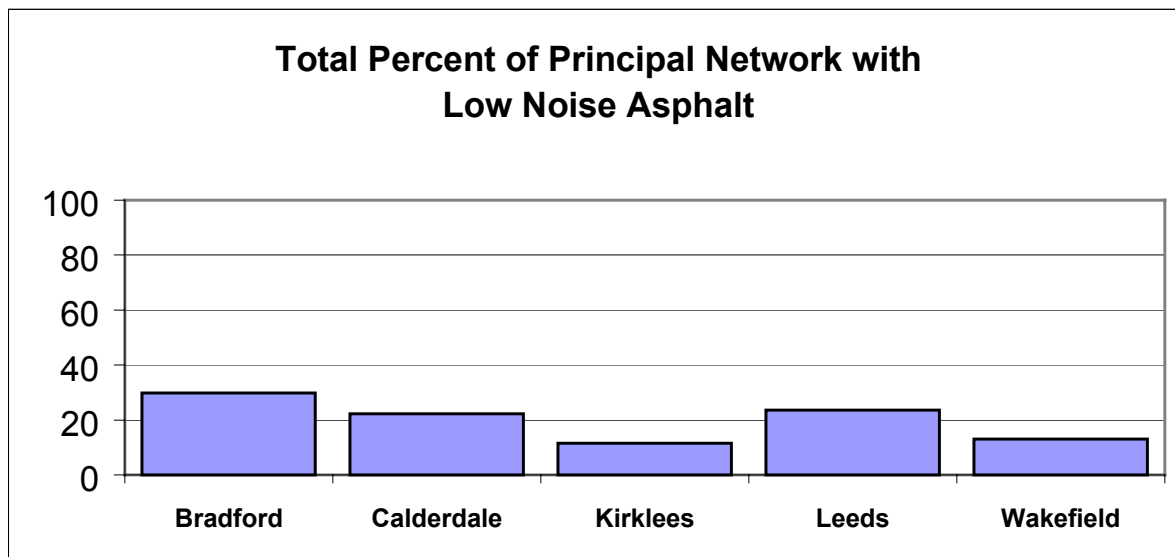


Figure 3.7.6 Length of Low Noise Asphalt Laid

3.7.37 Figure 3.7.7 compares the actual lengths of 'low noise' asphalt laid within West Yorkshire to an approximate percentage coverage of the trunk / principal road network within each district. Taken as a whole, there is now approximately 19% of the trunk / principal road network within West Yorkshire surfaced with low noise asphalt. Motorways have not been included, as full details of low noise asphalt coverage were not obtained.



*Figure 3.7.7 Percentage of Principal Road Network with Low Noise Asphalt*

3.7.38 The EU Strategic Environmental Assessment (SEA) Directive 2002/42/EC, will become UK law by July 2004. This Directive should ensure a high level of environmental protection and will integrate environmental considerations during the preparation and adoption of new plans / programmes (e.g. LTP, Local Development Framework (LDF) or Regional Spatial Strategy (RSS)), with a view to promoting sustainable development.

3.7.39 The SEA Directive will follow a similar methodology to that of the existing EIA Directive. However, the SEA process will address any “significant” environmental effects likely to result from the strategic LTP visions/ objectives and associated transport themes planned for West Yorkshire, rather than assessing individual projects. The whole process will be conducted at a coarse level of detail, but will cover a wide range of environmental and associated safety, access and economic development issues (i.e. similar topics to those included in the New Approach to Appraisal (NATA)).

Important elements of SEA will include:

- Scoping of objectives and transport themes;
- Assessment of “Significant” environmental effects;
- Cumulative and synergistic effects;
- Develop Alternatives/ modifications of Plan to mitigate “significant “ effects;
- Consult with statutory consultees and public, both at scoping and detailed draft Plan stage;
- A transparent environmental reporting system;
- A non technical summary;
- Post monitoring.

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3.7.40 The LTP 2 must comply with the requirements of the SEA Directive. In April 2004 the Department for Transport published its Strategic Environmental Assessment Guidance for Transport Plans and Programmes (TAG Unit 2.11). To accompany this, draft Transport Analysis Guidance for the Environment Objective (TAG Unit 3.1.1) was also published by the Department for Transport in June 2003 to guide implementation of SEA.

**The West Yorkshire SEA Working Group.**

3.7.41 A West Yorkshire SEA Working Group has recently been set up to pool expertise in the field of transport/ land-use planning, sustainable development and EIA. This group is currently developing a methodology for conducting a full SEA, including all the above elements, for the proposed West Yorkshire LTP 2. Part of this process has involved organising a West Yorkshire Workshop on “Transport Plans and SEA”. This workshop was facilitated by the TRL, who have expertise in Transport SEA and have recently developed the above SEA Guidance (TAG Unit 2.11)

***The Eco-Management & Audit System (EMAS)***

3.7.44 Both Leeds and Kirklees have become two of the largest UK Local Authorities to become EMAS accredited. Bradford is making good progress towards their commitment to become EMAS accredited by September 2005. EMAS provides a mechanism to address corporate environmental policies / plans, such as the LTP and the LDF and provide continual environmental improvements. This environmental auditing system highlights the most significant environmental impacts and then instigates an appropriate Environmental Management Programme (EMP).

3.7.45 The EMP for Leeds and Kirklees both incorporate many transport related environmental impacts, including mitigation of traffic congestion, air quality, noise, EIA and “greenhouse gas” emissions. EMAS requires that the annual environmental performance of the EMP is made publicly available in the form of an environmental statement. The EMAS process helps to identify the most significant transport related environmental impacts and reinforce the mix of action plans incorporated within the West Yorkshire LTP.

3.7.46 The previous APR listed a range of EMAS action plan measures developed by both Leeds and Kirklees. A similar mix of actions continue to be developed to mitigate transport related environmental effects.

***Research Projects***

3.7.47 A partnership between Leeds City Council and Leeds University has been set up to exchange expertise and resources, in the field of transport related air quality and noise management. Leeds University is currently co-ordinating a major research project called LANTERN, (Leeds health, Air pollution, Noise, Traffic, Emissions, Research, Network ) this has been funded by a £4.2 million Joint Infrastructure Fund from the Engineering and Physical Sciences Research Council (EPSRC).

3.7.48 Stakeholder participation from Leeds has played an important role, identifying Local Authority requirements, end-user benefits and local transport case studies for LANTERN research.

LANTERN research projects include:

- 
- traffic congestion modelling;
  - instrumented vehicle emissions modelling;
  - enhanced street canyon modelling;
  - vehicle profile monitoring of ultra fine particulates;
  - development of “microscopic” (Individual vehicle) noise prediction model;
  - links with FUTURES ( Future Urban Technologies, Research to Enhance Sustainability) project.

The FUTURES project has recently been funded by EPSRC, research topics include:-

- Investigations of driver behaviour on vehicle emissions
- Detailed assessment of Bio-diesel emissions
- Further developments on microscopic modelling for exhaust and noise emissions
- Noise and air quality impact assessments of Intelligent Transport Systems

### ***Commentary***

3.7.49 All West Yorkshire Districts have completed the Updated Screening Assessment and started the Detailed Air Quality Assessment in the second round of the air quality review process. Leeds has completed an approved Air Quality Action Plan, whilst Wakefield is developing a similar Action Plan. Both plans aim to mitigate traffic related Air Quality Management Area's.

3.7.50 Urban monitoring of NO<sub>2</sub> within all West Yorkshire Districts between 1998 - 2003, indicate a general trend of air quality improvements and compliance with relevant air quality standards. The trend for PM<sub>10</sub> monitoring is less clear as all Districts monitored elevated levels of PM<sub>10</sub> during 2003. This increase in PM<sub>10</sub> was mainly due to prevailing weather conditions and an increase in vehicle emissions.

3.7.51 Predicted emissions of NO<sub>x</sub> and PM<sub>10</sub> from the West Yorkshire trunk/ principal road network between 2000 - 2003, have fallen 20% and 22%, respectively. There was a slight increase of 3% for CO<sub>2</sub> emissions.

3.7.52 A West Yorkshire Working Group has recently been set up to co-ordinate the Strategic Environmental Assessment for the proposed LTP 2.

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## 3.8 REDUCE TRANSPORT CONTRIBUTION TO GREENHOUSE GAS

### *Primary Objective*

To contribute to national and international efforts to reduce the contribution of transport to overall greenhouse gas emissions.

#### ***Summary of Key Trends***

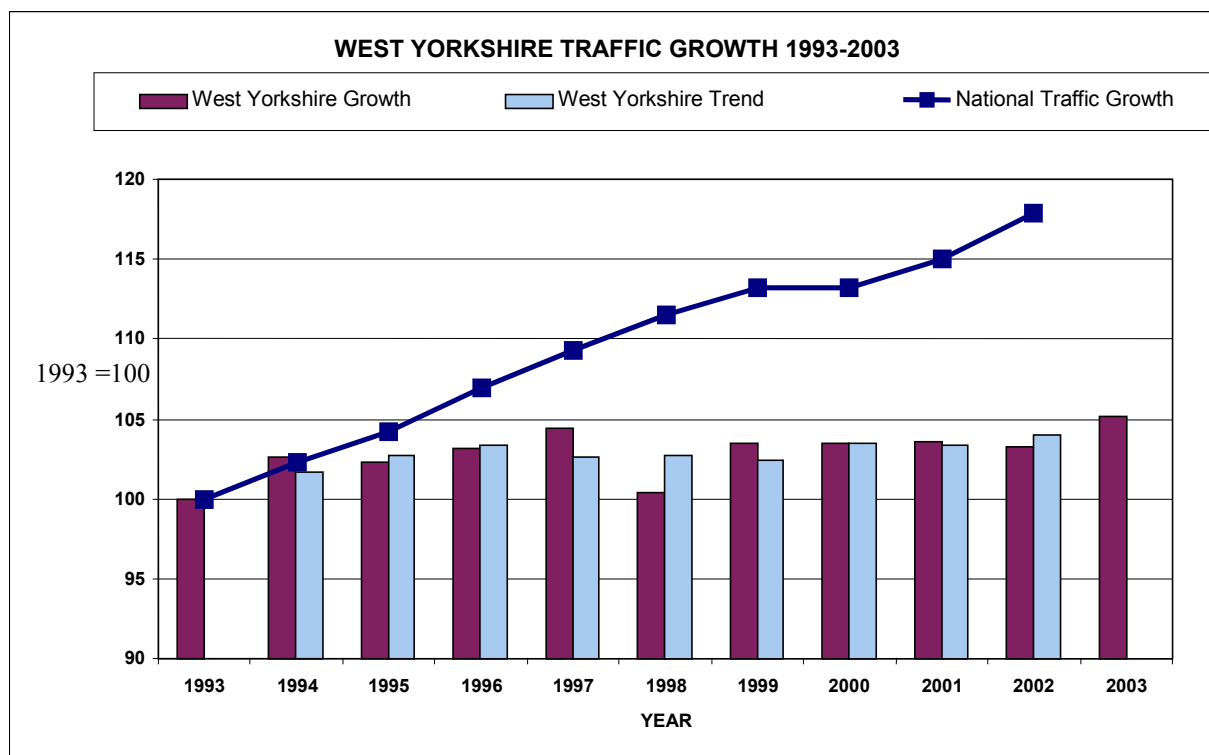
- Countywide daily traffic growth between 1999 and 2003 was 1.6%. Trends indicate the Plan target of less than 5.0% growth between 1999 and 2006 is likely to be met.
- Predicted CO<sub>2</sub> emissions for the trunk/ principal road network in West Yorkshire have increased by 2.5% from 2.79 million tonnes in 2000 to 2.86 million tonnes in 2003.
- Most Districts within West Yorkshire are developing Environmental Policies and EMAS Action Plans to reduce transport CO<sub>2</sub>
- Local CO<sub>2</sub> objectives and indicators will be included within the LTP2.

### ***Role of Transport***

3.8.1 The contribution of transport to greenhouse gas emissions is widely recognised and there is increasing concern over the levels of carbon dioxide emissions by road traffic. The encouragement of modal shift to public transport away from the private car should help to reduce emissions of greenhouse gas.

### **Key Indicator G1: Daily Traffic Flow**

3.8.2 Traffic flows throughout West Yorkshire have been monitored using automatic traffic counters since 1979. This long term monitoring programme is organised on a four year rolling programme and concentrates on screenlines and cordons in the main urban areas. In addition approximately 100 sites, selected to give a statistically valid sample across all districts and road types, are counted annually to monitor traffic growth countywide. These data are presented in Figure 3.8.1.



*Figure 3.8.1: West Yorkshire Traffic Growth Trend 1993 - 2003*

Note: West Yorkshire trend shown on the graph represents the three year moving average

### ***Desired Movement***

3.8.3 Countywide traffic flows have shown little change. It is anticipated that the combined effect of the strategy measures will continue to constrain traffic flows and that the Plan target of less than 5% daily traffic growth will be met. Whilst traffic growth rates are falling, it is important that the emission effects of traffic congestion are taken into account.

### ***Future Requirements***

3.8.4 The long term monitoring programme will continue to monitor traffic countywide. In the future consideration will be given to continuous monitoring of traffic flows and automatic vehicle classification.

### **Key Indicator G2: Bus Patronage**

3.8.5 This is now reported as Key Indicator I6: Bus Patronage

### **Key Indicator G3: Rail Patronage**

3.8.6 This is now reported as Key Indicator I6a: Rail Patronage

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**Key Indicator G4: Carbon Dioxide Emissions**

3.8.7 Predicted CO<sub>2</sub> emissions for the trunk/ principal road network in West Yorkshire have increased by 2.5% from 2.79 million tonnes in 2000 to 2.86 million tonnes in 2003. The increase in CO<sub>2</sub> emissions has arisen from a combination of countywide traffic growth and elevated emission factors for HGV's.

3.8.8 The West Yorkshire Districts are setting up working groups to audit CO<sub>2</sub> emissions from road transport which currently contributes 24% of total UK CO<sub>2</sub> emissions. These groups will incorporate Community Plan visions, Local Agenda 21 and EMAS related issues and appropriate Action Plans to identify the transport CO<sub>2</sub> burden. CO<sub>2</sub> emissions will be used as a climate change indicator for the strategic environmental assessment that is being prepared for the draft LTP 2. Local CO<sub>2</sub> targets and objectives will be developed as primary consideration for the LTP 2.

### 3.9 SUBSIDIARY OBJECTIVES

#### ***Summary of Key Trends***

- Council controlled all day parking charges have been raised above the rate of inflation, on average by 31% between 1997 - 2003;
- Good progress is being made towards increasing the modal share of public transport in the peak periods. A statistically robust methodology for monitoring changes in mode share across central cordons has been piloted in Leeds. Results show a reduction in am peak car travel from 64% in 1998 to 58% in 2004. There were also significant increases in mode share for bus 24% to 28%, train 9.5% to 10% and walking 2.2% to 3%. All these changes are statistically significant at the 95% confidence level.
- The long term trends still remain low for traffic growth across the cordons. Even in Leeds, which has seen large increases in economic activity, growth is only 2 percentage points higher than in 2000.
- Over 21,000 employees from 62 companies developing or implementing travel plan initiatives across West Yorkshire have taken part in the first annual Travel to Work Survey. This will establish a baseline against which future trends will be reported.
- Over 185,000 pupils in 569 schools participated in the 4<sup>th</sup> annual travel to school survey in West Yorkshire.

#### ***Subsidiary Objective: Reduction in Traffic Growth***

3.9.1 To reduce the general rate of growth in road traffic and, where feasible, to reduce absolute traffic levels.

#### **Key Indicator H1: Traffic Flow**

3.9.2 Traffic flows throughout West Yorkshire have been monitored as part of the long term monitoring programme since 1979. Automatic traffic counters have been used to collect data on screen lines and cordons in the main urban areas on a four year rolling programme. A reduction in the growth of traffic in all main centres is considered essential if the primary objectives are to be achieved. Data are presented for the am peak hour and am peak period in Tables 3.9.1 to 3.9.5 and show the changes in traffic flow measured against the 1990 baseline. Flows can change markedly from year to year as a result of network changes, new developments and the method of data collection, hence the 5 year average is a more robust indicator of the underlying trend.



Year	Peak Hour (0800 to 0900)	Peak Hour Index (1999=100)	Peak Period (0700 to 1000)	Peak Period Index (1999=100)
1990	18,180	98	43,660	96
1993	19,120	103	45,450	100
1995	18,860	102	45,340	99
1997	18,750	101	45,800	100
1999 Base	18,550	100	45,600	100
2001	18,690	101	46,790	103
2003	18,240	98	45,530	100
<b>% Changes 1993 – 2003 (annual average change)</b>				
	Am peak hour (0800 to 0900)		Am peak period (0700-1000)	
% Growth 1993 - 1998	-2.5 (-0.50)		+0.6 (0.11)	
% Growth 1998 - 2003	-2.2 (-0.44)		-0.4 (-0.07)	
% Growth 1993 - 2003	-4.6 (-0.47)		+0.2 (0.02)	

*Table 3.9.1 Bradford Central Cordon - AM Peak Period Inbound Traffic Flows*

<b>Year</b>	<b>Peak Hour (0800 to 0900)</b>	<b>Peak Hour Index (1999=100)</b>	<b>Peak Period (0700 to 1000)</b>	<b>Peak Period Index (1999=100)</b>
1990	8,550	91	19,810	87
1993	8,940	96	21,370	93
1995	9,480	101	22,530	98
1997	9,120	97	22,590	99
1999 Base	9,360	100	22,890	100
2001	8,970	96	22,090	97
2003	9,480	101	23,580	103
<b>% Changes 1993 - 2003 (annual average change)</b>				
	Am peak hour (0800-0900)		Am peak period (0700-1000)	
% Growth 1993 - 1998	+3.4 (0.66)		+6.4 (1.25)	
% Growth 1998 - 2003	+2.6 (0.51)		+3.7 (0.73)	
% Growth 1993 - 2003	+6.0 (0.59)		+10.3 (0.99)	

*Table 3.9.2 Halifax Central Cordon - AM Peak Period Inbound Traffic Flows*

<b>Year</b>	<b>Peak Hour (0800 to 0900)</b>	<b>Peak Hour Index (1999=100)</b>	<b>Peak Period (0700 to 1000)</b>	<b>Peak Period Index (1999=100)</b>
1990	11,340	92	28,570	91
1993	11,500	94	28,430	90
1995	12,150	99	30,680	97
1997	12,324	100	31,360	100
<b>1999 Base</b>	<b>12,280</b>	<b>100</b>	<b>31,490</b>	<b>100</b>
2001	12,230	100	31,220	99
2003	12,280	100	31,110	99
<b>% Changes 1993 – 2003 (annual average change)</b>				
	<b>Am peak hour (0800 to 0900)</b>		<b>Am peak period (0700-1000)</b>	
% Growth 1993 - 1998	+7.0 (1.36)		+10.5 (2.02)	
% Growth 1998 - 2003	-0.2 (-0.04)		-1.0 (-0.20)	
% Growth 1993 - 2003	+6.8 (0.66)		+9.4 (0.90)	

*Table 3.9.3 Huddersfield Central Cordon – AM Peak Period Inbound Traffic Flows*

Year	Peak Hour (0800 to 0900)	Peak Hour Index (2000=100)	Peak Period (0700 to 1000)	Peak Period Index (2000=100)
1990	35,596	99	87,180	93
1992	38,144	107	94,877	101
1994	34,631	97	88,423	95
1996	33,892	95	88,883	95
1998	34,380	96	92,330	99
2000 Base	35,785	100	93,536	100
2002	36,838	103	96,988	104
2004	36,541	102	98,205	105
<b>% Changes 1994 – 2004 (annual average change)</b>				
	Am peak hour (0800 to 0900)		Am peak period (0700-1000)	
% Growth 1994 - 1999	+1.3 (0.26)		+5.1 (1.00)	
% Growth 1999 – 2004	+3.8 (0.76)		+5.4 (1.05)	
% Growth 1994 - 2004	+5.2 (0.51)		+10.7(1.02)	

*Table 3.9.4 Leeds Central Cordon – AM Peak Period Inbound Traffic Flows*

Year	Peak Hour (0800 to 0900)	Peak Hour Index (2000=100)	Peak Period (0700 to 1000)	Peak Period Index (2000=100)
1990	10,110	97	24,940	95
1992	9,710	94	24,300	92
1994	9,970	96	24,140	92
1996	9,850	95	24,360	92
1998	9,712	94	24,734	94
2000 Base	10,379	100	26,344	100
2002	11,749	113	29,577	112
2004	10,844	104	28,228	107
<b>% Changes 1994 – 2004 (annual average change)</b>				
	Am peak hour (0800 to 0900)		Am peak period (0700-1000)	
% Growth 1994 - 1999	+0.8 (0.15)		+5.8 (1.13)	
% Growth 1999 – 2004	+8.0 (1.54)		+10.5 (2.02)	
% Growth 1994 - 2004	+8.8 (0.84)		+16.9 (1.58)	

*Table 3.9.5 Wakefield Central Cordon – AM Peak Period Inbound Traffic Flows*

### **Desired Movement**

3.9.3 It is anticipated that the combined effect of the strategy measures will lead to a stabilisation or reduction in traffic flows, particularly at peak times. The data presented above generally indicate that in most centres traffic growth in the peak hour has stabilised at around the 1990 level. Data for Wakefield in 2004 shows a much more realistic figure, both in peak hour and peak period traffic levels, than those reported in 2002. It is highly likely that the 2002 figures are as a result of the location of the cordon in relation to the new retail park on Charlesworth Way, the bulk of the increase being recorded on one site, A638 Westgate End. A permanent ATC has been installed at the busiest site, which should produce much more robust figures in the future. Flows in Leeds are stabilising with traffic levels only 2 percentage points higher than the 2000 base. This is very encouraging given the high level of economic growth in the centre of Leeds.

### **Future Requirements**

3.9.4. The monitoring of traffic flows across the main district centre central cordons will continue. This monitoring provides valuable information including long-term trend data and information on peak spreading.

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**Subsidiary Objective: Alternative Modes**

3.9.5 To encourage a greater proportion of journeys to be made by public transport, cycling and walking as alternative modes to the private car.

**Key Indicator I1: Modal Split**

3.9.6 In addition to absolute volumes, modal split is recognised as a Background indicator of the impact of the Transport Plan measures. Previously the main source of this data was the national census which, with a ten-year cycle, is useful for assessing long-term trends. To further refine the monitoring of mode choice, and to establish a robust baseline against which future changes could be measured, local modal split surveys were carried out in major centres during 1998 and further surveys undertaken in 1999 at a number of other district centres.

3.9.7 The surveys recorded persons travelling in private vehicles, on foot and by bicycle and also those travelling by bus. Rail patronage data were obtained from the Metro continuous ticketing survey. The survey points, which coincide with those used for the central cordon automatic traffic count programme reported in 3.9.2, Background Indicator H1: Traffic Flow, thus persons walking or cycling on off-road routes were not counted.

**Modal Forecasts**

3.9.8 Forecasts relating to changes in the use of the three principal modes (cars, buses and trains) have been developed based on modelling work undertaken using a Strategic Transport Model prepared for the West Yorkshire Authorities by consultants. The model is capable of testing a wide range of policy options, including parking policies, changes in bus and rail speeds, capacity, frequency, quality and fares; new rail stations; Leeds Supertram; cordon pricing and workplace parking charges. The model also includes the effect of the fuel price escalator, however, in the absence of any indications to the contrary this has been set to reflect only those changes which have already occurred, i.e. the 6% increase in the 1999 budget.

3.9.9 The model is currently being updated and new forecasts and mode split targets will be developed for LTP2.

3.9.10 The current regime of monitoring each site for 1 day per year can only reliably detect changes in mode share in excess of 4%. Changes smaller than 4% may be due to natural variation in traffic levels. To be able to reliably measure a change of 3% requires monitoring over 2 days, because the more you measure the more accurate your estimate. With 4 survey days it is possible in the future to reliably detect a change of 2.0% in the mode share for car, 2.1% for bus and 0.4% for rail.

3.9.11 To pilot this statistically robust monitoring regime, mode split counts were undertaken in Leeds over 4 days for the am peak period inbound to the city centre. The surveys show that the proportion of people travelling into the City Centre by car during the two hour morning peak period has decreased from 64% in 1998 to 58% in 2004. Increases are seen for bus 24% to 28%, train 9.5% to 10% and walking 2.2% to 3%. All these changes are statistically significant at the 95% confidence level.

3.9.12 Progress towards each of these forecasts is shown in Tables 3.9.6 to 3.9.8 along with the modal split for each of the main centres for 2004. Changes in modal share since 1998 are illustrated in Figures 3.9.1 to 3.9.3.

Centre	Total persons crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
Bradford	49,898	4	<1	<1	74	16	5
Halifax	25,318	4	<1	<1	73	18	4
Huddersfield	34,028	6	<1	<1	66	22	5
Leeds	120,400	3	<1	<1	58	28	10
Wakefield	33,570	2	<1	1	73	16	9
Keighley*	14,666	9	<1	<1	74	10	7
Dewsbury**	16,490	4	<1	1	78	11	10

\* 2003 \*\*1999

Table 3.9.6 Modal Split – AM Peak (0730-0930) 2004 Inbound to Centres (shaded cells indicate statistically significant changes in mode share)

Centre	Total persons crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
Bradford	19,732	4	<1	<1	77	17	2
Halifax	10,227	2	<1	<1	73	21	3
Huddersfield	13,385	4	<1	<1	67	23	5
Leeds	35,865	2	<1	<1	63	27	6
Wakefield	11,808	1	<1	1	74	16	8
Keighley*	6,506	8	<1	<1	71	15	5
Dewsbury**	7,765	3	<1	0	80	15	4

\* 2003 \*\*1999

Table 3.9.7 Modal Split - Inter Peak (1400-1500) 2004 Outbound from Centres

Centre	Total persons crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
Bradford	58,632	3	<1	<1	75	16	5
Halifax	30,453	3	<1	<1	74	18	4
Huddersfield	37,256	5	<1	<1	69	20	5
Leeds	125,000	3	<1	<1	59	27	11
Wakefield	34,866	2	<1	1	74	13	10
Keighley*	17,052	7	<1	<1	74	12	6
Dewsbury**	20,054	3	<1	1	81	11	8

\* 2003 \*\*1999

Table 3.9.8 Modal Split - PM Peak (1600 - 1800) 2004 Outbound from Centres

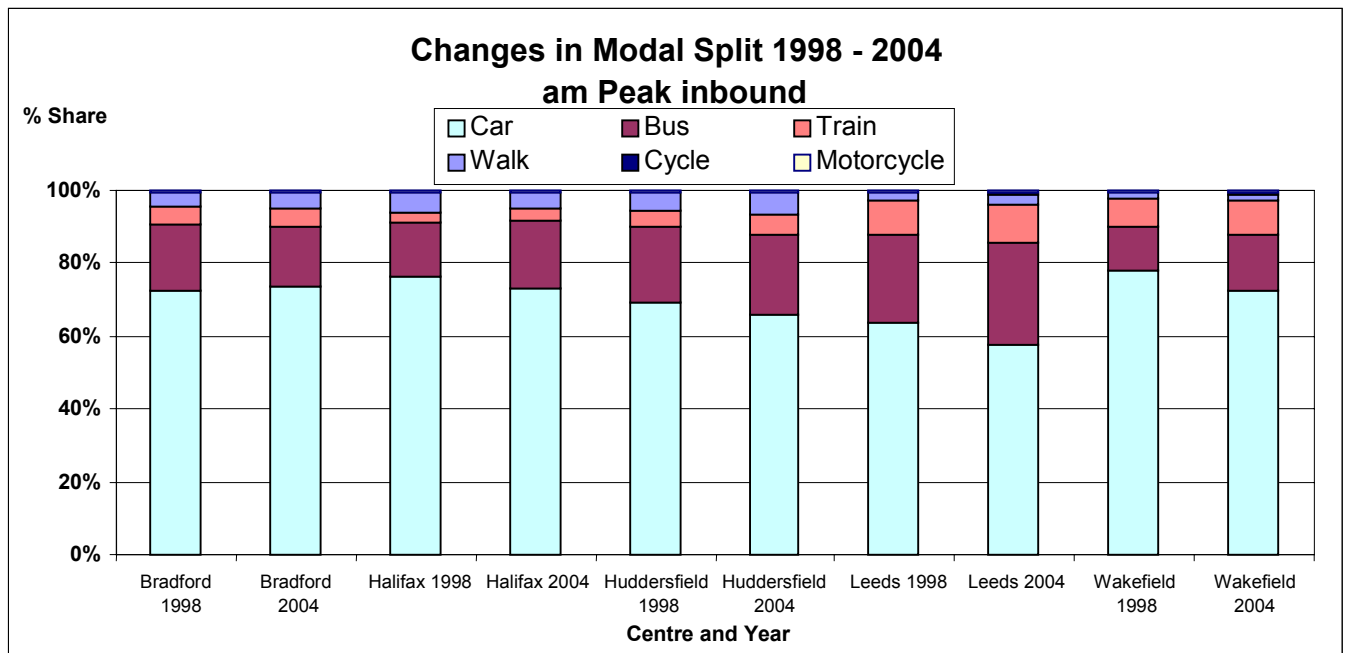


Figure 3.9.1 Changes in Modal Share AM Peak 1998 – 2004



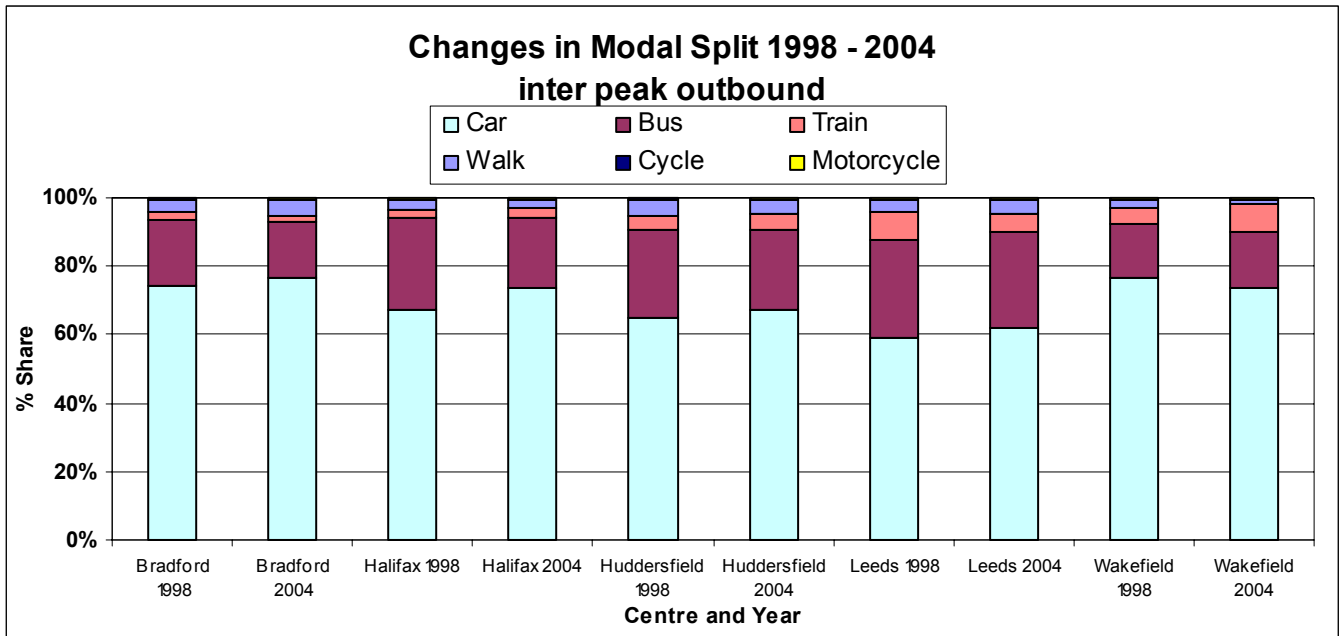


Figure 3.9.2 Changes in Modal Share Inter peak 1998 – 2004

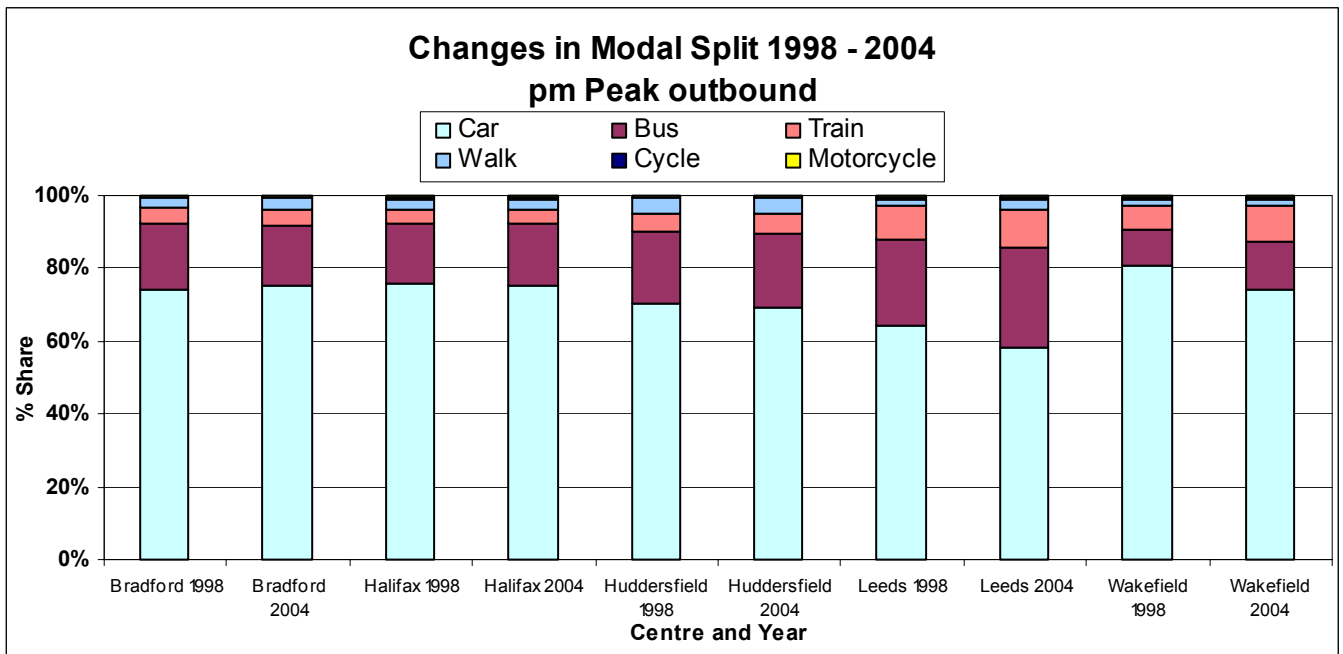


Figure 3.9.3 Changes in Modal Share PM Peak 1998 – 2004

3.9.13 The opportunity was also taken to record the occupancy of cars and taxis crossing the cordons which will allow trends in vehicle occupancy to be observed in future years. The results of the 2002 occupancy surveys are presented in Table 3.9.9. Figures 3.9.4 to 3.9.6 show the changes in car occupancy for the major centres since 1998.

Centre	Time Period	Direction	% of Cars with	Average car occupancy
			One occupant	
Bradford	am peak	Inbound	79.0	1.26
	inter peak	Outbound	68.7	1.40
	pm peak	Outbound	71.0	1.38
Halifax	am peak	Inbound	79.6	1.24
	inter peak	Outbound	68.5	1.39
	pm peak	Outbound	69.5	1.39
Huddersfield	am peak	Inbound	77.9	1.26
	inter peak	Outbound	67.2	1.39
	pm peak	Outbound	72.5	1.34
Leeds	am peak	Inbound	79.6	1.24
	inter peak	Outbound	72.3	1.33
	pm peak	Outbound	74.4	1.31
Wakefield	am peak	Inbound	79.9	1.24
	inter peak	Outbound	66.6	1.41
	pm peak	Outbound	69.7	1.39

Table 3.9.9 Car Occupancy 2004

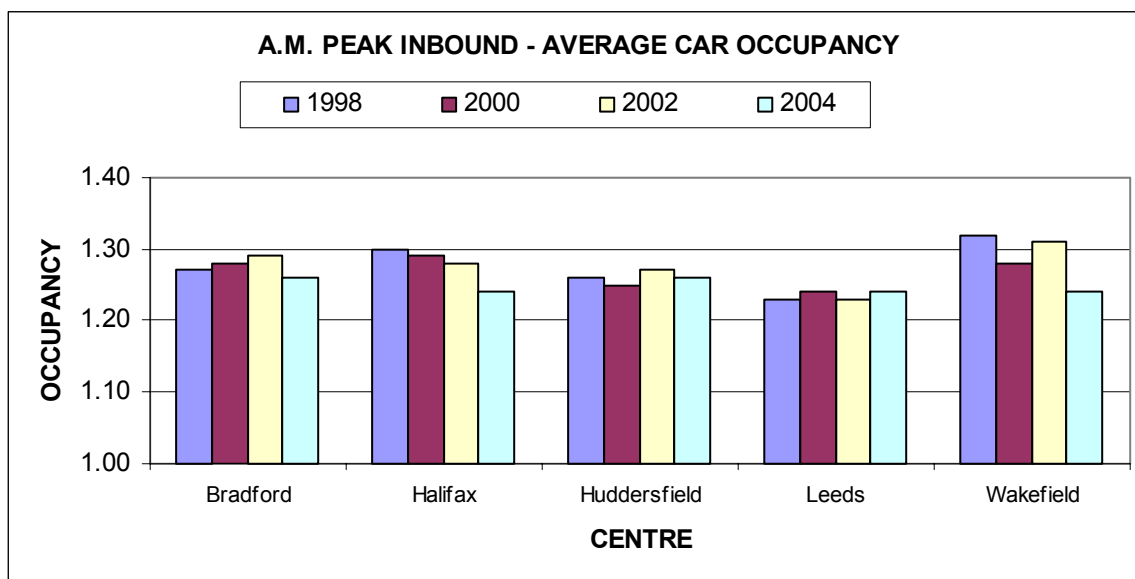


Figure 3.9.4 Changes in Car Occupancy AM Peak 1998 – 2004

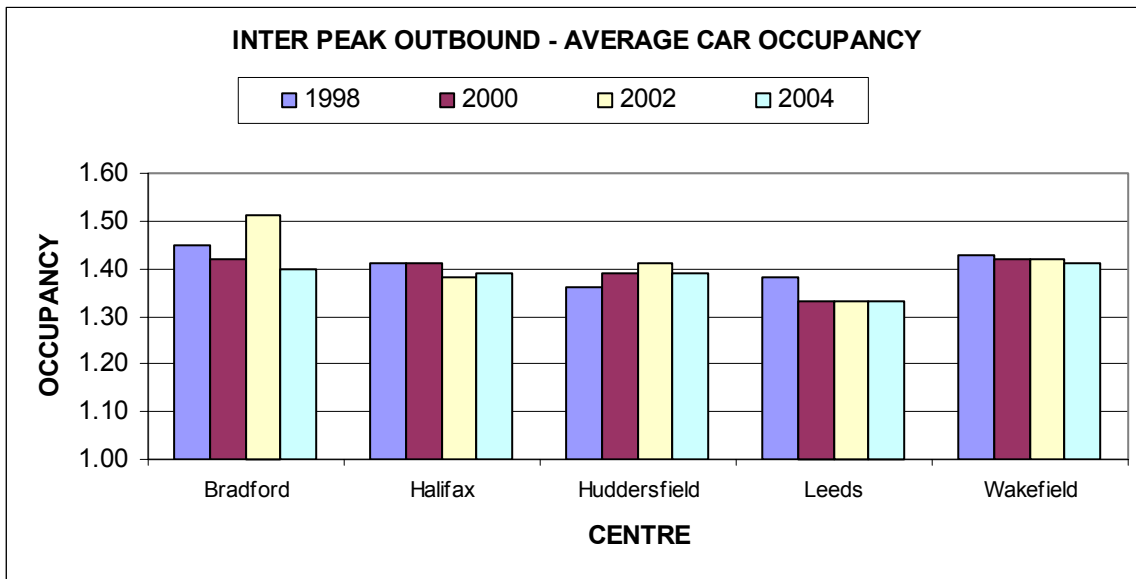


Figure 3.9.5 Changes in Car Occupancy Inter Peak 1998 – 2004

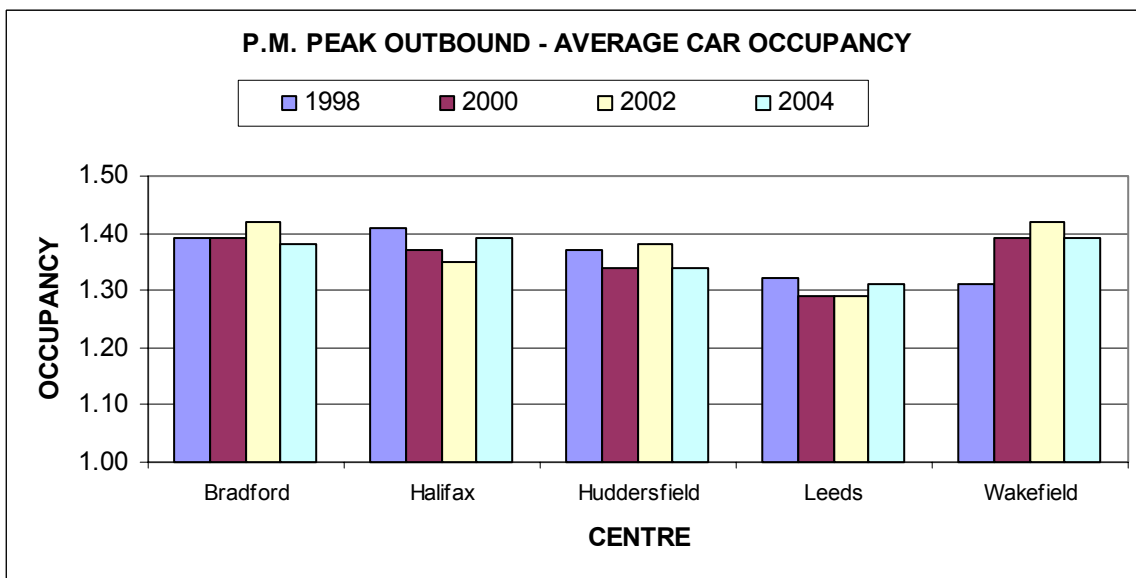


Figure 3.9.6 Changes in Car Occupancy PM Peak 1998 - 2004

### **Desired Movement**

3.9.14 It is anticipated that the combined effect of the Plan measures will lead to a reduction in car usage and an increase in the use of other modes. The data presented above clearly show the progress made in reducing the use of the private car, particularly in the peak periods. Significant increases in public transport patronage have been recorded in all centres. This is especially encouraging when the total number of people accessing the main centres is on the increase, reflecting the increasing attractiveness of the centres.

3.9.15 It is hoped that there will be a trend towards a greater number of occupants per car, showing evidence of ride sharing rather than individuals driving alone. It is unlikely that any significant change will occur in the short term but the impact of Travel Plans and travel awareness initiatives should lead to an increase in car sharing in the future.

### ***Future Requirements***

3.9.16 We have established a biennial survey cycle for these indicators and successfully piloted a statistically robust regime for monitoring modal split journeys in the main district centres.

### ***Background Indicator I2: Journey Times***

3.9.17 This section is now reported under Background Indicator B1: Journey Times

### ***Background Indicator I3: All Day Commuter Parking Provision and Cost***

3.9.18 It is widely accepted that control of all day commuter parking is a powerful demand management tool. In past years, there has been no common definition, which has made it difficult to assess the relative effectiveness of measures in the different centres. For consistency, the following definition has been agreed for monitoring purposes and is used for all centres.

*All day commuter spaces are defined as those where the maximum stay is greater than 8 hours, or where the cost of parking for more than 8 hours is less than 1.5 times the average cost of council off street long stay parking for an equal duration.*

3.9.19 Parking inventories have been conducted in all major centres in the region to provide baseline data against which future changes can be measured. Table 3.9.10 shows the relative size of the parking study areas for each Centre, whilst inventory data are presented in Table 3.9.11.

<b>Centre</b>	<b>Approximate radius of parking survey area (Metres)</b>
Bradford	1150
Halifax	500
Huddersfield	900
Dewsbury	500
Leeds	700
Wakefield	750

*Table 3.9.10 Size of Parking Survey Areas*

Parking Type		Bradford	Halifax	Huddersfield	Dewsbury	Leeds	Wakefield
<b>Public Short Stay</b>	Council	1681	1598	2,701	909	2123	807
	Private	2941	484	1,438	934	3057	80
	<b>Total</b>	<b>4622</b>	<b>2082</b>	<b>4,139</b>	<b>1,843</b>	<b>5180</b>	<b>887</b>
<b>Public All Day Commuter</b>	Council Free	5651	344	790	501	78	61
	Council Pay	999	976	1959	466	1972	1537
	Private	1668	629	150	0	4872	1949
	<b>Total</b>	<b>8318</b>	<b>1949</b>	<b>2,899</b>	<b>967</b>	<b>6922</b>	<b>3547</b>
<b>Other</b>	Customer	3903	3194	1,953	1,312	1507	3642
	PNR	11822	2825	6,925	1,107	10415	3603
	Permit	2063	1176	1,241	174	630	1407
<b>Total</b>		<b>30728</b>	<b>11226</b>	<b>17,157</b>	<b>5,403</b>	<b>24654</b>	<b>13086</b>

Table 3.9.11 Parking Inventory 2004

3.9.20 The progress made by the districts in raising parking charges is shown below in Table 3.9.12. This shows the average cost of council controlled all day commuter parking, where charges are levied, and the % change in parking charges 1997 - 2004.

Centre	Cost for stay of > 8 hrs - 2004	% change in council controlled all day parking charges (for stay of > 8hrs) 1997 - 2004
Bradford	£2.01	7%
Halifax	£2.00	27%
Huddersfield	£2.50	47%
Dewsbury	£2.50	47%
Leeds	£5.80	64%
Wakefield	£3.50	75%

Table 3.9.12 Average Cost Of Council Controlled All Day Parking And Changes In Parking Charges 1997 – 2004. (Where Charges Apply)

Note: Parking charges in Bradford were increased from £1.50 in July 1997 by 33% just prior to the survey period.

### ***Desired Movement***

3.9.21 If commuters are to be encouraged to use alternative modes to the car then the number of commuter parking spaces in centres should not increase. Charges for all day parking should continue to increase at greater than the rate of inflation.

3.9.22 It must be recognised that the effect of any increases in long stay parking charges will be limited by the influence of both Private Non Residential (PNR) parking and, to a lesser extent, by privately operated publicly available long stay parking. This is clearly illustrated in Table 3.9.13 which shows the percentage of total all day parking provision in the main centres actually under council control. It also compares the average cost of council controlled all day parking with a weighted average cost of all day parking, calculated from consideration of all available long stay spaces, including PNR.

<b>Centre</b>	<b>% of all day parking under council control*</b>	<b>Average cost of council controlled all day parking</b>	<b>Weighted average cost of all day parking</b>
Bradford	33%	£2.01	£0.32
Halifax	28%	£2.00	£0.41
Huddersfield	28%	£2.50	£0.53
Dewsbury	47%	£2.50	£0.56
Leeds	12%	£5.80	£2.70
Wakefield	22%	£3.50	£1.43

*Table 3.9.13 Percentage of Total All Day Parking under Direct Council Control and the Weighted Average Cost of All Day Parking*

\* Spaces under council control are defined as public on street / off street spaces over which the council has regulatory authority.

### ***Future Requirements***

3.9.23 Given the importance of parking control as a demand management tool comprehensive inventories of all parking spaces will be undertaken every 5 years and changes in parking charges will be reported annually for the main centres.

### ***Key Indicator 14: Cycle Monitoring***

3.9.24 The West Yorkshire authorities are committed to encouraging cycling, for both commuting and leisure trips, through the provision of a high quality cycle network and through the inclusion of improvements for cyclists in the integrated corridor schemes.

3.9.25 In response to the challenge of a national cycling target a methodology for measuring cycle flows throughout the area has been developed using National Traffic Census data. This survey is considered to be more indicative of wider cycle use than central area cordon counts and includes counts on all principal roads and a sample of minor roads counted for a 12 hour weekday over a 3 year cycle. (Cycle flows are routinely collected as part of the modal split surveys in the district centres and changes in these flows are reported under Background Indicator I1).

3.9.26 To establish the level of cycling within West Yorkshire use was made of the database of 12 hour manual classified counts. Each site is typically counted at least once every three years, although from time to time the list of sites changes slightly and some sites are counted more frequently.

3.9.27 This same dataset was used to estimate the trends in cycle use within the Leeds District in the previous APR. Here the methodology has been extended to the whole of West Yorkshire. Once again, only the sites which have at least one count during all of the three year periods is included in the statistic. This ensures that the dataset is a consistent set in terms of its constitution for the entire reporting period.

3.9.28 Cycling statistics from the national census journey to work data is presented in Table 3.9.14. This is again indicative of the wider level of cycling activity and shows that cycling to work by residents has picked up in 2001 after a decline in 1991.

	1971 *	1981 *	1991 *	2001
Bradford	950	1390	1440	1481
Calderdale	380	490	700	709
Kirklees	1110	1390	1310	1765
Leeds	3880	3970	3450	4189
Wakefield	3760	2670	1760	2001
<b>W Yorkshire</b>	<b>10080</b>	<b>9910</b>	<b>8660</b>	<b>10145</b>
<b>Base %</b>	<b>100.0</b>	<b>98.3</b>	<b>85.9</b>	<b>100.6</b>

*Table 3.9.14 Cycling to work by Resident Population 1971-2001*

(Source: Census workplace and transport to work. \* factored from 10% sample)

3.9.29 Table 3.9.15 shows the average number of cyclists observed across all 182 survey sites. The index shows the change in the level of cycling for a nine year period, relative to a base year finishing in 1996. The data clearly shows fluctuations in the level of cycling, with a downward trend being apparent in the last five year reporting period.

<b>WEST YORKS</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	44.5	44.7	42.3	43.1	41.6	40.5	38.7	38.3
<b>No of Sites</b>	182	182	182	182	182	182	182	182
<b>% base</b>	100%	101%	95%	97%	94%	91%	87%	86%
<b>BRADFORD</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	42.8	46.1	44.9	42.1	38.2	37.1	36.0	34.8
<b>No of Sites</b>	29	29	29	29	29	29	29	29
<b>% base</b>	100%	108%	105%	98%	89%	87%	84%	81%
<b>CALDERDALE</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	46.0	43.1	36.0	34.9	32.3	32.2	33.1	34.0
<b>No of Sites</b>	22	22	22	22	22	22	22	22
<b>% base</b>	100%	94%	78%	76%	70%	70%	72%	74%
<b>KIRKLEES</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	38.0	39.8	37.6	38.6	35.4	33.4	31.0	29.6
<b>No of Sites</b>	32	32	32	32	32	32	32	32
<b>% base</b>	100%	105%	99%	102%	93%	88%	81%	78%
<b>LEEDS</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	48.3	47.0	44.8	49.5	49.6	48.2	45.2	44.7
<b>No of Sites</b>	77	77	77	77	77	77	77	77
<b>% base</b>	100%	97%	93%	102%	103%	100%	94%	92%
<b>WAKEFIELD</b>	<b>1994- 1996</b>	<b>1995- 1997</b>	<b>1996- 1998</b>	<b>1997- 1999</b>	<b>1998- 2000</b>	<b>1999- 2001</b>	<b>2000- 2002</b>	<b>2001- 2003</b>
<b>Average</b>	41.1	43.6	43.5	36.9	36.4	36.7	36.6	37.4
<b>No of Sites</b>	22	22	22	22	22	22	22	22
<b>% base</b>	100%	106%	106%	90%	89%	89%	89%	91%

*Table 3.9.15: Volume of Bicycle Counts Across West Yorkshire 1994 - 2003.*

3.9.30 Table 3.9.16 shows the changes in cycle flows across the main district centre cordons. The only centre showing an increase in cycling is Leeds which may be due to the more robust monitoring regime employed in 2004.



	1998	2000	2002	2004
Bradford	423	348	346	283
% base	100	82	82	67
Halifax	191	202	76	165
% base	100	106	40	86
Huddersfield	265	204	245	190
% base	100	77	92	72
Leeds	1119	912	1002	1223
% base	100	82	90	109
Wakefield	328	347	381	248
% base	100	106	116	76

Bradford:0730-0930 inbound, 1400-1800 outbound

Halifax., Huddersfield & Wakefield 0730-0930 inbound, 1400-1500, 1600-1800 outbound

Leeds: 0730-0930 inbound, 1500-1800 outbound

*Table 3.9.16: Cycle volumes across monitoring cordons 1998 - 2004.*

3.9.31 As reported in the previous APR the approach adopted here is not ideal but is perhaps the best which is currently available. There is a recognition nationally that in authorities with low levels of cycling the robust monitoring of cycle use is problematic.

3.9.32 The West Yorkshire authorities are also following the development of automatic cycle counting equipment and recognise the benefits to cycle monitoring this technology would provide, particularly in establishing robust seasonal trends. However, we are not yet convinced of the reliability of these systems, either in mixed traffic or away from segregated cycle facilities.

### ***Desired Movement***

3.9.33 Provision of a high quality cycle network and improvements for cyclists through the integrated corridor schemes should lead to an overall increase in the numbers of people cycling.

### ***Future Requirements***

3.9.34 Changes in cycle flows for West Yorkshire will be updated annually in future annual progress reports. Progress on the development of robust cycle monitoring techniques will be reported in future progress reports.

**Key Indicator 16: Local Bus Services (Vehicle Kilometres and Passenger Journeys per year(BVPI102))**

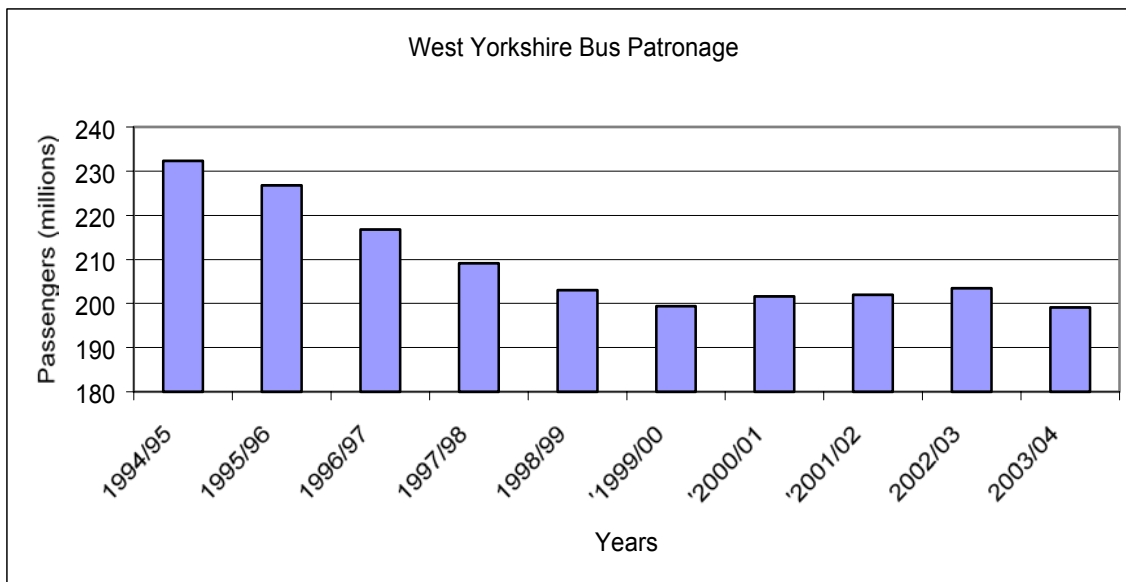
3.9.35 Formerly reported as BVPI 101, bus vehicle km operated each year is now included in this indicator. The 2003/04 figure is an estimate as an improved computerised monitoring system is being installed.

3.9.36 Patronage of bus services in West Yorkshire is monitored through use of a continuous on board survey. This data is extrapolated to provide annual figures for countywide bus patronage as presented in Figure 3.9.7.

	1998/1999	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
Million Vehicle km per year	108	107	107	107	107	107*
Passenger journeys per year (millions)	203.0	199.4	201.6	202.0	203.6	199.1

\*Estimate

*Table 3.9.17 Local Bus Service Km Operated and Number of Passenger Journeys*



*Figure 3.9.7 West Yorkshire Bus Patronage*

**Desired Movement**

3.9.37 After a rising trend in 2001/02 and 2002/03, bus patronage has fallen in 2003/04 by 2.2%, compared to 2002/03. This equates to 4.4 million less passenger trips and represents a fall of 0.2% on the base year of 1999/2000.

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3.9.38 Of the 4.4 million fewer trips made this year, trips using Elderly and Disabled concessionary fares account for a reduction of 3.4 million following a 10 pence increase in the cost of the Elderly and Disabled concessionary off-peak fares. Although the impact of this change was anticipated, reliability of bus services has worsened in 2003/04, with a negative impact on patronage.

3.9.39 Meeting the LTP target of 5% growth by 2006/07 requires the trend of rising bus patronage, seen in the two years before 2003/04 to resume in 2004/05 at a faster rate. We believe that our proposed £36 million investment in bus infrastructure enhancements, including bus priority measures as part of the Yorkshire Bus Initiative, will deliver this growth. This investment has already started. Bus operators are also investing in complementary, attractive new vehicles. Evidence from individual 'Quality Bus' schemes implemented previously in West Yorkshire featuring new buses and infrastructure improvements shows patronage growth and evidence of transfer from car. Bus 'real time' information, funded by the LTP, will be launched during 2004/05 with timetable and running information available via text message, on-street displays, the internet and an automated voice server, backed up by a major promotional campaign. The 'Yorcard' bus smartcard will also be implemented during the LTP period with the 'stored value' smartcard encouraging additional bus trips. We are also taking measures to help bus operators improve their punctuality and reliability.

3.9.40 We believe that our LTP funded programme with bus operator investment and other measures will, in combination, lead to a resumption of the previous two years' trend of rising bus patronage. The impact of the programme and measures described will be carefully monitored in 2004/05 for reporting against in the 2005 APR.

### ***Future Requirements***

3.9.41 Changes in vehicle kilometres and bus passenger numbers will continue to be monitored.

### ***Key Indicator 16a: Rail Patronage***

3.9.42 Patronage of rail services in West Yorkshire is monitored by Metro through use of a continuous on board survey. This data is extrapolated to provide annual figures for countywide rail patronage as presented in Figure 3.9.8. The data shown is for West Yorkshire internal journeys.

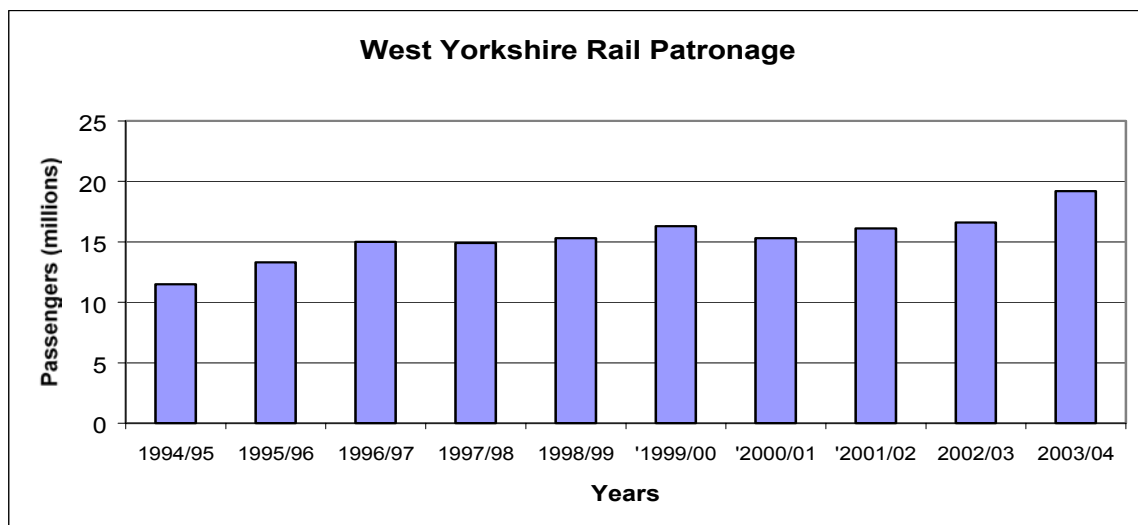


Figure 3.9.8 West Yorkshire Rail Patronage

### **Desired Movement**

3.9.43 Rail patronage has grown by 16% since 2002/03 and 18% since the base year of 1999/2000. This equates to 3 million more passengers using rail services last year when compared to the base year.

3.9.44 When the LTP target was set, it was assumed that the previous trend of rail patronage growth would continue assisted by rail enhancement schemes funded from the LTP programme. In addition, SRA (RPP) funded capacity-enhancing schemes would allow this patronage growth to be accommodated. As a result, the target anticipated 6.5 million more trips being made on the rail network in the last year of the LTP compared to the base year. The LTP and RPP programme provided for:

- more rolling stock capacity across West Yorkshire, catering for up to 5.5 million more rail trips each year;
- five new rail stations, generating around 1 million more rail trips each year; and
- service enhancements, rolling stock and station improvements, encouraging continued growth in rail patronage.

3.9.45 The climate for delivering schemes involving operational change to the railway has been very difficult due to the financial and operating issues affecting the industry in recent years. Therefore, progress on delivering rail schemes has been much slower than planned, particularly service and capacity enhancement schemes. To meet our original LTP target, 3.2 million more rail trips will be needed by 2006/07 compared to last year. Two of the five new rail stations originally planned for the LTP period will be delivered in the LTP period and are expected to generate ¼ million additional rail trips each year. A previously approved RPP funding bid for new rolling stock will potentially provide capacity for up to ½ million additional peak trips per year. We are pressing SRA and industry partners to resolve outstanding issues in relation to this scheme. Other schemes funded from the LTP programme will improve the quality of rail services, creating ideal conditions for potential future growth; however, lack of rolling stock capacity at peak

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times has become the major constraint to future patronage growth. RPP funding ceased in 2002/03 and the new Northern franchise, the start of which has been delayed, does not currently include provision for more rolling stock.

3.9.46 These factors prevent us meeting our original LTP target of 40% patronage growth within the period of the current LTP. For the current LTP period, we intend to set a revised, interim target of 25% patronage growth, reflecting the scope of our remaining LTP and potential RPP funded programme and the current capacity constraints on the network. This equates to 3.3 million additional rail trips each year. We will consult on a new rail target for the 2nd LTP as part of our consultation activity leading up to LTP2.

### ***Future Requirements***

3.9.47 We are on track to achieve patronage growth of 25% during the current LTP period, although rolling stock capacity will constrain further growth on peak services into Leeds.

### ***Background Indicator 17: % of Users Satisfied With Local Provision of Public Transport Information (BVPI103)***

3.9.48 It is recognised that the provision of accurate, reliable and up to date travel information can help encourage new passengers and improve the ease of travel for existing users. During 2003/4 Metroline accepted almost 700,000 calls and achieved a response level of 83%.

3.9.49 A key requirement of Best Value is to provide user satisfaction performance indicators and as a result each District Council conducted a user satisfaction survey, using a questionnaire produced to the format directed by the former Department of Environment, Transport and the Regions (DETR).

3.9.50 All the Districts asked the public to indicate whether they were satisfied or dissatisfied with the provision of transport information. The results are largely positive, with 56% indicating that they were happy with the provision of transport information. This figure provides the baseline against which future progress will be monitored. The latest survey was conducted in Autumn 2003 but audited results are not yet available from the Office of the Deputy Prime Minister (ODPM).

3.9.51 Further efforts will be made to improve satisfaction levels by working closely with operators to review and improve standards relating to passenger information. A target has been set for 70% of users to be satisfied with the local provision of public transport information by 2004 / 2005.

	1998/9	1999/00	2000/01	2001/02	2002/03	2003/04
Percentage of users satisfied with Local Provision of Public Transport Information	-	-	55.8% Baseline	-	-	Data awaited from ODPM

*Figure 3.9.18: (BVPI103) Percentage of Users Satisfied with Local Provision of Public Transport Information*

### **Desired Movement**

3.9.52 It is anticipated that continually improving standards relating to the scope and provision of passenger information will result in movement towards the BVPI target.

### **Future Requirements**

3.9.53 Changes in user satisfaction with public transport information will continue to be monitored.

### **Background Indicator 18: Percentage of Users Satisfied with Local Bus Services (BVPI 104)**

3.9.54 All the Districts also asked the public to indicate whether they were satisfied or dissatisfied with the provision of bus services overall. The results indicate that 54% were happy with bus services overall. This figure provides the baseline against which future progress will be monitored. A target has been set for 80% of users to be satisfied with local bus services by 2006 / 2007.

	1998/9	1999/00	2000/01	2001/02	2002/03	2003/04
Percentage of users satisfied with Local Bus Services	-	-	54.3% Baseline	-	-	Data awaited from ODPM

*Table 3.9.19: (BVPI104) Percentage of Users Satisfied with Local Bus Services*

### **Desired Movement**

3.9.55 The introduction of new, accessible vehicles, quality bus corridors and bus guideways is anticipated to result in increased levels of satisfaction relative to the 2000 / 2001 baseline of 54%.

### **Future Requirements**

3.9.56 Further work will continue with the bus operators to raise satisfaction levels and commercial services will also be closely monitored for compliance with the West Yorkshire Bus Strategy.

### **Background Indicator I9: Percentage of Users Satisfied with Local Rail Services**

3.9.57 The West Yorkshire authorities recognise the importance of high quality rail services in encouraging new passengers and passenger satisfaction is a high priority. The Strategic Rail Authority collates the results for the National Passenger Survey. A minimum of 500 respondents commencing their journey at a rail station in West Yorkshire are interviewed. Only those completing their journey in the County are included in these statistics. Data has been available since Spring 2001 and progress against the target for 2003/04 of 77% is shown in Table 3.9.19.

<b>SS1a</b>	<b>Spring 2001</b>	<b>Autumn 2001</b>	<b>Autumn 2002</b>	<b>Autumn 2003</b>
Percentage of users satisfied with Local Rail Services	61% Baseline	67%	77%	72%

*Table 3.9.20 Percentage of Users Satisfied with Local Rail Services*

#### **Desired Movement**

3.9.58 Progress towards the target reflects the continued delivery of reliability and punctuality improvements on the local network, along with enhancements to stations and rolling stock.

#### **Future Requirements**

3.9.59 The West Yorkshire authorities will continue to monitor user satisfaction with local rail services.

### **Key Indicator I10: Percentage of rural households within 800 meters walk of an hourly better bus services**

3.9.60 A provisional baseline figure was reported in the 2003 APR for rural households within 800m walk of an hourly or better bus service, using 1991 census data. It was indicated that this provisional figure would be updated for the 2004 APR and a local target set.

3.9.61 We have updated our baseline figure with 2001 census data. The accuracy of our baseline figure has also been greatly improved by identifying household locations using postal codes. For the provisional baseline figure, only aggregate electoral ward level data was available. Households included in the baseline figure are those which are located in wards defined as rural by the Office of National Statistics (ONS). The bus service database used in our accessibility model has also been updated to represent all services provided between 7am and 10am on weekdays in June 2004. 61,800 (88%) of rural households are within 800m walk of an hourly or better bus service. This is a high proportion of rural households in West Yorkshire and reflects our success in retaining extensive network coverage across West Yorkshire and the

enhancement provided through the fifty rural bus initiatives we have already introduced over the period of the Local Transport Plan.

### ***Desired Movement***

3.9.62 Extending the coverage of hourly or better bus services to the remainder of the rural household population is more challenging. In many cases the relative isolation of these communities prevents the cost-effective provision of a bus service, which in some cases may not even be possible because of highway constraints. Through our work with Rural Transport Partnerships, we are instead seeking to improve accessibility from these locations through measures such as car sharing, taxi-bus services and car clubs. The accessibility benefits arising from these measures cannot be readily captured in a change to our performance against the national core indicator.

### ***Future Requirements***

3.9.63 Many of our future initiatives will seek to develop and enhance existing bus networks in rural areas. These initiatives will be driven by extensive community consultation and informed by feedback from previous schemes. Our experience suggests that this approach is the best way to improve the accessibility, ridership and cost effectiveness of rural bus services. The benefits arising from these initiatives may not lead to a significant change in our performance against the national core indicator for the reasons set out above.

### ***Background Indicator I11 Age of Bus Fleet***

3.9.64 The age of the bus fleet is monitored through annual returns from operators against a national target of 8 years. The returns presented in Table 3.9.20 show a fairly consistent age of bus fleet in West Yorkshire.

	<b>March 1999</b>	<b>March 2000</b>	<b>March 2001</b>	<b>March 2002</b>	<b>March 2003</b>	<b>March 2004</b>
Age of bus fleet	9.2	8.7	-	-	9.2	9.4

*Table 3.9.21 Age of Bus Fleet*

### ***Desired Movement***

3.9.65 The average age of the bus fleet in West Yorkshire was 9.4 years in 2004. Continued investment by operators in partnership with West Yorkshire authorities should result in progress towards this target.

### ***Future Requirements***

3.9.66 The age of the bus fleet will continue to be monitored through operator returns.

### ***Key Indicators I12: Bus Punctuality & I13: Bus Reliability***

3.9.67 Bus punctuality and reliability were first reported as LTP targets in last year's APR, therefore the base year for reporting progress against is 2002/03. Metro monitors the performance of bus services (both commercial and tendered) and reports the monitoring results to operators as part of a partnership approach towards improving performance.



	<b>2002/03</b>	<b>2003/04</b>
Bus punctuality	90% no more than 6 minutes late 1.4% early	91.6% no more than 6 minutes late 0.9% early
Bus reliability	1.4% cancelled	2.1% cancelled

*Table 3.9.22 Bus Punctuality and Bus Reliability*

### ***Desired Movement***

3.9.68 Punctuality has improved since 2002/03 with late running reduced by 1.6% and early running reduced by 0.5%. The number of cancellations has increased by 0.5%, reflecting driver shortages and vehicle availability problems. Metro has no direct control over commercial services but is able to exert more influence on the performance of tendered services. Late running and cancellations are less on tendered services than for commercial services.

### ***Future Requirements***

3.9.69 Bus operators, however, have day-to-day responsibility for the performance of bus services. Metro discusses performance at bi-monthly meetings with the Managing Directors of bus companies and an outline joint action plan with milestone punctuality and reliability targets has already been agreed, which will be finalised in Autumn 2004.

3.9.70 The joint action plan is realistic, achievable and takes into account the measures we are taking to help bus operators meet their LTP targets. For example, the South and West Yorkshire 'Real Time' Passenger Information (RTPI) System, funded by DfT will, for the first time, provide minute by minute data on the performance of 80% of the West Yorkshire bus fleet in 'real time' from mid 2004 and will allow better management of services as well as better scheduling. Our expectations in relation to the use of the system to improve punctuality and reliability have already been discussed with operators. Operators will be expected to:

- Manage day-to-day operations more responsively, and
- Act upon performance data and trends revealed.

Metro will:

- Monitor the performance of bus services;
- Use the performance data to agree with the operators areas for improvement; and
- Investigate the scope for publishing performance data in conjunction with the operators.

Other actions being taking to help operators meet the targets include:

- Through the West Yorkshire Transport Education and Skills Alliance (WYTESA), studying how bus driver recruitment and retention can be improved. Driver shortages cause most cancellations;
- Through the Yorkshire Bus Initiative (YBI), providing bus priority measures that reduce late running and journey time variability; and
- Linking the RTPi system to traffic controls to allow buses priority at traffic lights. The first scheme will be introduced in East Leeds in 2004.

3.9.71 A cause of poor punctuality beyond Metro and the bus operators' control is the enforcement of bus priorities. In 2003/04 Metro funded police enforcement. We and the bus operators are concerned that this type of activity continues to be a low police priority.

#### **Background Indicator I14 : Travel to School**

3.9.72 The annual "hands-up" travel to school survey is now in its 4<sup>th</sup> year. In 2003 over 185,000 pupils from over 550 schools in West Yorkshire took part. Table 3.9.22 shows the changes in mode share and the increase in school and pupil participation since the first survey in 2000.

	<b>Walk</b>	<b>Car</b>	<b>Bus</b>	<b>Bike</b>	<b>Other</b>	<b>No of Schools</b>	<b>Pupils</b>	<b>Schools in Area</b>
<b>2003</b>	89,716	67,484	25,986	1,129	716	569	185,047	897
	48%	36%	14%	1%	<1%	63%		
<b>2000</b>	62,633	45,079	19,880	490	389	475	128,471	934
	49%	35%	15%	<1%	<1%	51%		

*Table 3.9.23 Mode Split From The Annual Travel To School Survey*

#### **Desired Movement**

3.9.73 It is anticipated that the impact of school travel planning initiatives and the Yellow Bus Project will reduce dependence on the private car for school travel.

3.9.74 Of particular interest is the trends in schools where some form of advice or intervention has taken place. Taking the example of schools within the Leeds District, during 2003, walking plans were implemented in 16 primary schools and cycle travel plans in 10 schools. From these 24 schools (two schools had both a walking and cycling plan) 11 were selected as priority schools and given extra assistance. Figure 3.9.9 shows the trends in the proportion of pupils who are driven to school, for each category of school. For the primary schools where no plans were implemented the proportion travelling by car has remained constant at around 42% for the past 4 years. For schools where any type of plan was implemented, after an unexplained sharp increase in 2001, the level of car travel has declined back to the long term average. For priority schools, where positive interventions have been made, the level of car travel has decreased significantly below the longterm average.

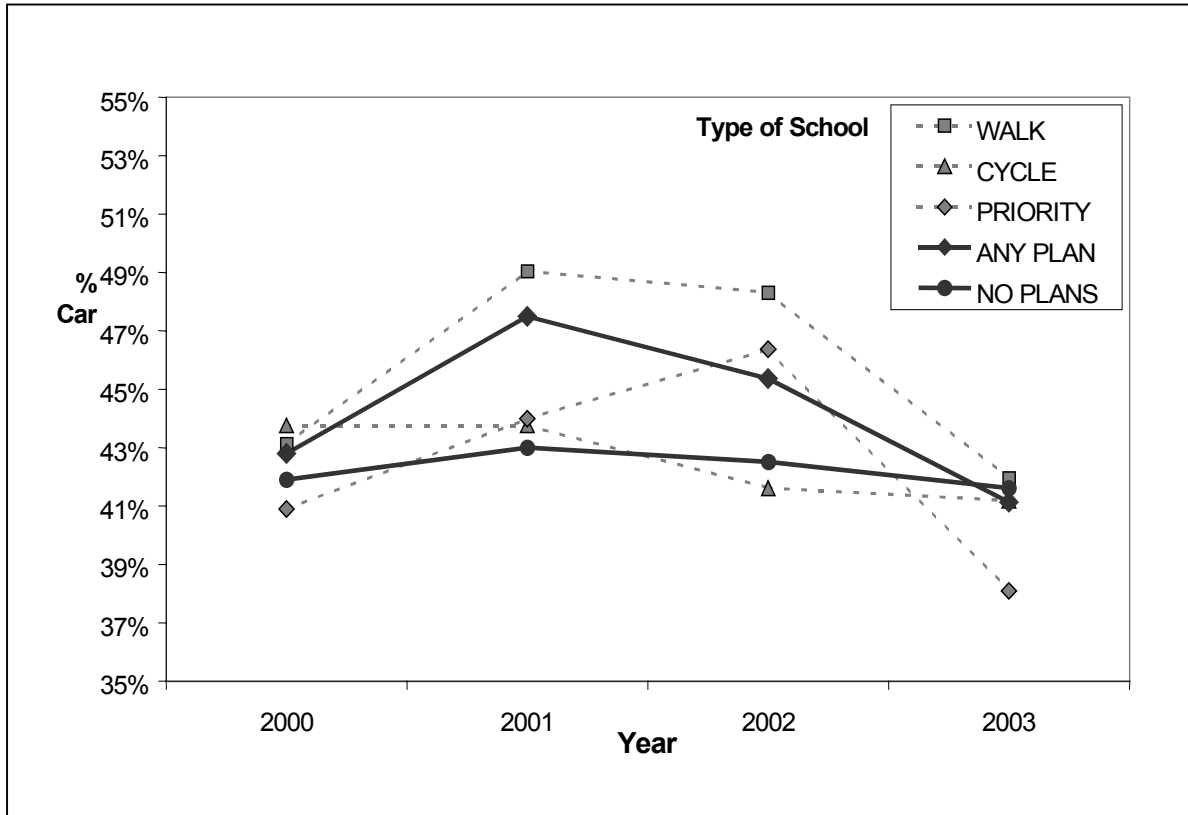
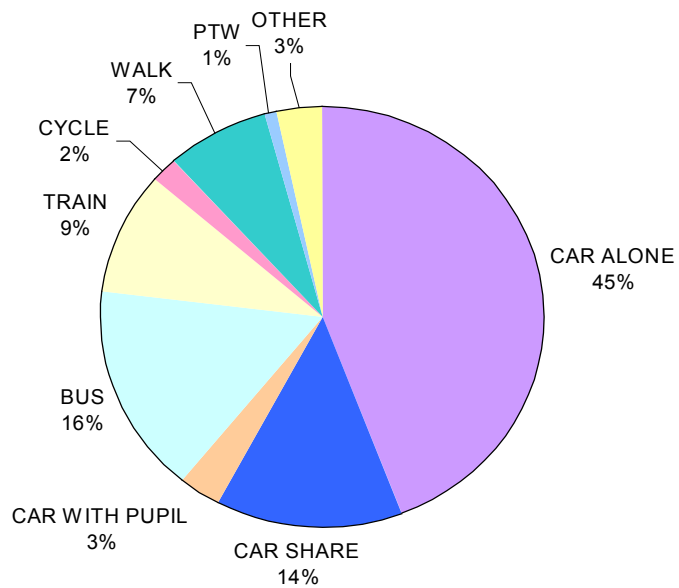


Figure 3.9.9 Travel by Car Leeds Primary Schools

### **Background indicator I15: Travel to Work**

3.9.75 The West Yorkshire Travel Plan Officers Group have initiated a Travel to Work Survey as a means of obtaining modal split data from companies developing or implementing travel plan initiatives across the county. Around 56% of the employers (62 companies) who are working with officers across the district participated in the survey which covered 21,406 employees.

3.9.76 The Survey took place over the week 15<sup>th</sup>–19<sup>th</sup> March 2004. Data was collected via an internet survey or paper based questionnaire. The Survey requested mode of travel to work and home postcode. Organisations participating in the survey have been provided with a summary of the results for their individual sites, average distance travelled by mode of transport, and a summary of the results for their district. It is intended to repeat the Survey on an annual basis. The mode share for the West Yorkshire Travel to Work Survey is shown in Figure 3.9.10.



*Figure 3.9.10 West Yorkshire Travel to Work Survey 2003 – Mode Share*

# ANNEXES

## **A. ProForma A : Progress Towards Department for Transport Core Indicators**

APR Core Indicators Pro-Forma

Select your LA from the drop down list (Click in yellow box and use the drop down arrow). West Yorkshire (Joint Plan)

Core Indicator	Definitions	Year	Value	Year Type <sup>3</sup> (Enter C for Calendar Year and F for Financial Year)	Actual and Trajectory Data <sup>2</sup>													Is your LA on track to meet its target for this core indicator?	Please indicate if your reported or target figures have changed since you previously reported.	Please outline the methodology and source of data used to calculate your figures. Also include any other relevant information.	
					Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11					
Road Condition (% where structural maintenance should be considered) <sup>4</sup>	(1) principal roads - BV96	Base Data <sup>1</sup>	2000/01	36.50%	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Yes	Not changed for 2006/07 but projected to 2010/11 to comply with DfT requirements.	2010/11 target methodology based on 1 years work to represent zero backlog (20 year return period)	
		Target Data <sup>2</sup>	2006/07	10%		Actual Figures	36.50%	32.30%	27.80%	12.11%											
		Units		Percentage		Trajectories	36.50%	28.30%	21.10%	13.50%	12.00%	11%	10%	9%	8%	6.50%	5%				
	(2) non-principal roads - BV97a	Base Data <sup>1</sup>	2000/01	11.20%	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Yes	Revised meaning of "eradicating backlog" from 0% to 5% based on 1 years work and 20 year return period	UKPMS CVI's and realistic approach to eradicating backlog	
		Target Data <sup>2</sup>	2010/11	5%		Actual Figures	11.20%	10.40%	12.90%	13.37%											
		Units		Percentage		Trajectories	11.20%	11.20%	11.20%	11.20%	11.20%	10.00%	9.00%	8.00%	7.00%	6.00%	5%				
	(3) unclassified roads BV97b	Base Data <sup>1</sup>	2001/02	22.60%	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	No	Revised meaning of "eradicating backlog" from 0% to 2% based on 1 years work and 50 year return period	Base Year 2001/02. Straight line improvement. NB Not achievable without increase in funding	
		Target Data <sup>2</sup>	2010/11	2%		Actual Figures	no data	22.60%	26.20%	15.17%											
		Units		Percentage		Trajectories	no data	22.60%	19.50%	16.00%	14.00%	12.00%	10.00%	8.00%	6.00%	4.00%	2%				
Number of bus passenger journeys <sup>5</sup>	Thousands of bus passenger journeys (i.e. boardings) per year in the authority - BV102	Base Data <sup>1</sup>	1999/00	199,400	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Yes	target increased from 3% increase in patronage to 5% in 2002/03	Base Year 1999/2000 BV102 methodology.	
		Target Data <sup>2</sup>	2006/07	209,370		Actual Figures	201,600	202,000	203,500	199,100											
		Units		Thousands		Trajectories	200,560	201,140	201,720	202,000	202,300	205,900	209,400								
Bus passenger satisfaction <sup>6</sup>	Percentage of bus users satisfied with local bus services - BV104u	Base Data <sup>1</sup>	2000/01	54%	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	No Clear Evidence		Survey of users carried out every 3 years following BVPI guidelines. Data submitted to ODPM . * Validated results for 2003/04 awaited from ODPM.	
		Target Data <sup>2</sup>	2004/05	80%		Actual Figures	54%	no data	no data	*											
		Units		Percentage		Trajectories	54%	58%	62%	66%	72%	75%	80%								

Core Indicator	Definitions	Year	Value	Year Type <sup>3</sup> (Enter C for Calendar Year and F for Financial Year)	Actual and Trajectory Data <sup>2</sup>												Is your LA on track to meet its target for this core indicator?	Please indicate if your reported or target figures have changed since you previously reported.	Please outline the methodology and source of data used to calculate your figures. Also include any other relevant information.		
					Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010					
Number of cycling trips	Number of cycling trips across the authority or number of cycling trips at a representative number of counting points (please state which)	Base Data <sup>1</sup>	1996	100	C	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	No		Base Year 1996 DfT National Traffic Census data. Sample of 182 sites in a 3 year rolling sample.	
		Target Data <sup>2</sup>	2006	200		Actual Figures	94	91	87	86											
		Units		Indexed to 100		Trajectories	140	150	160	170	180	190	200								
Number of deaths and serious injuries (all ages) <sup>7</sup>	Number of people killed or seriously injured on roads in the authority	Base Data <sup>1</sup>	1994/98 av	1484	C	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Yes		Base Year 1994/1998 Average. West Yorkshire Police Stats 19 data used	
		Target Data <sup>2</sup>	2010	890		Actual Figures	1229	1331	1319	1238											
		Units		numbers		Trajectories	1397	1355	1313	1271	1229	1187	1128	1068	1009	949	890				
Number of children killed and seriously injured <sup>7</sup>	Number of children (aged less than 16) killed or seriously injured in the authority	Base Data <sup>1</sup>	1994/98 av	272	C	Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Yes		Base Year 1994/1998 Average. West Yorkshire Police Stats 19 data used	
		Target Data <sup>2</sup>	2010	136		Actual Figures	230	227	161	203											
		Units		numbers		Trajectories	254	244	239	229	214	204	190	177	163	150	136				
Light rail passenger journeys <sup>3</sup>	Thousands of light rail passengers per year	Base Data <sup>1</sup>				Year														Not Applicable to this Authority	
		Target Data <sup>2</sup>				Actual Figures															
		Units				Trajectories															
% of rural households within 13 minutes walk of an hourly or better bus service <sup>8</sup>	% of rural <sup>9</sup> households within 13 minutes walk of an hourly or better bus service or % of rural households within 800 metres of an hourly or better bus service (please state which)	Base Data <sup>1</sup>	2003	88%	F	Year	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Yes	Revised base year figure using 2001 census data. Revised target set for 2005/06, for further explanation see Monitoring Appendix, section 3.9, Indicator I10.	Percentage of Households within 800 metres. Accessibility mapping from OS and METRO data and current bus timetables..	
		Target Data <sup>2</sup>	2006	90%		Actual Figures				88%											
		Units		percentage		Trajectories					89%	90%									

NB - Please refer to section 10 of the guidance for descriptions of footnotes.



## **B. ProForma B : Progress Towards Local Targets and Outcomes**

Local Objectives contained in LTP	Local Performance Indicators contained in LTP	Local targets or outcomes contained in LTP	Baseline Date	Actual and Trajectory Data											On track/not on track?	Source of Data	Which national PSA or 10 Year Plan Target does the Local Target/Outcome Link to?
				2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11				
Maintain Transport Infrastructure	C2 : To reduce the %age of principal roads requiring major repair (BV96)	L17 : To reduce the %age to 10% by 2006/07	2000/01 36.5%	32.30%	27.80%	12.11%	12.00%	11.00%	10.00%	9.00%	8.00%	6.50%	5.00%	On Track	Deflectograph and CVI's	N7	
	C2:BV97a :To eliminate the backlog of non-principal roads requiring structural maintenance	L18 To eliminate the backlog by 2010/11. Interim target of 11.2% by 2004/05	2000/01 11.2%	10.40%	12.90%	13.37%	11.20%	10.00%	9.00%	8.00%	7.00%	6.00%	5%	On Track	Deflectograph and CVI's	N7	
	C2: BV97b To eliminate the backlog of unclassified roads requiring structural maintenance	L19 : To eliminate the backlog by 2010/11. Interim target 22.6% by 2004/05	2001/02 22.6%	22.60%	26.20%	15.17%	14.00%	12.00%	10.00%	8.00%	6.00%	4.00%	2%	Not on track	Deflectograph and CVI's	N7	
Safety, Security & Health	D1 Road Casualty Trends	L11 : 20% reduction in numbers killed or seriously injured	1994/98 Av 1484	1331	1319	1238	1229	1187	1128	1068	1009	949	890	On Track	Stats 19	N3, Shared Priority - Safety	
		L13 : 5% reduction in slight casualty rate	1994/98 Av 81.9 cas. Per 100m <sup>2</sup>	79.5	76.9	74.9	78.4	77.8	77	76.1	75.3	74.5	73.7	On track	Stats 19 and DFT flow data	N3, Shared Priority - Safety	
	D2 Casualty Rates for different road user groups	L9 : 40% reduction in number of pedestrian KSI's	1994/98 av 525	378	373	340	413	394	368	342	315	289	263	On Track	Stats 19	N3, Shared Priority - Safety	
		L7 : 20% reduction in number of cyclist KSI's	1994/98 av 106	91	62	101	88	85	81	77	72	68	64	On track	Stats 19	N3, Shared Priority - Safety	
	D3 Casualty trends for children	L12 : 25% reduction in numbers of children KSI	1994/98 av 272	227	161	203	214	204	190	177	163	150	136	On Track	Stats 19	N3, Shared Priority - Safety	

Local Objectives contained in LTP	Local Performance Indicators contained in LTP	Local targets or outcomes contained in LTP	Baseline Date	Actual and Trajectory Data										On track/not on track?	Source of Data	Which national PSA or 10 Year Plan Target does the Local Target/Outcome Link to?	
				2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11				
Environmental Quality	F1 Air Quality	L10 : Not to exceed the annual average NO2 standard of 40ug/m3	2000	Bfd 44 Cal 38 Kirk 34 Lds 37 Wak 31	Bfd 36 Cal 34 Kirk 34 Lds 38 Wak 38	Bfd 38 Cal 36 Kirk 31 Lds 40 Wak 42	>40 all centres	>40 all centres	>40 all centres	>40 all centres	>40 all centres	>40 all centres	>40 all centres	On Track	Permanent Monitoring stations/sites	N4, Shared Priority : Environment	
Greenhouse Gas Emissions	G1 Daily traffic flow	L1 : Daily traffic growth 1999-2006 not to exceed 5%	1999	100	98	99.8	101.6	104.5	105						On track	ATC data : 93 sites	N1, Shared Priority Environment, Congestion
Traffic Reduction	H1 Town centre traffic reduction	L2 : No increase in AM peak traffic into Leeds 1999-2006	2000	35,790	no data	36,840	36,430	35,790	35,790						Not on track	ATC data : biennial central cordon survey	N1, Shared Priority Congestion, Environment
		3% increase in AM peak traffic (1999-2006) into: a) Bradford	1999	18,550	18,690	no data	18,240	18,600	19,110						On track	ATC data : biennial central cordon survey	N1, Shared Priority Congestion, Environment
		b) Halifax	1999	9,360	8,920	no data	9,480	9,550	9,640						On track	ATC data : biennial central cordon survey	N1, Shared Priority Congestion, Environment
		c) Huddersfield	1999	12,280	12250	no data	12280	12450	12650						On track	ATC data : biennial central cordon survey	N1, Shared Priority Congestion, Environment
		d) Wakefield	2000	10,380	no data	11,750	10,880	10,500	10,690						No Clear Evidence	ATC data : biennial central cordon survey	N1, Shared Priority Congestion, Environment









## **C. Report on Status of Targets and Indicators**



## **Report on Status of Targets and Indicators**

### ***L1 : Weekday traffic growth not to exceed 5% from 1999 to 2006.***

In order to record progress against this target data is collected each year at 93 automatic traffic counting (ATC) sites across West Yorkshire. These sites have been selected to give a statistically valid sample of all road types across the county.

Growth rates for all day traffic have averaged less than 1% per annum for the period of the LTP and it is for this reason we classify this target as "On Track"

For further information see Appendix 1, Monitoring Report, Section 3.8, Indicator G1.

### ***L2 : Stabilise morning peak inbound traffic into Leeds at 1999 levels.***

Data to monitor traffic growth into central Leeds has been collected using ATC's at 35 sites on a cordon around central Leeds since 1979. The data shows that, despite the rapid economic growth of Leeds during the plan period, morning peak traffic growth rates remain relatively low at around 2% per annum. In spite of a slowing down in traffic flow growth from 2002 to 2004 it is unlikely that the rate of decrease will be sufficient to meet the target therefore we classify this as "Not on Track"

For further information see Appendix 1, Monitoring Report, Section 3.9, Indicator H1.

### ***L3 : No more than 3% growth in morning peak traffic into Bradford, Halifax, Huddersfield and Wakefield.***

ATC cordons around these centres have been used to collect data since 1979. This data indicates that in all centres with the exception of Wakefield the long term trends indicate that we are "On Track" to meet the target.

In Wakefield the situation is less clear. A large increase in traffic from 2000 to 2002 has been followed by a fall from 2002 to 2004 giving an overall increase of 5% over the baseline and in line with long term trends. Until the next set of cordon counts is available we are unable to determine whether there has been a change in trend or the 2002 numbers were abnormal. For this reason we classify this target as "No Clear Evidence"

For further information see Appendix 1, Monitoring Report, Section 3.9, Indicator H1.

***L4 : Total bus patronage to grow by 5% by 2006/07 from a 1999/00 base.***

After 2 years of modest growth patronage fell by 2.2% in 2003/04 to 0.2% below the base line. Despite this reverse in trends the view of the West Yorkshire Authorities is that the measures being implemented through the Yorkshire Bus Initiative and Quality Partnerships or Quality Contracts with the operators will ensure the target is met within the plan period and therefore we are "On Track". A fuller explanation is given in Chapter 3 of the APR and more data is provided in Appendix 1, Monitoring Report, Section 3.9, Indicator I6.

***L5 : Total number of rail passengers to grow by 25% by 2006/07 from a 1999/00 base. (Revised target for 2003/04)***

Rail patronage has grown by 16% since 2002/03 and 18% since the base year of 1999/2000. This equates to 3 million more passengers using rail services last year when compared to the base year. Works planned for the remainder of the LTP period will enable the interim target of 25% growth to be achieved and the original target of 40% growth remains a long term goal. For these reasons we classify this target as "On Track".

A fuller explanation of the issues affecting the rail patronage target is given in Chapter 3 of the APR and more data is provided in Appendix 1, Monitoring Report, Section 3.9, Indicator I6a.

***L6 : To double the number of cycling trips between 1996 and 2006 and double again by 2012.***

Using the methodology adopted to monitor cycle use - 12 hour manual counts at 182 sites across West Yorkshire covering all road types and repeated annually - we have recorded a fall of 8% in cycling trips since 2000. However monitoring of individual schemes shows an increase in cycling in more localised areas. A revised methodology for monitoring cycle use is being developed for the 2<sup>nd</sup> LTP.

This target is "Not on Track" and further information is provided in Appendix 1, Monitoring Report, Section 3.9, Indicator I4.

***L7 : To reduce fatal and serious cycle casualties by 20% by 2005 from 1994/98 average.***

The number of fatal and serious cycling casualties rose sharply in 2003/04, thus highlighting the variability of annual statistics. The long term trend, based on 5 year moving averages continues to be downwards. The target therefore remains "On track".

For further information see Appendix 1, Monitoring Report, Section 3.5, Indicator D2.

***L8: To halt the overall long-term decline in journeys made on foot and increase the proportion of pedestrian journeys by children and young people (1998 to 2006).***

Progress towards this target is monitored via the biennial modal split surveys on cordons around the 5 main urban centres. These show a continuing increase in walking in the morning and evening peaks. Inter-peak statistics are more variable. The target therefore remains "On track".

For further information see Appendix 1, Monitoring Report, Section 3.9, Indicator I1 and Section 3.2, Background Indicator A4.

***L9 : To reduce fatal and serious pedestrian casualties by 40% between 1994/98 average and 2005 and by 50% by 2010.***

The number of casualties continues to fall and is currently at the lowest level recorded in West Yorkshire. The trend line, measured by a 5 year moving average indicates the target will be met and we are therefore "On Track"

For further information see Appendix 1, Monitoring Report, Section 3.5, Indicator D2 .

***L10: Not to exceed an annual average of 40µg/m<sup>3</sup> NO<sub>2</sub> in main urban areas in any given year.***

Since NO<sub>2</sub> monitoring began in 1998 there is a clear trend of improving air quality and, despite Wakefield exceeding the target in 2003, we believe we are "On Track". A more detailed explanation of the issues in Wakefield is given in Chapter 3 of the APR and more detailed statistical data is given in Appendix 1, Monitoring Report, Section 3.7, Indicator F1 .

***L11. To reduce fatal and serious casualties by 20% between 1994/98 average and 2005 and by 40% by 2010.***

Both the year on year data and 5 year moving average trend line indicate that we are "on track" to meet both the 2005 and 2010 LTP targets. More detailed statistical information is given in Appendix 1, Monitoring Report, Section 3.5, Indicator D1 .

***L12. To reduce number of children killed or seriously injured by 25% between 1994/98 average and 2005 and by 50% by 2010.***

Although there was an increase in casualties in 2003 compared with 2002 the long term trend based on a 5 year moving average continues downwards and that the targets for 2005 and 2010 will be met. We are, therefore, "On Track" and more detailed statistical information is given in Appendix 1, Monitoring Report, Section 3.5, Indicator D1 .

***L13. To reduce the rate of slight injury accidents by 5% between 1994/98 average and 2005.***

Since 2000 we have seen a continued year on year reduction in the rate of slight injury accidents and the target for 2005 has been met and we are within sight of the 2010 target. It is likely that this target will be stretched in next years APR. We are, therefore, "On Track" and more detailed statistical information is given in Appendix 1, Monitoring Report, Section 3.5, Indicator D1 .

***L14 . At least 95% of bus services to run no more than 6 minutes late and no services to run early and***

***L15. No more than 0.5% of bus services to be cancelled***

These targets were introduced in last years APR. Although punctuality has improved the number of cancelled services , a measure of reliability, has increased. An Action Plan, together with milestones, is being jointly developed with the bus operators to ensure the LTP targets are met and this will be reported in next years APR. We therefore classify these targets as "No Clear Evidence" with more detailed information given in Appendix 1, Monitoring Report, Section 3.9, Indicator I11 .

***L16 . To increase the % of households in rural wards within 800m of an hourly or better bus service to 90% by 2005/06.***

*ONS definition of Rural wards used. A revised base year of 2003 was set following re-running of the accessibility model using 2001 census data. A target of 90% set as many of remaining households are isolated properties or small settlements where the use of measures such as car sharing clubs and taxi buses may be more valid. The target is classed as on track and more detailed information is given in Appendix 1, Monitoring Report, section 3.9, Indicator I10.*

***L17. Principal Roads – To reduce the percentage of roads requiring structural maintenance to 10% by 2006/07 (from a 2000/01 base year).***

The latest visual condition data shows that 12.15% of principal roads require structural maintenance and the trend data indicates that the LTP target of 10% will be met; we are therefore "On Track".

***L18. Non- Principal Classified Roads - To eliminate the backlog of roads requiring structural maintenance by 2010/11 with an interim target of 11.2% by the end of 2004/05 (Base Year 2000/01).***

Trends in the condition of the non-principal roads are more difficult to determine as the method of analysis has varied. Survey results suggest a slight decline in the condition of B and C classified roads. However work has been carried out to improve the roads and the result is believed to be attributable partly to the changes in methodology. As such both the interim and long term targets are still achievable and we are "On track".

***L19. Unclassified Roads - To eliminate the backlog of roads requiring structural maintenance by 2010/11 with an interim target of 22.6% by the end of 2004/05 (Base Year 2001/02).***

On the unclassified roads there is an apparent improvement in condition from 26.23% to 15.17%. Each year a 25% sample of the network is surveyed. 2003/04 was the third year of surveys but the results are based only on the latest sample and not the cumulative 75%. The average condition of the roads in each sample varies between samples. In addition, the impact of imposed changes in the method of analysis of the data to meet the BVPI requirements has introduced further variability into the results. Hence, although the results suggest that the network condition may be on target, in reality the length of the unclassified network is so great that real improvements will only be achieved over a long period of time  
Therefore we classify this target as "Not on Track".

A more detailed explanation of the issues affecting Targets L17, L18 and L19 is give in chapter 3 of the APR and in Appendix 1 Monitoring Report, Section 3.4, Indicator C2.