West Yorkshire

Local Transport Plan

Annual Progress Report 2004/05

Appendix 1 Monitoring Report

July 2005

WEST YORKSHIRE LOCAL TRANSPORT PLAN

ANNUAL PROGRESS REPORT 2004 / 2005

APPENDIX 1

MONITORING REPORT

CONTENTS

List of Tables

List of Figures

CHAPTER 1 INTRODUCTION

1.1 The West Yorkshire Local Transport Plan (LTP) Partnership has produced this Monitoring Appendix to the 2004/ 2005 Annual Progress Report in order to:

- comply with the emphasis on monitoring set out in the Annual Progress Report guidance without overburdening the main document with detail;
- provide more detail relating to targets covered in Section 2, Proforma A and Proforma B of the main report;
- provide information on an individual Authority basis where relevant;
- provide longer term trend information where relevant;
- 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 LTP and national targets.

1.4 Progress towards these targets is described in Chapter 2 ‘ Progress Towards Targets and Objectives ’ and in Proformas A and B of the main Annual Progress Report (APR) document.

CHAPTER 2 IMPACT REPORT

2.1 INTRODUCTION

2.1.1 The following Impact Report describe in detail schemes which were implemented or started in West Yorkshire during 2004/2005 or where significant additional monitoring has been undertaken on schemes previously reported. These schemes 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 undertaken 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, alllowing successful schemes to be identified.

2.1.3 Each scheme report comprises a causal chain, a description of the scheme and 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. Whenever significant subsequent monitoring is ubdertaken this will be reported in future Impact Reports.

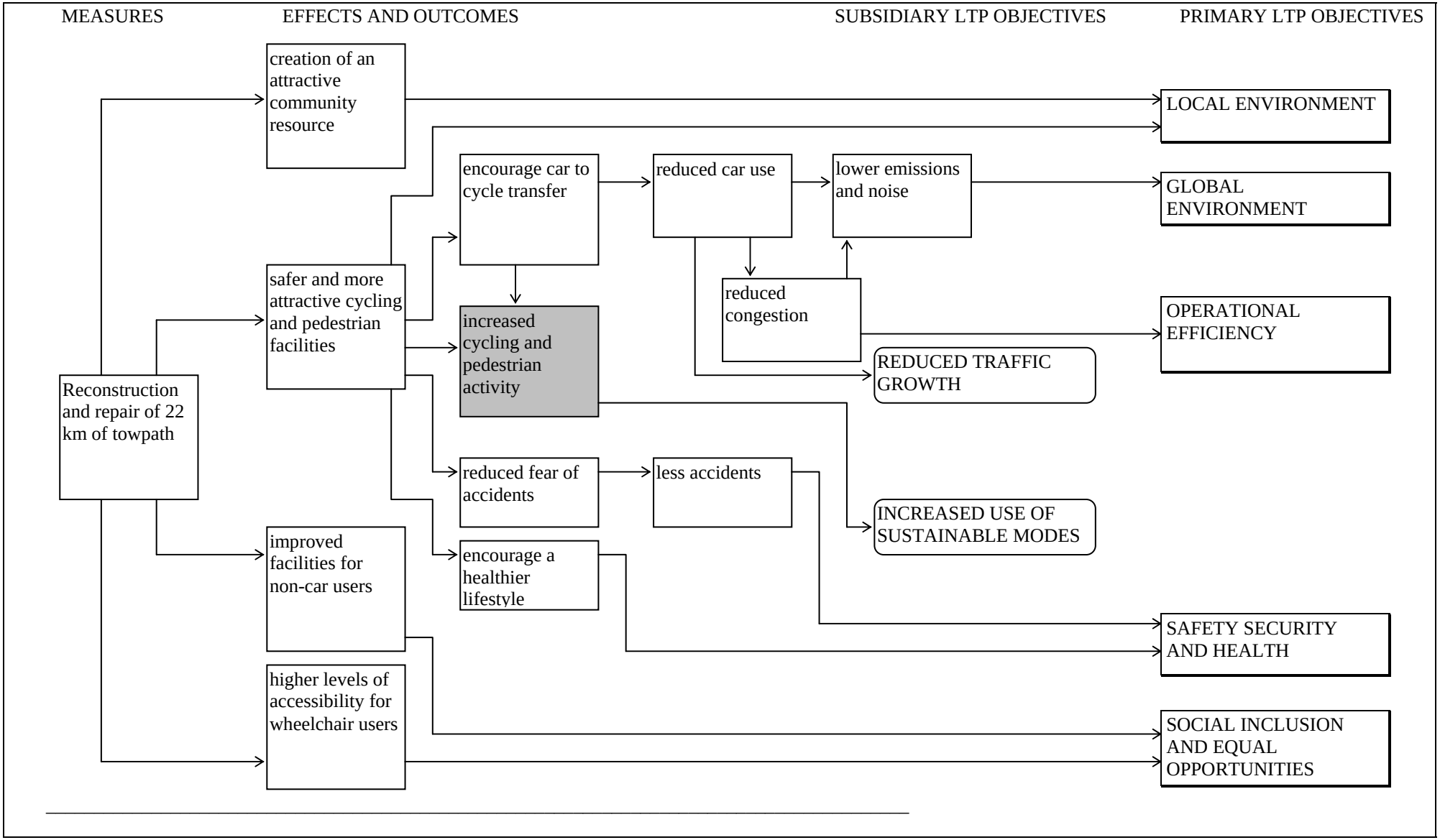
2.1.4 Schemes for which impact reports have been presented between 1997 and 2003/04 are summarised in Table 2.8.1. These previously reported schemes are presented in a common format allowing impacts to be clearly identified.

2.1.5 This process of detailed examination enables the effectiveness of the measures to be clearly demonstrated and allows the future Plan strategy and programme to be adjusted towards those types of measures which prove to be the most effective.

Urban Area Schemes
Leeds and Liverpool Canal Towpath Improvement - update
A650 Bingley Relief Road (Highways Agency scheme)
South Bradford Integrated Transport Improvements
Improvements to Shipley rail station
School Travel Plans in Calderdale
WizzGo car club operations in Leeds

Table 2.1 Schemes Reported in the Impact Report

LEEDS - LIVERPOOL CANAL TOWPATH IMPROVEMENTS CAUSAL CHAIN



PRIMARY OBJECTIVE | SUBSIDIARY OBJECTIVE | data monitored

URBAN AREA SCHEME

2.2 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

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

2.2.2 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.

2.2.3 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 (commenced 2003/04);
- Resurfacing to improve ride quality between Leeds and Saltaire will be implemented in future years, together with improved signage.

2.2.4 Expenditure up to the end of 2004/05 has been £335,000 in Bradford and £216,000 in Leeds.

Monitoring

2.2.5 Counts of towpath usage have been carried out each March since 2002 in Leeds and 2003 in Bradford. Summer surveys in July and August commenced in 2003.

2.2.6 The surveys cover four sites in Leeds and six in Bradford. Survey periods are 0730-0930 and 1130-1430 on Wednesdays and between 1100-1400 on Sundays. Each site is counted once on each day. In March 2005 additional data was collected

from one Bradford site with 12 hour (0700-1900) surveys being carried out for five successive weekdays.

Survey Results

2.2.7 Figure 2.2.1 shows the total level of cycling and pedestrian activity recorded at five of the 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). Figure 2.2.2 shows the Leeds survey results. Tables 2.2.1 and 2.2.2 show the breakdown by day and time period within the Leeds and Bradford sections.

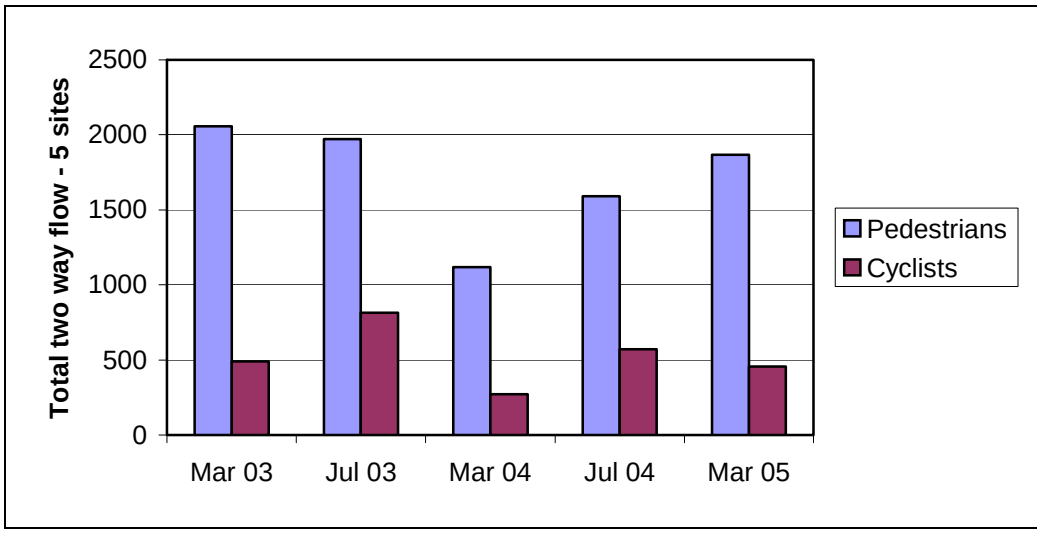


Figure 2.2.1 Towpath Usage (Bradford) – All 5 sites combined 2003-2005

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

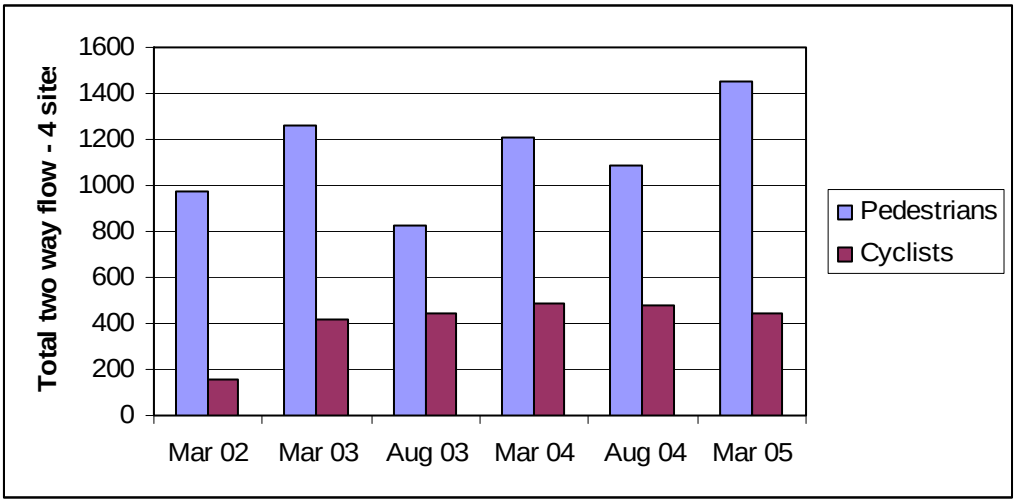


Figure 2.2.2 Towpath Usage (Leeds) – All 4 sites combined 2002-2005

Survey day	Time period	Survey date						% age change - March to March	
		Mar 2002	Mar 2003	Aug 2003	Mar 2004	Jul 2004	Mar 2005	2002-04	2002-05
Cycling									
Wed	0730-0930	34	37	103	82	62	97	141%	185%
Wed	1130-1400	49	27	133	47	96	72	-4%	47%
Sun	1100-1400	76	351	208	361	324	272	375%	258%
Pedestrians									
Wed	0730-0930	92	70	84	82	80	122	-11%	33%
Wed	1130-1400	359	305	355	310	427	466	-14%	30%
Sun	1100-1400	520	882	391	818	577	868	57%	67%

Table 2.2.1 Towpath Usage (Leeds) – All 4 sites combined 2002-2005

Survey day	Time period	Survey date						% age change - March to March	
		Mar 2002	Mar 2003	Jul 2003	Mar 2004	Jul 2004	Mar 2005	2003-04	2003-05
Cycling									
Wed	0730-0930	n/a	48	98	46	84	58	-4%	21%
Wed	1130-1400	n/a	81	159	54	75	47	-33%	-42%
Sun	1100-1400	n/a	362	557	171	412	352	-53%	-3%
Pedestrians									
Wed	0730-0930	n/a	152	153	130	202	169	-14%	+11%
Wed	1130-1400	n/a	315	548	381	478	331	+21%	+5%
Sun	1100-1400	n/a	1589	1270	608	910	1367	-62%	-14%

Table 2.2.2 Towpath Usage (Bradford) – All 5 sites combined 2003-2005

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

2.2.8 The variable changes in both cycling and walking illustrate the difficulties associated with monitoring activities that are so influenced by the weather. Given

that most towpath activity is leisure based, the impact of the weather is much more pronounced than for other trips. The 12 hour surveys carried out on the towpath in March 2005 indicate that both pedestrian and cycling levels can vary by +/- 35% on a day to day basis.

2.2.9 Nevertheless, the Leeds section of the towpath shows a trend of increased pedestrian activity and a notable jump in cycling in the first year, though this growth has not been sustained. The Bradford results are more variable, although the trend since March 2004 has been upward.

2.2.10 Total activity on the towpath is dominated by flows on Sundays, implying that most use is leisure based. There is evidence, however, that weekday cycling activity is for more utilitarian purposes with notably higher volumes observed during the peak periods than the inter peak.

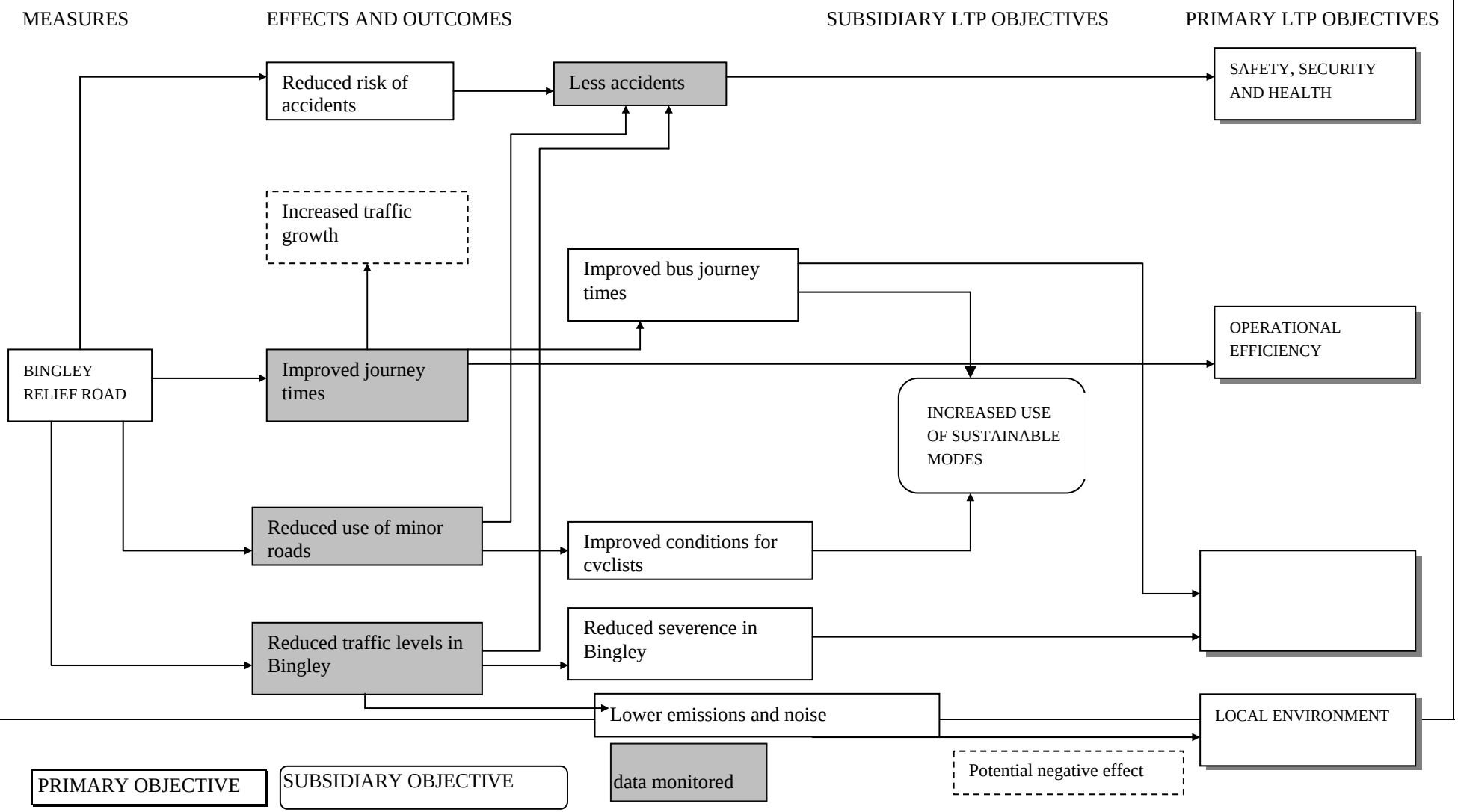
2.2.11 Estimates of 12 hour cycling activity for the Bradford section (using factors derived from the 5 weekday surveys in March 2005) show that daily levels mostly fall into the range 70-100, which is comparable with the busier on road cycling routes in the District.

Discussion

2.2.12 It is still too early to judge whether the improvements have increased towpath usage. 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 usage in the Bradford section following the low levels of activity recorded in 2004. Nevertheless, overall cycling activity remains low, with daily volumes of 70-100 being comparable with the busier main road network in Bradford when it might be expected that off road cycling would prove more attractive. The trends in Leeds are more positive, however, cycling activity appears to have reached a plateau.

2.2.13 It is planned to continue the existing survey programme for the foreseeable future.

BINGLEY RELIEF ROAD IMPROVEMENTS CAUSAL CHAIN



URBAN AREA SCHEME

2.3 A650 Bingley Relief Road (Highways Agency Scheme)

Objectives

- to improve journey times for through traffic;
- to reduce the use of alternative minor roads;
- to improve safety;
- to reduce severance within Bingley;
- to improve air quality and reduce traffic noise within Bingley.

Scheme Description

2.3.1 Bingley Relief Road is a three mile long dual carriageway which provides a bypass to the old single carriageway trunk road through Bingley, to the north of Bradford.

2.3.2 The road threads its way along the Aire Valley between a busy railway line, the Leeds Liverpool canal, the river Aire and the old trunk road through Bingley. Within the centre of Bingley itself the new road has a grade separated junction with Ferncliffe Road and is crossed by several other roads and a new footbridge for cyclists and pedestrians.

2.3.3 The road was opened to traffic on 22nd December 2004.

Monitoring

2.3.4 Scheme monitoring has been undertaken by Bradford Council and WS Atkins, on behalf of the Highway Agency.

2.3.5 Before surveys were carried out in the spring of 2003, during construction of the road, followed by immediate after surveys in spring 2004. Further surveys were undertaken in spring 2005 and will be reported in next year's APR.

2.3.6 The 2003 surveys were affected to some extent by the ongoing roadworks associated with the scheme and as a consequence historic data from autumn 1999 has also been used in this appraisal.

2.3.7 Survey data collected in 2003-2005 comprised:

- Journey time surveys (0700-1000, 1400-1800) on the A650 between Thwaites (to the west of Bingley) and Saltaire to the east;
- Automatic Traffic Counts for a period of 4 weeks on the A650 and a series of minor roads as well as the A65 to the west of Ilkley;
- Manual counts (0700-1100 and 1500-1900) on two screenlines through Bingley itself and at Saltaire roundabout.

2.3.8 In addition, journey time surveys (0730-0930, 1400-1800) were also carried out on three other routes in 2004, (repeating surveys previously carried out in 1999), to establish changes in congestion downstream of the Relief Road:

- B6269/B6144 Toller Lane/White Abbey Road (Cottingley to Bradford City Centre)
- A650 Manningham Lane (Saltaire to Bradford City Centre)
- A657 Saltaire Road/Leeds Road (Saltaire to Calverley)

Survey Results

2.3.9 The journey time surveys show a significant reduction in congestion on the A650 through Bingley when compared with both the 1999 and 2003 surveys. Tables 2.3.1 and 2.3.2 show the changes in journey times for traffic using the relief road and those remaining on the old road through Bingley. Statistically significant changes are highlighted.

Direction	Period	Journey Time (minutes)					
		Old A650 'Before' (May 99)	Old A650 'Before' (Jun 03)	New Relief Road (Apr 04)	Change (1999 to 2003)	Change (1999 to 2004) Scheme impact	Change (2003 to 2004) Scheme impact
Southb'nd	Am	14.4	21.2	7.9	+6.8	-6.5	-13.3
	Inter	10.9	13.7	6.7	+2.8	-4.2	-7.0
	Pm	11.0	14.0	5.7	+3.0	-5.3	-8.3
Northb'nd	Am	15.6	14.7	5.4	-0.9	-10.2	-9.3
	Inter	10.1	15.0	5.6	+4.9	-4.5	-9.4
	Pm	14.2	17.4	5.5	+3.2	-8.7	-11.9

Am = 0730-0930, Inter = 1400-1600, Pm = 1600-1800

Table 2.3.1 A650 Journey Times (Crossflatts to Saltaire) 1999-2004

2.3.10 Journey times for traffic on the old route through Bingley have also improved.

Direction	Period	Journey Time (minutes)					
		Old A650 'Before' (May 99)	Old A650 'Before' (Jun 03)	Old A650 'After' (Apr 04)	Change (1999 to 2003)	Change (1999 to 2004)	Change (2003 to 2004)
Southb'nd	Am	14.4	21.2	11.3	+6.8	-3.1	-9.9
	Inter	10.9	13.7	10.4	+2.8	-0.5	-3.3
	Pm	11.0	14.0	8.6	+3.0	-2.4	-5.4
Northb'nd	Am	15.6	14.7	8.1	-0.9	-7.5	-6.6
	Inter	10.1	15.0	8.7	+4.9	-1.4	-6.3
	Pm	14.2	17.4	8.1	+3.2	-6.1	-9.3

Am = 0730-0930, Inter = 1400-1600, Pm = 1600-1800

Table 2.3.2 A650 Journey Times (Crossflatts to Saltaire) Through Bingley 1999-2004

2.3.11 The impact of the Relief Road on roads downstream of Bingley is less positive. Although overall journey times have improved, the reduced congestion through Bingley has been partly offset by increased delays elsewhere. Some of this increased congestion is likely to be attributable to general increases in traffic, however, there is strong evidence that at least some is directly attributable to the opening of the Relief Road.

2.3.12 Traffic volumes on the A650 have risen significantly following the opening of the Relief Road. In the centre of Bingley, traffic levels on Main Street are now around half what they were in 2003, however, the combined flow on Main Street and the relief Road shows a substantial rise in activity with 56% more traffic than in 1999.

2.3.13 This increase in traffic is not reflected by counts to the west of east of the town, implying that some of the rise is due to local (rather than through) traffic and possibly an element of double counting.

2.3.14 Table 2.3.3 shows estimated Annual Average Weekday Traffic (AAWT) levels from 1999 to 2004 for a sample of roads. (Factors to AAWT have been derived from permanent ATC sites on the A650).

2.3.15 Some of the changes between 1999 and 2003 reflect the impact of the roadworks associated with the scheme itself, in particular the fall in traffic on the A650 west of Saltaire and increased use of the B6144 Haworth Road.

Link	Estimated AAWT (vehs)			Changes in AAWT (vehs / %)		
	1999	2003	2004	1999 to 2003	1999 to 2004	2003 to 2004
A650 Marley	19600	22500 *	30200 *	+2900 (+15%)	+10600 (+54%)	+7700 (+34%)
Old A650 Crossflatts	30800 *	28700	12400	-2100 (-7%)	-18400 (-60%)	-16300 (-57%)
Old A650 Main Street	26500 *	27700 *	14200	+1200 (+5%)	-12300 (-46%)	-13500 (-49%)
A650 Relief Road (w)	n/a	n/a	27200	n/a	+27200	+27200
Combined Main St & Relief Road	26500 *	27700 *	41400	+1200 (+5%)	+14900 (+56%)	+13700 (+49%)
A650 W of Saltaire	30600 *	28500	34600	-2100 (7%)	+4000 (+13%)	+6100 (+21%)
A650 S of Shipley	24700	22000	23900	-2700 (-11%)	-800 (-3%)	+1900 (+9%)
A65 W of Ilkley	20700	21600	20900	+900 (+4%)	+200 (+1%)	-700 (-3%)
B6265, Stockbridge	19600	18700	17500	-900 (-5%)	-2100 (-11%)	-1200 (-6%)
Swine La, East Morton	6400 *	6100	5300	-300 (-5%)	-1100 (-17%)	-800 (-13%)
B6429 Harden Rd	7900	9000	9600	+1100 (+14%)	+1700 (+22%)	+600 (+7%)
B6144 Haworth Rd	15400	16600	14300	+1200 (+8%)	-1100 (-7%)	-2300 (-14%)
B6146 Cottingley Rd	18000 *	18100	20100	+100 (+1%)	+2100 (+12%)	+2000 (+11%)

* MCC data. All other data from ATC's.

Table 2.3.3 Traffic Flow Changes (Estimated AAWT)1999-2004

2.3.16 The increase in traffic levels on the A650 to the West of Saltaire (+13% from 1999-2004) is not reflected by clear increases within the town itself. Traffic volumes on the A650 to the south of Shipley are lower in 2004 than in 1999, and other data

from manual counts shows only small changes on the A657. Counts at Saltaire roundabout (the first main junction to the east of the Relief Road) also show no obvious pattern to the changes with increases on some roads in one direction and falls in the other.

2.3.17 The increase in traffic on B6146 Cottingley Road is a reflection of the fall in traffic on B6144 Haworth Road, indicating a simple re-routing from more minor roads to the south of Bingley onto the Relief Road.

2.3.18 To the north of Bingley there is no clear evidence of reduced traffic levels either on the A65 or the minor roads over Baildon Moor (not shown).

Discussion

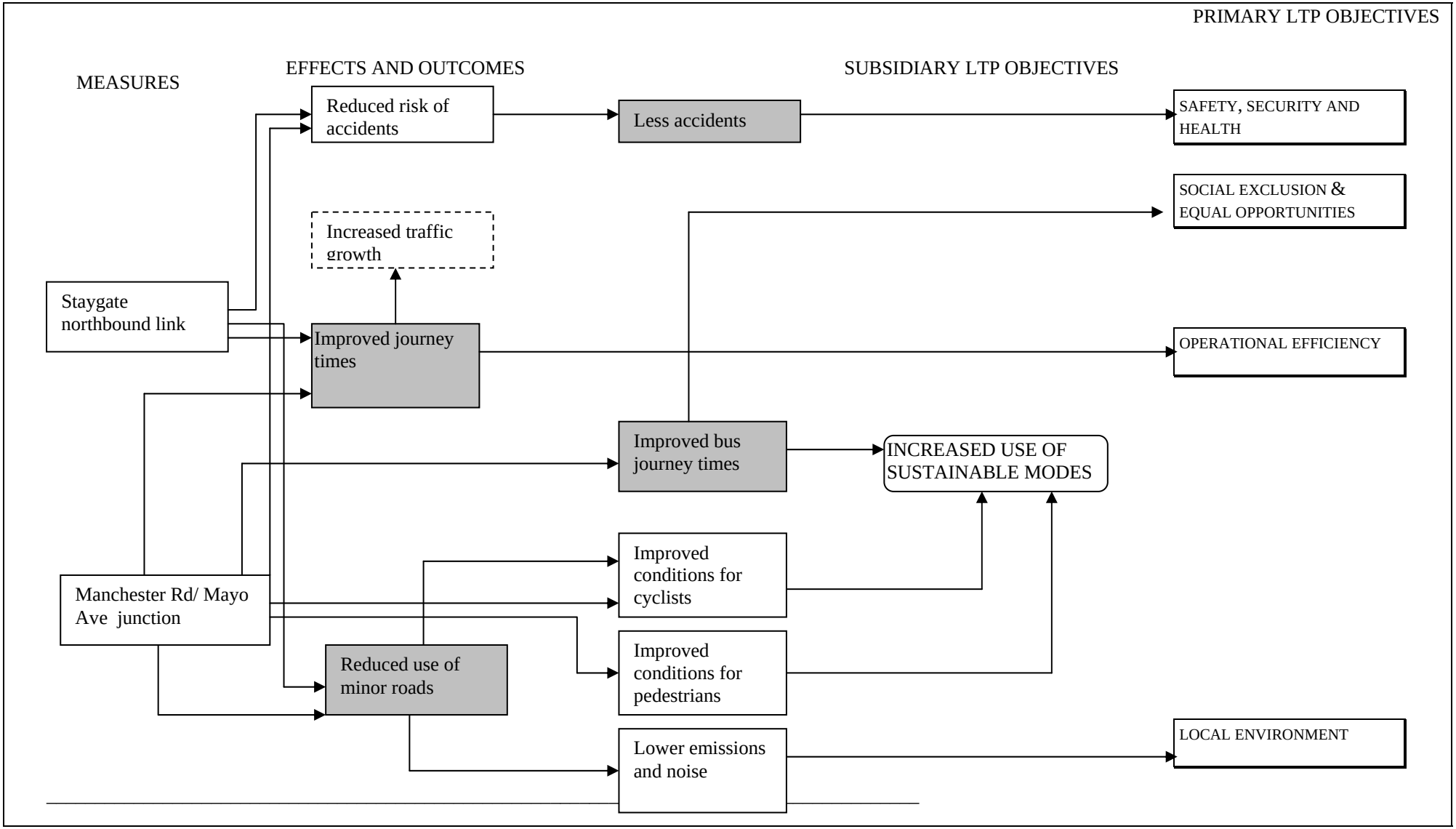
2.3.19 The scheme has been successful in significantly reducing congestion on the A650 through Bingley. Traffic volumes on Main Street have fallen by around 50%, having a substantial impact upon levels of severance, noise and air quality in the town centre.

2.3.20 Traffic volumes have risen following the opening of the Relief Road, with significant increases occurring on the A650 to the east and west of Bingley. The combined flow on the Relief Road and Main Street has risen by around 50% or 14,000 vehicles per day although some of this increase is probably linked to double counting.

2.3.21 There is evidence of increased congestion on the A657, A650 and B6144 downstream of Bingley. Although traffic volumes haven’t risen markedly on all these roads, peak narrowing may also be contributing to this.

2.3.22 The increases in traffic on the A650 are not mirrored by comparable reductions elsewhere, implying that there may be wider effects than covered by the monitoring and possibly also a degree of traffic generation.

SOUTH BRADFORD INTEGRATED TRANSPORT IMPROVEMENTS CAUSAL CHAIN



URBAN AREA SCHEME

2.4 South Bradford Integrated Transport Improvements (Interim Monitoring)

Objectives

- to improve access to strategic development sites;
- to improve bus journey times on A641 and A6177;
- to reduce the use of alternative minor roads;
- to reduce journey times for strategic traffic;
- to improve conditions for pedestrians and cyclists.

Scheme Description

2.4.1 The South Bradford Integrated Transport Improvements (SBITI) comprises:

- A641 Manchester Road / A6177 Mayo Avenue - replacement of roundabout with signalised junction;
- M606 / A6177 Rooley La / A6036 Rooley Ave – provision of grade separated northbound link between M606 and Rooley La at Staygate junction;
- Complementary traffic management measures on minor road network (programmed for 2005/06)

2.4.2 The Mayo Avenue junction was opened in December 2003 and the Staygate northbound link in July 2004.

2..4.3 The total scheme cost to date (excluding traffic management measures) is £11.3M. The traffic management measures are being funded from the Integrated Transport budget.

Monitoring

2.4.4 ‘Before’ surveys were principally carried out in September 2002, although some journey time data was obtained in September/October 2000; interim ‘after’ surveys took place in September/October 2004.

2.4.5 The ‘after’ surveys repeated much of the data collection of the ‘before’ surveys:

- Bus and car journey time surveys
- Automatic Traffic Counts (ATCs) on the main road network
- Manual classified link and junction counts (mostly on the minor road network)
- Speed surveys (minor roads)

2.4.6 Detailed turning flows at the two junctions and pedestrian surveys at Manchester Road/Mayo Avenue were omitted until the full after surveys, which are dependent upon the completion of the traffic management measures.

Survey Results

2.4.7 Table 2.4.1 shows the changes in car journey times on the approaches to the Manchester Road/Mayo Avenue junction. Statistically significant changes are highlighted.

	Am peak period (0730-0930)			Pm peak period (1600-1800)		
	Before time (secs)	After time (secs)	Change (secs)	Before time (secs)	After time (secs)	Change (secs)
A641 Nb'nd (Common Rd-Mayo Ave)	349	221	-128	158	177	+19
A6177 Eb'nd (Little Horton La to M'cr Rd)	254 *	101	-153	140 *	115	-24
A641 Sb'nd (St Stephen's Rd to Mayo Ave)	78	82	+4	297	101	-197
A6177 Wb'nd (Staygate to M'cr Rd)	128 *	123	-6	214 *	156	-58

* 2000 data

Table 2.4.1 Manchester Rd / Mayo Avenue Journey Times 2002-2004 (Cars)

2.4.8 Statistically significant journey time savings have been achieved in both time periods of between one and three minutes. This has been accompanied by increased traffic levels, both in the peaks and all day.

2.4.9 Increased congestion between the ring road and the City Centre, and on the ring road itself to the west of Manchester Road, has meant that much of the savings have been offset by additional delays at other junctions. The main exception being southbound in the evening peak period – see Table 2.4.2.

2.4.10 Inter peak journey time surveys (1400-1600), with one exception, indicate no significant changes in journey times, either on the approaches to the junction, nor on the whole routes surveyed. The single exception to this is for westbound traffic on the A6177 approach the Manchester Road which has benefited from a time saving of 1 minute.

2.4.11 The impact is similar to that monitored in the Aire Valley following the completion of Bingley Relief Road. The removal of a significant bottleneck has

resulted in changes in traffic levels and assignment which has diminished the immediate scheme benefits in the peak periods at least.

	Am peak period (0730-0930)			Pm peak period (1600-1800)		
	Before time (secs)	After time (secs)	Change (secs)	Before time (secs)	After time (secs)	Change (secs)
A641 Nb'nd (Common Rd-Croft St)	635	683	+48	362	421	+60
A6177 Eb'nd (Gt Horton Rd to Staygate)	559 *	531	-28	411 *	373	-38
A641 Sb'nd (Croft St to Common Rd)	363	364	+1	668	546	-121
A6177 Wb'nd (Staygate to Gt Horton Rd)	510 *	456	-54	449 *	459	+10

* 2000 data

Table 2.4.2 Whole Route Journey Times (Manchester Rd / Mayo Ave) : 2002-2004 (Cars)

2.4.12 Bus journey times on Manchester Road have not been improved by the scheme. For much of the route buses are insulated from general traffic by either guideway or conventional bus lanes. The signalisation of the previous roundabout was carried out in part to bring more control to the movement of buses through the junction after exiting from the guideway. Table 2.4.3 shows the changes for both the immediate approaches and the whole route on A641 Manchester Road.

	Am peak period (0730-0930)			Pm peak period (1600-1800)		
	Before time (secs)	After time (secs)	Change (secs)	Before time (secs)	After time (secs)	Change (secs)
A641 Nb'nd (Odsal Top to Mayo Ave)	183	157	-26	111	114	+3
A641 Nb'nd (Common Rd-Croft St)	710	740	+30	590	586	-6
A641 Sb'nd (Croft St to Mayo Ave)	305	333	+28	378	437	+59
A641 Sb'nd (Croft St to Common Rd)	614	619	+5	685	769	+84

Table 2.4.3 Journey Times (Manchester Rd / Mayo Ave) 2002-2004 (Buses)

2.4.13 Significant journey time savings have been achieved at the Staygate junction, principally in the morning peak period – See Table 2.4.4 . The new underpass is used by traffic heading for A6177 east, while the existing slip road is for westbound traffic.

	Am peak period (0730-0930)			Pm peak period (1600-1800)		
	Before time (secs)	After time (secs)	Change (secs)	Before time (secs)	After time (secs)	Change (secs)
M606 Nb'nd (Chain Bar to exit A6177 (e))	406	261	-145	215	233	+18
M606 Nb'nd (Chain Bar to exit A6177 (w))	406	195	-212	215	179	-36
A6036 Rooley Ave Eb'nd (Odsal Top to Staygate)	249 *	75	-174	68 *	63	-5

* 2000 data

Table 2.4.4 Journey Times (M606/Staygate) 2002-2004 (Cars)

2.4.14 These significant time savings have been accompanied by a substantial increase in traffic volumes – morning peak period (0700-1000) northbound flows on

the M606 have risen by 27% (over 1300 vehicles), while in the evening peak the rise has been 12% (600 vehicles). All day traffic has also risen significantly on the M606, and to a lesser extent on both Manchester Road and the parallel Wakefield Road. It is notable that the rise in traffic on the M606 outweighs reductions elsewhere, implying that the scheme impacts are wider than expected or that traffic generation has taken place.

2.4.15 The most significant changes on the minor road network have occurred in the morning peak period with notable reductions in traffic through Bierley and on Cleckheaton Road. Evening peak impacts have been more limited, however, flows on Raymond Street (a rat run used to avoid congestion at the Mayo Avenue junction) have fallen substantially. Table 2.4.5 highlights the more significant impacts on the minor road network (links with changes of more than 10%).

2.4.16 Changes in all day traffic have been less marked. Flows on Cleckheaton Road and Bradford Road have fallen by 8%, while on Staithgate Lane and Bierley Lane the fall has been around 2-3%. This probably reflects the lack of congestion outside the peaks and the consequent lack of an incentive for traffic to switch to the main road network. (See Table 2.4.6)

	Before flow (vehs)	After flow (vehs)	Change (vehs / %)
	Am peak period (0730-0930)		
Bradford Rd NB / SB	1620 1029	1379 662	-242 (-15%) -367 (-36%)
Cleckheaton Rd NB / SB	1283 1015	1097 894	-186 (-14%) -121 (-12%)
Staithgate La NB	730	420	-310 (-42%)
Mill Carr Hill Rd NB	685	553	-132 (-19%)
Rockhill Lane NB	815	447	-368 (-45%)
Bierley Lane NB	1502	1021	-481 (-32%)
Shetcliffe La NB	649	415	-234 (-36%)
	Pm peak period (1600-1800)		
Raymond St SB	620	432	-188 (-30%)
Mill Carr Hill Rd SB	401	309	-92 (-23%)

Table 2.4.5 Peak Period Traffic Changes (selected minor links) 2002-2004

	Before flow (vehs)	After flow (vehs)	Change (vehs / %)
Bradford Rd	15300	14000	-1300 (-8%)
Cleckheaton Rd	12400	11400	-1000 (-8%)
Staithgate La	3500	3400	-100 (-3%)
Bierley Lane	8200	8000	-200 (-2%)
Manchester Rd	35200	36300	+1100 (+3%)
Wakefield Rd	43700	46800	+3100 (+7%)
M606 (N Euroway)	53800	58300	+4500 (+8%)

Table 2.4.6 Weekday Traffic Changes 2002-2004 (AAWT)

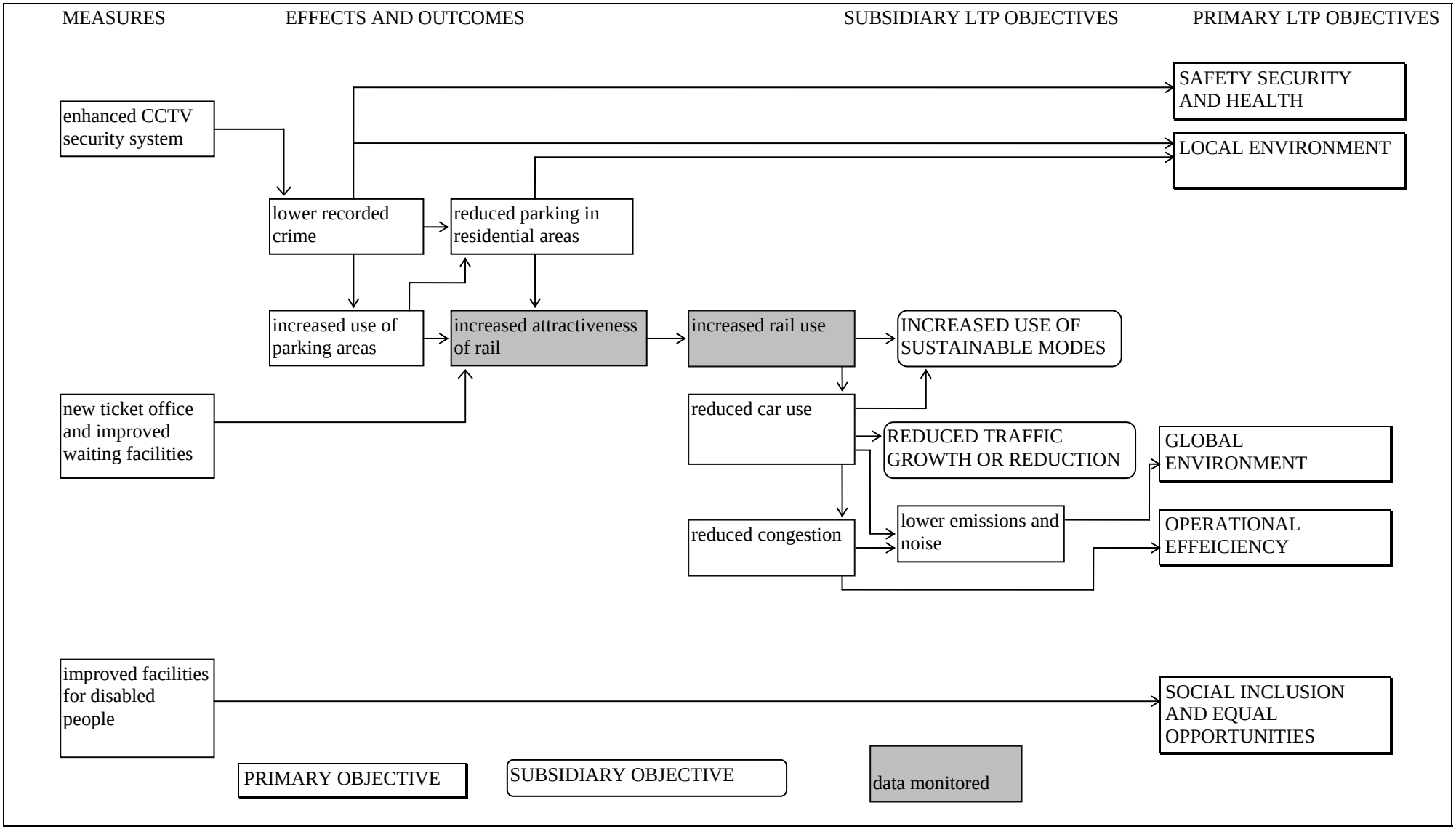
Discussion

2.4.17 The scheme has been successful in reducing peak period congestion on the main road network and consequently attracting rat running traffic away from unsuitable minor roads.

2.4.18 As a consequence of this, however, much of the journey time savings on Manchester Road and the outer ring road have been offset by increased congestion elsewhere.

2.4.19 All day traffic volumes have risen significantly on the M606, outweighing reductions elsewhere, implying wider scheme impacts than monitored but also the possibility of generated traffic.

SHIPLEY RAIL STATION IMPROVEMENTS CAUSAL CHAIN



URBAN AREA SCHEMES

2.5 Improvements to Shipley Rail Station

Objectives

- To provide a safer and more secure environment for rail passengers
- To provide better facilities and a high quality environment for rail travel

Scheme Description

2.5.1 Shipley is one of the busiest stations on the West Yorkshire network and being a triangular junction is also an important interchange point. It is served by trains on the Airedale and Wharfedale Lines which have seen the fastest growth in patronage on the network. Platforms 1 and 2 are very heavily used by passengers to Leeds, Keighley, Skipton and the North, but they had very minimal waiting facilities. There were also security issues at the station with lack of CCTV provision in the existing waiting rooms on platforms 1 and 2 and poor lighting in the subway to platforms 3 and 4 and around the station generally. A package of provision was agreed which provided:

- New improved waiting rooms for platforms 1 and 2
- Provision of public information display screens and public address schemes at the waiting rooms
- Provision of CCTV surveillance in the waiting rooms and the car park
- Improved lighting in the subway and car park

Figure 2.5.1 Shipley Rail Station : The New Waiting Room on Platform 1

Monitoring

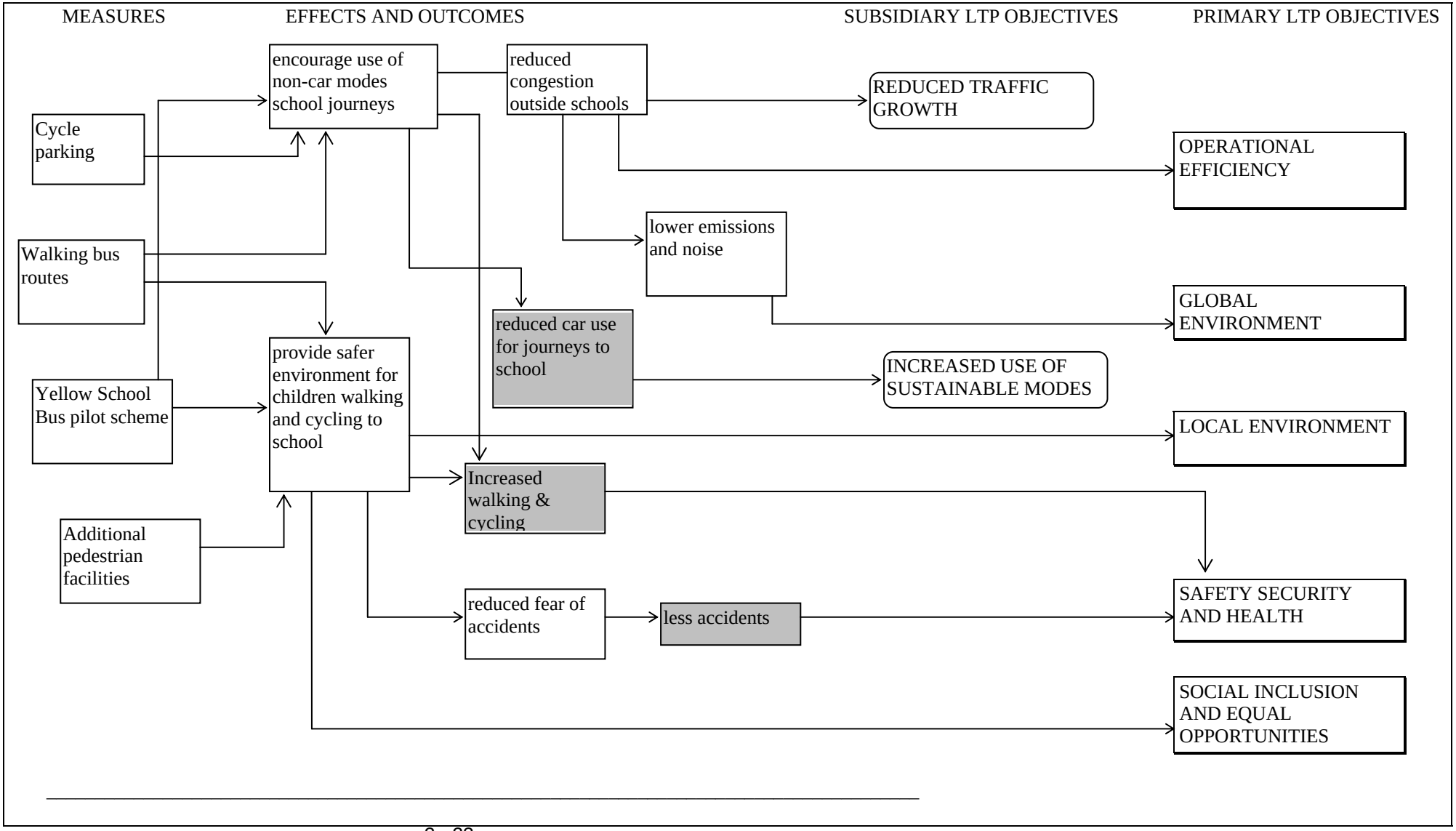
2.5.2 A postal questionnaire was distributed at the station to both peak and off peak passengers. The 115 returned questionnaires (20% response rate) showed :-.

- 80% of respondents found the new waiting facilities good or very good
- 78% found the station appearance good or very good
- 45% rated the public address system good or very good with 29% indifferent
- 36% of respondents said they had increased their use of the station during the last year and of these 10% had done so because of improvements to the station

Discussion

2.5.3 The overall response to the improvements at Shipley show positive feedback to the package. The survey showed some concerns about security at the station. These concerns are being addressed through a number of measures. Since the survey was conducted additional CCTV has been installed in other areas of the station and further surveillance measures are being planned.

SCHOOL TRAVEL PLANNING IN CALDERDALE – CAUSAL CHAIN



URBAN AREA SCHEME

2.6 School Travel Plans in Calderdale

Objectives

- to reduce the numbers of school journeys undertaken by car;
- to increase the proportion of school journeys undertaken on foot, cycle or public transport;
- to improve the health, fitness and well being of Calderdale children;
- to work with all partners that can have a direct influence on the school journey;
- to provide additional road safety skills training, leading to an increase in parental confidence about school journeys;
- to find commonality and complement the targets laid down in the LTP and Public Service Agreements, including the Casualty Reduction, Walking, Cycling and Air Quality Targets.

Background

2.6.1 With support of Government funding, Calderdale has recently completed the first full year of the new Government led School Travel Plan (STP) initiative. This has further complemented and supported the work already being undertaken by the Safer Routes to School team, who with targeted engineering schemes have been encouraging a modal shift away from the private car to more healthy and sustainable travel options.

2.6.2 The results of extensive consultation put in place through the STP process has allowed us to identify and take action on the anxieties and 'barriers to change' often put forward by parents in the district.

2.6.3 In 2004/05 Calderdale recorded twenty-three STP's, adding to the eleven completed in 2003/04 (24 Primary and 10 Secondary schools). To complement this process seven schools benefited from engineering schemes and an additional twenty-five have had TRO treatments directly affecting the school curtailage.

2.6.4 Engineering schemes have been varied in nature including improvements for pedestrians, cyclists and for bus users at both Primary and Secondary schools. A total of £303,000 was dedicated to STP, SRTS projects in 2004/05 with measures including: -

- segregating pedestrian and vehicle access and pedestrian facility improvements;
- cycle routes from the National Cycle Network to local schools;
- highway works such as build outs to assist pedestrian crossing movements, narrowing of junction radii, dedicated bus stops and hard standing areas for pupils.

2.6.5 Education, Training and Publicity (ETP) is seen as pivotal in the STP process, influencing parents and pupils about their travel choices. Understanding the need to further address ETP, Calderdale has encouraged 91% of schools that have achieved a STP to take up additional work in this area during 2004/05.

2.6.6 Some of the ETP initiatives introduced or encouraged as part of the STP process have been: -

- providing practical pedestrian training for pupils;
- increased numbers of pupils taking up cycle training;
- developing the role of Junior Road Safety Officers so they consider school travel in their wider road safety agenda;
- schools creating their own publicity materials including writing to residents to keep them updated on STP progress.

2.6.7 An additional seven 'Walking Buses' have been set up in Calderdale along with seven 'Park and Ride' schemes. High profile launches of these schemes linked to the development of the STP creates a vision of success across the authority and an increased number of schools wishing to 'buy-in' to the success they are seeing other schools enjoy.

Monitoring

2.6.8 All schools with active school travel plans will be revisited on an annual basis to assist with continued enthusiasm and target setting. A number of schools have included the STP in their 'School Improvement Plans' to ensure continued focus on their modal shift commitments.

2.6.9 All schools with STP's are committed to take part in the annual 'Travel to School' survey each October, the feed-back being used to evaluate the Authority's performance and steer future initiatives. Figure 2.6.1 summarises the results since 2000.

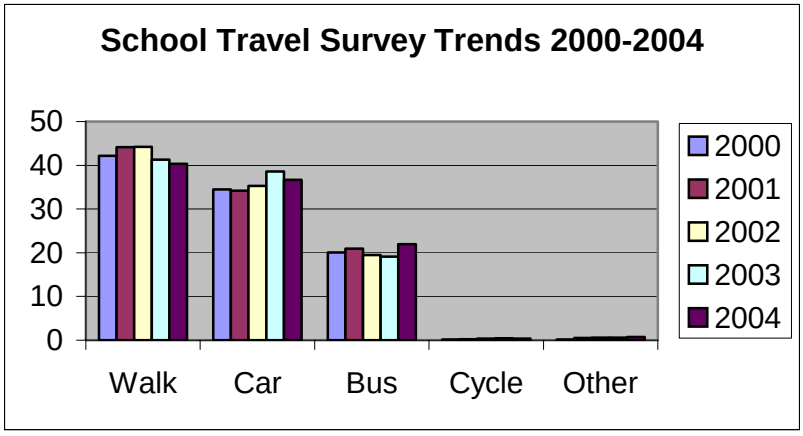


Figure 2.6.1 Calderdale School Travel Survey Results, 2000 - 2004

2.6.10 Close liaison with Engineering and Planning Services enables the schools to identify and be aware of their changing travel issues as a result of expansion.
2.6.11 In 2005/06 Calderdale will trial the 'Walking Wednesday' initiative to build on the aspirations of the evolving STP process, encouraging and rewarding more sustainable travel to school choices.

2.6.12 All ten Secondary schools with STP's either have, or will be, investing in cycle storage and are therefore actively seeking advanced cycle training for new 'home to school' cyclists. Calderdale is investigating ways in which it can begin to support this new and ever growing demand for increased cycle training initiatives (in line with national cycling standard recommendations). Secondary schools are now taking on the 'Sports College' status and cycling features highly in their curriculum, cycling to school is made a high priority and training needs are being demand led. Family cycle training courses are also going to be trialed, encouraging a 'cycle to school together' initiative for Primary schools.

2.6.13 Four off-road cycle routes to schools are planned for 2005/06 in partnership with Sustrans, which will complement the aims and aspirations in the STP's of the schools involved. In the case of the proposed route to Castle Hill Junior & Infants school in Todmorden, the development of the STP has spread to the community and a significant number of residents in the area are eagerly awaiting the completion of the route, acknowledging that it will have huge health and safety benefits for the whole community.

Affected Parties

2.6.14 The benefits of the STP process are being seen in many areas of Calderdale. Examples of these are: -

- Partnership working;
- Healthy Schools Award Co-ordinators – including STP's in their award criteria;
- Metro/Calderline – jointly promoting school and public transport;
- Highways – reducing congestion;
- Traffic – reducing casualties on the school journey;
- Business – providing drop off areas for parents involved in 'park and stride';
- Parents – empowered through the STP process to make a difference;
- Pupils – increased fitness, independent travel skills and motivation;
- Residents – communicating with the school community, having a voice, encouraging community cohesion;
- Schools – assisting them in meeting curriculum targets and performance measurements;
- Road Safety – schools actively involved in developing safer road user skills in pupils;
- Environmental Services – improving the environment and barriers to walking, including the removal of rubbish and dog fouling and establishing valuable links into schools though involvement with the School Travel Advisers.
- Transport working group – using data provided through the STP process to guide a review of school travel within the whole authority.

Discussion

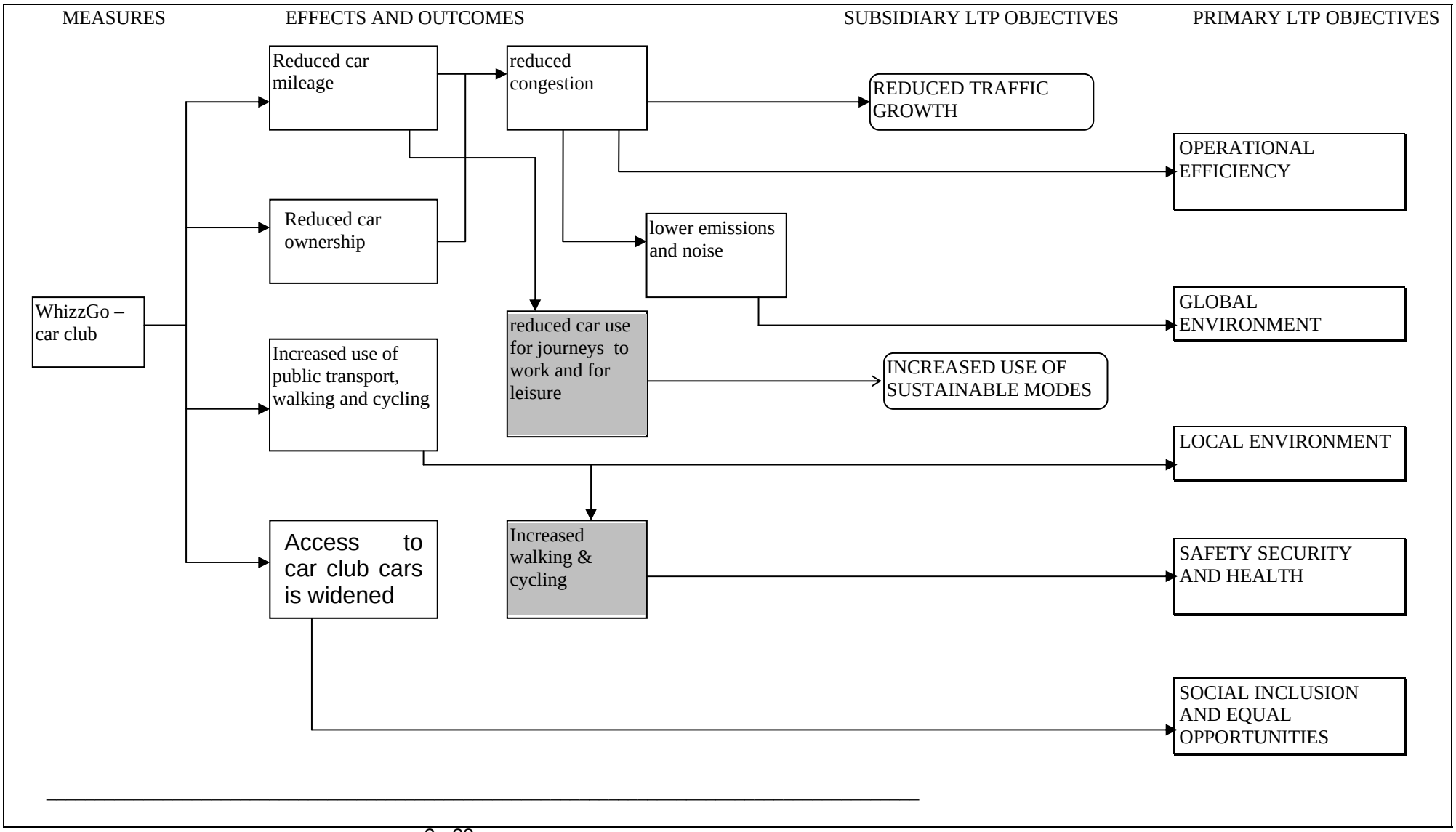
2.6.15 Calderdale has had a very successful first year in the development of STP's. There are many initiatives either ongoing or under consideration for the financial year 2005/06 and the engagement is not just with the school community, but also with the wider Calderdale community and partner organisations in resolving the issues inappropriate travel choices cause.

2.6.17 It is anticipated that the STP process will make a significant contribution towards:-

- halting the increased numbers of pupils travelling to school by car by the end of 2005;
- increasing numbers of Secondary school pupils cycling to school (22 new cyclists already this year at Hipperholme and Lightcliffe High School), doing so as a direct result of the
- instilling a commitment in the local communities.

2.6.18 Continued monitoring of the success of existing STP's and the development of a minimum of a further fifteen new STP's during 2005/06, in another year of frenetic activity to address school travel needs in Calderdale.

LEEDS CAR CLUB 'WHIZZGO' - CAUSAL CHAIN



Urban Area Scheme

2.7 Leeds Car Club - WhizzGo

Objectives

- to reduce the numbers of journeys undertaken by private car;
- to reduce overall levels of car ownership
- to increase the proportion of journeys undertaken on foot, cycle or public transport;
- to improve access to services by providing membership to disadvantaged families and those without access to a car
- to relieve pressure on parking spaces
- to change perceptions and attitudes towards car ownership and use
- to encourage communities to live by more sustainable means

Background

2.7.1 Car clubs offer an alternative to private car ownership, and which typically result in 10 fewer private cars on the road for each car club car in operation. Leeds Car Club – 'WhizzGo' was established through a European project (Interreg IIIB – Target 2 funding) headed by Metro and partners 'Car Plus', Leeds City Council, and community car club 'Co-Drive'. The club was launched in July 2004 with eight Citroen C3 cars in four locations across the city. The Council have entered into a ten year contract with WhizzGo to operate the car club, and in return the Council have agreed to provide dedicated on-street car club parking bays, and further support, as the club grows in size. Metro provided free Metrocards to the first 50 members. WhizzGo is one of the UK's most ambitious car club schemes outside London.

2.7.2 WhizzGo offer a service whereby members can have access to new fuel efficient cars without the hassle of owning them, and cut their transport costs by up to 50%. With WhizzGo it is possible to book a car by phone or internet for less than £4/hr and for as little as 1hour. The hourly rate includes fuel, insurance, servicing, maintenance, repairs, MOT, cleaning and rescue. The cars are located within easy walking distance of homes and workplaces. Membership now exceeds 300 users.

2.7.3 The car club is used by both businesses, other organisations (e.g. the University of Leeds) and private residents. Since the initial launch membership of both user types has grown steadily, and the club has expanded by adding two further cars, making 10 in total. The bays are located in the following places;

- six bays in Leeds city centre (in three locations of two bays each)
- two bays at Chapel Allerton
- two bays in the University of Leeds campus

All WhizzGo cars are available to all members 24hrs a day, 365 days a year.

2.7.4 WhizzGo is also being promoted through the Planning process at suitable developments, and through development related travel plans. Currently, there are several large development projects investigating the opportunity to establish WhizzGo parking bays on their sites in Leeds.

2.7.5 Leeds has been recognised as a progressive and innovative city in terms of its support for WhizzGo car club, and in the last year it has hosted visits and detailed enquiries from several cities looking to develop their own schemes including Southampton, Manchester, Sheffield, Portsmouth, York and Newcastle.

Monitoring

2.7.6 As part of the contractual arrangement , WhizzGo are required to monitor growth and member satisfaction with the scheme. A member survey was therefore carried out in spring 2005 and this revealed the following results / impacts;

- Since joining WhizzGo 21% of members have disposed of a car (83% of these sold the only car they had and became car-free households. The other 17% have reduced from two cars to one)
- 37% have decreased the number of miles driven by car
- 53% have increased their use of public transport
- 71% have increase the amount they cycle
- 29% would defer buying / replacing a car in the future
- 96% of members were satisfied with the service from WhizzGo

2.7.7 The survey results show that WhizzGo is providing a convenient and cost effective transport option for Leeds which has already reduced the number of cars on the road and will continue to do so as members consider disposing of their current cars and more members are recruited.

2.7.8 In the Council's Development Department over 100 members are signed up as business users making use the cars like pool cars for undertaking business journeys from work. Access to WhizzGo cars at work allows staff to switch their commuting from car to public transport or cycling. Evidence of the success and popularity of WhizzGo within the Department is shown in the chart, Figure 2.7.1, below. There is scope to greatly expand the use of WhizzGo across the Authority.

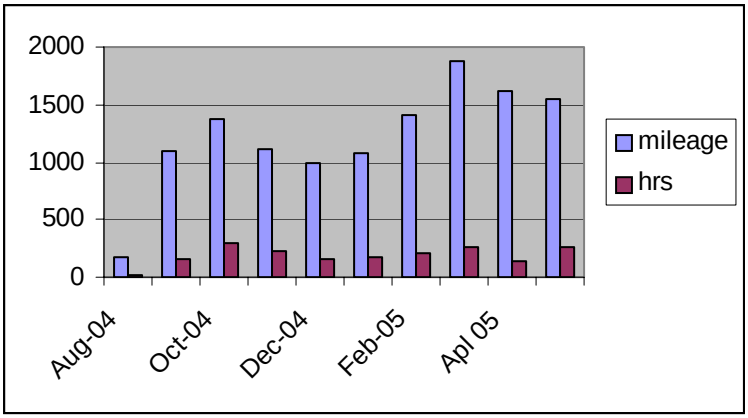


Figure 2.7.1 WhizzGo Business Usage in the Development Department (July 2004-May 2005)

2.9.9 Monitoring will be carried out on an regular basis to evaluate the impact of WhizzGo on travel behaviour and commuting habits in the city.

Affected Parties

2.7.10 The benefits of the WhizzGo Leeds car club are being seen in many areas of the city and beyond Examples of these are: -

- Partnership - working with Metro, Leeds City Council, WhizzGo and others;
- Highways – reducing the number of private cars on the road;
- Parking - reducing the demand on available parking spaces
- Business – providing conveniently located pool cars
- Residents – providing cars for private use
- City living – providing residents with access to cars at low-car developments
- Social inclusion – making cars available to low income families
- Public transport and cycling – increasing the number of journeys made by these modes
- Road Safety –reducing overall traffic levels
- Environmental Services – improving the environment by lowering overall vehicle emissions

Discussion

2.7.11 WhizzGo has got off to an encouraging and progressive start since its initial launch last year. WhizzGo car club has firmly established itself as a viable, convenient and cost effective alternative to private car ownership, while at the same time demonstrating modal shift away from car use in its membership. WhizzGo and the council have ambitious plans to grow the car club in size and reach by establishing more parking bays and recruiting more members in both city centre and residential locations. The next phase of development will create sustainable transport hubs with parking sites close to frequent bus routes and cycle parking provided. The Council are committed to supporting the scheme with additional on-

street parking bays and other forms of support. WhizzGo car club is recognised as contributing to the Demand Management strategy of the next Local Transport Plan.

2.7.12 WhizzGo have an important role to play in the future mix of sustainable transport options available to the businesses and residents of Leeds. The Council are committed to the success of WhizzGo and will seek to implement further measures and initiatives to ensure its continued growth.

2.8 SCHEMES COVERED IN PREVIOUS ANNUAL PROGRESS REPORTS

2.8.1 Table 2.8.1 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	●	
	Measured	**Perceived**
Significant improvement	✓✓	✓✓
Improvement	✓	✓
Neutral effect (where an objective of the scheme)	○	○
Worsening	5	5
Significant worsening	55	55

	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	
Countywide Schemes																								
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				✓	5	5	✓	✓✓			Car use reduced, apparent shift to cycle and train, not bus
Safety Cameras in West Yorkshire		●		●		●	●	●					02/03			✓✓						✓✓		
Leeds Urban Area Schemes																								
Leeds City Centre Loop & Public Transport Box	●			●	●	●	●	●	●			6,400	01			✓	✓✓							

Table 2.8.1 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	
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 1st	●	●		●	●	●		●	●			165,000	5-02	✓	✓✓		✓✓	✓✓		✓✓		○	✓✓	Interim survey results
Cross Green-Colton Cycle Route				●	●	●	●	●				265	1999						+		+		+	Links to main employment areas and with other regeneration schemes
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	✓✓	+		✓	✓		✓	+			

Table 2.8.1 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	
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	++	+	+		+		+				
M1-A1 Link Road	●	●		●		●		●				DBFO	2-99	+	+	✓✓	O							Successful at removing extraneous traffic and reducing accidents
Leeds City Centre Controlled Parking Zone Extension		●				●		●	●			200	6-01				O		O	+			+	Reduced long stay commuter parking, increased short stay parking in the zone. Some evidence of relocation of parking

Table 2.8.1 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	
Review of UTMC off-peak plans for City centre loop		●		●									03-02	✓	✓									
Horsforth station refurbishment		●		●	●	●	●	●	●									✓					✓	
Bradford Urban Area Schemes																								
South Bradford QBI – Manchester Road Guided Bus		●		●	●	●		●	●			10,500	1-02											Interim report
Bradford Bus Station		●		●	●	●							2-01					✓✓		✓			✓✓	
Keighley Bus Station		●		●	●	●							2-02					✓✓		✓			✓✓	
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	○	+		○			+			+	

Table 2.8.1 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	
Safer Routes to School – Heaton Middle School												27	4-97				xx	○	xx	xx		✓		
School travel planning in Ilkley		●		●	●	●	●					150	3-04				✓✓	✓✓						
Bierley Traffic Calming				●			●					188	8-00									●		Traffic levels reduced by 12%
South Bradford QBI – Manchester Road Guided Bus		●		●	●	●		●	●			10.5m	01-02											Interim impact report
Traffic Calming - Bradford				●			●					462.2	00									✓✓		5 schemes : West Bowling (2), Thornbury , Tong, Buttershaw
Halifax Urban Area																								
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 2.8.1 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	
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	O	O	+		O	++		+		++	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
A629/A6026/ B6112 Calder and Hebble Junction Improvements		●			●		●		●		●	289	2-98	✓✓	✓✓	✓✓							+	Significant improvement for buses

Table 2.8.1 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	
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 2.8.1 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	
Heavy Woollen Area Schemes																								
Spen Valley Greenway				●	●	●	●	●	●			730	3-01						✓✓	+	✓✓		+	Very successful cycle route scheme with strong community support
Huddersfield Urban Area Schemes																								
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 2.8.1 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
Wakefield Urban Area Schemes																								
Route 110 Announce Project				●	●	●	●						3-01					✓					✓	
A61 Intelligent Road Stud Trial				●								35	99			✓✓								Trial
Safer Routes to School				●	●		●		●							+	+			✓				Significant proportion of children walking to school – start of a wider roll-out
Pontefract Bus Station		●		●	●	●												✓✓		✓			✓✓	
A61 Demonstration Access Corridor				●	●	●			●			218	5-98	✓	✓	✓		✓		+			✓✓	Positive response to Metro survey of local population.

Table 2.8.1 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	
Sandal and Agbrigg Rail Park and Ride				●			●		●		●	112	5-98					✓✓		+			+	
Wakefield UTMC System		●					●					172	3-98	✓	✓					✓				
Aire Valley and Wharfedale Schemes																								
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 2.8.1 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	
Coalfields Area Schemes																								
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.
Rural Area Schemes																								
Rural Bus Services 903 & 923		●		●	●	●		●	●				12-99		✓			✓✓					✓✓	
Denby Dale Integrated Transport Initiative		●		●	●	●		●	●			366	7-99				✓	✓✓		✓			✓	

Table 2.8.1 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	
Micklefield Rail Park and Ride		●		●	●	●	●	●	●		●	149	6-98					✓✓		+			+	
Sowerby Bridge Rail Park and Ride		●		●	●	●	●	●	●		●	142	6-98					✓		+	+		+	
Carriageway Maintenance Schemes																								
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 2.8.1 Schemes Reported in Previous Annual Progress Reports

CHAPTER 3 BASELINE DATA AND TRENDS BY INDICATOR

3.1 INTRODUCTION

3.1.1 In the main APR document, Chapter 2 'Progress Towards Targets & Objectives' and Proformas 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 during LTP2 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 **C2 Road maintenance programmes** 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.	**D1 Road user casualty trends** **D2 Casualty trends for different user groups** **D3 Casualty trends for children** D4 Town centre car park spaces with CCTV D5 CCTV cameras at rail station car parks D6 CCTV cameras at bus stations D7 Car park spaces with secured car park awards D8 Town & city centre streets covered by CCTV	L11, L13 L7, L9 L12	N3,DfT Core N3,DfT Core N3,DfT Core
So 2	To promote social inclusion and equal opportunities for access to transport	E1 AccessBus patronage E2 Accessibility of bus fleets E3 Accessibility of rail stations E4 Accessibility of bus stations E5 Accessibility of bus stops E6 Provision at controlled pedestrian crossings		BVPI 165
Ev 1	To improve environmental quality and reduce the impacts of transport on air quality and noise	**F1 Air quality monitoring in town** F2 Noise mapping and city centres F3 Use of low noise road surfacing	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	**G1 Daily traffic flow** **G4 CO2 emissions**	L1 L10	N1
Sb 1	To reduce the general rate of growth in road traffic	**H1 Town centre traffic flows**	L2, L3	N1
Sb 2	Encourage a greater proportion of journeys to be made by alternatives to the private car.	**I1 Modal split** I3 All day commuter parking supply and cost **I4 Cycle monitoring** **I6 Local bus services – passengers and vehicle kms.** **I6a Rail patronage** I7 % users satisfied with PT information I8 % users satisfied with local bus services I9 % users satisfied with local rail services **I10 % rural h'holds within 800m of an hourly or better bus service** I11 Age of Bus Fleet **I12 Bus punctuality** **I13 Bus reliability** 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

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;
- Unemployment in West Yorkshire continues to decrease, following the national and regional trends;
- Generally, the availability and occupancy of retail trading space has fluctuated during the life of the plan, though there has been a significant decrease in vacant units in Wakefield since 2004;
- Rental values have shown a continued 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 schemes to improve access carried out since the commencement of the plan.

Role of Transport

3.2.1 The Regional Economic Strategy for the Yorkshire and the Humber region recognises that transport issues have a direct effect on the economic well being of the area. An efficient transport system with high quality facilities providing appropriate access links to district centres, workplaces, retail centres, local communities and the other amenities in the region is vital to 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 A fundamental concern in the region's first Spatial Strategy (RSS), approved in December 2004 and based on a selective review of RPG12, is to establish crucial links between regeneration, economic, social and environmental planning, and sustainability. The RSS seeks to build on the economic success of Leeds spreading to other parts of the region, setting out advice for the sub-region in terms of transport. Within the RSS, the Regional Transport Strategy link with land-use and 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.

3.2.3 Investment in local transport infrastructure can be an important stimulus in regional economic development. Opening up market and employment opportunities benefits 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.

Background Indicator A1: Claimant Count and Unemployment Rates

3.2.4 Release of the 2001 Census 'workplace' data has enabled a baseline for local area and sub-regional work patterns, and provides information for more confident transport planning.

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, based on is those residents who were economically active.

3.2.6 The figures indicate a continued downtrend in unemployment rates in most districts with the exception of Leeds, also being slightly higher than the national and regional rates.

	Unemployment Rate %									
Area	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**
Great Britain	6.2	4.8	3.9	3.7	3.3	2.8	2.7	2.7	2.5	2.4
Yorkshire and the Humber	6.7	5.4	4.6	4.4	3.9	3.4	3.1	3.0	2.7	2.5
Bradford	7.0	5.8	4.9	4.9	4.6	4.1	4.0	3.9	3.3	2.9
Calderdale	5.7	4.9	4.0	4.1	3.7	3.3	3.1	3.0	2.5	2.2
Kirklees	5.7	4.4	3.7	3.8	3.3	2.8	2.6	2.6	2.2	2.1
Leeds	6.4	5.1	4.3	4.0	3.6	3.1	2.9	3.0	2.6	2.7
Wakefield	6.3	5.1	4.3	4.2	3.5	3.1	2.8	2.7	2.3	2.3

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

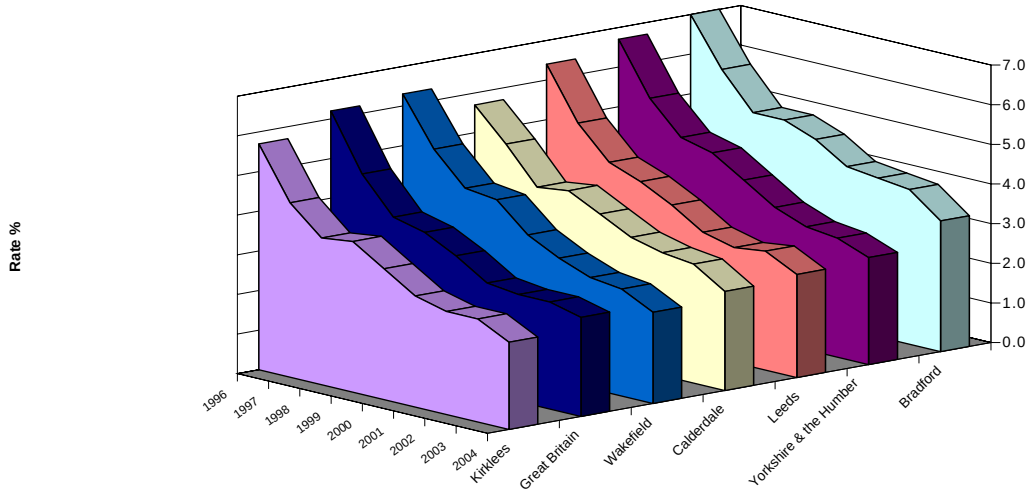


Figure 3.2.1 Claimants as a proportion of residents of working age

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^2	No.	000m^2	%	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
	2004	Na	517	Na	Na	113	21.9
	2005	Na	533	Na	Na	132	24.8
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
	2004	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
	2005	81	724	4	5.5	66	9.1
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
	2004	44	340	3	6.9	52	15.3
	2005***	44	341	3	6.6	47	13.8
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	23.9	11.9	143	14.2
	2003	201	1004	22.8	11.3	148	14.7
	2004	203	1012	21.8	10.7	141	13.9
	2005	204	1002	21.3	10.4	141	14.1
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
	2005	73	556	1	1.1	8	1.4

Table 3.2.2: Availability and Occupancy of Retail Floor Area

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

Bradford figures affected by Broadway redevelopment

** Halifax town centre was redefined in 2002. The figures shown set out the corresponding results for the new area. It is intended to re-survey in Autumn 2005/ Spring 2006*

*** The increased total floorspace in Dewsbury is largely due to the opening of ASDA on Mill Street West*

**** The Dewsbury 2005 figures are based on data measured in February – all previous years have been measured in October*

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

	Rental Values £/m²														
Location	**Type 1 25 - 75m²**			**Type 2 150 – 200m²**			**Type 3 Circa 500m²**			**Type 4 Circa 1000m²**			**Type 5 Multi Storey**		
	Oct 96	Oct 00	July 04	Oct 96	Oct 00	July 04	Oct 96	Oct 00	July 04	Oct 96	Oct 00	July 04	Oct 96	Oct 00	July 04
Bradford	65	66	66	46	47	47	43	47	47	40	41	41	24		
Halifax		50	60		45	55		40	45		35	40		15	23
Huddersfield	53	55	65	48	53	60	40	43	50	33	40	45	15	20	25
Leeds	58	60	65	51	55	65	52	50	50	43	45	50	25	27	
Wakefield		48	60		40	60		38	50		33	50			

Table 3.2.3: Rental Values for Industrial Premises

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

	Rental Values £/m²								
Location	**Type 1 ZPI**			**Type 2 ZPI**			**Type 3 GIA**		
	Oct 96	**Oct 00**	**July 04**	**Oct 96**	**Oct 00**	**July 04**	**Oct 96**	**Oct 00**	**July 04**
Bradford	915	1,250	1,300	425	750	750	92	95	200
Halifax		750	1,000		400	500		100	150
Huddersfield	800	750	1,100	420	400	550	80	100	225
Leeds	1,450	2,500	3,000	400	550	800	85	200	230
Wakefield		850	1,200		460	550		88	150

Table 3.2.4: Rental Values for Shops

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

	Rental Values £/m²								
Location	**Type 1**			**Type 2**			**Type 3**		
	Oct 96	**Oct 00**	**July 04**	**Oct 96**	**Oct 00**	**July 04**	**Oct 96**	**Oct 00**	**July 04**
Bradford	113	113	120		113	120	80	80	120
Halifax		70	110		65	110		70	80
Huddersfield	118	110	120	90	100	120	70	70	85
Leeds	180	200	*190	180	190	*220	140	140	175
Wakefield		70	145		90	150		70	120

Table 3.2.5: Rental Values for Offices

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

** denotes offices with air-conditioning*

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
	Nov-2004	510,433	86.4
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	156.6
	Sept-2004	1,244,784	147.2 (**)
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
	May / June 2004	573,350	113.5
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,

The methodology of counts in Wakefield has changed from May 2002

(**) Extensive town centre works in Halifax and Huddersfield contributed to the temporary decline in footfall, Traditions Street Festival in Halifax TC at the time of the count in Sept 2004

(***) 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.

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 2005 has again decreased over the year 2004/05 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. Amendments in the monitoring frequency and procedures have established a more reliable methodology and the underlying trends in the district centres is becoming more apparent now 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. Town centre audits are proving vital in underpinning strategic decisions about the continued development of the centres. 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

3.3.1 To improve operational efficiency within the transport system.

Role of Transport

3.3.2 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 programme of manual journey time data collection has now been superseded by GPS data supplied by the DfT, however, no comparable data is currently available for buses;
- 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 increased by 25% between 1991 and 2001;
- In combination with an increase in employment, the number of person kms travelled by commuters rose by 37% between 1991 and 2001;
- Average cost per passenger journey in 2005 on subsidised bus services is £0.95 (Best Value Performance Indicator 94).

Background indicator B1: Journey Times by Car and Bus.

3.3.3 A comprehensive five year programme of car and bus journey time surveys was carried out between 1998 and 2004 covering all the principal routes within the urban area of West Yorkshire (including urban motorways but excluding the M62 and M1). Data from these surveys was included in previous Monitoring Reports. This programme has now been superseded by GPS data supplied by DfT which provides information on general traffic speeds, however, data for local buses is not included. Negotiations are ongoing with the bus operators to obtain this information.

3.3.4 The DfT data covers all A and B roads in each District, together with significant other roads and urban motorways (M606 and M621). Table 3.3.1 shows the breakdown of network coverage by local authority. The network coverage is greater than that previously surveyed, with a greater number of non-urban roads included. This applies particularly in Calderdale, Kirklees, Leeds and Wakefield.

Authority	Bradford	Calderdale	Kirklees	Leeds	Wakefield	Total
Radials	202	130	191	234	191	948
Orbitals	27	13	74	128	56	298
Total	229	143	265	362	247	1,246

Table 3.3.1 West Yorkshire Journey Time Survey Network Breakdown

3.3.5 Tables 3.3.2 - 3.3.6 show the average vehicle speeds for each of the five Districts for the whole of 2003, and the first four months of 2004 (no data is available for more recent dates). The speeds are weighted by route length but not by traffic volume.

Time	Direction	Mean vehicle speed Jan-Dec 2003 (kph)	Mean vehicle speed Jan-Apr 2004 (kph)	Change (2004 - 2003)
Am peak	**All routes**	**31.4**	31.5	0.0
(0730-0930)	Inbound	29.4	29.5	0.1
	Outbound	36.3	36.6	0.3
	Orbital	25.2	24.6	-0.5
Inter peak	**All routes**	**34.9**	35.4	0.4
(1400-1600)	Inbound	35.5	36.1	0.6
	Outbound	37.4	37.8	0.4
	Orbital	26.1	26.2	0.1
Pm peak	**All routes**	**33.7**	33.9	0.2
(1600-1800)	Inbound	36.1	36.0	-0.1
	Outbound	34.8	35.3	0.5
	Orbital	24.0	24.3	0.4

Table 3.3.2 Bradford Mean Vehicle Speeds 2003-2004

Time	Direction	Mean vehicle speed Jan-Dec 2003 (kph)	Mean vehicle speed Jan-Apr 2004 (kph)	Change (2004 - 2003)
Am peak	**All routes**	37.3	36.7	-0.6
(0730-0930)	Inbound	35.5	35.3	-0.1
	Outbound	39.5	38.2	-1.3
	Orbital	36.3	36.2	0.0
Inter peak	**All routes**	42.3	41.8	-0.6
(1400-1600)	Inbound	42.1	41.1	-1.1
	Outbound	43.0	42.8	-0.3
	Orbital	40.1	40.5	0.5
Pm peak	**All routes**	42.4	41.0	-1.3
(1600-1800)	Inbound	42.0	40.2	-1.7
	Outbound	43.7	42.3	-1.4
	Orbital	38.3	39.2	0.9

Table 3.3.3 Calderdale Mean Vehicle Speeds 2003-2004

Time	Direction	Mean vehicle speed Jan-Dec 2003 (kph)	Mean vehicle speed Jan-Apr 2004 (kph)	Change (2004 - 2003)
Am peak	**All routes**	36.9	35.4	-1.5
(0730-0930)	Inbound	34.8	33.3	-1.5
	Outbound	39.1	37.1	-2.0
	Orbital	37.3	36.3	-0.9
Inter peak	**All routes**	39.6	38.6	-1.0
(1400-1600)	Inbound	39.2	38.2	-1.0
	Outbound	40.3	38.8	-1.6
	Orbital	39.0	38.6	-0.5
Pm peak	**All routes**	39.3	38.5	-0.8
(1600-1800)	Inbound	38.4	37.7	-0.7
	Outbound	40.5	39.1	-1.4
	Orbital	38.9	38.8	-0.1

Table 3.3.4 Kirklees Mean Vehicle Speeds 2003-2004

Time	Direction	Mean vehicle speed Jan-Dec 2003 (kph)	Mean vehicle speed Jan-Apr 2004 (kph)	Change (2004 - 2003)
Am peak	**All routes**	38.8	37.7	-1.1
(0730-0930)	Inbound	31.8	31.4	-0.5
	Outbound	38.6	38.1	-0.5
	Orbital	37.8	37.3	-0.4
Inter peak	**All routes**	44.8	45.0	0.2
(1400-1600)	Inbound	40.3	41.1	0.8
	Outbound	41.2	41.3	0.1
	Orbital	43.0	42.8	-0.3
Pm peak	**All routes**	41.5	41.3	-0.2
(1600-1800)	Inbound	39.0	38.9	-0.1
	Outbound	36.6	36.1	-0.5
	Orbital	40.4	40.1	-0.3

Table 3.3.5 Leeds Mean Vehicle Speeds 2003-2004

Time	Direction	Mean vehicle speed Jan-Dec 2003 (kph)	Mean vehicle speed Jan-Apr 2004 (kph)	Change (2004 - 2003)
Am peak	**All routes**	42.2	41.4	-0.8
(0730-0930)	Inbound	37.4	36.6	-0.8
	Outbound	44.3	42.9	-1.4
	Orbital	39.3	39.3	-0.1
Inter peak	**All routes**	45.3	44.5	-0.8
(1400-1600)	Inbound	42.7	41.8	-0.9
	Outbound	44.4	43.7	-0.7
	Orbital	42.1	41.3	-0.8
Pm peak	**All routes**	44.8	44.7	-0.1
(1600-1800)	Inbound	41.7	42.0	0.3
	Outbound	44.4	44.0	-0.3
	Orbital	41.5	40.9	-0.6

Table 3.3.6 Wakefield Mean Vehicle Speeds 2003-2004

3.3.6 The changes in speeds between 2003 and the first four months of 2004 are fairly marginal, and are likely to be more related to weather impacts than congestion

issues. The availability of GPS data in future years should enable a better picture of year on year changes, as well as seasonal effects, to be established.

Desired Movement

3.3.7 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

3.3.8 In the absence of GPS data for bus journey times, comparable car and bus data from the historic manual surveys (1998-2004) has been used to estimate indicative generalised commuting costs for the five main centres. 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.

3.3.9 The generalised costs have been calculated for each centre based on the average commuting distance for car drivers derived from the 2001 census. (W301). The values are considerably greater than those used in previous reports, reflecting a general increase in travel distances and the relatively longer distances travelled by car drivers than the average for all modes. Nevertheless, the relative results remains very similar to last year's calculation.

3.3.10 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 3.3.1.

			Generalised cost (pence/day)		
Centre	**Distance (km)**	**Parking charge (p)**	**Car driver**	**Car driver**	**Bus user**
Bradford	12.97	2.01	712	1124	1390
Halifax	12.40	2.70	596	1077	1275
Huddersfield	11.41	2.80	579	1071	1225
Leeds	18.79	5.80	939	1731	1622
Wakefield	14.21	4.00	708	1319	1389

Table 3.3.7 Estimated Generalised Central Area Commuting Costs 2005

(based on average car driver journey to work distance to each main centre from the 2001 census)

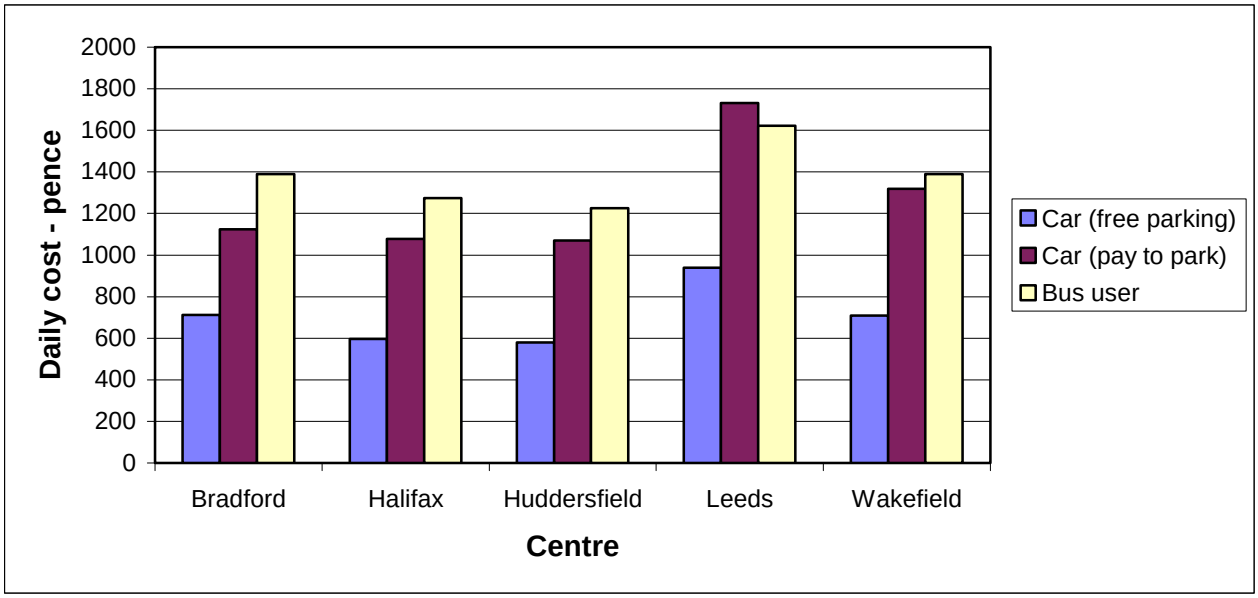


Figure 3.3.1 Estimated Generalised Central Area Commuting Costs 2005

(based on average car driver journey to work distance to each main centre from the 2001 census)

3.3.11 Aside from the changes in assumed journey lengths, the principal changes from last year are that petrol costs have risen by 13% and bus fares (using an annual Metrocard) by 4%. Average parking costs have risen in four of the five centres – the exception being Bradford.

3.3.12 Leeds remains is 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. However, the latest increase in the cost of parking in Wakefield has reduced the difference between bus and car travel significantly here.

3.3.13 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.

3.3.14 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. Nevertheless, census data shows that average car driver commuting distances are significantly greater than for bus users (around twice as long for trips to the main centres) reflecting a greater dispersal of origins and the consequent lack of suitable bus services.

Desired Movement

3.3.15 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.

3.3.16 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 of car usage, such as road pricing or workplace parking charges, may also be required to achieve significant levels of modal shift.

3.3.17 Increases in average commuting journey lengths, discussed in more detail below, tend to encourage greater car use because of greater trip dispersal. Road pricing would tend to encourage shorter trips lengths in congested urban areas, but perversely may make longer distance commuting more attractive if relatively uncongested rural roads are priced cheaply.

Future Requirements

3.3.18 The availability of GPS data for journey time information will enable a better picture of year on year changes to be derived, providing comparable information can be obtained from the bus operators.

Background Indicator B3: Travel Distance to Work

3.3.19 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 3.3.2.

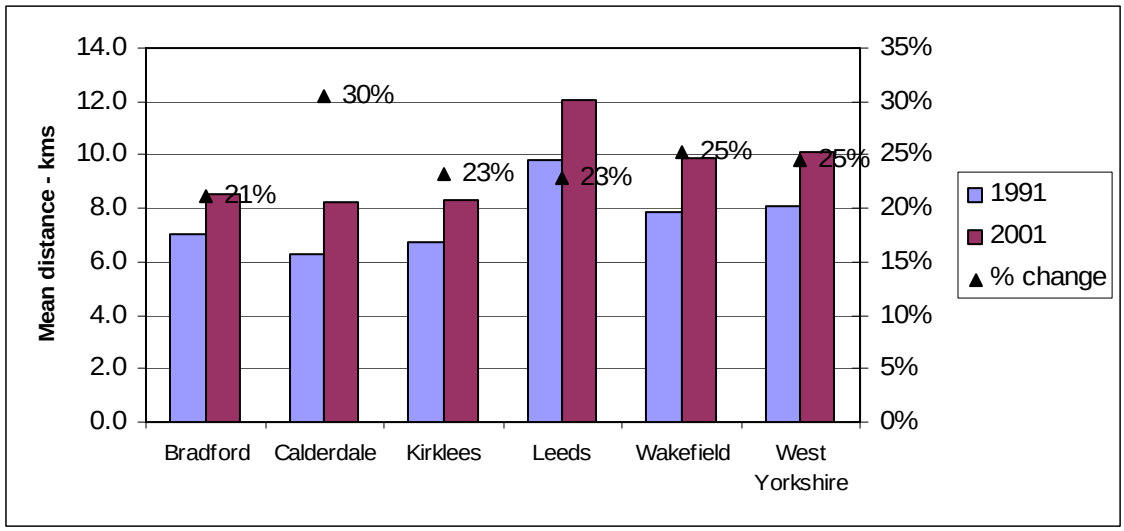


Figure 3.3.2 Average Travel Distance to Work, West Yorkshire, 1991-2001

(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)

3.3.20 Figure 3.3.3 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.

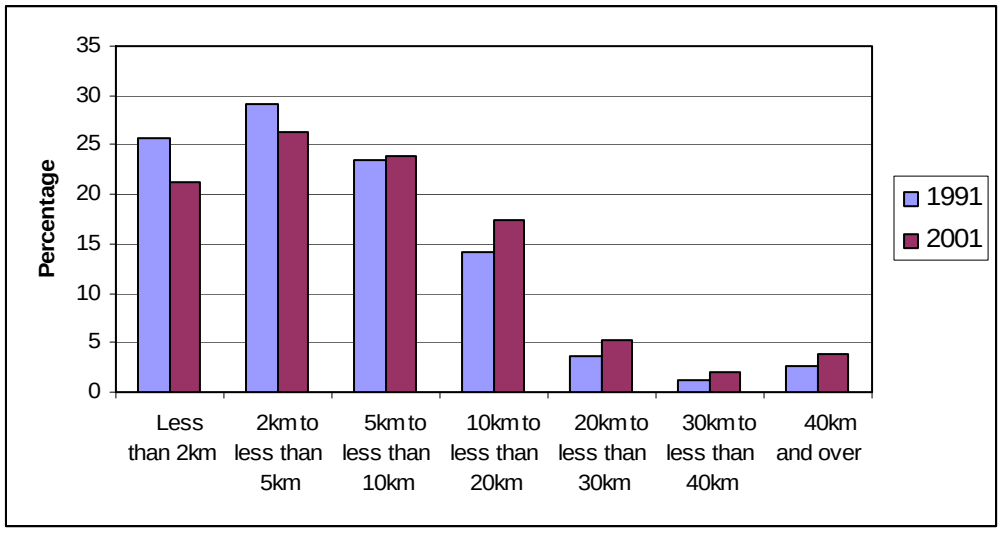


Figure 3.3.3 Travel Distances to Work, West Yorkshire, 1991-2001

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

3.3.21 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 3.3.4.

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)

3.3.22 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%.

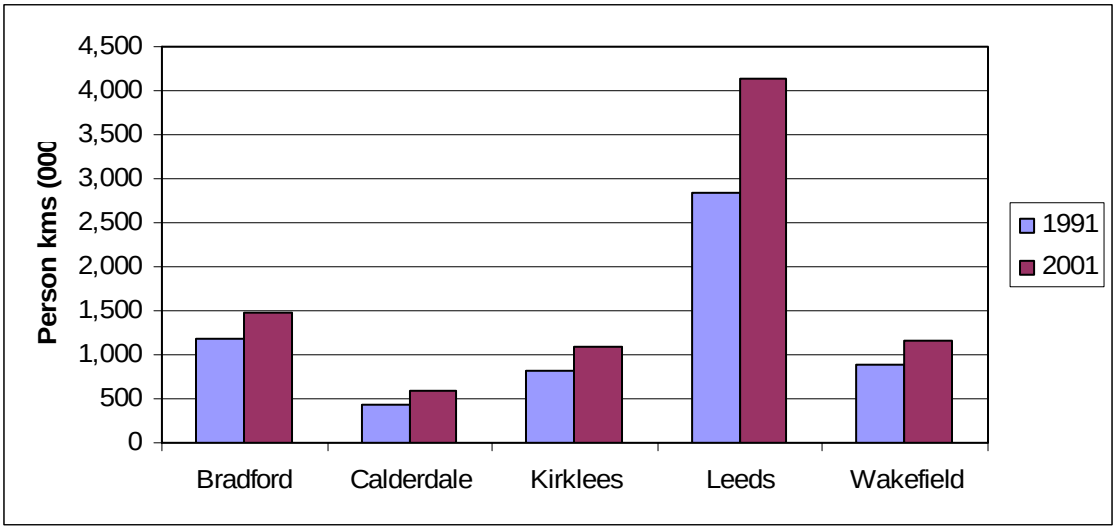


Figure 3.3.4 Person-kms Travelled to work in West Yorkshire, 1991-2001

(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)

3.3.23 Data on journey length by mode is not 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

3.3.24 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)

3.3.25 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 2005 value compared with the 1999 baseline figure.

	1999	2005 *	% increase
Cost (pence)	50	95	90.0

** estimate*

Table 3.3.9 Estimated Cost per Passenger Journey of Subsidised Bus Services

3.3.26 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 there is some evidence that the backlog is being addressed. Further improvement is anticipated, subject to sustained funding of these important routes.
- Trends in the condition of the non principal network are more variable, due in part to the lack of consistent, historic condition data. However funding of these roads and footways has increased and condition is no longer deteriorating. 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 is now beginning to be addressed although 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 0.22 which compares well with the median value for all Metropolitan Authorities of 0.30 and the median for all English Authorities of 0.7.

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.

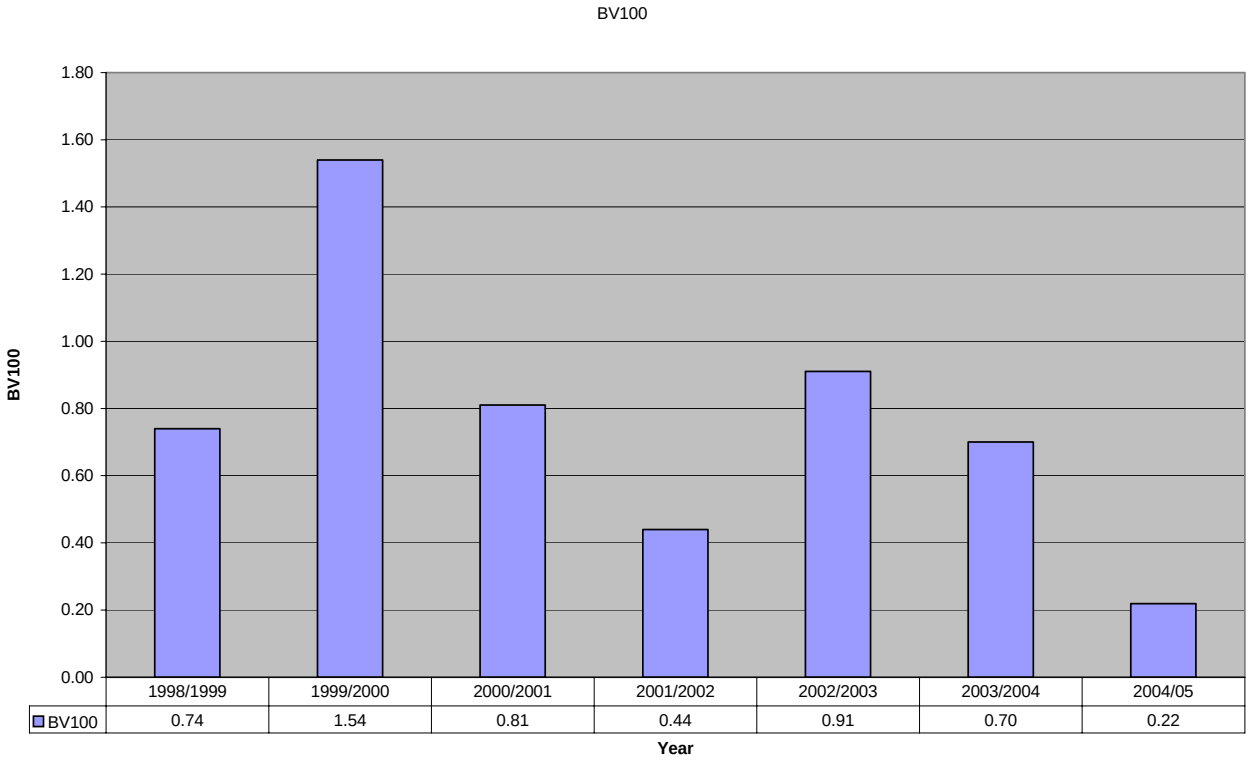


Figure 3.4.1 BVPI 100 Number of Days of Temporary Traffic Controls or Road Closure on Traffic Sensitive Roads Caused by Local Authority Road Works per km of Traffic Sensitive Road.

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. For 2004-05 this has been measured using a TRACS type survey (TTS). The results are as follows:-

District	Result
Calderdale	39%
Kirklees	45%
Leeds	26%
Wakefield	29%
Weighted Ave.	36%

3.4.7 Bradford commissioned their surveys but accreditation of the providers machine was delayed and they consequently have no result. The available results follow the same pattern as previous surveys in terms of worst and best performance. However they are some 20% to 66% higher than data from deflectograph surveys. Similar increases across the country show that the survey methods do not give comparable results and this data cannot be used to map trends from previous BVPI 96 results.

3.4.8 Leeds an Bradford undertook some TTS in 2003-04 and calculated values of 47% and 45% respectively on their sample data. However the machines were not accredited and meaningful comparisons cannot be made.

3.4.9 However all West Yorkshire authorities continue to undertake deflectograph surveys of their Principal Roads with results as shown below. The weighted averages for 2004/05 suggest a slight decline in condition but the general trend is still positive. Authorities now need to sustain the recent levels of investment in the maintenance of principal roads in order to show continuous improvement in condition.

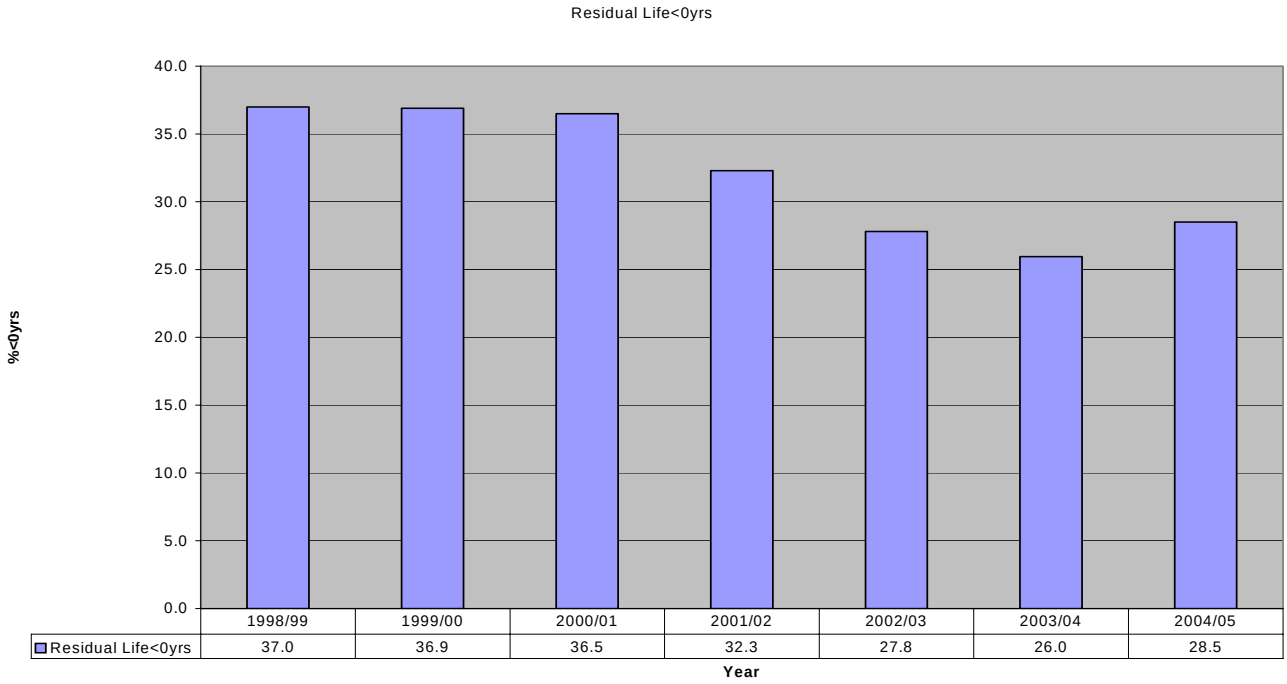


Figure 3.4.2 Percentage of the Roads Network with Negative Residual Life, Derived from Deflectograph Surveys.

3.4.10 In addition to carrying out deflectograph surveys, three of the five West Yorkshire Authorities also carry out UKPMS CVI surveys on their principal road network. The results are all below 10% which show that the visual condition of the road surface is much better than the structural condition.

3.4.11 A BVPI 96 target of 10% was set for the five year LTP period. Changing survey methods have made assessment against this target difficult. However on the basis of a mix of deflectograph and CVI results, significant improvements have been made and the target is likely to be achieved.

3.4.12 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 currently calculated using UKPMS accredited visual surveys.

3.4.13 The weighted average value for BVPI97a is 12.8% which is just outside the upper quartile for both the metropolitan authorities and England. This is the third year where the result has been around 13% and indicates that deterioration has been arrested. Removing the backlog is considered to be achievable if funding levels are maintained.

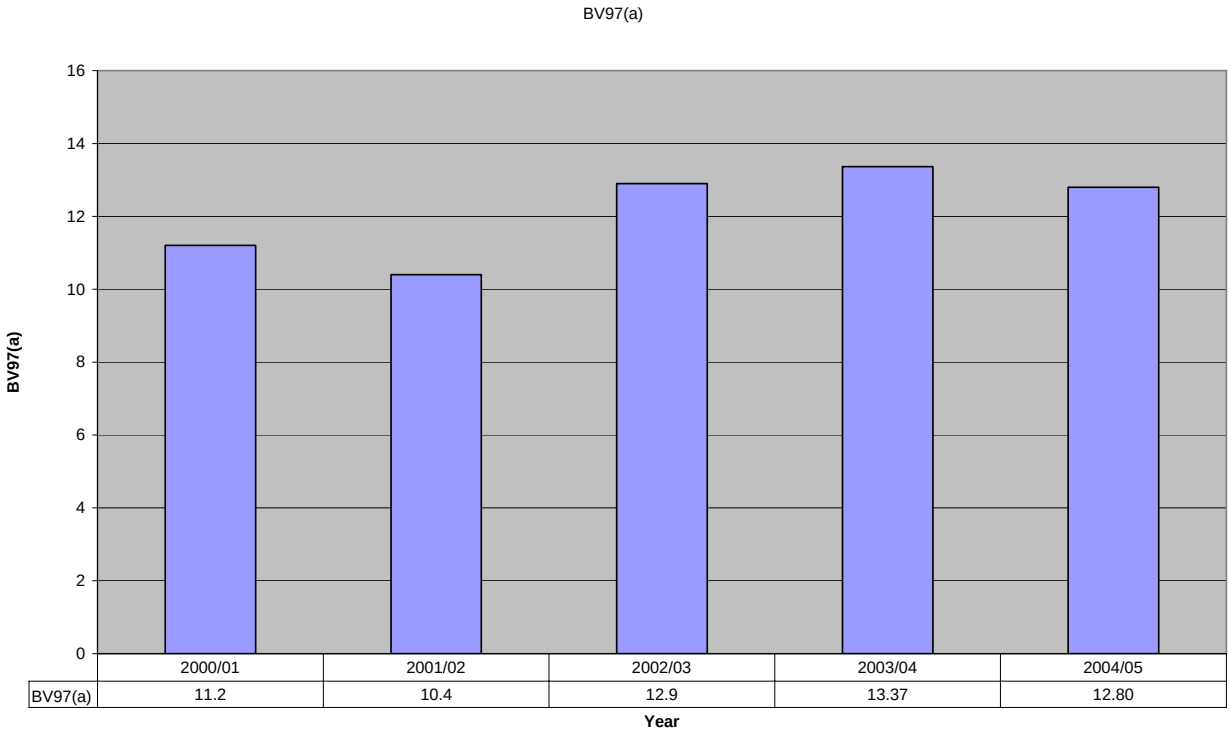


Figure 3.4.3 *BVPI 97(a) Percentage of Non-principal Classified Roads with Significant Defects (Visual Inspection).*

3.4.14 2004-05 was the fourth year for the calculation of BV97(b). The result each year is based on data collected in the preceding 12 months for 25% of the unclassified roads. The results have fluctuated over the four year as shown below. It is not possible to determine whether this fluctuation is a consequence of variation in condition between the 25% samples, variations in the rules and parameters use for the analysis, actual changes in condition or a combination of factors. Indeed caution was recommended against interpreting last year's low result of 15.17% as an actual improvement.

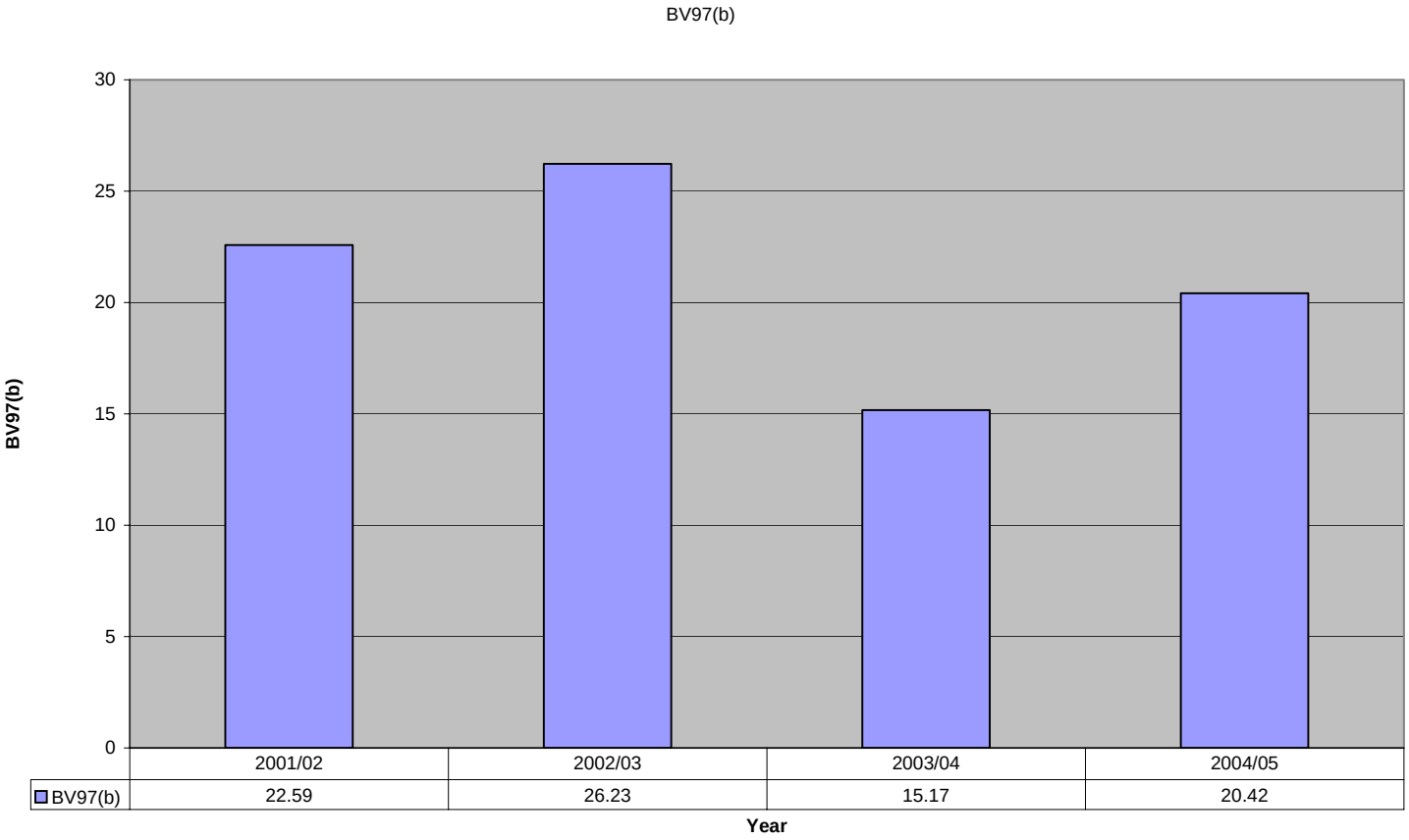


Figure 3.4.4 BVPI 97(b) Percentage of Non-principal Unclassified Roads with Significant Defects (Visual Inspection).

3.4.15 The weighted average for 2004-05 is 20.42%. The average result for the four years is 21.1%. Both figures are in the bottom quartile to median range. These results suggest that there has been no significant improvement in the network . The condition of unclassified roads is not as good as the classified roads and this difference reflects their relative priority of the networks hierarchy. In addition, the length of unclassified road currently in need of major maintenance is well over 1000km and consequently there is minimum probability of removing the backlog in the next five years unless there is a considerable increase in funding.

3.4.16 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 that the 2005-06 result would be best compared with a baseline of 21.1%.

3.4.17 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 three years of data have now been collected. The improvement in 2004-05 initially appears to be significant. However the West Yorkshire authorities believe that trends can be better assessed by taking a

100% sample over a two year period. This gives a small improvement from 22.5% to 21.85% which is in the upper to median quartile of results nationally.

3.4.18 Future works programmes will further improve this part of the footway network. However 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.

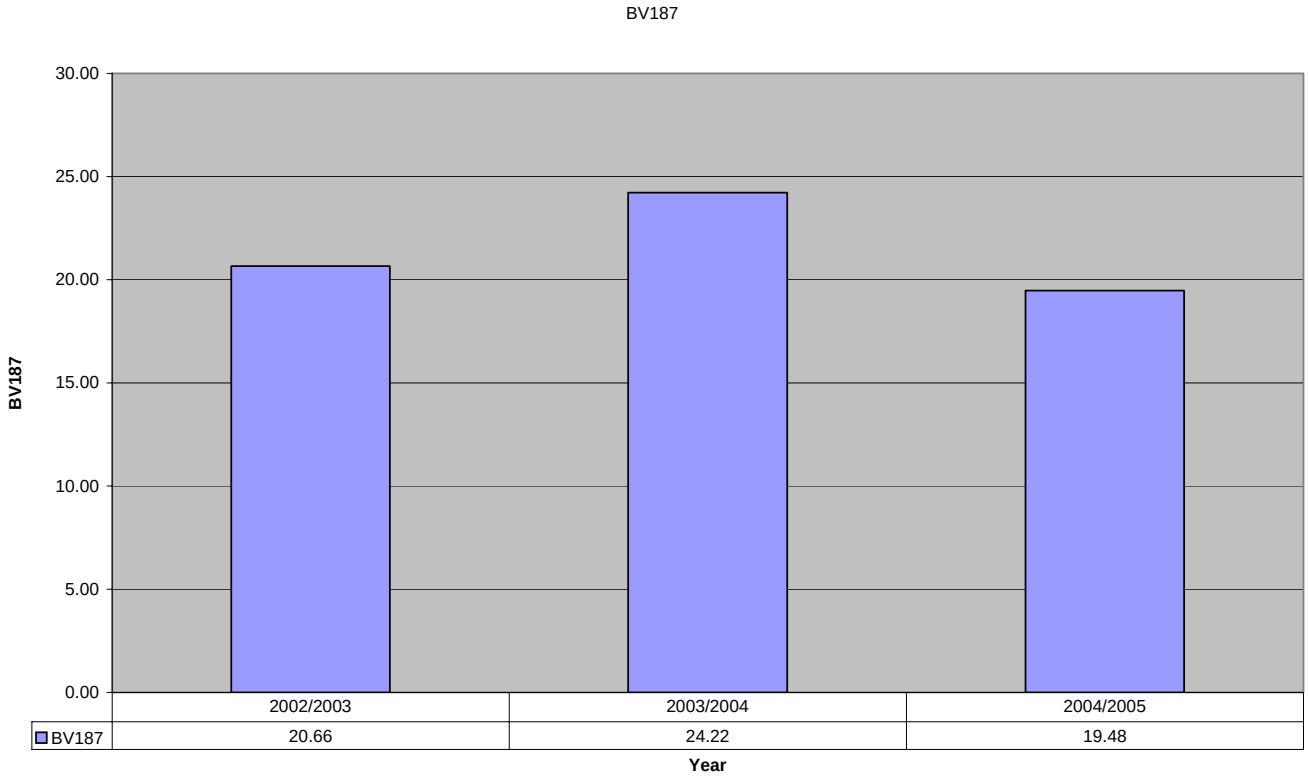


Figure 3.4.5 BVPI 187 Percentage of Prestige, Primary and Secondary Walking Routes with Significant Defects (Visual Inspection).

Background Indicator C3: Local Indicators and Bench Marks

3.4.19 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.

3.4.20 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.

3.4.21 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.

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 2004 and 31 March 2005 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 2006, and Calderdale and Bradford completing the programme by March 2006.

District	TO MARCH 2004			TO MARCH 2005		
	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 Other Owner 74	209 74	88.2 100.0	237 74	209 74	88.2 100.0
Calderdale	263 66	258 59	98.0 89.0	263 66	259 59	98.5 89.4
Kirklees	290 87	271 73	93.4 84.0	296 86	286 86	96.6 100.0
Leeds	229 112	229 86	100.0 77.0	229 113	229 90	100.0 79.6
Wakefield	85 60	85 60	100.0 100.0	85 60	85 60	100.0 100.0
TOTAL	Council 1104 Other Owner 399	1052 352	95.3 88.2	1100 399	1068 369	96.2 92.5
TOTAL	All Owners 1503	1404	93.4	1499	1437	95.9

Table 3.4.1 Bridges with Completed Assessments.

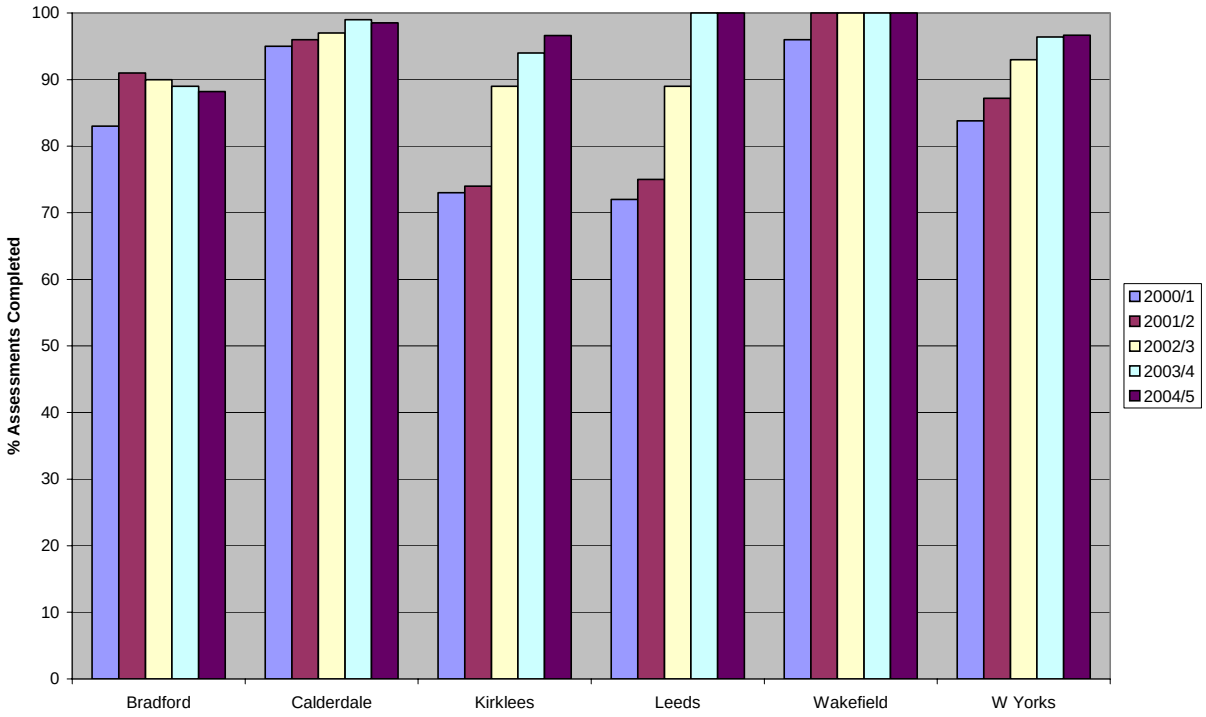


Figure 3.4.5 Bridges with Completed Assessments

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 2004 and March 2005. 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 2005 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 9, the number of bridges strengthened has increased by 20.

District	TO MARCH 2004			TO MARCH 2005		
	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	56	54.4	103	66	64.1
Calderdale	75	46	61.3	75	46	61.3
Kirklees	120	69	57.5	129	76	58.9
Leeds	102	36	35.3	102	38	37.3
Wakefield	43	26	60.5	43	27	62.8
TOTAL	443	233	52.6	452	253	56.0

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

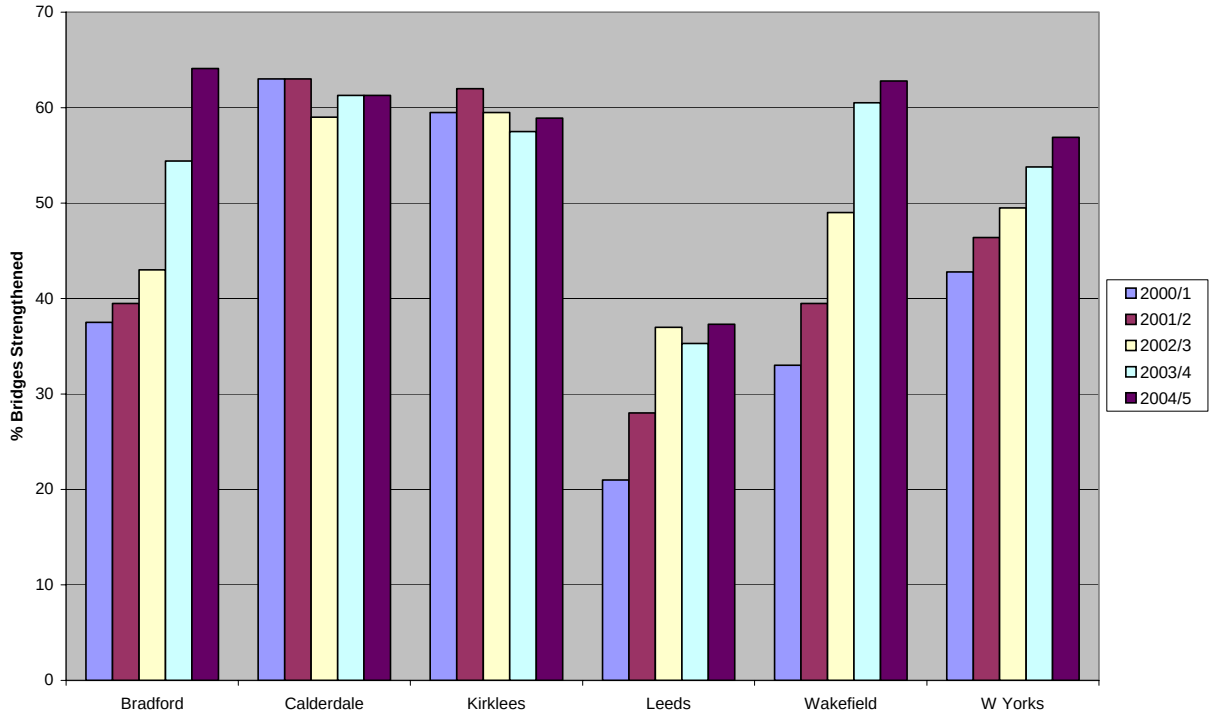


Figure 3.4.6 Percentage of Bridges Strengthened (All Roads All Owners)

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 9 or 10 years for Council-owned bridges allowing for sub-standard bridges under monitoring regimes and at least 10 years for privately-owned bridges, in particular Network Rail 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".

An exception during 2004/05 was Bradford who have temporarily suspended their GI/PI programme, concentrating resources on BCI inspections. 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 2004 / 2005 and indicates that 85% of planned principal inspections and 100% of planned general inspections were completed across West Yorkshire.

District	Structures Inspections, 2004 / 2005							
	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	Bradford have temporarily suspended the GI/PI programme and have been concentrating resources on BCI inspections. In addition extensive walling inspections have been undertaken as part of the asset management plans. All PRN walls have been identified and BCI inspections carried out. 462 structures excluding walls have been BCI inspected							
Calderdale	310	42	43	102	643	322	322	100
Kirklees	544	78	46	59	697	362	377	104
Leeds	740	100	94	94	716	490	490	100
Wakefield	149	20	20	100	217	110	110	100
West Yorks	1743	240	203	85	2273	1284	1299	100

Table 3.4.3 Percentage of Structures Subject to General and Principal Inspections in 2004 / 2005

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 2004 and March 2005 is reported in Table 3.4.4. Overall, there is a slight decrease in restrictions over the year, reflecting the ongoing strengthening programme. As the assessment programme nears completion, this trend should continue

However, timing of strengthening schemes for privately owned structures is often out of the Councils' control.

West Yorkshire: Weight And Width Restricted Structures

District	TO MARCH 2004						TO MARCH 2005					
	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	290	17	5.9	87	15	17.2	296	16	5.4	86	13	15.1
Leeds	229	5	2.2	112	1	0.9	229	6	2.6	113	3	2.7
Wakefield	85	0	0	60	6	10.0	85	0	0	60	5	8.3
TOTAL	1104	25	2.3	399	34	8.5	1110	25	2.3	399	33	8.3

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, except where permanent weight restrictions are acceptable. Hence, for Council owned structures, the target date is the end of the second 5 year LTP in March 2011, with the exception of sub-standard bridges under monitoring regimes where restrictions are not significant. In addition, 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 past years the LTP allocations for highway structures have been concentrated on strengthening rather than maintenance schemes resulting in a maintenance backlog which has needed to be addressed to ensure the

continued functionality and safety of the structures and therefore the highway network. During 2004/05 more funding has been directed towards maintenance schemes.

3.4.43 Background Indicator C6c monitors the percentage of highway structures requiring preventative and essential maintenance. The position at March 2004 and March 2005 is shown in Table 3.4.5.

3.4.44 The number of structures requiring preventative or essential maintenance at March 2005 is 1156 or 62% of the bridge stock compared with 59% at March 2004. This indicates a marginal decrease over the year in the condition of the highway structures stock, excluding walls, it and confirms that the level of outstanding maintenance remains high.

District	TO MARCH 2004						TO MARCH 2005					
	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 (*incl detrunking)	432	128	30	432	23	5	465*	144	31	465*	30	6
Calderdale	310	95	30	310	32	10	263	93	28	263	26	10
Kirklees	414	215	52	414	99	24	466	259	56	466	117	25
Leeds	476	300	63	476	95	20	476	295	62	476	95	20
Wakefield	188	80	43	188	10	5	188	87	46	188	10	5
TOTAL	1820	818	45	1820	259	14	1858	878	47	1858	278	15

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

3.5.1Danger 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 the total number of people injured on the roads of the County during 2004.
- The number of high severity casualties reduced yet again such that the 2004 total is the lowest ever recorded in West Yorkshire
- The slight casualty rate (in terms of casualties per 100 million vehicle kilometres) has fallen for 4 successive years and the 2004 total has already met the 2010 target.
- The number of pedestrians injured on the roads of West Yorkshire fell significantly, and the total of 1,526 is once again the lowest ever recorded in the County.
- There was a welcomed continuation in the downward trend of killed and seriously injured child pedestrian casualties. The 2004 total is the lowest ever recorded and still on track to meet the stated targets.
- The total of 440 recorded pedal cycle casualties in the County is down on the 2003 total, and the long-term trend is still downwards.
- The steady long-term rise in the number of motor cycle casualties levelled out in 2003 and reduced slightly in 2004.
- There were 8305 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.
- Car occupants account for 69% of all road casualties in West Yorkshire.
- The use of CCTV to combat crime on street, in car parks and at bus and rail stations continues to increase.

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 2004, 12,031 casualties were recorded on West Yorkshire's roads, a further decrease on the total recorded in 2003 and a marked 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 already 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
2004	1,215	116	1,099	10,816	12,031
% Change 2004 cf. 1994 - 1998 average	-18%	+0.9%	-20%	-5.0%	-6.6%
% Change 2004 cf. 2003	-1.9%	+14%	-3.3%	-6.5%	-6.0%

** Killed or Seriously Injured*

Table 3.5.1 West Yorkshire Road Casualty Trends

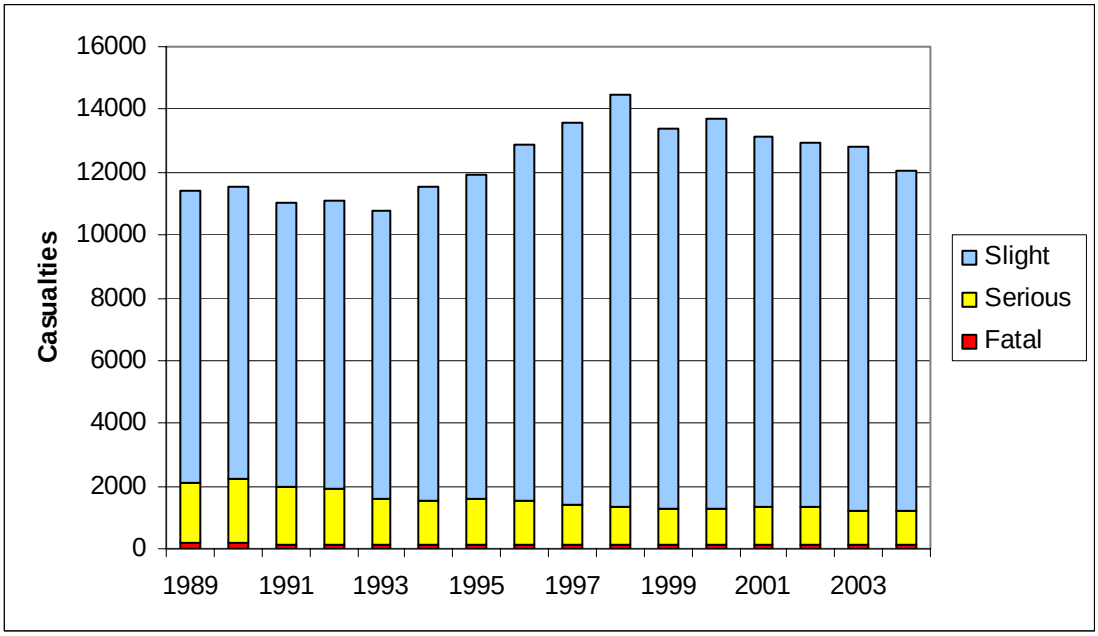


Figure 3.5.1 West Yorkshire Road Casualty Trends Since 1989

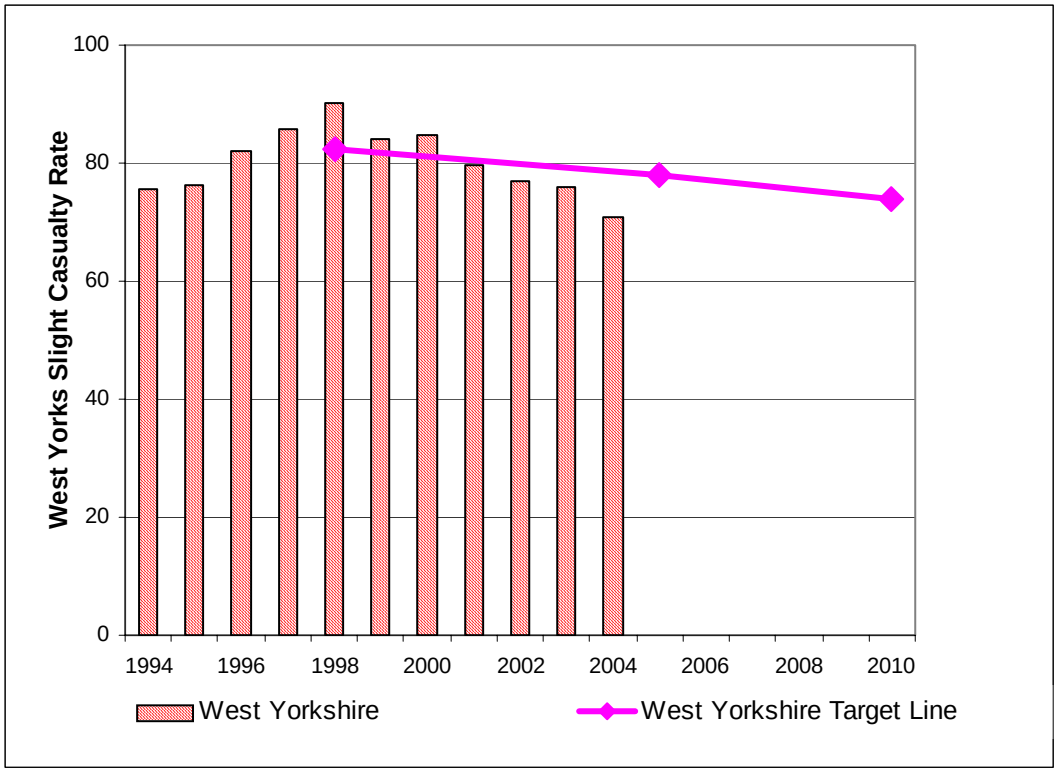


Figure 3.5.2 West Yorkshire Slight Casualty Rate Trend

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 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 since then the fatality total has averaged at 111 some 4% less than the 1994 - 1998 average. The number of serious casualties has fallen in the past 2 years and the 2004 total is the lowest ever recorded in West Yorkshire. However West Yorkshire is still only just on track to meet the Government target. This is the second 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 and the 2010 target has already been met.

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
2004	360	78	204	24	300	194
% Change 2004 cf. 1994 - 1998 ave	-31%	-26%	+41%	+85%	-21%	-16%
% Change 2004 cf. 2003	+5.9%	-23%	-5.6%	+21%	-7.1%	+4.4%

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

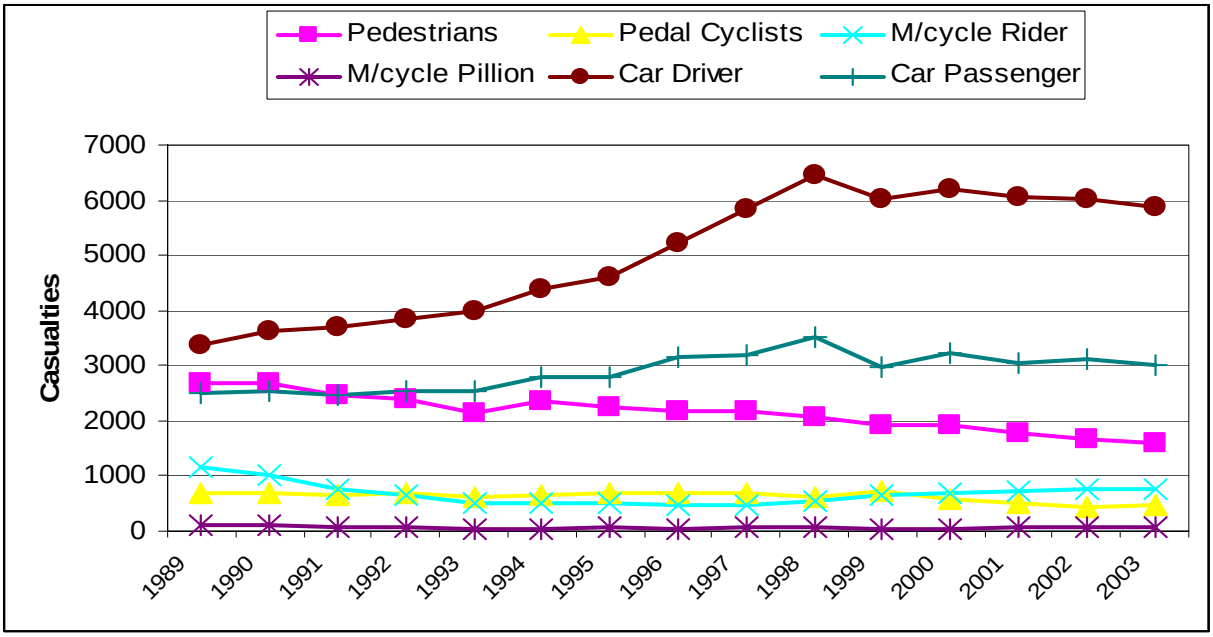


Figure 3.5.3 West Yorkshire Casualty Trends for Different Road Users Since 1989

Desired Movement

3.5.8 It is desired that the number of casualties in all groups reduces. The pedestrian casualty total for 2004 is again the lowest ever recorded in West Yorkshire.

3.5.9 The annual total of car occupant casualties has fallen slightly over the past 2 years, which suggests that the trend of rising car casualties up to 1998 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

Year	KSI *	Fatal	Serious	Slight	Total
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
2004	148	8	140	1,234	1.382
% Change 2004cf. 1994 -1998 average	-46%	-39%	-46%	-29%	-31%
% Change 2004 cf. 2003	-27%	+100%	-30%	-11%	-13%

** Killed or Seriously Injured*

Table 3.5.3 West Yorkshire Road Casualty Trends for Children

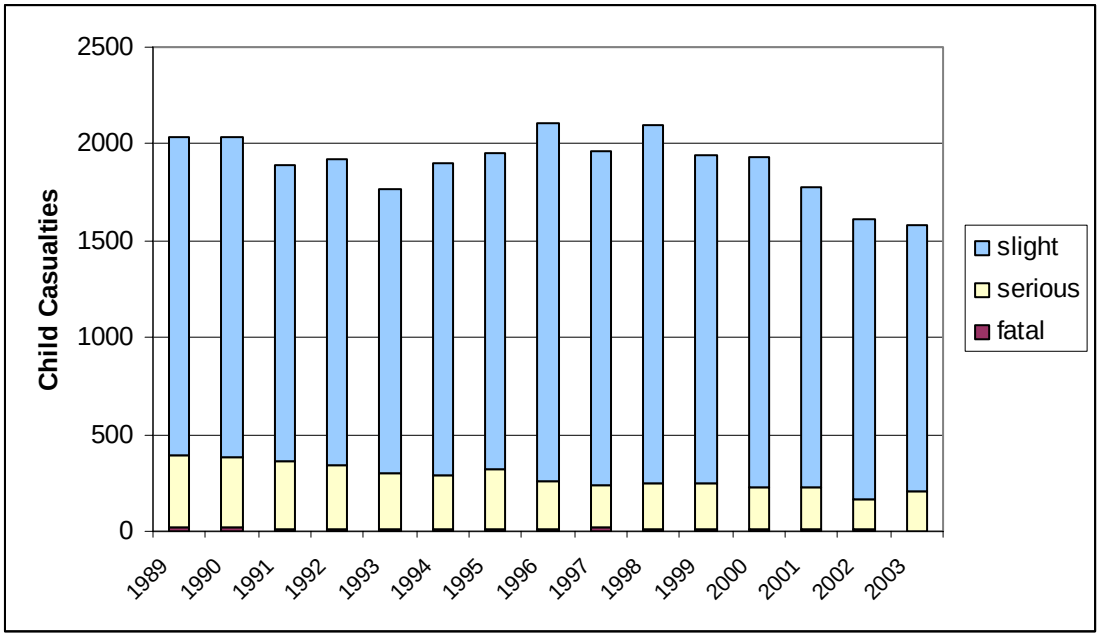


Figure 3.5.4 West Yorkshire Road Casualty Trends for Children since 1989

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 seriously injured. However the number of children killed doubled during 2004 compared with 2003 showing the volatility of the numbers. Overall the figures show that there has been reductions of over 30% compared with the 1994-98 average and the trend is still downwards. The total number of child injuries was again the lowest level since 1993. The number of children killed each year, whilst at a low level, shows wild fluctuations from year to year.

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. This year Glasshougton station opened, which has a car park with CCTV.

	Rail station car parks with CCTV	Of which staffed rail stations	Of which unstaffed rail stations
1999/00	22 (43%)	10 (63%)	12 (34%)
2004/05	25 (45%)	12 (67%)	13 (35%)

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. Plasma screen have now been installed at eight bus stations. 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.

	Bus stations / points with CCTV	Of which staffed bus stations / points	Of which unstaffed bus stations / points	Bus Stations / points with Help points
1999/00	11 (42%)	8 (89%)	3 (7%)	0 (0%)
2004/05	25 (93%)	9 (100%)	16 (89%)	20 (74%)

Table 3.5.6 Bus Stations with CCTV Surveillance

Desired Movement

3.5.20 It is envisaged that the percentage of bus stations with CCTV surveillance will increase in the future. Further funding has been secured to extend CCTV coverage to include on-street bus points. 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

3.5.21 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.

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

3.5.22 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.

		Bradford	Halifax	Huddersfield	Leeds	Wakefield
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

3.5.23 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.

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

3.5.24 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.

	Bradford	Halifax	Huddersfield	Leeds	Wakefield
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

3.5.25 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 Objective

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;

- 45% of buses are low floor, compared to 10% in 1999
- 40% of buses have a ramp fitted, compared to 7% in 1999;
- 36% of bus stations are fully accessible
- All rail stations in West Yorkshire now have public address systems
- Accessbus patronage has dropped by 1.9% compared to 1999.
- There has been an increase of 232% 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. In1995 320,000 passenger trips were made.

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 three years have shown reduced patronage levels, partly due to the new booking system which logs cancellations more accurately. This represents a decrease of 1.9% on the baseline of 1999/2000.

3.6.4 AccessBus patronage trends are shown in Figure 3.6.1

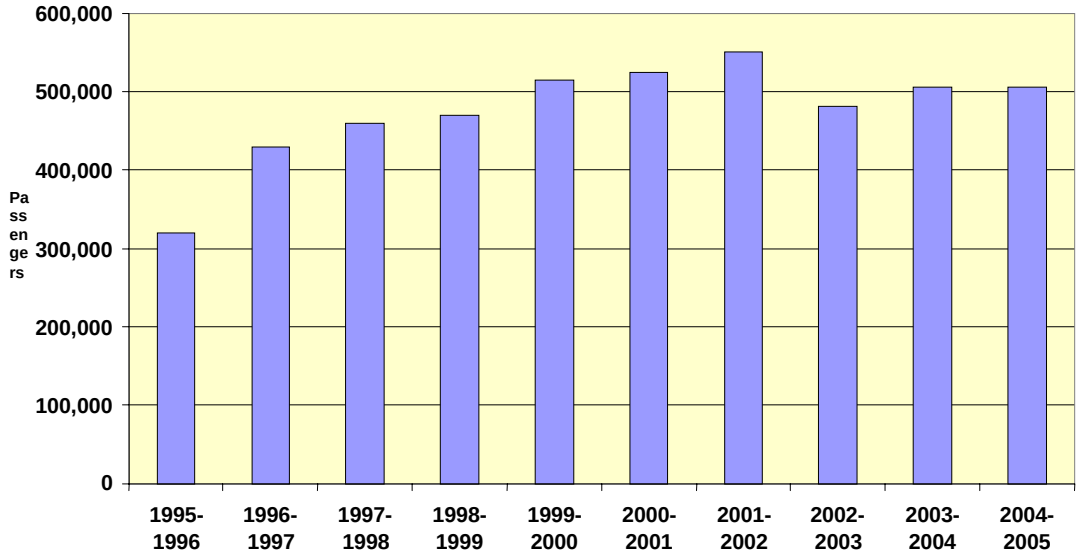


Figure 3.6.1 AccessBus Patronage Trends

Future Requirements

3.6.5 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.

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 now 45% compared to 10% in 1999. The percentage of DDA compliant buses i.e. low floor with a ramp fitted, was 7% in 1999, and has now increased to 40%. It should be noted that these figures are based on voluntary returns from bus operators.

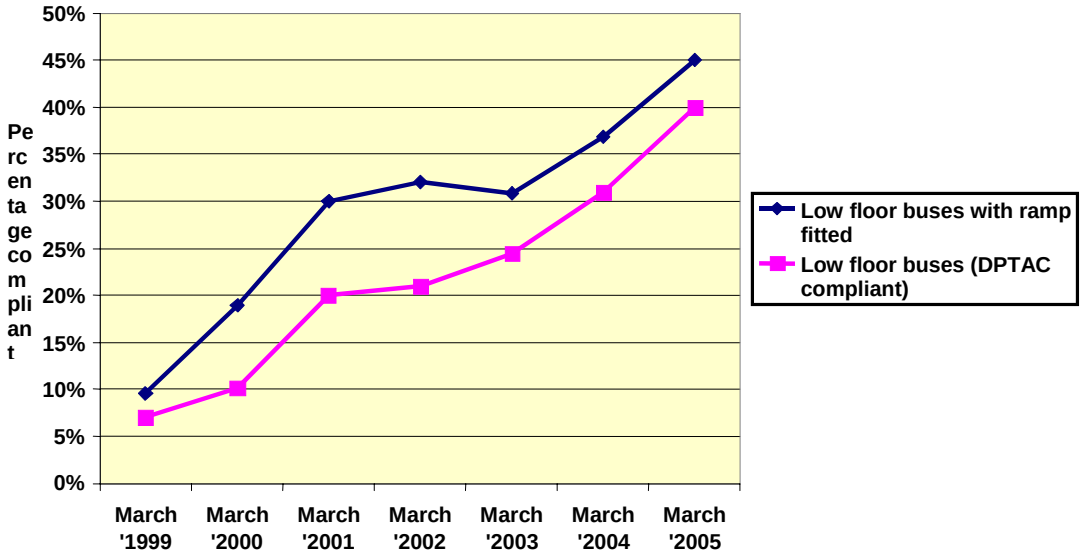


Figure 3.6.2 Accessibility of Bus Fleet

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 Table 3.6.1 In 2002 all remaining stations in West Yorkshire were equipped with a full public address system.

3.6.7 In early 2005 Glasshoughton station was opened which is fully DDA compliant.

Station Facility	**No of Stations with Facilities**		**% of stations**	
	(Baseline) 1997	**2004-5**	**1997**	**2004-5**
Staffed (17 Stations)				
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
Unstaffed (49 Stations)				
Level/ramped access to all platforms	30	38	63	78
Level/ramped access to some platforms	11	11	23	22
Information Screens	0	9	0	18
Full public address	21	49	44	100

Table 3.6.1 Station Facilities within West Yorkshire

Desired Movement

3.6.8 The potential for further investment in rail station accessibility measures will be considered in conjunction with the operator of the Northern Franchise. All our other modifications to rail stations will meet the latest accessibility requirements.

Future Requirements

3.6.9 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

3.6.10 Accessibility is based on eight criteria which, if met, would make the bus stations fully accessible to disabled users. Ten of the West Yorkshire Bus Stations (36%) are fully accessible. A further thirteen (46%) are 87% accessible and 5 (18%) are 75% accessible.

Desired Movement

3.6.11 It is anticipated that Ossett bus station will open later during 2004/5. this will be fully accessible.

Future Requirements

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

Background Indicator E5: Accessibility of Bus Stops

3.6.13 Work on a number of corridors throughout West Yorkshire aims at improving accessibility of stops as part of the Yorkshire Bus Initiative. These include such factors as raised kerbs, tactile paving and improved lighting. Routes with accessible stops, such as the bus guideways, are operated exclusively by low floor buses, thus giving a fully accessible service. Good progress has been made this year and the number of accessible bus stops has increased by 79%. In 2000 there were 448 accessible bus stops; in 2004 there were 1489, an increase of 232%.

Desired Movement

3.6.14 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

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

Key indicator E6: Provision at Controlled Pedestrian Crossings

3.6.16 Baseline year is now 2002/3 in line with the introduction of Performance Indicator BV165. Progress made in improving facilities at controlled crossings is shown below in Table 3.6.2 .

Bradford				
Type	**With dropped kerbs, tactile paving and tactile indicators**			
	2002/03		**2004/05**	
	No	**%**	**No**	**%**
Pelican / Puffin	52	46	139	97
Signal control	25	34	83	94

Calderdale				
Type	**With dropped kerbs, tactile paving and tactile indicators**			
	2002/03		**2004/05**	
	No	**%**	**No**	**%**
Pelican / Puffin	16	57	38	100
Signal control	16	50	36	94

Kirklees				
Type	**With dropped kerbs, tactile paving and tactile indicators**			
	2002/03		**2004/05**	
	No	**%**	**No**	**%**
Pelican / Puffin	24	48	29	63
Signal control	42	76	71	93

Leeds				
Type	**With dropped kerbs, tactile paving and tactile indicators**			
	2002/03		**2004/05**	
	No	**%**	**No**	**%**
Pelican / Puffin	98	49	200	92
Signal control	151	57	210	92

Wakefield				
Type	**With dropped kerbs, tactile paving and tactile indicators**			
	2002/03		**2004/05**	
	No	**%**	**No**	**%**
Pelican / Puffin	63	80	86	95
Signal control	31	42	49	86

Table 3.6.2 Provision at Controlled Crossings

Desired Movement

3.6.17 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

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

3.7 ENVIRONMENTAL QUALITY

Primary Objectives

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

Role of Transport

3.7.2 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 Detailed Air Quality Assessment and started their Annual Progress Reports
- NO2 and PM10 remain the transport pollutants of concern.
- A long term (7 year) general trend of improved NO2 air quality continues in West Yorkshire. All relevant standards were met, except for a slight annual average exceedance for Wakefield.
- Monitored levels of PM10 fell across West Yorkshire with the exception of Bradford, were levels remained constant. All relevant standards were met.
- Leeds has completed their transport oriented Air Quality Action Plan. Wakefield continues to develop their Action Plan. Both plans will be integrated into the second Local Transport Plan (LTP2)
- Since the year 2000, road transport emissions of NOx and PM_{10} within West Yorkshire have fallen by 27% and 29% respectively. Over the same period, emissions of CO2 have slightly increased by 1%.
- Kirklees and Leeds have achieved EMAS accreditation. Bradford is making good progress and hopes to achieve EMAS accreditation before the end of 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 Groups have been set up to co-ordinate the SEA methodology for the Draft LTP 2.

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

Transport Emissions

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

3.7.4 Road transport emissions of nitrogen dioxide (NO_2) and particulates (PM_{10}) contribute in the region of 75% and 50% respectively, towards total urban emissions. NO_2 and PM_{10} represent the two major transport pollutants of concern.

Nitrogen Dioxide Monitoring

3.7.5 Figure 3.7.1 illustrates the results of the annual average NO_2 monitoring within urban centres of each District. During the year 2004, all Districts except Wakefield complied with the annual average standard of 40 $\mu g/m^3$. Over the 7 year period, there is a general trend of improving air quality, with respect to background levels of NO_2. This trend provides an indication that road transport emissions of NO_2 are slowly declining.

The Wakefield site remained just above the annual average standard for the second year. It is not fully understood why the air quality remains poor at this location. This site is dominated by traffic emissions and some local industrial sources. Recent traffic counts indicate traffic levels remain high, but with very limited traffic growth for the year 2004. Wakefield is currently working towards declaring this site an Air Quality Management Area.

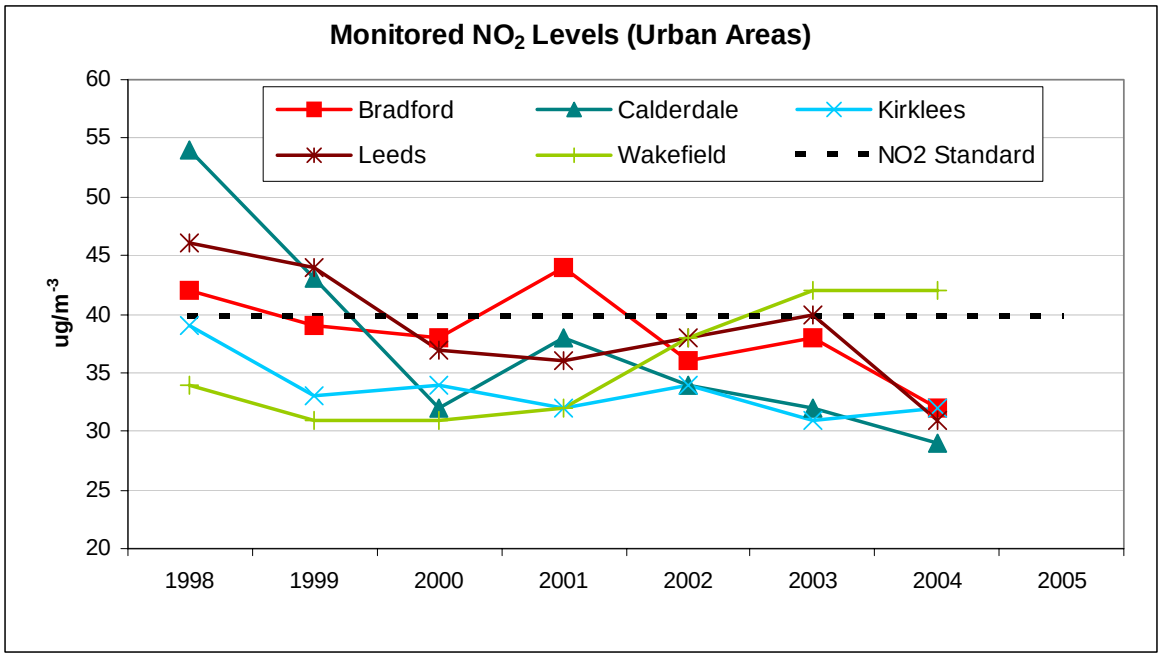


Figure:3.7.1 West Yorkshire Annual Average NO_2 Monitoring – Summary Data

3.7.6 Figure 3.7.2 illustrates the number of exceedances of the hourly NO_2 standard of 200 $\mu g/m^3$. (This standard allows up to 18 exceedances per year). Since monitoring began in 1998, there have been only 6 exceedances recorded at these West Yorkshire sites. During the year 2004, a single exceedance was reported at the Kirklees site. All Districts complied easily with the relevant air quality standard. No hourly NO_2 data was available for

Calderdale.

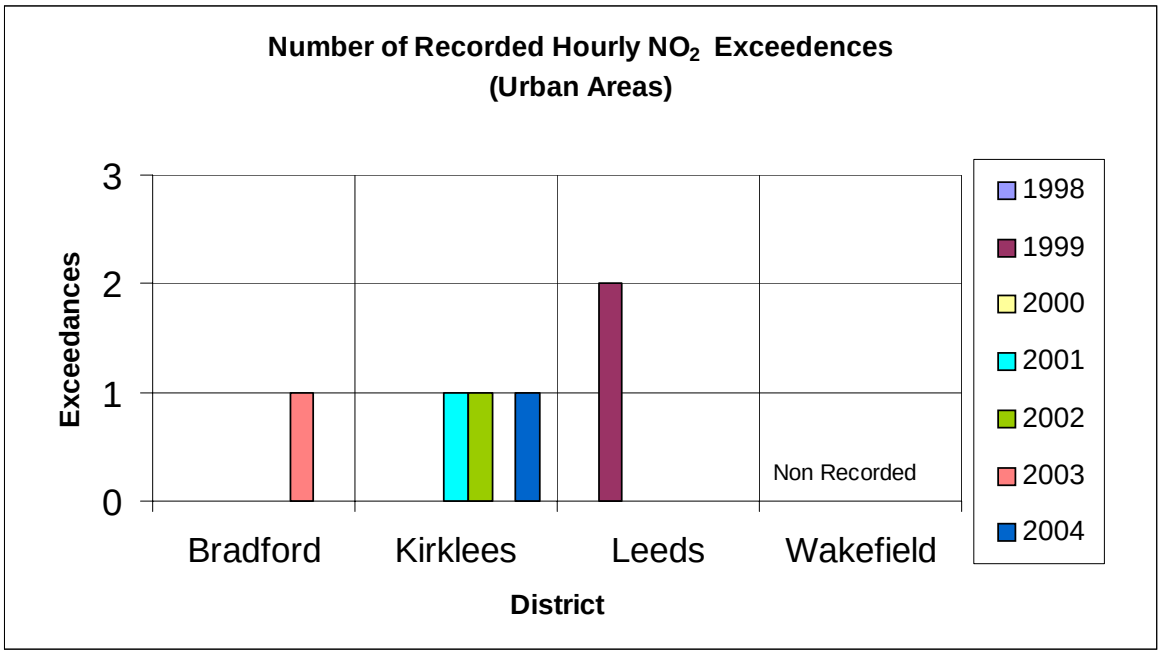


Figure 3.7.2 Total Number of Hourly NO_2 Exceedances

Particulates (PM_{10}) Monitoring

Figure 3.7.3 indicates that all Districts comply with the annual average PM_{10} standard of 40 µg/m^3. Since monitoring began in 1998 there has been little change in general background PM_{10} air quality within urban centres. All Districts reported a reduction in Annual Average PM_{10} levels in 2004 except Bradford, which recorded the same level as for 2003.

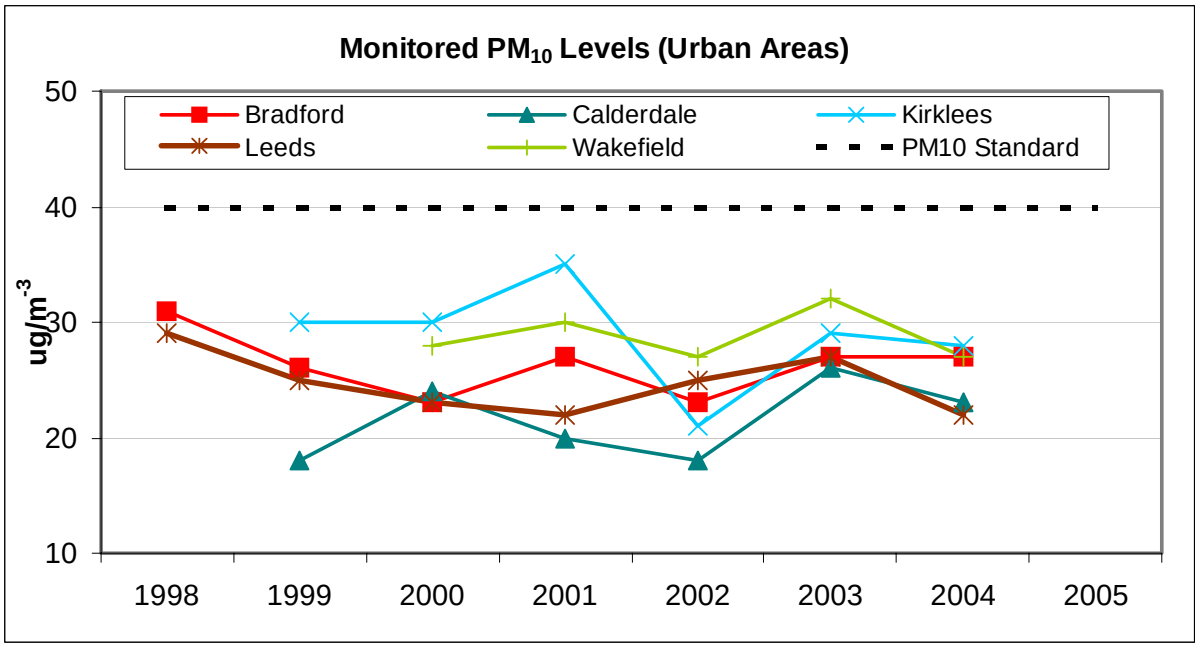


Figure 3.7.3 West Yorkshire Annual average PM_{10} Monitoring – Summary Data

Figure 3.7.4 indicates the number of daily PM_{10} exceedances within the urban monitoring network of West Yorkshire. (This standard allows 35 daily exceedances greater than 50 $\mu g/m^3$). The whole region reported a significant decrease in daily PM_{10} exceedances except Leeds, which recorded only a marginal reduction in the number of daily exceedances. All Districts complied with the relevant PM_{10} standard.

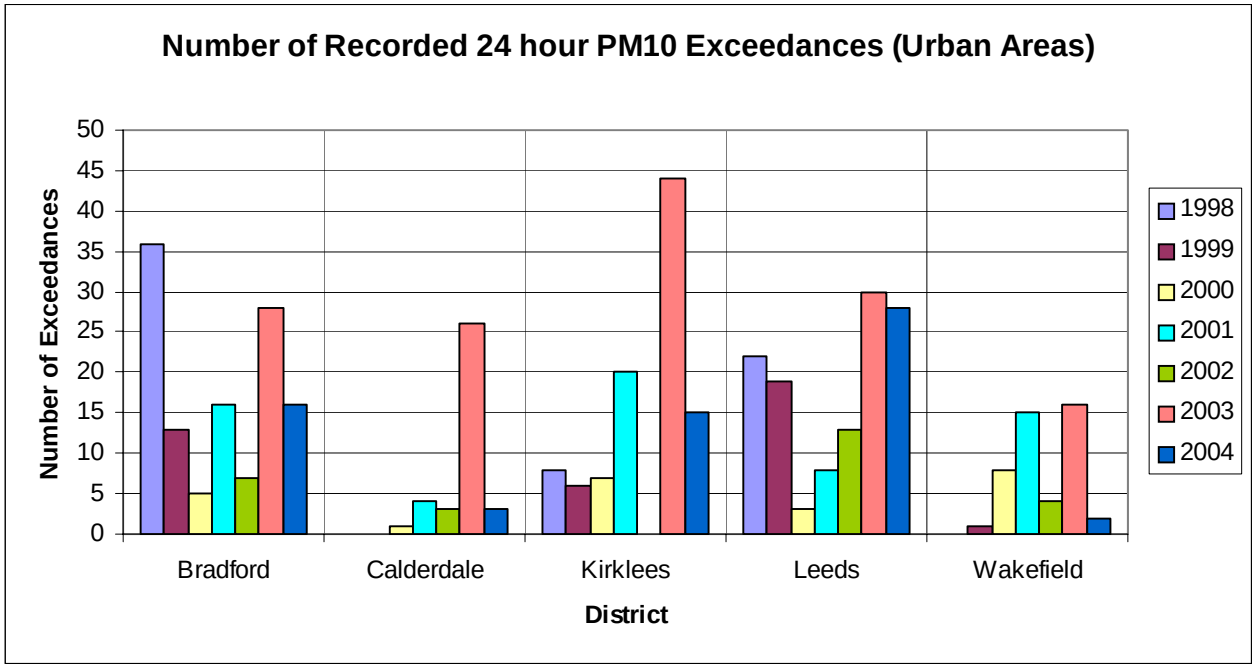


Figure 3.7.4 Total Number of Daily Exceedances - Summary Data

Road Transport Emission Trends in West Yorkshire

3.7.9 Road transport emissions of oxides of nitrogen (NO_x) which contains a mixture of nitric oxide (NO) and nitrogen dioxide (NO_2), fine particulates (PM_{10}) and carbon dioxide (CO_2), the primary "greenhouse gas", have been predicted for the West Yorkshire trunk / principal road network. Annual emission rates were predicted for NO_x and PM_{10} using the latest 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_2.

3.7.10 All calculated emission rates took account of the observed annual traffic growth for all road types in each District and actual traffic count data on the Motorway network. Some coarse assumptions have been used to approximate traffic speeds and the percentage of Heavy Duty Vehicles within the modelled network based on previously used data. It should be noted that annual emission rates are sensitive to the input of speed data and may underestimate the exacerbating effects of local congestion during peak periods.

3.7.11 Table 3.7.1 provides a summary of predicted road transport emissions for the West Yorkshire trunk / principal road network. Approximately 17,956 tonnes, 518 tonnes and 2.82 million tonnes / year of NO_x, PM_{10} and CO_2 emissions respectively, have been predicted for the year 2004. The annual emission rates for NO_x and PM_{10} continues to fall across the region, whilst there is a small increase for CO_2 emissions. Compared with the base year of 2000, annual emission rates for NO_x and PM_{10} have fallen almost 27% and 29% respectively. Since 2000 there has been just over a 1% increase in CO_2 emissions.

Year	2000 (Base Year)	2002		2003		2004	
Pollutant	**Tonnes / yr**	**Tonnes / yr**	**% Change from base year**	**Tonnes / yr**	**% Change from base year**	**Tonnes / yr**	**% Change from base year**
NOx	24,459	20,802	- 15.0%	19,240	- 21.5%	17,956	-26.6%
PM_{10}	724	604	- 16.5%	557	- 23.1%	518	-28.5%
CO_2	$2.787*10^{-6}$	$2.787*10^{-6}$	0.0%	$2.817*10^{-6}$	+ 1.1%	$2.817*10^{-6}$	+1.1%

Table 3.7.1 Summary of Road Transport Emissions

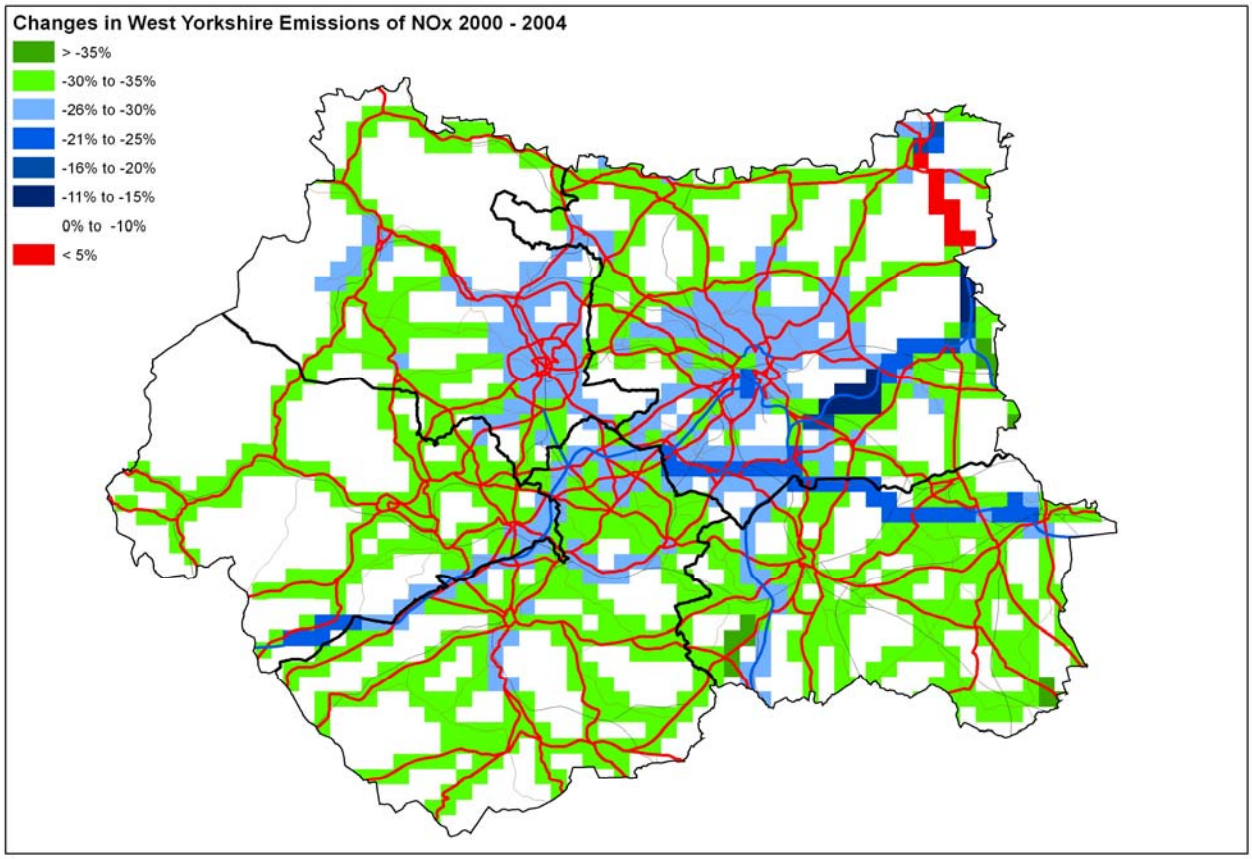


Figure 3.7.5 Changes in emissions of NOx 2000 –2004

3.7.12 Figure 3.7.5 contains a NOx 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 2004. Reductions of NOx emissions in excess of 30% have been predicted across most of the region, including some of the smaller urban areas. However, the larger central urban areas of Bradford and Leeds have experienced slightly lower reductions in emission rates of between 26% and 30%. NOx emissions from the motorways have generally reduced less significantly, typically 16% to 25%. This is mainly the result of higher vehicle speeds and traffic growths, combined with a greater percentage of HGV's. One section of the A1 between Bramham and Wetherby indicates a slight increase in emission rate of between 0 and 5%, due to a slightly higher increase in traffic than across the rest of the modelled network. This increase could be

related to long term road works on the A64 at Bilbrough Top.

3.7.13 The general reduction in emissions for NOx and PM_{10} 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 CO2 emissions will rely on improved engine technology / efficiency to reduce fuel consumption. Examples include the common rail diesel technology 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 CO2 emissions.

Air Quality Strategy 2000

3.7.15 The UK Air Quality Strategy (AQS) 2000, requires all Districts within 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 air quality 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_{10} maybe introduced in the near future.

District	Round 1			Round 2	
	Stage 4	AQMAs Identified	Action Plans	USA	Detailed Assessment
Bradford	N/A	N/A	N/A	NO_x (Roads) PM_{10} & SO_2 (Steam train)	Full report delayed with defra agreement. An interim report on SO_2 completed
Calderdale	N/A	N/A	N/A	NO_x (roads) PM_{10} (roads) SO_2 (industry)	Completed
Kirklees	N/A	N/A	N/A	NO_x (Roads) SO_2 (Industry)	Completed
Leeds	3	(7) NO_2 (1) PM_{10}	Completed & Approved	NO_x (Roads) PM_{10} (Roads & domestic)	Completed
Wakefield	3	(2) NO_2	On going	NO_x (Roads) PM_{10} (Roads, domestic, industrial) SO_2 (Domestic, industrial)	Completed

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

3.7.16 All Districts have 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 identified compliance with all relevant air quality standards/ objectives for the year 2005, and did not need to progress into Stage 4 and beyond.

Leeds and Wakefield identified a risk of exceeding relevant air quality standards. Both Leeds and Wakefield declared seven and two (respectively) traffic related NO_2 Air Quality Management Area's (AQMA's). In addition, Leeds declared one non-traffic related PM_{10} AQMA.

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_2. A similar transport based Action Plan by Wakefield is currently being finalised. All Districts except Bradford, have recently completed their Detailed Assessments, focusing on the pollutants identified within each District through the Updated Screening Assessment (USA). Bradford has completed an interim report concerning issues relating to stream train emissions of SO_2. This has caused some delay in completion of their Detailed Assessment.

3.7.19 As part of the review and assessment process, each District has identified additional Areas of Concern. Areas of Concern are defined as those areas considered at being at risk of exceeding one or more of the objectives and thus requiring further investigation to establish whether an AQMA will need to be declared or not.

Air Quality Monitoring / Modelling

3.7.20 All Districts within West Yorkshire have maintained 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. Most Districts have invested in additional NO_x analysers to help improve their monitoring capability for road transport emissions of NO_2. These upgrades in NO_2 monitoring were instigated by the findings of the updated screening assessment (USA). Kirklees also strengthened it's roadside PM_{10} monitoring programme.

3.7.21 All Districts make use of modern computerised dispersion models – either ADMS Urban or Airviro systems. These models are used to predict road transport emission maps and the simulation of local air quality, against relevant standards and objectives.

Air Quality / Transport Action Plans

3.7.22 Regional and District air quality management groups have been set up to co-ordinate the National Air Quality Strategy process and implement appropriate actions. An approved Air Quality Action Plan has been completed by Leeds, to help improve local air quality and mitigate traffic related AQMA's. This Action Plan is predominantly transport based, with a wide range of transport initiatives / measures.

3.7.23 Wakefield has declared two new traffic-related AQMA's. Good progress is being made towards developing their Air Quality Action Plan, which contains appropriate transport initiatives to aid mitigation of road traffic emissions.

Desired Movement

3.7.24 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.

3.7.25 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 vehicle emissions and improve local air quality.

Future Requirements

3.7.26 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.

The Districts have recently set up a Transport Emissions Working Group. It is intended that this group will arrange meetings with the Highways Agency to discuss issues related to Districts AQMAs and Areas of Concern that are principally caused by traffic emissions from motorways and trunk roads.

Background Indicator F2: Noise Mapping

Transportation Noise

3.7.27 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. According to the findings of the DEFRA UK Noise Attitude Survey 2000, over half the sample were "very/ fairly worried" about noise. Within this sample, 20% considered noise affects their quality of life and caused health related effects.

The level of disturbance generated by road traffic and other modes of transport, depends on the actual noise level, it's variability, time of occurrence, and the sensitivity of the site.

Proposed Directive for Environmental Noise

3.7.28 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.

3.7.29 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.

3.7.30 Each member state must identify all major roads with more than 6 million vehicles passages a year, railways with more than 60,000 train passages a year, major airports and agglomerations with more than 250,000 inhabitants. However, recent developments concerning noise mapping, the level of detail and likely timescales for implementation of the

Directive is still under review.

Noise Mapping of West Yorkshire

A recent DEFRA consultation on the Environmental Noise Directive (END) has concluded that English implementation would be carried out solely by consultants, central Government and it's agencies. The revised methodology will be more strategy-based and less detailed, thereby reducing the need for intensive data input and resources.

Consultants will co-ordinate the collection of relevant transport data from Local Authorities. This process is likely to be split into regions, but the final outcomes are still being assessed by DEFRA. The deadlines for completion of noise maps has not been declared by DEFRA

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 noise mitigation measures, targeted at the worst effected areas. If any further delays are experienced by DEFRA, it maybe necessary for the West Yorkshire Transport Emissions group to develop their own noise mapping model. Most of the relevant information necessary to develop a regional noise map is contained within the Airviro air quality database.

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. This screening model is currently being trialled within for a range of transport schemes. When more information is available, it is hoped the findings will be disseminated to the West Yorkshire Districts.

3.7.35 Table 3.7.3 provides a summary of the noise insulation carried out under the Noise Insulation Regulations, 1988. A total of 76 eligible residential properties were offered insulation against traffic noise during 2004. Of those properties offered insulation, 42 have so far accepted the offer. There has been a considerable reduction in noise insulation work throughout the region during 2004. This is mainly due to the lack of major schemes being implemented within West Yorkshire.

Year \ District		Bradford	Calderdale	Kirklees	Leeds	Wakefield
2000	**Offered**	100	0	4	649 (1)	0
	Accepted	70	0	4	387 (2)	0
2001	**Offered**	324	0	0	149	0
	Accepted	180	0	0	75	0
2002	**Offered**	155	0	0	220	6
	Accepted	114	0	0	109	0
2003	**Offered**	55	0	21	20	51
	Accepted	39	0	7	2	13
2004	**Offered**	25	0	30	21	0
	Accepted	15	0	22	5	0

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

Table 3.7.3: Summary of Noise Insulation

Background Indicator F3: Use of Low Noise Road Surfacing

3.7.36 Figure 3.7.6 shows the approximate lengths roads that have been re-surfaced with 'low noise' asphalt over the previous four years. In total, there has been approximately 363km of 'low noise' asphalt have been laid in West Yorkshire between the years 2000 – 2005. This figure includes 48km laid by the Highways Agency on motorways and trunk roads. There was approximately 74km of low noise surfacing laid across West Yorkshire during 2004/5. Each district laid a similar amount of low noise surfacing as they had the previous year.

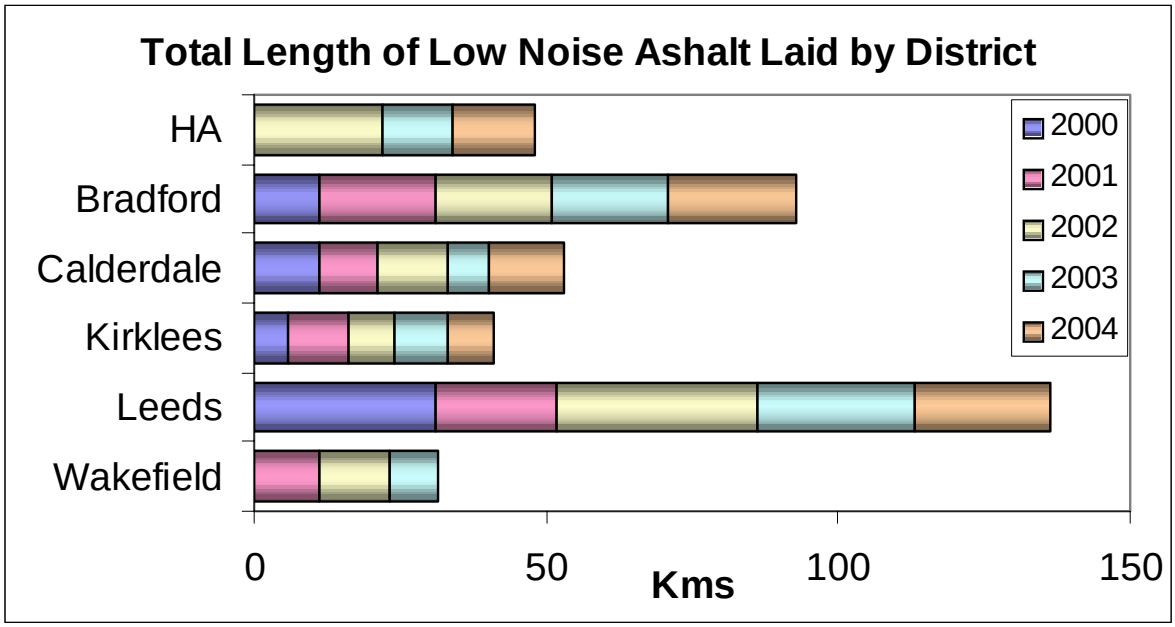


Figure 3.7.6 Total Length of Low Noise Asphalt Laid

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 25% of the trunk / principal road network within West Yorkshire surfaced with low noise asphalt. Data for the trunk road network, looked after by the Highway Agency (HA) is included separately.

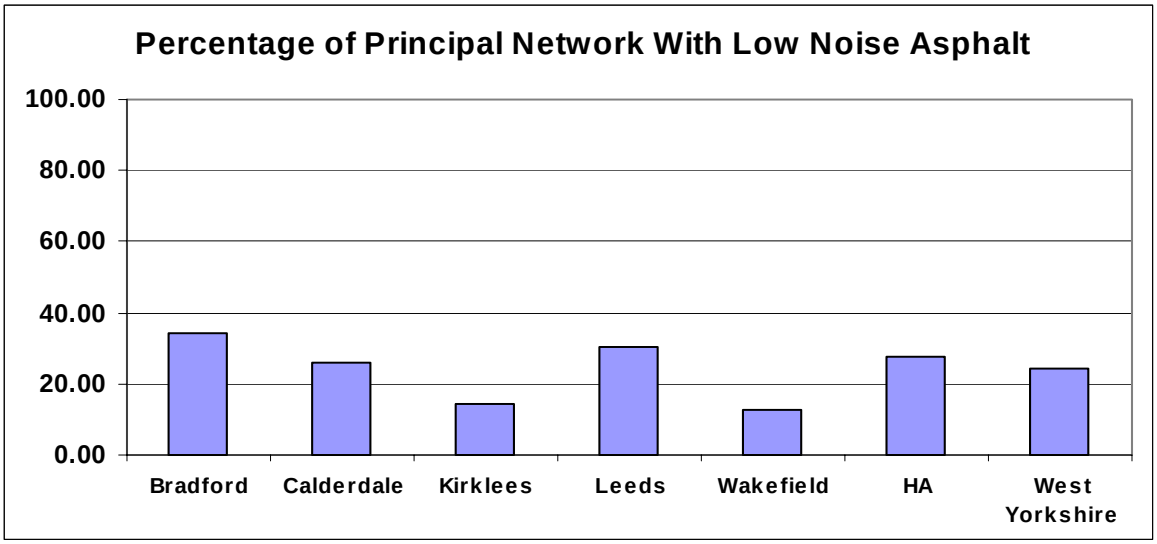


Figure 3.7.7 Percentage of Principal Road Network with Low Noise Asphalt

Strategic Environmental Assessment

3.7.38 The EU Strategic Environmental Assessment (SEA) Directive 2002/42/EC, became UK law in July 2004. This Directive ensures a high level of environmental protection and integrates 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 follows a similar methodology to that of the EIA Directive. However, the SEA process addresses “significant” environmental effects that are likely to result from the strategic LTP 2 visions/ objectives and the associated transport themes planned for West Yorkshire, rather than individual projects. The process is conducted at a coarse level of detail. Even so, it covers 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 include:-

- Scoping of SEA objectives and Alternative LTP 2 Strategies
- Assessment of “Significant” environmental effects of Preferred LTP 2 Strategy
- Cumulative and synergistic effects
- Developing alternatives/ modifications of Plan to mitigate “significant “ effects.
- Consulting with statutory consultees and public, both at scoping and detailed draft Plan stage.
- A transparent environmental reporting system
- A non technical summary

- Post monitoring

3.7.40 The LTP 2 must comply with the requirements of the SEA Directive. In April 2004 the Department for Transport published it's 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.

A West Yorkshire SEA Working Group was set up to pool expertise in the field of transport/ land-use planning, sustainable development and EIA. This group has developed a methodology for conducting a full SEA, including all the above elements, for the proposed West Yorkshire LTP 2.

A comprehensive draft SEA Scoping Report for the LTP 2 was completed in March 2004. This report is presently being assessed by the four Statutory Consultees, who comments will be taken into account for completion of the Scoping Report. An Environmental Report will be conducted for the Preferred LTP 2 Strategy. This report will ulitise output from the West Yorkshire Strategic Transport model and use local congestion mapping techniques.

Desired Movement

3.7.41 The West Yorkshire LTP will help co-ordinate a range of transportation schemes and initiatives aimed at reducing transportation noise and their effects in sensitive areas.

Future Requirements

3.7.42 Noise mapping techniques will soon be developed to identify sensitive areas exposed to high ambient noise levels. Improved scheme design and the use of appropriate mitigation measures and materials will be targeted towards noise sensitive areas.

The Eco-Management & Audit System (EMAS)

3.7.43 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. Wakefield is just beginning to start relevant work and actions towards the introduction of EMAS.

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).

3.7.44 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.

3.7.45 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 second round of the Updated Screening Assessment and their Detailed Air Quality Assessments. 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_2 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 PM10 monitoring is less clear as all Districts monitored elevated levels of PM10 during 2003. This increase in PM10 was mainly due to prevailing weather conditions and an increase in vehicle emissions.

3.7.51 Predicted emissions of NOx and PM_{10} 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 CO2 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.

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 2004 was 1.4%. Trends indicate the Plan target of less than 5.0% growth between 1999 and 2006 is likely to be met.
- Predicted CO_2 emissions for the trunk/ principal road network in West Yorkshire have increased by 1.1% from 2.787 million tonnes in 2000 to 2.817 million tonnes in 2004.
- Most Districts within West Yorkshire are developing Environmental Policies and EMAS Action Plans to reduce transport CO_2
- Local CO_2 targets 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.

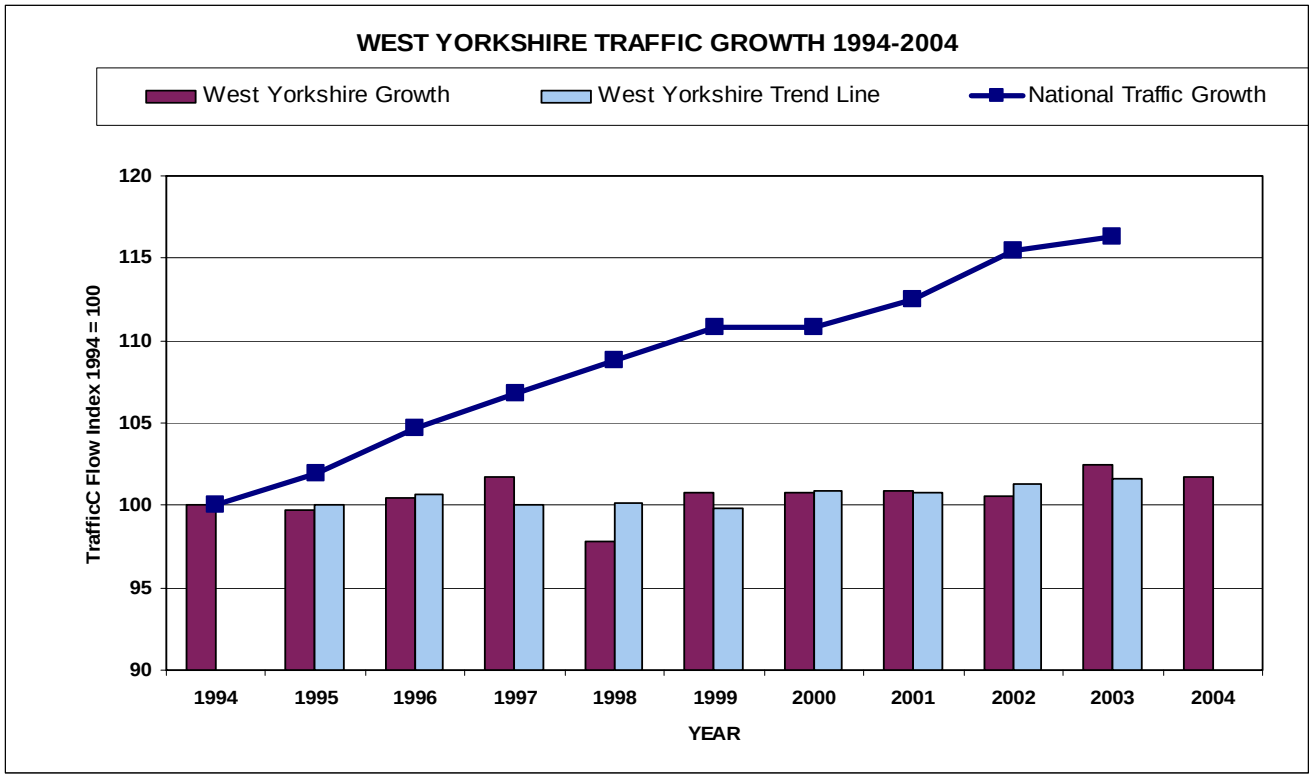


Figure 3.8.1: West Yorkshire Traffic Growth Trend 1993 - 2004

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. Whist 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

Key Indicator G4: Carbon Dioxide Emissions

3.8.7 Predicted CO_2 emissions for the trunk/ principal road network in West Yorkshire have increased by 1.1% from 2.787 million tonnes in 2000 to 2.817 million tonnes in 2004. Net CO_2 emissions have remained fairly constant. The improvements in CO_2 emissions achieved through technolgical improvements in vehicle fleets has been slightly outweighed by the increase in vehicle kilometers travelled over the period of the LTP.

3.8.8 The West Yorkshire Districts have set up working groups to audit CO_2 emissions from road transport which contributed 26% of total UK CO_2 emissions in 2002. These groups will incorporate Community Plan visions, Local Agenda 21 and EMAS related issues and appropriate Action Plans to identify the transport CO_2 burden. CO_2 emissions will be used as a climate change indicator for the strategic environmental assessment that is being prepared for LTP 2. Local CO_2 targets and objectives are being 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.
- 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 24,000 employees from companies developing or implementing travel plan initiatives across West Yorkshire have taken part in the second annual Travel to Work Survey.
- Over 150,000 pupils in 538 schools participated in the 5th 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
% Changes 1993 – 2003 (annual average change)				
	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

Year	Peak Hour (0800 to 0900)	Peak Hour Index (1999=100)	Peak Period (0700 to 1000)	Peak Period Index (1999=100)
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
% Changes 1993 - 2003 (annual average change)				
	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

Year	Peak Hour (0800 to 0900)	Peak Hour Index (1999=100)	Peak Period (0700 to 1000)	Peak Period Index (1999=100)
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
1999 Base	12,280	100	31,490	100
2001	12,230	100	31,220	99
2003	12,280	100	31,110	99
% Changes 1993 – 2003 (annual average change)				
	Am peak hour (0800 to 0900)		Am peak period (0700-1000)	
% 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
% Changes 1994 – 2004 (annual average change)				
	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
% Changes 1994 – 2004 (annual average change)				
	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.

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 key 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 Following a sucessful pilot in Leeds, detailed in the 2004 Monitoring Report, a more statistically robust monitoring regime was introduced in 2005 and mode split counts were undertaken in the main centres over 4 days for the am peak period inbound to the city centre.

3.9.11 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 2005. 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	50,123	4	<1	<1	74	16	6
Halifax	26,768	5	<1	<1	74	17	4
Huddersfield	35,664	7	<1	<1	64	23	6
Leeds	121,184	4	<1	<1	57	26	12
Wakefield	38,399	3	<1	<1	72	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) 2005 Inbound to Centres

Centre	**Total persons Crossing cordon**	**% Modal Split**					
		Walk	**Cycle**	**Motorcycle**	**Car**	**Bus**	**Train**
Bradford	14,412 +	5	<1	<1	76	16	3
Halifax	10,033	3	<1	<1	75	19	3
Huddersfield ***	13,385	4	<1	<1	67	23	5
Leeds	35,701	3	<1	<1	64	26	7
Wakefield	13,007	2	<1	<1	78	11	8
Keighley*	6,506	8	<1	<1	71	15	5
Dewsbury**	7,765	3	<1	0	80	15	4

* 2003 **1999 *** 2004 + 1400-1600

Table 3.9.7 Modal Split - Inter Peak (1400-1500) 2005 Outbound from Centres

Centre	Total persons crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
Bradford	58,715	3	<1	<1	73	17	5
Halifax	31,245	3	<1	<1	74	19	4
Huddersfield ***	37,256	5	<1	<1	69	20	5
Leeds	127,541	3	<1	<1	59	26	11
Wakefield	34,855	2	<1	<1	76	11	10
Keighley*	17,052	7	<1	<1	74	12	6
Dewsbury**	20,054	3	<1	1	81	11	8

* 2003 **1999 *** 2004

Table 3.9.8 Modal Split - PM Peak (1600 - 1800) 2005 Outbound from Centres

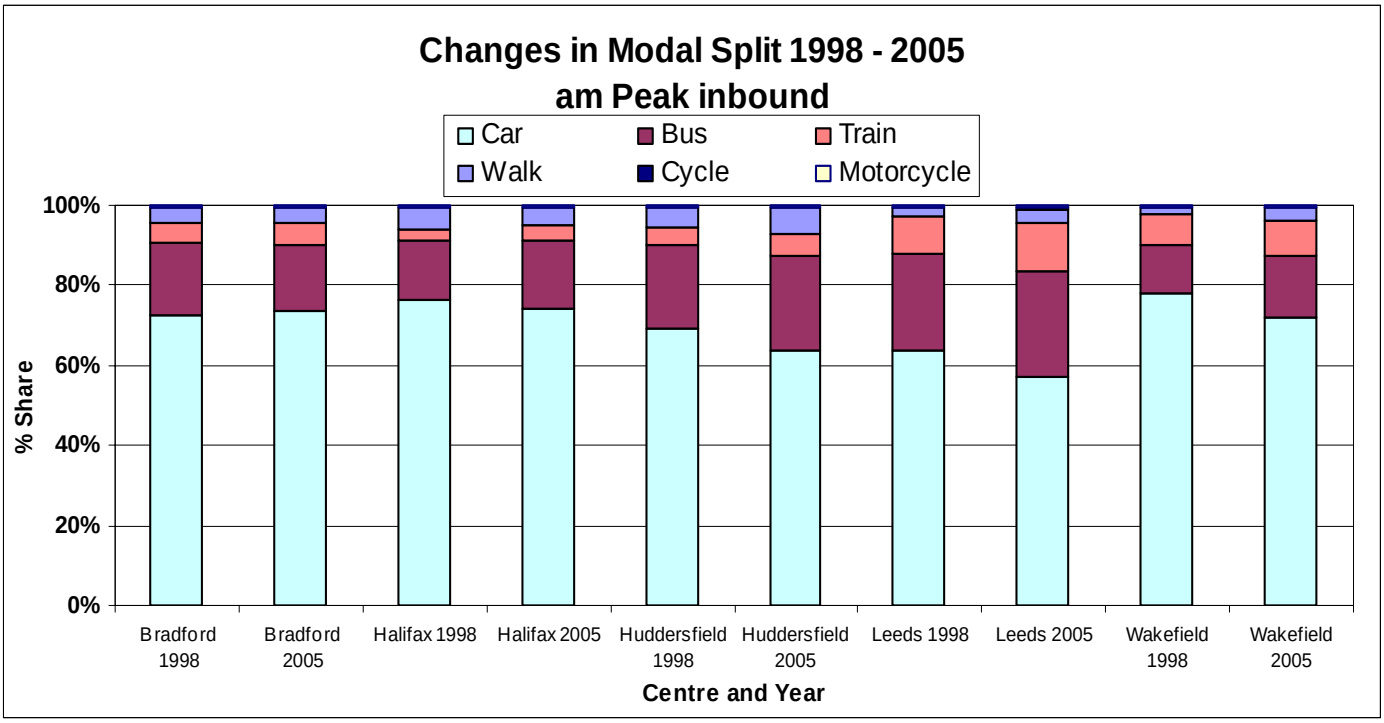


Figure 3.9.1 Changes in Modal Share AM Peak 1998 – 2005

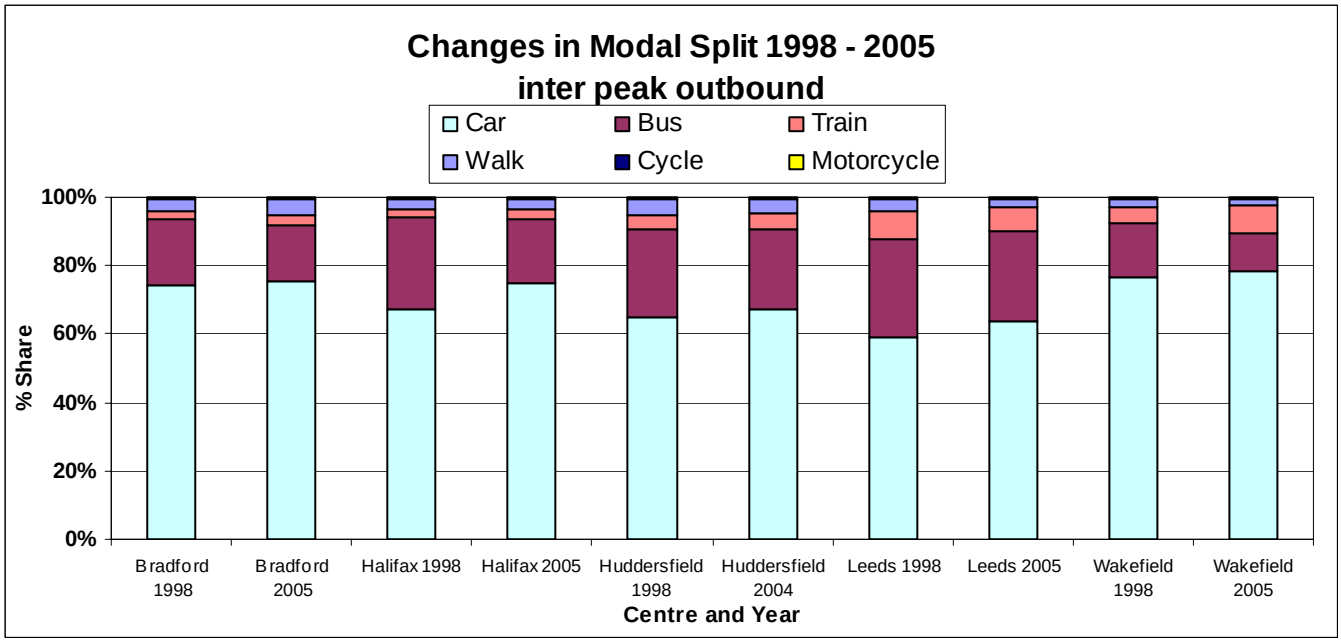


Figure 3.9.2 Changes in Modal Share Inter peak 1998 – 2004

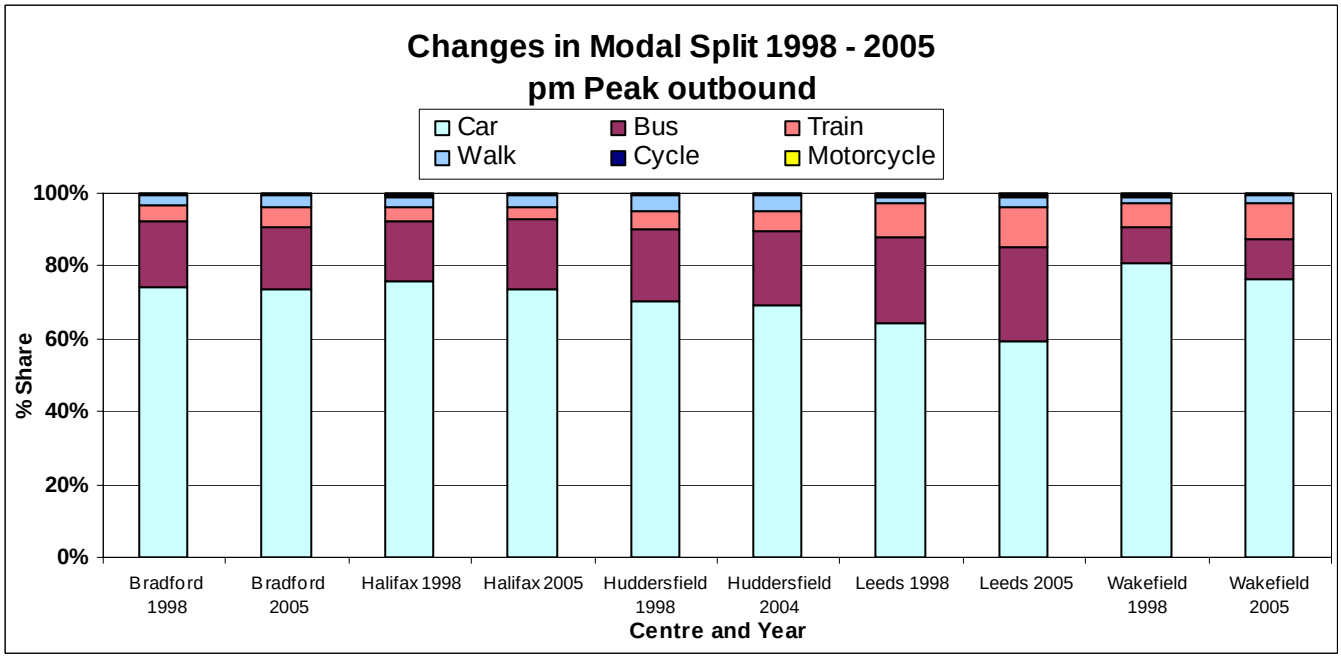


Figure 3.9.3 Changes in Modal Share PM Peak 1998 – 2004

3.9.12 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 2005 occupancy surveys are presented in Table 3.9.9. Table 3.9.10 shows the changes in average car occupancy for the major centres since 1998. Shaded cells show where car occupancy has increased over the monitoring period.

Centre	Time Period	Direction	% of Cars with One occupant	Average car occupancy
Bradford	am peak	Inbound	77.5	1.28
	inter peak	Outbound	65.2	1.47
	pm peak	Outbound	70.0	1.40
Halifax	am peak	Inbound	77.0	1.29
	inter peak	Outbound	67.4	1.42
	pm peak	Outbound	69.3	1.39
Huddersfield	am peak	Inbound	77.6	1.27
	inter peak *	Outbound	67.2	1.39
	pm peak *	Outbound	72.5	1.34
Leeds	am peak	Inbound	80.2	1.23
	inter peak	Outbound	71.9	1.32
	pm peak	Outbound	74.9	1.31
Wakefield	am peak	Inbound	61.2	1.29
	inter peak	Outbound	53.8	1.34
	pm peak	Outbound	61.6	1.35

** 2004 data*

Table 3.9.9 Car Occupancy 2005

Centre	Time Period	Direction	Average Car Occupancy	
			1998	2005
Bradford	am peak	Inbound	1.27	1.28
	inter peak	Outbound	1.45	1.47
	pm peak	Outbound	1.39	1.40
Halifax	am peak	Inbound	1.30	1.29
	inter peak	Outbound	1.41	1.42
	pm peak	Outbound	1.41	1.39
Huddersfield	am peak	Inbound	1.27	1.26
	inter peak	Outbound	1.36 *	1.39 *
	pm peak	Outbound	1.37 *	1.34 *
Leeds	am peak	Inbound	1.23	1.23
	inter peak	Outbound	1.38	1.32
	pm peak	Outbound	1.32	1.31
Wakefield	am peak	Inbound	1.32	1.29
	inter peak	Outbound	1.43	1.34
	pm peak	Outbound	1.31	1.35

** 2004 data*

Table 3.9.10 Car Occupancy Changes, 1998 to 2005

Desired Movement

3.9.13 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.

3.9.14 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

3.9.15 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

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

Background Indicator I3: All Day Commuter Parking Provision and Cost

3.9.17 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.

3.9.18 Parking inventories have been conducted in all major centres in the region to provide baseline data against which future changes can be measured. Table 3.9.11 shows the relative size of the parking study areas for each Centre, whilst inventory data are presented in Table 3.9.12.

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

Table 3.9.11 Size of Parking Survey Areas

Parking	Type	Bradford	Halifax	Huddersfield	Dewsbury	Leeds	Wakefield
Public	Council	1681	1598	2,701	909	2123	839
Short Stay	Private	2941	484	1,438	934	3057	80
	Total	4622	2082	**4,139**	**1,843**	5180	919
	Council Free	5123	344	790	501	78	61
Public	Council Pay	1527	976	1959	466	1972	1438
All Day	Private	1668	629	150	0	4872	2186
Commuter	**Total**	8318	1949	**2,899**	**967**	6922	3685
	Customer	3903	3194	1,953	1,312	1507	3754
Other	PNR	11822	2825	6,925	1,107	10415	3472
	Permit	2063	1176	1,241	174	630	1823
Total		30728	11226	**17,157**	**5,403**	24654	13653

Table 3.9.12 Parking Inventory 2005

3.9.19 The progress made by the districts in raising parking charges is shown below in Table 3.9.13. This shows the average cost of council controlled all day commuter parking, where charges are levied, and the % change in parking charges 1997 - 2005.

Centre	Cost for stay of > 8 hrs - 2004	% change in council controlled all day parking charges (for stay of > 8hrs) 1997 - 2004
Bradford	£1.83	7%
Halifax	£2.70	71%
Huddersfield	£2.80	65%
Dewsbury	£2.80	65%
Leeds	£5.80	64%
Wakefield	£4.00	80%

Table 3.9.13 Average Cost Of Council Controlled All Day Parking And Changes In Parking Charges 1997 – 2005. (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

3.9.20 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.

3.9.21 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 3.9.14 which shows the percentage of total all day parking provision in the main centres actually under council control.

Centre	% of all day parking under council control*	Average cost of council controlled all day parking
Bradford	33%	£1.83
Halifax	28%	£2.70
Huddersfield	28%	£2.80
Dewsbury	47%	£2.80
Leeds	12%	£5.80
Wakefield	22%	£4.00

Table 3.9.14 Percentage of Total All Day Parking under Direct Council Control

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

Future Requirements

3.9.22 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 I4: Cycle Monitoring

3.9.23 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.

3.9.24 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).

3.9.25 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.

3.9.26 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.

3.9.27 Cycling statistics from the national census journey to work data is presented in Table 3.9.15. 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
W Yorkshire	**10080**	**9910**	**8660**	**10145**
Base %	**100.0**	**98.3**	**85.9**	**100.6**

Table 3.9.15 Cycling to work by Resident Population 1971-2001

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

3.9.28 Table 3.9.16 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. It is possible that the large increase reported in Wakefield is a result of noise in the data rather than a reversal of the previous trends.

WEST YORKS	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	45.3	46.0	43.4	44.7	43.3	42.1	40.2	39.6	38.9
Count	171	171	171	171	171	171	171	171	171
% base	100%	101.4%	95.7%	98.6%	95.4%	92.8%	88.6%	87.4%	85.8%
BRADFORD	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	42.8	46.1	44.9	42.1	38.2	37.1	36.0	34.8	34.5
Count	29	29	29	29	29	29	29	29	29
% base	100%	108%	105%	98%	89%	87%	84%	81%	81%
CALDERDALE	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	46.0	43.1	36.0	34.9	32.3	32.2	33.1	34.0	34.0
Count	22	22	22	22	22	22	22	22	22
% base	100%	94%	78%	76%	70%	70%	72%	74%	74%
KIRKLEES	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	41.3	43.4	40.9	42.1	38.6	36.3	33.4	31.8	28.7
Count	28	28	28	28	28	28	28	28	28
% base	100%	105%	99%	102%	93%	88%	81%	77%	70%
LEEDS	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	50.2	49.6	47.1	53.3	53.7	52.0	48.5	47.8	46.5
Count	70	70	70	70	70	70	70	70	70
% base	100%	99%	94%	106%	107%	104%	97%	95%	93%
WAKEFIELD	**1994-1996**	**1995-1997**	**1996-1998**	**1997-1999**	**1998-2000**	**1999-2001**	**2000-2002**	**2001-2003**	**2002-2004**
Average	37.9	40.6	40.3	33.9	33.7	34.5	35.0	35.8	38.3
Count	22	22	22	22	22	22	22	22	22
% base	100%	107%	106%	90%	89%	91%	92%	95%	101%

Table 3.9.16: Volume of Bicycle Counts Across West Yorkshire 1994 - 2004.

3.9.29 Table 3.9.17 shows the changes in cycle flows across the main district centre cordons. The only centres showing an increase in cycling are Leeds and Huddersfield.

	1998	2000	2002	2004	2005
Bradford	423	348	346	283	309
% base	*100*	*82*	*82*	*67*	*73*
Halifax	191	202	76	165	114
% base	*100*	*106*	*40*	*86*	*60*
Huddersfield	265	204	245	190	327
% base	*100*	*77*	*92*	*72*	*123*
Leeds	1119	912	1002	1223	1321
% base	*100*	*82*	*90*	*109*	*118*
Wakefield	328	347	381	248	172
% base	*100*	*106*	*116*	*76*	*52*

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 3.9.17: Cycle volumes across monitoring cordons 1998 - 2005.

3.9.30 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. A revised monitoring programme is being developed for LTP2.

3.9.31 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

3.9.32 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

3.9.33 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 I6: Local Bus Services (Vehicle Kilometres and Passenger Journeys per year(BVPI102))

3.9.34 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 countrywide bus patronage as presented in Table 3.9.18 and Figure 3.9.4

	1998/ 1999	**1999/ 2000**	**2000/ 2001**	**2001/ 2002**	**2002/ 2003**	**2003/ 2004**	**2004/ 2005**
Million Vehicle km per year	108	107	107	107	107	107*	107*
Passenger Journeys per year (millions)	203.0	199.4	201.6	202.0	203.6	199.1	195.7

* Estimate

Table 3.9.18 Local Bus Service km Operated and Number of Passenger Journeys

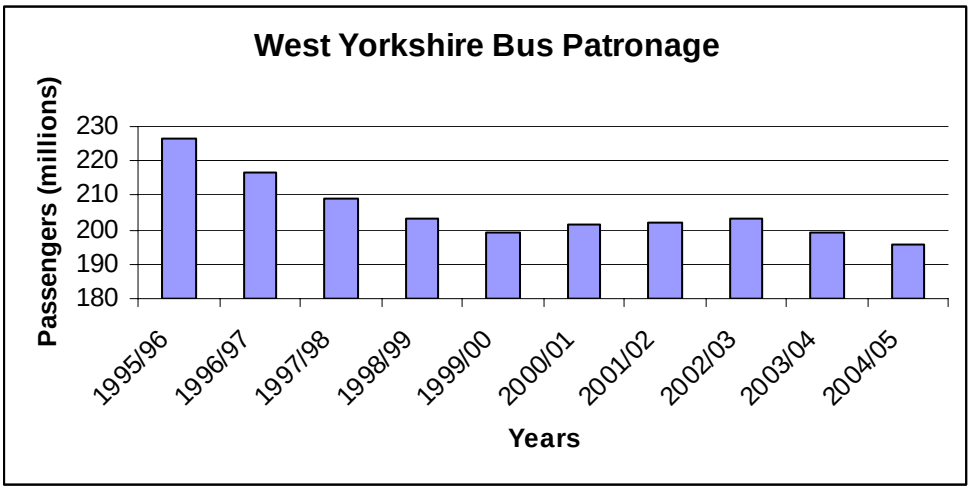


Figure 3.9.4 West Yorkshire Bus Patronage, 1995/96 to 2004/05

Desired Movement

3.9.35 There are a number of factors affecting bus patronage. The fuel crisis and problems on the railways (the redevelopment of Leeds station; floods; the Hatfield disaster and driver/guard strikes) may have contributed to the patronage increase in the early part of the LTP period. At the same time, lack of funding for the Yorkshire Bus Initiative (YBI – major scheme), the YorCard smartcard scheme and the A65 Quality Bus Initiative have hampered attempts to maintain the growth in patronage. This has been demonstrated by the fact that patronage growth has continued on LTP funded QBC. For example the East Leeds and Bradford Manchester Road Quality Bus Initiatives saw patronage increases of 2.5% and 1.3% respectively during 2004/5.

3.9.36 Higher than anticipated fare increases due to higher insurance, fuel costs and drivers wages has fed through into passenger journey decline. Pressures on revenue budgets have also resulted in increases in concessionary fares. The increase in bus operating costs has also resulted in increased tender prices and Metro having to reduce the tendered service mileage.

3.9.37 Consultation is underway on a new West Yorkshire Bus Strategy, which will form part of LTP2. This proposes greater intervention in the market to deal with issues that have led to patronage decline.

3.9.38 Every effort is being made to address the issue of declining patronage. At this stage forecasts from the SIMBUS bus patronage model suggest that patronage can be increased 5% by 2010/11 and 10% by 2015/6 from a base year of 2004/5.

Future Requirements

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

Key Indicator I6a: Rail Patronage

3.9.40 Metro is in the process of introducing a new system for rail surveys. Information from the new system is not yet available. For this year, patronage has been estimated using the relationship between morning peak arrivals at Leeds station and overall travel in West Yorkshire over the past 12 years. Statistical analysis of these data shows a strong correlation between morning peak arrivals at Leeds Station and West Yorkshire wide patronage levels. This relationship gives confidence in the estimates.

Desired Movement

3.9.41 Rail patronage has increased by 9% from 19.2 million last year to 21.1million this year, an increase of 29% since the beginning of the LTP. This indicates that the target of a 25% increase in patronage by 2006 has been met.

3.9.42 The opening of Glasshoughton station, and ongoing investment in rail facilities and rolling stock refurbishment, have helped meet this target and enable rail to support economic growth in Leeds and other centres.

Future Requirements

3.9.43 We are on track to achieve patronage growth of 25% during the current LTP period. Although capacity is still the major constraint preventing rail playing a greater role in supporting the economy..

Background Indicator I7: % of Users Satisfied With Local Provision of Public Transport Information (BVPI103)

3.9.44 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%.

3.9.45 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).

3.9.46 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).

3.9.47 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 3.9.19: (BVPI103) Percentage of Users Satisfied with Local Provision of Public Transport Information

Desired Movement

3.9.48 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

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

Background Indicator I8: Percentage of Users Satisfied with Local Bus Services (BVPI 104)

3.9.50 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 3.9.20: (BVPI104) Percentage of Users Satisfied with Local Bus Services

Desired Movement

3.9.51 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

3.9.52 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

3.9.53 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 towards the target of 77% by 2004/05 is shown in Table 3.9.21.

SS1a	Spring 2001	Autumn 2001	Autumn 2002	Autumn 2003	Autumn 2004
Percentage of users satisfied with Local Rail Services	61% Baseline	67%	77%	72%	76%

Table 3.9.21 Percentage of Users Satisfied with Local Rail Services

Desired Movement

3.9.54 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

3.9.55 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

3.9.56 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.

3.9.57 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. In 2005, 66,000 (94%) 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

3.9.58 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

3.9.59 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

3.9.60 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 3.9.22 shows 6.6% reduction in the age of bus fleet in West Yorkshire since 1999.

	March 1999	March 2000	March 2001	March 2002	March 2003	March 2004	March 2005
Age of bus fleet	9.2	8.7	-	-	9.2	9.4	8.6

Table 3.9.22 Age of Bus Fleet

Desired Movement

3.9.61 The average age of the bus fleet in West Yorkshire was 8.6 years in 2005. Continued investment by operators in partnership with West Yorkshire authorities should result in progress towards this target.

Future Requirements

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

Key Indicators I12: Bus Punctuality & I13: Bus Reliability

3.9.63 Bus punctuality and reliability were first reported as LTP targets in the 2002/3 APR. Metro monitors the performance of bus services (both commercial and tendered) and reports the monitoring results to operators as part of a partnership approach to monitoring information.

	2002/3	2003/4	2004/5
Bus Punctuality: • 95% of services to run no more than 5mins late and 1min early per annum	86.1/1.7	85.7/1.5	84.4/2.4
Bus Reliability: • No more than 0.5% of services to be cancelled annually	1.4	2.1	1.7

Table 3.9.23 Bus Punctuality and Bus Reliability

Desired Movement

3.9.64 Punctuality has declined again this year but reliability has improved. Both are still below target. The achievement of these targets is predominantly outside the control of Metro and the district authorities. This is demonstrated by the fact the most commonly reported reasons for cancelling services are dirver shortages and vehicle breakdowns. Although the provision and enforcement of bus priority measures does have an important role.

Future Requirements

3.9.65 The Bus Partnership Forum have recommended that Punctuality Improvement Partnerships (PIPs) be formed between operators, transport authorities/Passenger Transport Executives and highways authorities to identify the causes of punctuality and reliability problems and to pose solutions.

3.9.66 Metro's PIPs will replace and build upon the work already undertaken by Metro for many years to improve performance and develop Joint Action Plans with

operators and highway authorities. PIPs are expected to be in place by the end of 2005/6.

3.9.67 The "yournextbus" Real Time Passenger Information (RTPI) scheme is currently being rolled out across bus fleets in West Yorkshire and is already available to some of the participating operators. This will have a number of positive effects on both punctuality and reliability as operators will be able to base schedules on better information and improve their service management. The technology will be used to provide bus priority at signals when a service is delayed and identify sources of delay.

3.9.68 Metro's work with operators through WYTESA aims to improve bus driver recruitment, retention and customer care. This should have a direct affect on the reliability target as driver shortages cause most service cancellations.

3.9.69 RTPI is programmed to be launched later in 2005 which will assist in improving reliability and punctuality. PIP's will be in place by the end of 2005/06.

Background Indicator I14 : Travel to School

3.9.70 The annual "hands-up" travel to school survey is now in its 5th year. In 2004 over 150,000 pupils from over 530 schools in West Yorkshire took part. Table 3.9.24 shows the changes in mode share and the increase in school and pupil participation since the first survey in 2000.

	Walk	Car	Bus	Bike	Other	No of Schools	Pupils	Schools in Area
2004	71,600	57,602	20,552	797	1,080	538	151,770	901
	47%	*38%*	*14%*	*<1%*	*<1%*	*60%*		
2000	62,633	45,079	19,880	490	389	475	128,471	934
	49%	*35%*	*15%*	*<1%*	*<1%*	*51%*		

Table 3.9.24 Mode Split From The Annual Travel To School Survey 2000 and 2004

Desired Movement

3.9.71 It is anticipated that the impact of school travel planning initiatives and the My Bus project will reduce dependence on the private car for school travel.

Background Indicator I15: Travel to Work

3.9.72 The Travel to Work survey initiated by the West Yorkshire Travel Plan Officers Group in 2004 took place again in March 2005. This year a total of over 24,000 employees took part from companies developing or implementing travel plans across the county.

3. 9.73 The results of the March 2005 survey are shown below in Figure 3.9.5

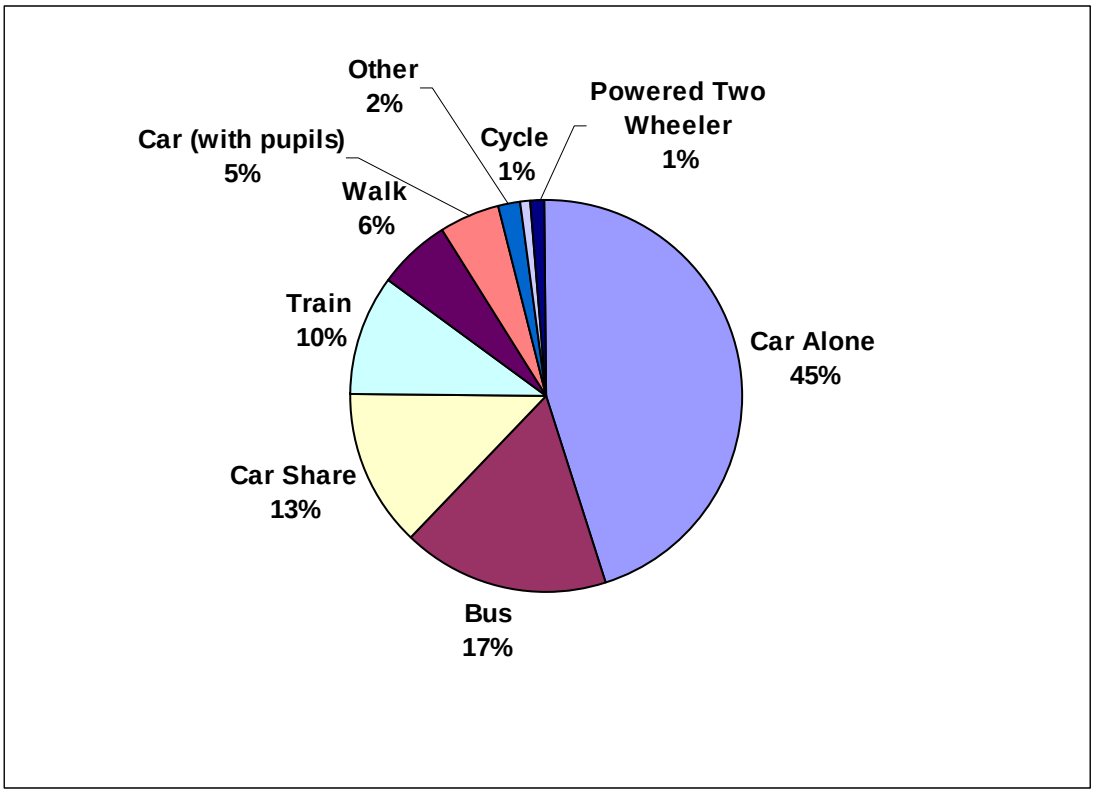


Figure 3.9.5 West Yorkshire Travel to Work Survey 2005 – Mode Share

ANNEXES

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

B. ProForma B : Progress Towards Local Targets

ANNEX A : PROFORMA A – PROGRESS TOWARDS DEPARTMENT FOR TRANSPORT CORE INDICATORS

Core Indicator	Definitions		Year	Value	Year Type[3] (Enter C for Calendar Year and F for Financial Year)	Actual and Trajectory Data[2]												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.
Road Condition (% where structural maintenance should be considered)[4]	(1) principal roads - BV96	Base Data[1]	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	No Clear Evidence		2010/11 target methodology based on 1 years work to represent zero backlog (20 year return period)
		Target Data[2]	2006/07	10%		Actual Figures	36.50%	32.30%	27.80%	12.11%	36%									
		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[1]	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		UKPMS CVI's and realistic approach to eradicating backlog
		Target Data[2]	2010/11	5%		Actual Figures	11.20%	10.40%	12.90%	13.37%	12.80%									
		Units		Percentage		Trajectories	11.20%	11.20%	11.20%	11.20%	12.00%	10.00%	9.00%	7.00%	6.00%	5.00%	5%			
	(3) unclassified roads - BV97b	Base Data[1]	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 Clear Evidence		Base Year 2001/02. Straight line improvement. NB Not achievable without increase in funding. UKPMS CVI's and realistic approach to eradicating backlog
		Target Data[2]	2010/11	2%		Actual Figures	no data	22.60%	26.20%	15.20%	20.40%									
		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[5]	Thousands of bus passenger journeys (i.e. boardings) per year in the authority - BV102	Base Data[1]	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	No		Base Year 1999/2000 BV102 methodology.
		Target Data[2]	2006/07	209,370		Actual Figures	201,600	202,000	203,500	199,100	195,700									
		Units		Thousands		Trajectories	200,560	201,140	201,720	202,000	202,300	205,900	209,400							
Bus passenger satisfaction[6]	Percentage of bus users satisfied with local bus services - BV104u	Base Data[1]	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[2]	2004/05	80%		Actual Figures	54%	no data	no data	no data	no data									
		Units		Percentage		Trajectories	54%	58%	62%	66%	72%	75%	80%							
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[1]	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[2]	2006	200		Actual Figures	94	91	87	86	87									
		Units		Indexed to 100		Trajectories	140	150	160	170	180	190	200							
Number of deaths and serious injuries (all ages)[7]	Number of people killed or seriously injured on roads in the authority	Base Data[1]	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[2]	2010	890		Actual Figures	1299	1331	1319	1238	1215									
		Units		numbers		Trajectories	1397	1355	1313	1271	1229	1187	1128	1068	1009	949	890			
Number of children killed and seriously injured[7]	Number of children (aged less than 16) killed or seriously injured in the authority	Base Data[1]	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[2]	2010	136		Actual Figures	230	227	161	203	148									
		Units		numbers		Trajectories	254	244	239	229	214	204	190	177	163	150	136			
Light rail passenger journeys[8]	Thousands of light rail passengers per year	Base Data[1]				Year														Not Applicable to this Authority
		Target Data[2]				Actual Figures														
		Units				Trajectories														
% of rural households within 13 minutes walk of an hourly or better bus service[8]	% of rural[9] households within 13 minutes walk of an hourly or better bus service or % of rural[9] households within 800 metres of an hourly or better bus service (please state which)	Base Data[1]	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		Percentage of Households within 800 metres. Accessibility mapping from OS and METRO data and current bus timetables.
		Target Data[2]	2006	90%		Actual Figures				88%	94%									
		Units		percentage		Trajectories					89%	90%								

ANNEX B : PROFORMA B – PROGRESS TOWARDS LOCAL TARGETS

				LOCAL TARGETS : Actual and Trajectory Data											
Local Objectives contained in LTP	Local Performance Indicators contained in LTP	Local targets or outcomes contained in LTP	Baseline Date	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	On track/not on track?	Source of Data
Safety, Security & Health	**D2 Casualty Rates for different road user groups**	**L13** : 5% reduction in slight casualty rate by 2005/06	1994/98 Av 81.9 cas. Per 100mvkm	79.5	76.9	74.9	70.7	77.8	77	76.1	75.3	74.5	73.7	On track	Stats 19 and DfT flow data
		L9 : 50% reduction in number of pedestrian KSI's by 2010/11	1994/98 av 525	378	373	340	360	394	368	342	315	289	263	On track	Stats 19
		L7 : 20% reduction in number of cyclist KSI's 2005/06	1994/98 av 106	91	62	101	78	85	81	77	72	68	64	On track	Stats 19
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	no data	36,540	35,790						On track	ATC data : biennial central cordon survey
		L3 : Less than 3% increase in AM peak traffic (1999-2006)into: a) Bradford	1999 18,550	18,690	no data	18,240	no data	19,110						On track	ATC data : biennial central cordon survey
		b) Halifax	1999 9,360	8,920	no data	9,480	no data	9,640						On track	ATC data : biennial central cordon
		c) Huddersfield	1999 12,280	12,250	no data	12,280	no data	12650						On track	ATC data : biennial central cordon
		d) Wakefield	2000 10,380	no data	11,750	no data	10,844	10,690						On track	ATC data : biennial central cordon

				Actual and Trajectory Data											
Local Objectives contained in LTP	Local Performance Indicators contained in LTP	Local targets or outcomes contained in LTP	Baseline Date	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	On track/not on track?	Source of Data
Halt the Overall decline in journeys made by foot	**I1 Modal split data on urban area cordons**	L8 To maintain pedestrian flows at at 1998 levels	1998 AM Peak 7660 (100) Inter Peak 2960 (100) PM Peak 5350 (100)	AM : 112 IP : 98 PM : 167	no data	AM : 128 IP : 91 PM : 172	no data	AM : 100.0 IP : 100.0 PM : 100.0						On track	Cordon Surveys
Encourage a greater use of PT	**I12 Bus Punctuality**	L14 : 95% of services to run no more than 5 minutes late & 1 minute early per annum	2002/03 86.1% : 1.7%	no data	86.1; 1.7	85.7; 1.5	84.4; 2.4	95% : 0%						Not on track	Roadside Monitoring
	I13 Bus Reliability	L15 : No more than 0.5% of services to be cancelled annually	2002/03 1.4%	no data	1.40%	2.10%	1.70%	0.50%						Not on track	Roadside Monitoring
	I6a Rail Patronage	L5: Total rail patronage to grow by 25% by 2006	1999/00 16.3 million	16.1	16.6	19.2	21.1	20.1						On track	On train surveys (1% sample grossed up to scheduled rail
Environmental Quality	**F1 Air Quality**	**L10** : Not to exceed the annual average NO2 standard of 40ug/m3	2000 Bfd 38 Cal 32 Kirk 34 Lds 37 Wak 31	Bfd 44 Cal 38 Kirk 32 Lds 36 Wak 32	Bfd 36 Cal 34 Kirk 34 Lds 38 Wak 38	Bfd 38 Cal 32 Kirk 31 Lds 40 Wak 42	Bfd 32 Cal 29 Kirk 32 Lds 31 Wak 42	<40 all centres						On track	Permanent Monitoring stations/sites
Greenhouse Gas Emissions	**G1 Daily traffic flow**	**L1** : Daily traffic growth 1999-2006 not to exceed 5%	1999 100	98	99.8	101.6	101	105						On track	ATC data : 93 sites