



# **West Yorkshire Local Transport Plan 2 Monitoring Report 2010**

**September 2010**



# WEST YORKSHIRE LOCAL TRANSPORT PLAN

2006/07 – 2010/11

## 2010 MONITORING REPORT

The West Yorkshire Local Transport Plan Partnership

September 2010





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## CHAPTER 1 INTRODUCTION

1.1 This report provides detailed information on the 46 key and background indicators which have been identified to effectively monitor both the Local Transport Plan (LTP) and associated national and local strategies. 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 1.1

1.2 Where relevant the appropriate National Indicators (NI) are included. Progress is also reported against the Department for Transport's (DfT) Mandatory Indicators.

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

1.4 The remainder of this report is structured around indicators developed to monitor the 4 shared priorities of the LTP plus Asset Management with an initial section devoted to monitoring economic changes.

1.5 The data presented updates that given in the Monitoring Report which accompanied the West Yorkshire Local Transport Plan 2 Progress Report for 2008 and an indication of progress towards LTP2 targets is also provided.

Ref	Indicator (DfT Mandatory, <i>Local Key</i> , or Background Trend Indicator)	LTP2 Objective (* )	Additional Shared Priority for Key Indicators (**)
<b>ECONOMIC BACKGROUND</b>			
E1	Unemployment Rates	O1	
E2	Local Trade Levels/Vacant Premises	O1	
E3	Central Area Rental Values	O1	
E4	Town Centre Footfall	O1	
<b>SHARED PRIORITY : DELIVERING ACCESSIBILITY</b>			
A1	<b>Non Car Travel Time to Hospitals</b>	O2	C,AQ
A2	<b>Bus Service Punctuality</b>	O2, O3	C,AQ
A3	<b>Satisfaction with Bus Services</b>	O2, O3	C,AQ
A4	<b>Cycle Flows</b>	O3	S,C
A5	<b><i>Satisfaction with LTP funded Public Transport Facilities</i></b>	O2	C,AQ
A6	AccessBus Patronage	O2	
A7	Pedestrian Crossing Facilities	O2	
A8	Age of Bus Fleet	O2,O3	
<b>SHARED PRIORITY : TACKLING CONGESTION</b>			
C1	<b>Average Journey Time Per Person Per Mile on Key Routes (NI 167)</b>	O3	A,S,AQ
C2	<b>Town/City Centre Morning Peak Period Traffic Flows</b>	O3	A,AQ
C3	<b>Mode Share for Journeys to School (NI 198)</b>	O3	A,S,AQ
C4	<b>Public Transport Patronage (NI 177)</b>	O3	A,S,AQ
C5	<b><i>AM Peak Cycle Trips to Centres of Leeds, Wakefield and Halifax</i></b>	O3	A,S,AQ
C6	<b><i>AM Peak Period Modal Split to Main Urban Centres</i></b>	O3	A,S,AQ
C7	<b><i>Peak Period Rail Patronage to Leeds</i></b>	O3	A,S,AQ
C8	<b><i>Quality Bus Corridor Patronage</i></b>	O3	A,S,AQ
C9	Peak Period Journey Time Variability on Key Routes	O3	
C10	% of Network Below Reference Speed in Peak Periods	O3	
C11	Peak Spreading Index	O3	
C12	Morning Peak Period Car Occupancy	O3	

Ref	Indicator (DfT Mandatory, <i>Local Key</i> , or Background Trend Indicator)	LTP2 Objective (*)	Additional Shared Priority for Key Indicators (**)
C13	Mode Share for Travel to Work	O3	
C14	Travel Distance to Work	O3	
C15	Generalised Costs for Private and Public Transport	O3	
C16	Cost of Travel	O3	
C17	All Day Commuter Parking Supply & Cost	O3	
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S1	<b>All Road User Casualty Trends (NI 47)</b>	O4	
S2	<b>Casualty Trends for Children (NI 48)</b>	O4	
S3	<b>Slight Casualty Rates</b>	O4	
S4	<b>Casualty Trends for Different Road User Groups</b>	O4	
S5	Town Centre Car Park Spaces with CCTV Cameras	O4	
S6	Rail/Bus Stations with CCTV Cameras	O4	
S7	Town and City Centre Streets with CCTV Cameras	O4	
<b>SHARED PRIORITY : BETTER AIR QUALITY</b>			
AQ1	<b>NO<sub>2</sub> Levels in AQMA's</b>	O5	C
AQ2	<b>Area Wide Traffic Flows</b>	O5	C
AQ3	<b>Area Wide Road Transport Emissions - NO<sub>x</sub>, CO<sub>2</sub></b>	O5	C
AQ4	Air Quality Monitoring in Town and City Centres	O5	
AQ5	Area Wide Road Transport Emissions : PM <sub>10</sub>	O5	
AQ6	Low Noise Road Surfacing	O5	
<b>SHARED PRIORITY : ASSET MANAGEMENT</b>			
AM1	<b>Principal, Non Principal and Unclassified Road Condition (NI 168, 169)</b>	O6	C, S
AM2	<b>Footway Condition</b>	O6	C,S
AM3	<b>Structures with Weight and/or Width Restrictions</b>	O6	A,S
AM4	<b>Bus Shelters Meeting Modern Standards</b>	O6	A,S

**\* LTP2 Objectives**

- O1. To develop and maintain an integrated transport system that supports economic growth in a safe and sustainable way and enhances the overall quality of life for the people of West Yorkshire
- O2. To improve access to jobs, education and other key services for everyone
- O3. To reduce delays to the movement of people and goods
- O4. To improve safety for all highway users
- O5. To limit transport emissions of air pollutants, greenhouse gases and noise
- O6. To improve the condition of the transport infrastructure

**\*\* Shared Priorities**

- A Delivering Accessibility
- C Tackling Congestion
- S Safer Roads
- AQ Better Air Quality
- M Effective Asset Management

*Table 1.1. DfT Mandatory, Local Key and Background Trend Indicators, Local Transport Plan Objectives and Shared Priorities*

## CHAPTER 2 ECONOMIC BACKGROUND

### Role of Transport

2.1 The Regional Economic Strategy 2006-2015 for the Yorkshire and Humber region recognises that transport is a critical issue for the region which affects business success, quality of life and the environment. The Strategy identifies that a strong economy needs good sustainable transport connections and to make the best of the environment and infrastructure. Transport is strongly linked to all of the objectives of the Strategy as it supports business development, access to jobs and services and the development of towns, cities and rural communities.

2.2 The Regional Spatial Strategy (RSS) for Yorkshire and the Humber to 2026 sets out the policies in relation to the development of land within the region. The RSS seeks to help the region become more competitive, meet its housing needs and address its environmental and transport pressures in ways that are sustainable. For the sub region the plan states that plans, strategies, investment decisions and programmes for the Leeds City Region should support the roles of Leeds and Bradford as major engines of the regional economy, spread the benefits of the Leeds economy to other parts of the sub region, support the indigenous growth of the economies of the sub region and help to connect disadvantaged communities to job opportunities.

2.3 The RSS embodies the Regional Transport Strategy (RTS) which seeks to integrate transport with land-use planning and other policy areas. The RTS identifies regional priorities for transport investment and management which contribute to achieving the wider objectives of the plan.

### Background Indicator E1: Claimant Count and Unemployment Rates

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.

2.5 Recent trends in unemployment at national level, regional level and for the individual centres in West Yorkshire are indicated in Table 2.1. The figures show the rates calculated as proportion of estimated resident population who were of working age and economically active. From 2010 the rate is based on those residents who were aged 16-64.

2.6 The figures indicate a significant increase in unemployment over the last year reflecting the impact of the national recession.

Area	2002	2003	2004	2005	2006	2007	2008	2009	2010
Great Britain	2.7	2.7	2.5	2.4	2.7	2.5	2.2	4.1	4.1
Yorkshire and the Humber	3.1	3.0	2.7	2.5	3.0	2.8	2.5	4.7	4.8
Bradford	4.0	3.9	3.3	2.9	3.5	3.4	3.1	4.9	5.1
Calderdale	3.1	3.0	2.5	2.2	2.8	2.9	2.6	4.9	4.9
Kirklees	2.6	2.6	2.2	2.1	2.5	2.6	2.5	4.5	4.7
Leeds	2.9	3.0	2.6	2.7	3.1	2.9	2.6	4.7	4.9
Wakefield	2.8	2.7	2.3	2.3	2.8	2.5	2.3	4.6	4.5

Rates from 2010 onwards are calculated using the mid-2009 resident population aged 16-64.

*Table 2.1 Unemployment Rates Calculated as Proportion of Estimated Resident Population of Working Age. March Figures*

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. Improving end to end journey times and bringing business together helps reduce travel related non-productive time. 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.

2.8 Monitoring of economic activity and working patterns in West Yorkshire will continue throughout LTP2.

### **Background Indicator E2: Local Trade Levels / Vacant Premises**

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.

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 2.2 shows the latest data on the availability and



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

District	Year	Floor space		Vacant Floor		Vacant Units	
		000m <sup>2</sup>	No.	000m <sup>2</sup>	%	No.	%
Bradford	2000	--	--	--	--	--	--
	2001	131	515	14	11	108	21
	2002	--	--	--	--	--	--
	2003	112	499	19	17	116	23
	2004	--	517	--	--	113	21.9
	2005	--	533	--	--	132	24.8
	2006	--	478	--	--	78	16.3
	2007	--	477	--	--	57	12.0
	2008	--	480	--	--	62	13.0
	2009	--	468	--	--	69	14.9
Halifax	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	--	--	--	--	--	--
	2004	--	--	--	--	--	--
	2005	--	--	--	--	--	--
	2006	--	--	--	--	--	--
	2007	99	762	9	9.2	99	13
	2008	92	925	9	10.0	122	13.2
	2009	-	-	-	-	-	-
Huddersfield	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
	2006	86	719	11.0	12.0	77	10.7
	2007	86	718	9.1	10.6	70	9.7
	2008	na	na	na	na	na	na
	2009						
	Leeds	2000	180	956	15.8	8.8	125
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
2006		208	1011	26.5	12.8	147	14.5
2007		210	1021	31.6	15.0	176	17.2
2008		Na	Na	Na	na	Na	Na
2009		213	980	39.9	18.7	227	23.2
Wakefield	2000	75	574	9	12.6	51	8.5.7
	2002	72	556	6	7.7	32	4.1
	2004	72	555	4	5.1	23	1.4
	2005	73	556	1	1.1	8	1.6
	2006	72	556	1	1.3	9	2.9
	2007	72	556	1	1.5	16	3.9
	2008	72	556	8	10.6	28	3.9
	2009	--	--	--	--	--	--

*Table 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.*

2.11 An increase in the provision of retail trading space and a decrease in vacancy rates for floor space and units should occur as the vitality of local centres improves.

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 E3: Central Area Rental Values

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. Data presented in Tables 2.3 to 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.

2.14 The VOPMR underwent a major review in Jan 2010. Retail valuations are now only carried out for city centre shops and out of town non food retail, and only within Leeds. Offices and industrial values for smaller centres have been dropped from the report

TYPE	YEAR	LOCATION				
		Bradford	Halifax	Huddersfield	Leeds	Wakefield
1 25-75 m <sup>2</sup>	Jul 04	66	60	65	65	60
	Jan 06	65	65	70	70	66
	Jan 07	70	70	75	75	70
	Jan 08	68	68	75	75	72
	Jan 09	55	55	60	60	58
	Jan 10	na	na	na	na	na
2 150 – 200 m <sup>2</sup>	Jul 04	47	55	60	65	60
	Jan 06	60	60	65	65	64
	Jan 07	65	65	70	68	65
	Jan 08	60	60	70	68	68
	Jan 09	48	48	56	55	55
	Jan 10	na	na	na	na	na
3 circa 500m <sup>2</sup>	Jul 04	47	45	50	50	50
	Jan 06	53	50	55	55	60
	Jan 07	52.5	52.5	60	58	58
	Jan 08	53.0	53.0	65	57	55
	Jan 09	42	42	52	46	44
	Jan 10	na	na	na	na	na
4. Circa 1000 m <sup>2</sup>	Jul 04	41	40	45	50	50
	Jan 06	48	45	50	55	50
	Jan 07	48	48	55	55	50
	Jan 08	48	48	55	52	52
	Jan 09	38	38	44	41	41
	Jan 10	na	na	na	na	na
5 Multi Storey	Jul 04	--	23	25	--	--
	Jan 06	--	25	30	--	--
	Jan 07	--	30	35	30	--
	Jan 08	--	30	35	30	--
	Jan 09	--	24	28	24	--
	Jan 10	na	na	na	na	na

Source : Valuation Office Property Market Report

Table 2.3: Rental Values for Industrial Premises

Rental Values £/m															
Location	Type 1 <sup>1</sup> ZP1					Type 2 <sup>1</sup> ZPI					Type 3 <sup>1</sup> GIA				
	July 04	Jan 07	Jan 08	Jan 09 <sup>2</sup>	Jan 10	July 04	Jan 07	Jan 08	Jan 09 <sup>2</sup>	Jan 10	July 04	Jan 07	Jan 08	Jan 09 <sup>2</sup>	Jan 10
Bradford	1,300	1,300	1,400	1,200	na	750	750	775	660	na	200	200	200	170	na
Halifax	1,000	1,200	1,300	1,100	na	500	550	600	500	na	150	200	200	170	na
Huddersfield	1,100	1,350	1,500	1,275	na	550	650	675	575	na	225	200	200	170	na
Leeds	3,000	3,250	3,350	2,850	na	800	850	875	750	na	230	245	250	210	na
Wakefield	1,200	1,250	1,200	1,000	na	550	600	600	500	na	150	180	180	155	na

Note: i). Property types as defined in Valuation Office Property Market Report  
 ii). 2009 Figures are provided by Valuation Office as an approximate guide only due to a lack of evidence caused by poor market conditions.

Table 2.4: Rental Values for Shops

Rental Values £/m <sup>2</sup>															
Location	Type 1 <sup>1</sup>					Type 2 <sup>1</sup>					Type 3 <sup>1</sup>				
	July 04	Jan 07	Jan 08	Jan 09	Jan 10	July 04	Jan 07	Jan 08	Jan 09	Jan 10	July 04	Jan 07	Jan 08	Jan 09	Jan 10
Bradford	120	115	115	90	na	120	120	120	95	na	120	85	90	70	na
Halifax	110	150	115	90	na	110	150	155	125	na	80	100	105	85	na
Huddersfield	120	160	165	130	na	120	160	170	135	na	85	110	115	90	na
Leeds	190	230	230	185	na	220	230	235	190	na	175	195	195	155	na
Wakefield	145	145	145	115	na	150	150	150	120	na	120	110	110	90	na

Note: i). Property types as defined in Valuation Office Property Market Report  
 ii). 2009 Figures are provided by Valuation Office as an approximate guide only due to a lack of evidence caused by poor market conditions.

Table 2.5: Rental Values for Offices

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

2.16 Information on this indicator will be gathered from the VOPMR and will continue to be reported in future years against the base values of 2004. However, due to a lack of reliable evidence the figures quoted for 2009 are given as an approximate guide. There is little reliable data available for 2010 due to uncertain market conditions.

2.17 In addition the Valuation Office is currently reviewing its indicators to determine whether they are fit for purpose in the 21<sup>st</sup> Century.

**Background Indicator E4: Pedestrian Activity**

2.18 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.

2.19 Table 2.6 shows the change since 2004, the base year for LTP2. Data collection has been suspended in Wakefield due to the major redevelopment of the city centre taking place.

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

2.21 Pedestrian activity will continue to be monitored and will be presented on an annual basis. No data are available for 2010 due to uncertain market conditions.

**Commentary**

2.22 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 this broad-based audit process, we can identify strengths and weaknesses of the town centres.

2.23 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 vital in underpinning strategic decisions about the continued development of the centres.

2.24 It is likely that a range of local indicators will be developed to replace the VOPMR. These should reflect the impact of measures funded through the local transport plan expenditure and support more comprehensive town centre audits.

<b>Centre</b>	<b>Date</b>	<b>Flow</b>	<b>Index</b>
<b>Bradford</b>	Nov-2004	486,200	100
	2005	476,700	98
	2006	440,900	91
	2007	421,800	85
	2008	427,200	88
	2009	na	na
<b>Halifax **</b>	Sept-2004	704,500 **	100
	2005	705,300 **	100
	2006	730,800**	104
	2007	714,700	101
	2008	579,800	82
	2009	761,666	108
<b>Huddersfield</b>	Apr-2004	81,700	100
	2005	85,900	105
	2006	84,900	104
	2007	88,700	109
	2008	88,500	108
	2009	84,300	103
<b>Leeds</b>	May / June 2004	573,400	100
	2005	616,000	107
	2006	594,000	104
	2007	626,700	109
	2008	620,580	108
	2009	na	na
<b>Wakefield</b>	March-2004	311,000	100
	2005	304,700	98
	2006	331,800	107
	2007	308,300	99
	2008	341,000	110
	2009	na	na

Notes: No comparison can be made between centres as different survey methodologies apply.

\*\* Halifax data rebased following changes to methodology in 2007

**Table 2.6 Pedestrian Activity In Centres**

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## CHAPTER 3 DELIVERING ACCESSIBILITY

### Introduction

3.1 The following 8 indicators have been developed to monitor our progress towards the “Delivering Accessibility” strategy in LTP2. Progress towards LTP2 targets will be measured using 4 mandatory and 1 local key indicators. The remaining three indicators are background trend indicators which will help us assess overall progress for this key strategy area.

### Mandatory Indicator A1 : Non Car Travel Times to Hospitals

3.2 The Accession software has been used to calculate accessibility statistics for each 2001 census output area in West Yorkshire. Public Transport information is based on data supplied by DfT.

3.3 The base year (2005) calculation for this indicator shows that 89.5% of households without access to a car are within 30 minutes of a hospital. By 2006 this proportion had fallen to 82% with a further falls to 78% in 2007 and 75.4% in 2008. The downward trend has continued with the figure at March 2009 being 70.2%. The proportion for March 2010 is 71.3%, slightly improved in comparison with March 2009.

Year	Access to hospitals (%)
2005	89.5
2006	82.0
2007	78.0
2008	75.4
2009	70.2
2010	71.3

*Table 3.1 Access time to hospital (with outpatients) for non-car owning households*

3.4 Contraction of the bus network following service changes, the latest being in April 2010, continues to affect this indicator. Minor changes in timings of particular routes can have a significant effect on access to hospitals.

### Mandatory Indicator A2 : Bus Service Punctuality

3.5 Table 3.2 shows bus service punctuality , defined as the percentage of scheduled services less than 1 minute early or five minutes late, since the LTP2 base year of 2003/04

Year	Punctuality (%)
2003/04	82.6 <sup>!</sup>
2004/05	82.3 <sup>!</sup>
2005/06	--- *
2006/07	82.6
2007/08	85.7
2008/09	88.5
2009/10	88.6

\* no data – change to AVL (real time system) data.

! Figures corrected for sampling bias shown by the more comprehensive Real Time data

Table 3.2 Bus Service Punctuality, 2003/04 to 2009/10

3.6 Data is now collected using the Real Time Positioning equipment fitted to West Yorkshire buses which allow us to measure punctuality using a much larger sample size. The target will now be rebased to 2006/07. The table shows an increase in punctuality between the revised baseline and 2009/10.

3.7 Additionally the data indicates that, for frequent services (those with a headway of less than 15 minutes) the excess waiting time in 2006/07 was 1.07 minutes. This had improved to 0.83 minutes by 2009/10.

Year	Excess waiting time (minutes)
2003/04	1.29
2004/05	-----
2005/06	-----
2006/07	1.07
2007/08	1.01
2008/09	1.02
2009/10	0.83

Table 3.3 Excess waiting time - frequent services

### Mandatory Indicator A3 : Satisfaction with Local Bus services

3.8 As part of Central Government's assessment of local authority performance every three years the public are asked to indicate whether they were satisfied or dissatisfied with the provision of bus services overall. In 2003/04 54% of respondents indicated that they were happy with bus services and this had increased to 66.4% in 2006/07.



3.9 In addition Metro conducts regular Tracker Surveys to ascertain the public's attitude to public transport. They are based on a CATI survey (computer aided telephone interviewing) with a representative sample of the West Yorkshire population (i.e. representative of the 5 local authorities). Sample size is around 750 people above aged 14 or over. Table 3.4 shows the results of this survey. Since 2004 the level of satisfaction has risen from 6.73 to 8.03 in 2010. Future reporting of satisfaction levels will be based on this Tracker survey.

Date	Score
2004	6.73
2005	6.87
2006	6.77
2007	7.21
2008	7.63
2009	7.69
2010	8.03

*Table 3.4 Tracker Survey of Users Satisfied with Local Bus Services, 2004 to 2010*

#### **Mandatory Indicator A4 : Area Wide Cycle Flows**

3.10 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.

3.11 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

3.12 To establish the level of cycling within West Yorkshire use was made of the database of 12 hour manual classified counts supplemented with additional counts. Following a trial of the methodology in Leeds the process has been extended to the whole of West Yorkshire for LTP2. Once again, only the sites which have at least one count during all of the three year periods are included in the statistic. This ensures that the dataset is a consistent set in terms of its constitution for the entire reporting period.

3.13 Table 3.5 shows the average number of cyclists observed across over 300 survey sites. The index shows the change in the level of cycling since the baseline of 2002/04 and this indicates a significant increase in cycling across all districts of West Yorkshire. The LTP2 target of a 10% increase by 2010/11 has already been exceeded.

<b>WEST YORKS</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	30.8	30.8	31.8	34.0	35.3	37.4
<b>Count</b>	304	304	304	304	304	304
<b>% base</b>	100.0%	99.9%	103.4%	110.5%	114.7%	121.5%

<b>BRADFORD</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	27.1	27.4	27.9	29.9	31.2	33.3
<b>Count</b>	60	60	60	60	60	60
<b>% base</b>	100.0%	101.2%	103.0%	110.3%	115.4%	122.9%

<b>CALDERDALE</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	20.5	20.4	20.7	21.4	21.7	22.4
<b>Count</b>	32	32	32	32	32	32
<b>% base</b>	100.0%	99.5%	100.9%	104.3%	105.6%	109.2%

<b>KIRKLEES</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	20.6	20.1	21.3	22.7	22.3	22.9
<b>Count</b>	56	56	56	56	56	56
<b>% base</b>	100.0%	97.5%	103.2%	110.0%	108.1%	111.0%

<b>LEEDS</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	39.8	39.3	40.8	44.9	48.0	50.9
<b>Count</b>	110	110	110	110	110	110
<b>% base</b>	100.0%	98.6%	102.4%	112.6%	120.5%	127.8%

<b>WAKEFIELD</b>	<b>2002- 2004</b>	<b>2003- 2005</b>	<b>2004- 2006</b>	<b>2005- 2007</b>	<b>2006- 2008</b>	<b>2007- 2009</b>
<b>Average</b>	33.4	34.9	36.0	35.8	35.5	38.4
<b>Count</b>	46	46	46	46	46	46
<b>% base</b>	100.0%	104.5%	107.9%	107.3%	106.3%	115.0%

*Table 3.5 Number of cyclists and count locations across West Yorkshire 2002/04 – 2007/09.*

3.14 Research will continue into the development of additional cycle monitoring techniques including investigating the latest advances in automatic cycle counters.

#### **Local Key Indicator A5 : Satisfaction with LTP Funded Public Transport Facilities**

3.15 Before and after monitoring of schemes implemented since 2004/05 have been used to develop an indicator of satisfaction with LTP funded public transport schemes, as shown in Table 3.6 below.

3.16 Monitoring of all schemes introduced during LTP2 will be reported in future monitoring reports.

Year	Number of Schemes	Satisfaction Rate
2004/05	7	87%
2005/06	2	88%
2006/07	1	96%
2007/08	No schemes monitored	
2008/09	No schemes monitored	
2009/10	No schemes monitored	

Table 3.6 Satisfaction with LTP Funded Public Transport Schemes Completed Since 2004/05

**Background Indicator A6 : AccessBus Patronage**

3.17 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. 320,000 passenger trips were made in 1995/96 and this had risen to 489,500 in 2009/10.

3.18 Following recent changes to legislation governing registered bus services, the AccessBus service began operating as a registered local bus service from September 2010. Under the new rules AccessBus is available to anyone who registers with the service, subject to advance booking. English National Concessionary Scheme (ENCS) permit holders travel free, however non-permit holders will be required to pay a flat fare of £3 per single trip.

3.19 AccessBus patronage trends since 1995/96 are shown in Figure 3.1

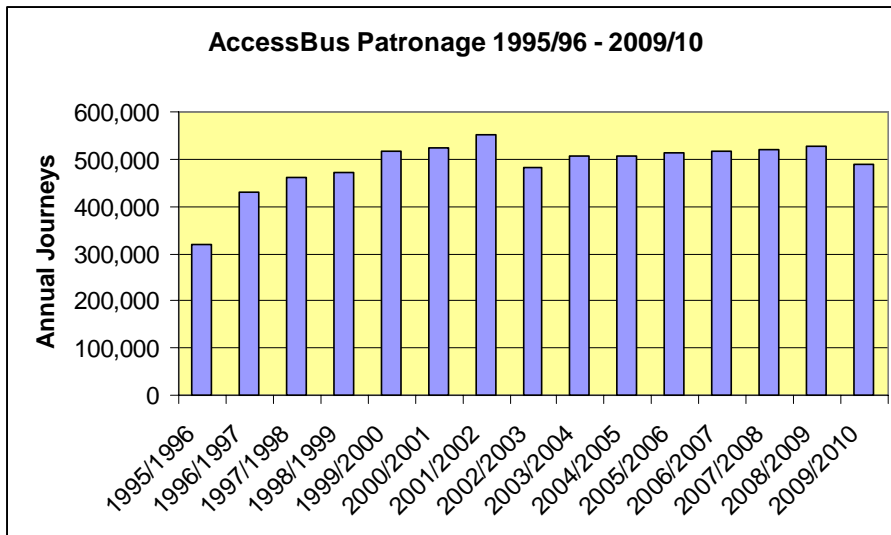


Figure 3.1 AccessBus Patronage Trends, 1995/96 – 2009/10

**Background Indicator A7 : Pedestrian Crossing Facilities Meeting BVPI 165**

3.20 Data is presented from 2002/3 in line with the introduction of the old Performance Indicator BV165. Progress made in improving facilities at controlled crossings is shown below in Table 3.7.

<b>Bradford</b>										
<b>Type</b>	<b>No of crossings with dropped kerbs, tactile paving and tactile indicators</b>									
	<b>2002/03</b>		<b>2006/07</b>		<b>2007/08</b>		<b>2008/09</b>		<b>2009/10</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Pelican/Puffin</b>	52	46	165	100	182	96	182	97	182	97
<b>Signal Control</b>	25	34	100	97	105	95	106	97	106	97

<b>Calderdale</b>										
<b>Type</b>	<b>No of crossings with dropped kerbs, tactile paving and tactile indicators</b>									
	<b>2002/03</b>		<b>2006/07</b>		<b>2007/08</b>		<b>2008/09</b>		<b>2009/10</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Pelican/Puffin</b>	16	57	42	100	42	100	42	100	43	100
<b>Signal Control</b>	16	50	38	100	38	100	38	100	39	100

<b>Kirklees</b>										
<b>Type</b>	<b>No of crossings with dropped kerbs, tactile paving and tactile indicators</b>									
	<b>2002/03</b>		<b>2006/07</b>		<b>2007/08</b>		<b>2008/09</b>		<b>2009/10</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Pelican/Puffin</b>	24	48	74	96	77	99	81	100	82	100
<b>Signal Control</b>	42	76	84	99	85	100	85	100	87	100

<b>Leeds</b>										
<b>Type</b>	<b>No of crossings with dropped kerbs, tactile paving and tactile indicators</b>									
	<b>2002/03</b>		<b>2006/07</b>		<b>2007/08</b>		<b>2008/09</b>		<b>2009/10</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Pelican/Puffin</b>	98	49	203	85	225	90	267	92	279	94
<b>Signal Control</b>	151	57	169	70	189	75	251	97	263	79

<b>Wakefield</b>										
<b>Type</b>	<b>No of crossings with dropped kerbs, tactile paving and tactile indicators</b>									
	<b>2002/03</b>		<b>2006/07</b>		<b>2007/08</b>		<b>2008/09</b>		<b>2009/10</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
<b>Pelican/Puffin</b>	63	80	97	99	100	99	105	100	105	100
<b>Signal Control</b>	31	42	65	95	69	96	72	97	72	97

*Table 3.7 Provision at Controlled Crossings – 2002/03 to 2009/10*

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

**Background Indicator A8 : Age of Bus Fleet**

3.22 The age of the bus fleet is monitored using a web based data-set, against a national target of 8 years. The returns presented in Table 3.8 shows the age of bus fleet in West Yorkshire since 2004.

	<b>March 2004</b>	<b>March 2005</b>	<b>March 2006</b>	<b>March 2007</b>	<b>March 2008</b>	<b>March 2009</b>	<b>March 2010</b>
Age of bus fleet	9.4	8.6	8.6	8.7	9.0	8.7	7.6

*Table 3.8 Age of Bus Fleet*

3.23 The age of the bus fleet will continue to be monitored annually.

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## CHAPTER 4 TACKLING CONGESTION

### Introduction

4.1 The following 17 indicators have been chosen to monitor our progress towards the “Tackling Congestion” strategy in LTP2. Progress towards LTP2 targets is measured using 4 mandatory and 4 local key indicators. The remaining 9 indicators are background trend indicators which will help assess overall progress for this key strategy area.

### Mandatory Indicator C1: Average Journey Time Per Person Mile on Key Routes.

4.2 Table 4.1 below shows the 2005/06, 2006/07, 2007/08 and 2008/09 results for this indicator which is calculated by DfT from data collected on site (vehicle occupancies, bus journey times) and non stopping vehicle speeds from the Trafficmaster data base on 13 selected routes across West Yorkshire. The routes are shown in Figure 4.1.

4.3 The table shows improving journey times after an initial increase and we are currently well ahead of our trajectory to meet the 2010/11 target. Results for 2009/10 are not yet available from DfT. Note that the data contained in the table differs from that previously reported following revisions to the calculations by DfT necessitated by the change of data supplier.

Year	Av. Journey time (mins & secs) per person mile	Trajectory towards 2010/11 Target
2004/05 & 2005/06 (Base)	4'03"	-----
2006/07	4'07"	4'06"
2007/08	4'06"	4'09"
2008/09	3'56"	4'16"
2009/10	Not yet available	4'18"
2010/11 (target)		4'20"

Table 4.1 Average Journey Time Per Person Mile on Key Routes.

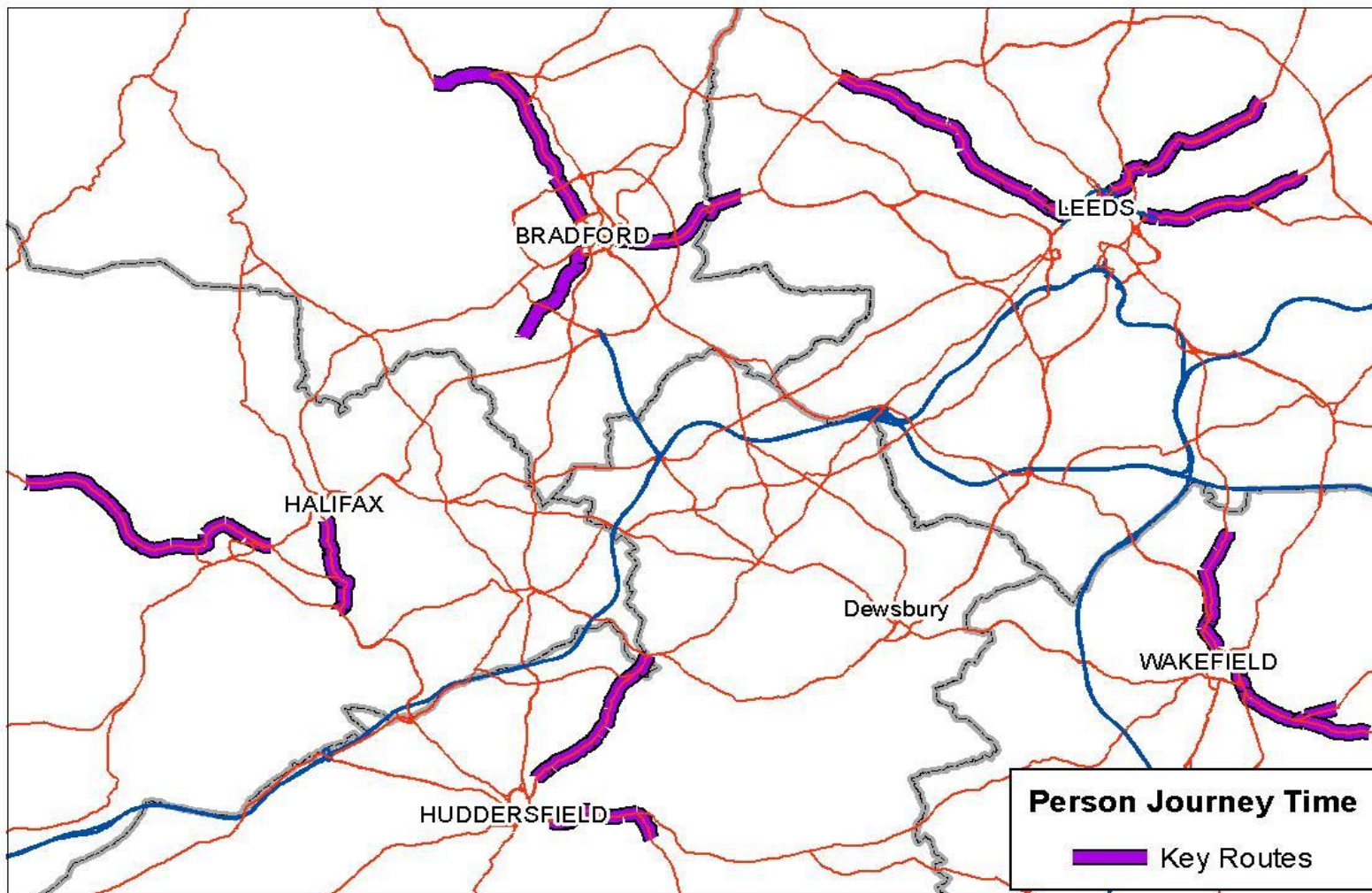


Figure 4.1 Key Routes Used for Monitoring Person Journey Time Indicator



**Mandatory Indicator C2 : Town/City Centre Morning Peak Period Traffic Flows**

4.4 Traffic flows throughout West Yorkshire have been monitored since 1979 as part of the Long Term Monitoring Programme (LTMP). Automatic traffic counters have been used to collect data on cordons around the main urban areas, initially on a two year programme, with data collected annually since 2007. Figures 4.2 to 4.6 show the locations of the cordons around the five main centres of Bradford, Halifax, Huddersfield, Leeds and Wakefield.

4.5 Data are presented for the morning peak period (0700 to 1000) in Tables 4.2 to 4.6 and show the changes in traffic flow since 2000/01 with the 2003/04 baseline for LTP2 highlighted. Flows can change markedly from year to year as a result of network changes, new developments and the method of data collection, although in all centres the trend has been downward or largely static since 2003.

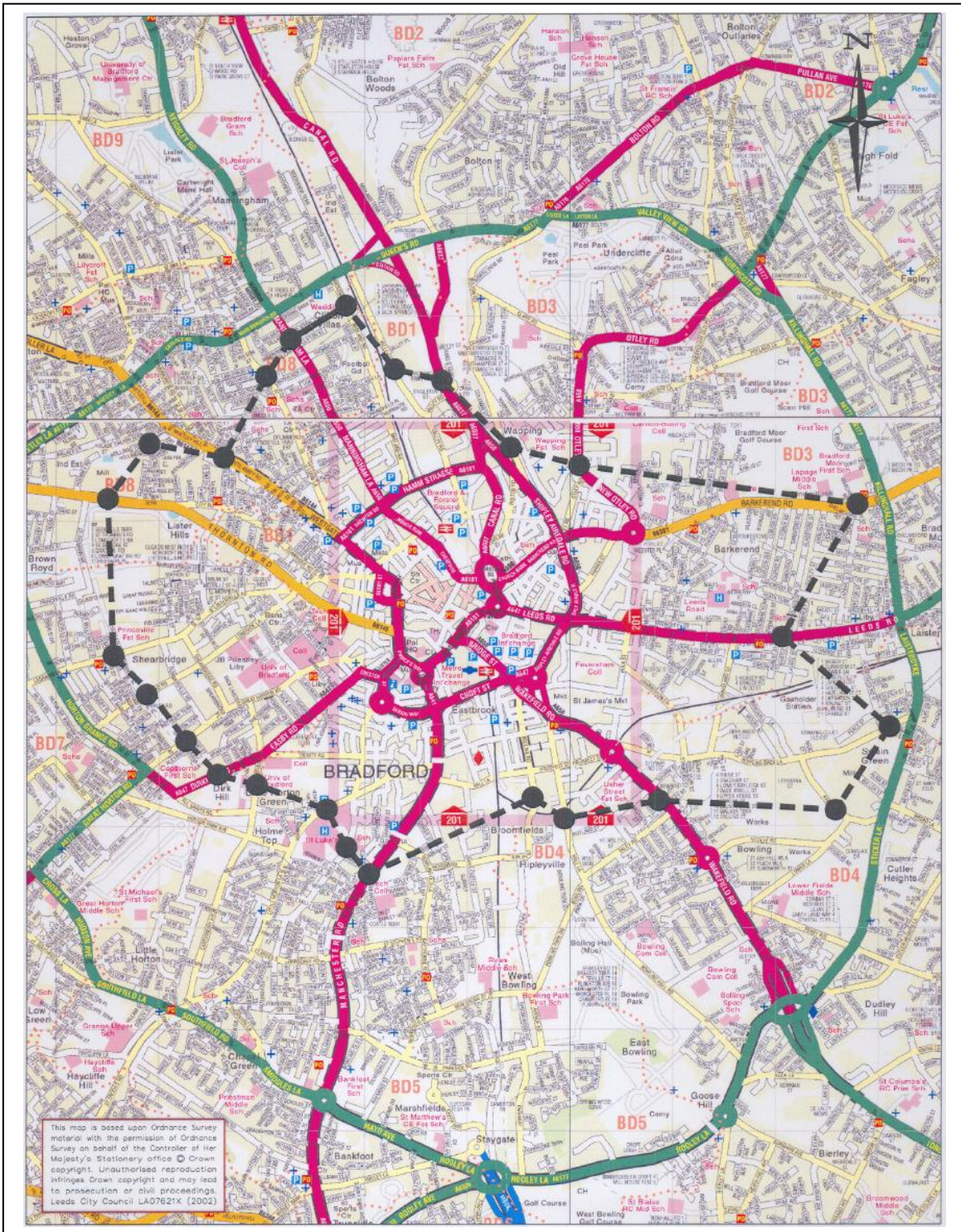
Year	AM Peak Period Traffic Flow (0700 to 1000)	Peak Period Index (2003=100)
2001	46,790	103
2003	45,530	100
2005	46,370	102
2006	--	--
2007	44,470	98
2008	42,980	94
2009	44,397	98
% Growth 2003 - 2009	-2.5%	

Table 4.2 Bradford Central Cordon - AM Peak Period Inbound Traffic Flows

Year	AM Peak Period Traffic Flow (0700 to 1000)	Peak Period Index (2003=100)
2001	22,090	94
2003	23,580	100
2005	23,450	99
2006	--	--
2007	22,360	*23,970
2008	23,850	*25,440
2009	22,860	*24,210
2010	23,150	*24,360
% Growth 2003 - 2010	-1.8%	

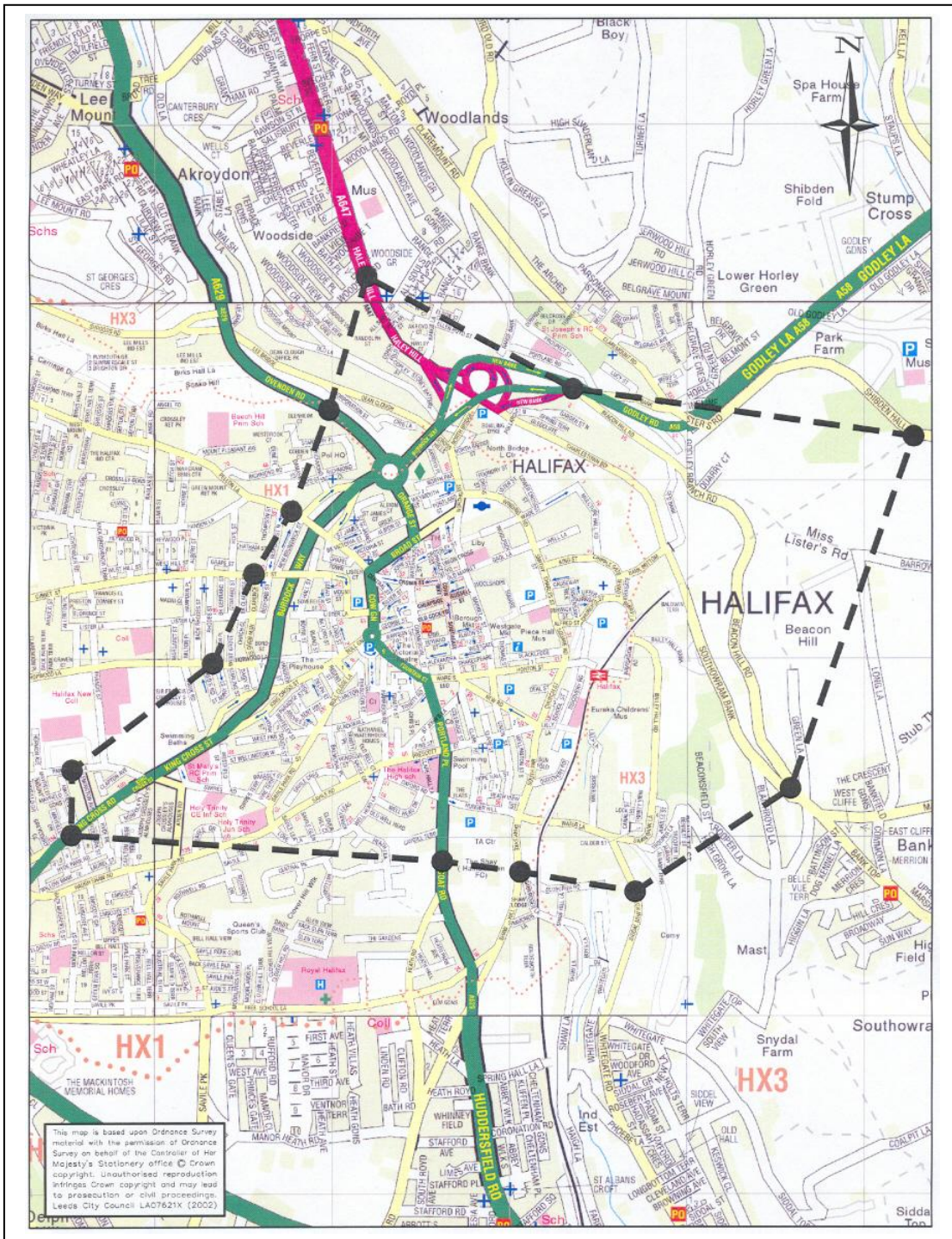
\*2 new sites were added to central cordon in 2007 – index and % growth based on old series for continuity

Table 4.3 Halifax Central Cordon - AM Peak Period Inbound Traffic Flows



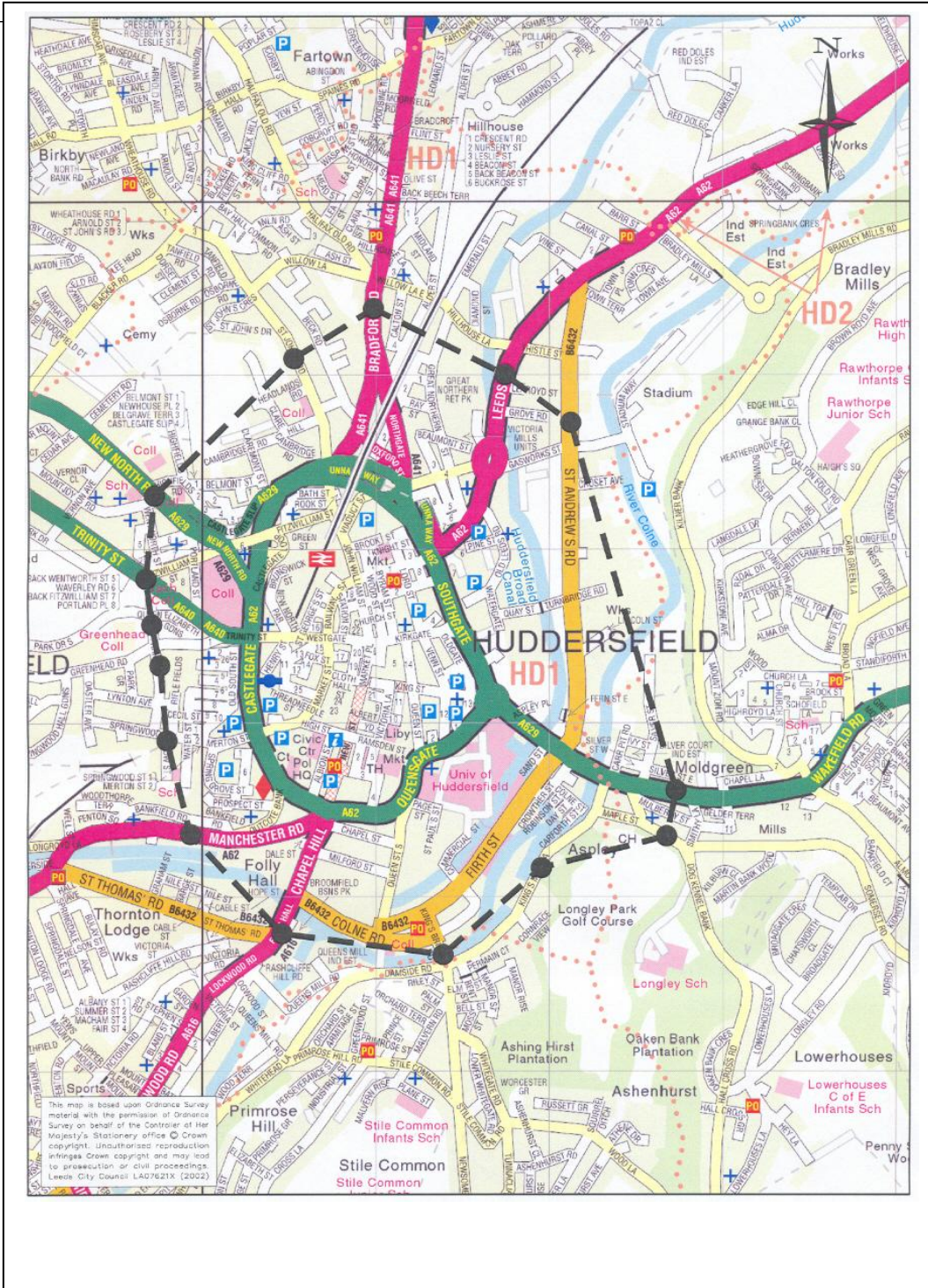
- ATC Count Location

Figure 4.2 Traffic Counting Cordon : Central Bradford



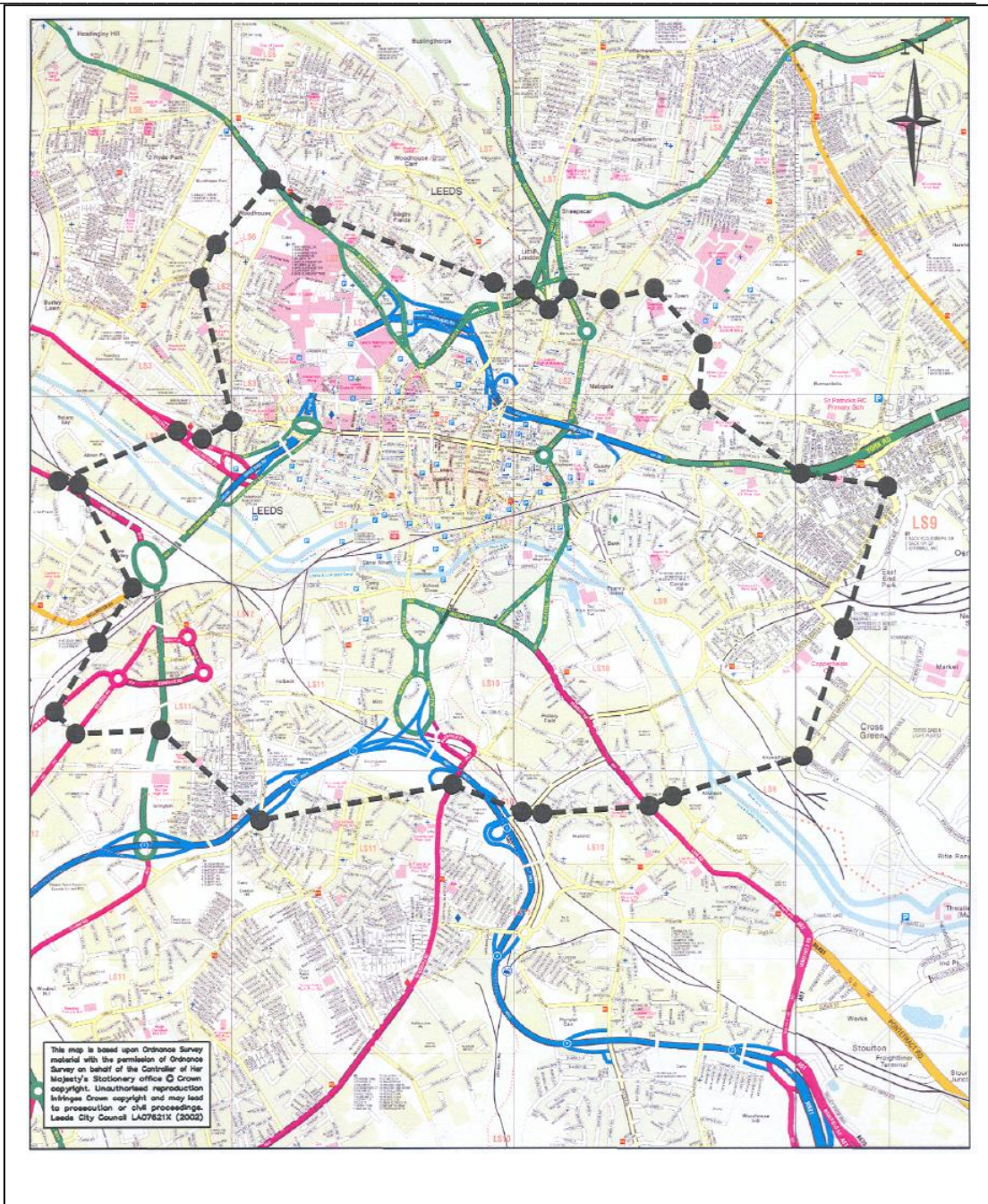
● ATC Count Location

Figure 4.3 Traffic Counting Cordons : Central Halifax



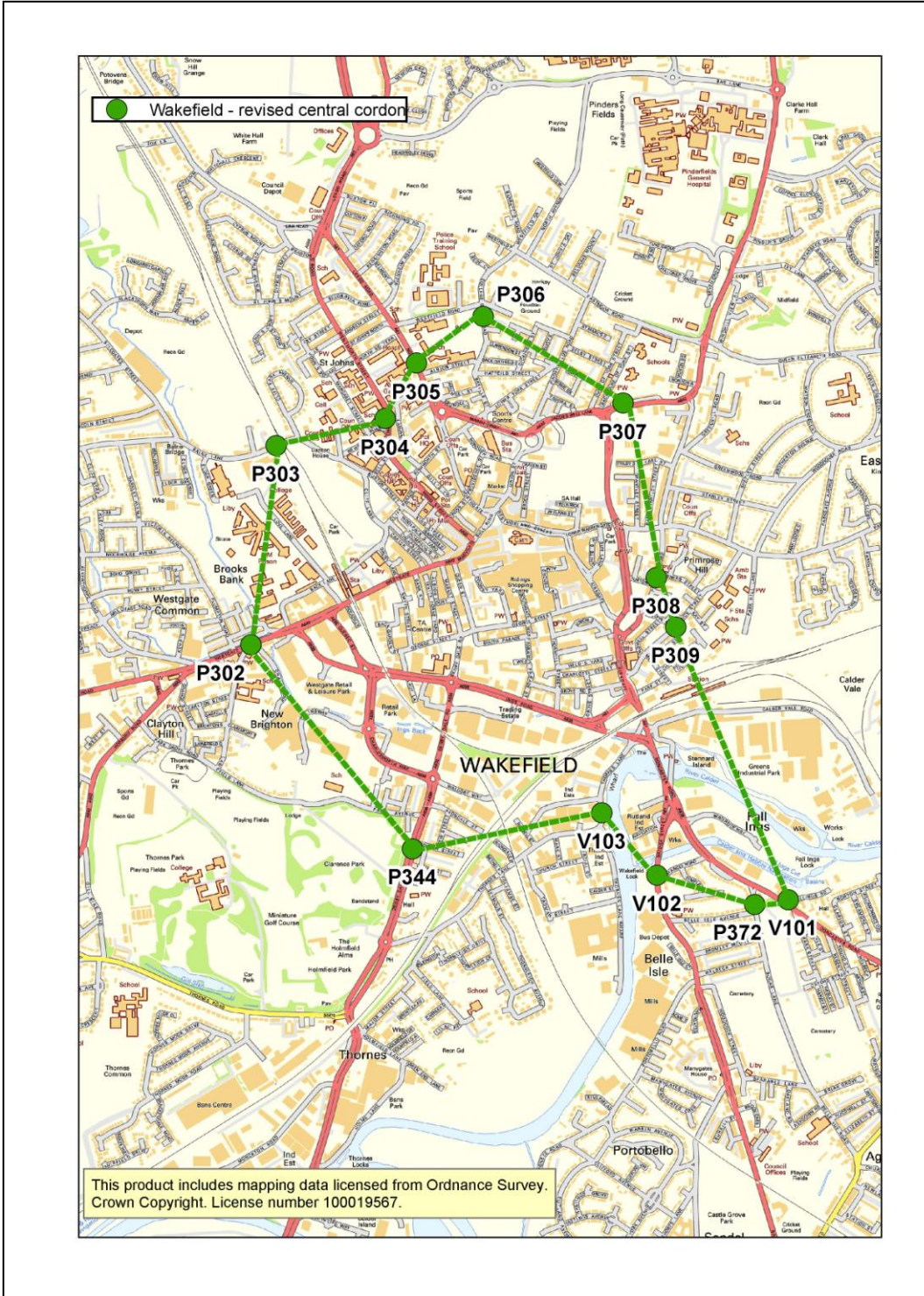
- ATC Count Location

Figure 4.4 Traffic Counting Cordon : Central Huddersfield.



- ATC Count Location

Figure 4.5 Traffic Counting Cordon : Central Leeds.



- ATC Count Location

Figure 4.6 Traffic Counting Cordon : Central Wakefield.

Year	AM Peak Period Traffic Flow (0700 to 1000)	Peak Period Index (2003=100)
2001	31,220	100
2003	31,110	100
2005	31,380	101
2006	--	--
2007	32,390	104
2008	30,320	97
2009	30,690	99
% Growth 2003 - 2009	-1.4%	

Table 4.4 Huddersfield Central Cordon – AM Peak Period Inbound Traffic Flows

Year	AM Peak Period Traffic Flow (0700 to 1000)	Peak Period Index (2004=100)
2000	93,540	95
2002	96,990	99
2004	98,210	100
2006	97,030	99
2007	95,190	97
2008	93,770	95
2009	93,080	95
2010	93,860	96
% Growth 2004 – 2010	-4.4%	

Table 4.5 Leeds Central Cordon – AM Peak Period Inbound Traffic Flows

Year	AM Peak Period Traffic Flow (0700 to 1000)		Peak Period Index (2004=100)
2000	26,340		93
2002	29,580		105
2004	28,230		100
2006	28,160		100
2007	29,310		104
2008	28,610		101
2009	28,340	25,260	100
2010	28,200	24,090	100
% Growth 2004– 2010	0%		

\*The Wakefield cordon was revised in 2009 – for continuity the peak index & % growth are calculated on the old cordon

Table 4.6 Wakefield Central Cordon – AM Peak Period Inbound Traffic Flows

4.6 Traffic flows have fallen in all centres over the past year leaving us on track to exceed our LTP2 targets. Although difficult to attribute this drop to any one factor it is reasonable to assume that LTP strategies and the economic recession will have had an impact.

**Mandatory Indicator C3 : Mode Share For Journeys to School (NI 198)**

4.7 Data on mode share of journeys to school had been collected for several years using a school administered “Hands up “ classroom survey and coordinated by regional school travel plan advisors. The WYLTP Monitoring Group identified several issues with the quality of this data, not least being the difficulty in obtaining reliable year on year comparisons.

4.8 The Travel to School Initiative, which started in 2004, was a joint DfT and Department for Children, Schools and Families (DCSF) project which aimed to reduce the number of children arriving at school by car. The project required all schools to have an approved travel plan in place by March 2010.

4.9 In 2006/07 DfT and DCSF introduced a question on usual mode of travel to school in the Pupil Led Annual School Census (PLASC). Schools with travel plans are required to complete the PLASC mode of travel to school question for each pupil and update it annually.

4.10 DfT supply a clean dataset from the survey which is used to report progress. This dataset excludes those children under 5 and over 15 and those pupils who did not respond to the mode of travel question.

4.11 Table 4.7 below summarises the usual mode of travel for over 270,000 pupils aged 5 to 15 in West Yorkshire in 2009/10, extracted from the national indicator dataset (NI 198) which is derived from the PLASC survey.

Usual Mode of Travel	Number of pupils (% of total)					
	Bradford	Calderdale	Kirklees	Leeds	Wakefield	West Yorks
Car <sup>1</sup>	19,372 (28%)	8,799 (31.2%)	17,271 (33.7%)	22,886 (26.7%)	13,476 (28.4%)	80,216 (28.9%)
Car Share <sup>2</sup>	2,953 (4.3%)	744 (2.6%)	2,221 (4.3%)	2,197 (2.6%)	366 (0.8%)	8,519 (3.1%)
Public Transport <sup>3</sup>	10,940 (15.8%)	6,835 (24.2%)	7,765 (15.2%)	15,439 (18%)	5,955 (12.6%)	46,773 (16.9%)
Walking	35,717 (51.6%)	11,732 (41.6%)	23,641 (46.2%)	44,022 (51.4%)	26,636 (56%)	137,320 (49.5%)
Cycling	108 (0.2%)	35 (0.1%)	124 (0.2%)	427 (0.5%)	332 (0.7%)	1,042 (0.4%)
Other	187 (0.3%)	76 (0.3%)	168 (0.3%)	728 (0.8%)	648 (1.4%)	1,245 (0.4%)
Total	69552	28221	51190	85699	40453	275,115

Source : NI 198 School Census Returns. 2009/10

Notes : 1. includes vans and taxis

2. car share is defined by DfT/DCSF as “travel in a car with a child/children from a different household

3. includes service buses, dedicated school buses, other buses and train

**Table 4.7** NI 198 Usual Mode of Travel to School, All Pupils Aged 5 to 15 West Yorkshire 2009/10.



4.12 Table 4.8 below shows changes in car mode share since the base year of 2006/07 and progress against the LTP2 target. This clearly shows a small but sustained reduction in car mode share as a result of targeted investment and partnership working between schools, parents and with both internal and external agencies.

YEAR	Car Mode Share (%) <sup>1</sup>	Target
2006/07	30.6	30.6
2007/08	30.5	30.6
2008/09	29.8	30.6
2009/10	28.9	30.6

*Note : 1. Excludes car share*

*Table 4.8 Travel to School: Changes in Car Mode Share and Progress Towards Target*

### **Mandatory Indicator C4 : Public Transport (Bus) Patronage (BVPI 102)**

4.13 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 4.9. and is shown indexed to the LTP2 base year of 2003/04.

	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010
Passenger Journeys per year (millions)	202.0	203.6	199.1	195.7	194.8	196.9	192.6	195.0	184.3
Index to 2003/04	101.5	102.3	100	98.3	97.7	98.9	96.7	97.9	92.6

*Table 4.9 West Yorkshire Bus Patronage, 2000/01 to 2009/10*

4.14 The growth in bus use of concessionary travellers has been in line with expectations. This growth has been largely off-set by a decline in the number of fare paying passengers.

4.15 Whilst operators cite the recession as the cause of passenger loss, Metro believes that resistance to sustained above inflation fare increases is also a significant factor. Major operators in West Yorkshire implemented significant fares increases in January 2008 and July 2008, citing increased fuel costs as the reasons. The WYTPA criticised the July increase as being unnecessary (as major operators were at that time isolated from the increased cost through hedging) and counter-productive as it undermined an opportunity to grow bus patronage through mode switch when pump prices were at record high levels.

4.16 Major operators have also reduced service levels in 2009 in response to falling demand and, in some cases, the desire to maintain former profit margins. There is little prospect for short-term growth in the number of fare-paying passengers and a risk of further decline unless alternative approaches to the current cycle of fare increases and service reductions are developed.

### Local Key Indicator C5 : AM Peak Cycle Trips to Centres of Leeds, Wakefield and Halifax

4.17 Cycle trips crossing the central cordons of Halifax, Leeds and Wakefield are monitored as part of the morning peak modal split surveys (see Key Indicator C6). Data is collected on three separate weekdays and cycles are recorded on road, on the footway and off road at the cordon points.

Centre	Number of Cycles in Morning Peak Period (0730-0930) (index against base of 2005)								
	2000	2002	2004	2005	2006	2007	2008	2009	2010
Halifax	52	51	54	53 (100)	36 (68)	57 (108)	65 (123)	n/a	71 (134)
Leeds	441	430	571	627 (100)	727 (116)	778 (124)	967 (154)	1064 (170)	1242 (198)
Wakefield	155	141	72	105 (100)	81 (77)	78 (74)	105 (100)	152 (145)	159 (151)
Bradford			114	112 (100)	113 (101)	124 (111)	120 (107)	127 (113)	141 (126)

Table 4.10 Morning Peak Period Cycle Flows to Central Halifax, Leeds, Bradford and Wakefield

4.18 All three centres have recorded increases in the number of peak period cyclists since 2004. The table indicates that the target of a 20% increase by 2010/11 has already been achieved. Data for Bradford have been included this year, although there is no target associated with cycle trips in central Bradford.

### Local Key Indicator C6 : AM Peak Period Modal Split to Main Urban Centres

4.19 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.

4.20 The surveys recorded persons travelling in private vehicles, on foot and by bicycle and also those travelling by bus. Until 2009 rail patronage data were obtained from Metro manual counts. In 2009 the methodology was changed to utilise the Automatic Passenger Count (APC) data supplied by the main operating companies supplemented by manual counts where necessary.

4.21 The survey points coincided with those used for the central cordon automatic traffic count programme ( see Figures 4.2 to 4.6) with additional sites added to these cordons to record persons walking or cycling on off-road routes where applicable.

4.22 Following a successful pilot in Leeds in 2004 <sup>1</sup> a more statistically robust monitoring regime was introduced across West Yorkshire in 2005 and mode split counts were undertaken in the main centres over 4 days for the morning peak period (0730-0930) inbound to the city centre which enables us to be 95% sure that observed changes of between 0.5% and 1.0% in mode share are statistically significant. At the same time the frequency of data collection was increased to annually.

4.23 Tables 4.11 to 4.15 show the results of the modal split surveys against the LTP2 baseline of 2004. Earlier issues concerning the methodology used to collect rail patronage data have been resolved and we are confident the data presented are now robust.

Year	Total persons Crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
2004	49,898	4	<1	<1	74	16	5
2005	50,123	4	<1	<1	74	16	6
2006	49,270	4.2	0.2	0.3	73.0	16.2	6.1
2007	50,166	4.6	0.2	0.3	71.9	15.9	7.1
2008	48,870	4.6	0.2	0.3	71.3	17.1	6.4
2009	47,917	4.7	0.3	0.3	71.5	16.0	7.2
2010	48,704	5.0	0.3	0.3	71.3	16.6	6.6

Table 4.11 Modal Split – AM Peak (0730-0930) Inbound to Bradford : 2004 - 2010

Year	Total persons Crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
2004	25,318	4	<1	<1	73	18	4
2005	26,768	5	<1	<1	74	17	4
2006	26,000	4.0	0.1	0.4	73.5	17.1	4.9
2007	26,970	4.4	0.2	0.4	69.1	21.1	4.8
2008	25,940	4.7	0.3	0.5	68.0	20.7	5.9
2009	24,756	5.1	0.2	0.5	68.0	20.8	5.3
2010	24,603	5.5	0.3	0.4	72.2	16.6	5

Table 4.12 Modal Split – AM Peak (0730-0930) Inbound to Halifax : 2004 – 2009

<sup>1</sup> Estimating Confidence Intervals for Transport Mode Share : Clark.S & McKimm J : Journal of Transportation and Statistics, Vol 8, No.2 : 2005

Year	Total persons Crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
2004	34,027	5.9	0.2	0.4	66.1	21.9	5.5
2005	33,914	6.6	0.3	0.4	63.9	23.2	5.6
2006	34,581	5.7	0.3	0.4	62.4	22.8	8.4
2007	34,852	6.5	0.4	0.4	61.1	23.2	8.5
2008	36,542	6.3	0.4	0.4	59.1	25.7	8.1
2009	35,514	6.5	0.4	0.4	61.1	22.9	8.7
2010	33,970	6.9	0.4	0.4	59.2	22.9	10.2

Table 4.13 Modal Split – AM Peak (0730-0930) Inbound to Huddersfield :2004 - 2010

Year	Total persons Crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
2004	120,400	3.1	0.5	0.5	57.7	27.8	10.3
2005	121,183	3.5	0.5	0.5	57.3	26.0	12.2
2006	122,646	3.5	0.6	0.5	56.4	25.9	13.2
2007	114,831	3.1	0.7	0.5	56.4	24.3	15.0
2008	113,568	2.9	0.9	0.5	55.3	23.7	16.7
2009	111,113	3.2	0.9	0.5	55.7	22.8	16.9
2010	116,341	4.2	1.1	0.5	56.1	22.2	16.0

Table 4.14 Modal Split – AM Peak (0730-0930) Inbound to Leeds :2004 - 2010

Year	Total persons Crossing cordon	% Modal Split					
		Walk	Cycle	Motorcycle	Car	Bus	Train
2004	33,570	2	<1	1	73	16	9
2005	38,399	3	<1	<1	72	16	9
2006	34,140	3.8	0.3	0.3	72.6	11.7	11.3
2007	28,339	3.4	0.3	0.3	68.2	12.8	15.0
2008	28,747	3.7	0.4	0.5	69.6	12.6	13.2
2009	32,704	3.6	0.3	0.4	69.5	12.6	13.6
2010	34,690	3.1	0.5	0.5	70.7	11.6	13.6

Table 4.15 Modal Split – AM Peak (0730-0930) Inbound to Wakefield :2004 – 2010

**Local Key Indicator C7 : AM Peak Period Rail Patronage to Leeds**

4.24 Table 4.16 below shows the number of passengers arriving at Leeds station during the weekday morning peak period (0730-0930) since 2003.

	2003	2004	2005	2006	2007	2008	2009	2010
Passengers	9,585	10,209	11,863	16,244	17,196	18,915	19,547	18,656

Table 4.16 AM Peak Period Rail Patronage to Leeds, 2003 to 2010

4.25 Passenger totals have previously grown year-on-year. However, there has been a small dip of 4.6% between 2009-2010.

**Local Key Indicator C8 : Quality Bus Corridor Patronage**

4.26 Patronage figures have been monitored on Quality Bus Corridors (QBC) and the trend in passenger numbers has been compared with that on the network as a whole as shown in Table 4.17.

Year	QBC Trend	QBC Average Weekly Patronage	WY Trend - % change in total patronage
2004/05	2%	-	-1.71%
2005/06	-1.35%	-	-0.46%
2006/07	2.15%	-	1.08%
2007/08 (New Base Year)	-	168,941 (-)	-2.18%
2008/09	-	177,121 (+4.8%)	1.25%
2009/10		na	na

*Table 4. 17 Bus Patronage on Quality Bus Corridors Compared With West Yorkshire Trend*

4.27 The table shows that patronage growth on Quality Bus corridors continues to exceed that on the network as a whole.

**Background Indicator C9 : Peak Period Journey Time Variability on Key Routes**

4.28 This indicator is under development.

### Background Indicator C10 : Proportion of Network Below Reference Speed in Morning Peak Period.

4.29 The following table shows the percentage of the main urban network operating below different proportions of the speed limit in the morning peak. The statistics are derived from TrafficMaster data supplied by DfT .

Proportion of the network operating below % of speed limit (cumulative)						
% age of speed limit	Bradford	Calderdale	Kirklees	Leeds	Wakefield	West Yorkshire
50%	0.27	0.23	0.23	0.30	0.22	0.26
60%	0.37	0.33	0.34	0.41	0.33	0.37
70%	0.49	0.44	0.46	0.54	0.43	0.49
80%	0.63	0.57	0.59	0.67	0.57	0.62
90%	0.77	0.69	0.73	0.80	0.70	0.76
100%	0.88	0.80	0.85	0.89	0.83	0.87

*Table 4.18 Proportion of Primary Urban Network Operating Below Set Percentages of Speed Limit , am peak period 0730-0930, 2008/09*

4.30 For the purposes of assessing network efficiency, a figure of 70% of the speed limit has been taken as a benchmark for LTP2. The table shows that around half of the network is operating at or below this level, and over one quarter of the network is operating at less than 50% of the posted speed limit during the peak period.

Year	Proportion of network operating below 70% of speed limit					
	Bradford	Calderdale	Kirklees	Leeds	Wakefield	West Yorkshire
2003	67	50	63	68	52	63
2005	70	62	71	75	56	69
2006	70	62	70	74	60	69
Change from iTIS to Trafficmaster data						
2007	50	48	47	55	42	50
2008	52	45	40	56	46	51
2009	49	44	46	54	43	49

*Table 4.19 Proportion of Primary Urban Network Operating Below 70% of Speed Limit, am peak period 0730-0930, 2003/04 to 2008/09*

4.31 Table 4.19 shows changes relative to the benchmark of 70% since 2003. Changes to the data used for calculating this indicator mean that comparisons with data prior to 2007 are not reliable. Since 2007 there has been a consistent improvement in network operation across all West Yorkshire districts.

### Background Indicator C11 : Peak Spreading Index

4.32 Traffic flows are collected using automatic counters on cordons around the main urban centres in West Yorkshire , (see Mandatory Indicator C2 above and Figures 4.2 to 4.6)

4.33 By examining the ratio of peak hour to peak period flows through time an understanding of the extent of peak spreading can be gained.<sup>2</sup> A fall in the value of this ratio would illustrate peak spreading. Peak spreading can result from motorists choosing to travel earlier (or later) as a result in changes in work practices or being forced to travel earlier (or later) due to congestion. Tables 4.20 to 4.24 show trends in this index since 1999/2000 with the LTP2 baseline of 2003/04 highlighted.

YEAR	AM Peak Period Inbound Traffic Flows		
	0700 - 1000 (P1)	0800 - 0900 (P2)	Ratio P2/P1
1999	45,600	18,550	0.406
2001	46,790	18,690	0.399
2003	45,530	18,240	0.401
2005	46,370	18,230	0.393
2007	44,470	17,260	0.388
2008	42,980	16,700	0.388
2009	44,397	17,560	0.396

*Table 4.20 Bradford Central Cordon : Peak Spreading Ratio, 1999-2009*

<sup>2</sup> Hounsall, NB : Transport Planning Systems, 1991, Vol.1 No.3

YEAR	AM Peak Period Inbound Traffic Flows		
	0700 - 1000 (P1)	0800 - 0900 (P2)	Ratio P2/P1
1999	22,890	9,360	0.409
2001	22,090	8,970	0.406
2003	23,580	9,480	0.402
2005	23,450	9,330	0.398
2007	22,360	8,680	0.388
2008	23,850	9,230	0.387
2009	22,860	9,000	0.394
2010	23,150	9,050	0.391

*Table 4.21 Halifax Central Cordon : Peak Spreading Ratio  
1999-2010*

YEAR	AM Peak Period Inbound Traffic Flows		
	0700 - 1000 (P1)	0800 - 0900 (P2)	Ratio P2/P1
1999	31,490	12,280	0.390
2001	31,220	12,230	0.392
2003	31,110	12,280	0.395
2005	31,380	12,100	0.386
2007	32,390	12,620	0.390
2008	30,320	11,430	0.377
2009	30,690	11,770	0.384

*Table 4.22 Huddersfield Central Cordon : Peak Spreading Ratio  
1999-2009*



YEAR	AM Peak Period Inbound Traffic Flows		
	0700 - 1000 (P1)	0800 - 0900 (P2)	Ratio P2/P1
2000	93,540	35,790	0.383
2002	96,990	36,840	0.380
2004	98,280	36,560	0.372
2006	97,030	35,700	0.368
2007	95,190	34,140	0.359
2008	93,770	33,950	0.362
2009	93,080	34,630	0.372
2010	93,858	35,110	0.374

*Table 4.23 Leeds Central Cordon: Peak Spreading Ratio 2000-2010*

YEAR	AM Peak Period Inbound Traffic Flows		
	0700 - 1000 (P1)	0800 - 0900 (P2)	Ratio P2/P1
2000	26,340	10,380	0.394
2002	29,580	11,750	0.397
2004	28,230	10,840	0.384
2006	29,150	11,330	0.389
2007	29,310	11,140	0.380
2008	28,610	10,920	0.382
2009	28,338	10,849	0.383
2010	28,200	10,800	0.383

*Table 4.24 Wakefield Central Cordon : Peak Spreading Ratio 2000-2010*

4.34 Traffic flows crossing the central cordons of the main centres are now counted annually and changes will be reported against the LTP2 baseline of 2003/04

**Background indicator C12 : Morning Peak Period Car Occupancy**

4.35 As part of the morning peak period mode split surveys (see Key Indicator C6 above) the opportunity was 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 occupancy surveys from 2006 are presented in Table 4.25.

	2006		2007		2008		2009		2010	
	Ave. Occ.	% single occ.	Ave. Occ.	% single occ.	Ave. Occ.	% single occ.	Ave. Occ.	% single occ.	Ave. Occ.	% single occ.
Bradford	1.28	77.5	1.29	76.9	1.28	77.5	1.28	77.4	1.29	76.9
Halifax	1.28	78.7	1.27	77.3	1.25	79.3	1.28	77.3	1.27	77.5
Huddersfield	1.26	na	1.24	na	1.24	na	1.24	na	1.22	80.0
Leeds	1.23	80.3	1.22	80.1	1.24	79.3	1.22	80.5	1.22	80.6
Wakefield	1.26	78.0	1.27	76.0	1.31	74.5	1.32	74.5	1.33	71.7

*Table 4.25 Car Occupancy in Main Centres, 2006 to 2010*

4.36 Table 4.26 shows the changes in average car occupancy for the major centres since 2005.

Centre	Time Period	Direction	Average Car Occupancy					
			2005	2006	2007	2008	2009	2010
Bradford	am peak	Inbound	1.28	1.28	1.29	1.28	1.28	1.29
Halifax	am peak	Inbound	1.29	1.28	1.27	1.25	1.28	1.27
Huddersfield	am peak	Inbound	1.27	1.26	1.24	1.24	1.24	1.22
Leeds	am peak	Inbound	1.23	1.23	1.22	1.24	1.22	1.22
Wakefield	am peak	Inbound	1.29	1.26	1.27	1.31	1.32	1.33

*Table 4.26 Average Car Occupancy Changes, 2005 to 2010*

4.37 Implementation of Travel Plans, travel awareness initiatives, car sharing initiatives, including High Occupancy Lanes seek to encourage greater car occupancy. It is unlikely that there will be significant change in the short term but the overall impact of such measures should lead to an increase in car sharing and the use of public transport in the future.

4.38 Changes in this indicator will be reported annually against a 2005 baseline.

**Background Indicator C13 : Mode Share for Travel to Work**

4.39 The Travel to Work survey initiated by the West Yorkshire Travel Plan Officers Group in 2004 takes place annually in March. In 2010 a total of over 41,170 employees took part from companies developing or implementing travel plans across the county.

4.40 Table 4.27 shows changes in mode share for the journey to work since 2004. This shows little change in the proportions travelling to work by public transport, although there is a slight increase in the proportion of people travelling by train and a drop in the proportion of bus passengers. Increases in the proportions cycling or walking to work were recorded. There is also a slight increase in those commuting alone by car.

Year	Sample Size	% by mode									
		Car				Bus	Train	PTW	Walk	Cycle	Other/ not given
		Alone#	With pupil #	share	Lift *						
2004	---	45	3	14	--	16	9	1	7	2	3
2005	24,000	45	5	13	--	17	10	1	6	1	2
2006	36,000	46	4	15	--	15	10	1	6	2	1
2007	38,485	51	---	11	2	15	10	1	8	2	0
2008	39,498	50	---	12	1	16	11	<1	6	2	2
2009	43,510	51	---	11	1	15	11	<1	7	3	<1
2010	41,173	52	-	10	1	14	11	<1	7	3	<1

# merged in 2007

\* given a lift by a driver who then returns home

*Table 4.27 West Yorkshire Travel to Work Survey: Mode Share 2004 - 2010*

4.41 Examination of the survey responses from those companies in the West Yorkshire Travel Plan Network (WYTPN) who have been actively engaged in smarter choices activities, shows a significantly different picture.

Year	Car Alone	Lift to work	Car Share	Bus	Train	Cycle	On foot	Powered Two Wheeler	Other	Home Working
2007	52.7%	1.9%	9.5%	15.5%	11.6%	1.4%	6.2%	0.6%	0.6%	0.4%
2008	49.8%	1.2%	12.9%	15.1%	12.0%	1.9%	5.8%	0.6%	0.7%	0.3%
2009	48.3%	1.1%	12.0%	15.9%	12.5%	2.1%	6.5%	0.7%	0.9%	0.1%
2010	48.6%	1.1%	10.0%	15.2%	13.1%	2.3%	6.6%	0.6%	1.3%	1.3%

*Table 4.28 Changes in mode share - WY travel Plan Network members: 2007–2010*

4.42 Table 4.28 shows the mode share for travel to work for WYTPN members who have completed the survey every year. There has been a significant reduction in the proportion of people travelling by car compared to the wider travel to work sample. There has also been an increase in cycling, walking and home working.

### Background Indicator C14 : Travel Distance to Work

4.43 Table 4.29 shows the changes in the distance travelled to work in West Yorkshire taken from the 1991 and 2001 Censuses. The table shows a 39% increase in the distance travelled over the 10 year period.

	1991			2001			1991-2001 Total km % Change
	Workplace Pop <sup>n</sup> .	Workplace Distance	Total Km	Workplace Pop <sup>n</sup> .	Workplace Distance	Total Km	
Bradford	166,810	6.8	1,135,976	173,454	8.4	1,457,014	28
Calderdale	70,100	6.1	429,012	72,682	8.0	581,456	36
Kirklees	121,270	6.5	793,106	131,483	8.1	1,065,012	34
Leeds	291,180	9.4	2,745,827	343,799	11.7	4,022,448	46
Wakefield	112,680	7.7	866,509	117,202	9.7	1,136,859	31
West Yorkshire	762,040	7.8	5,966,733	838,620	9.9	8,302,338	39

Excludes those working at or from home

Table 4.29 Distance Travelled to Work in West Yorkshire, 1991 and 2001

### Background Indicator C15 : Generalised Costs for Private and Public Transport

4.44 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.<sup>3</sup>

4.45 The generalised costs have been calculated for each centre based on the average commuting distance for car drivers derived from the 2001 census. 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 remain very similar to last year's calculation.

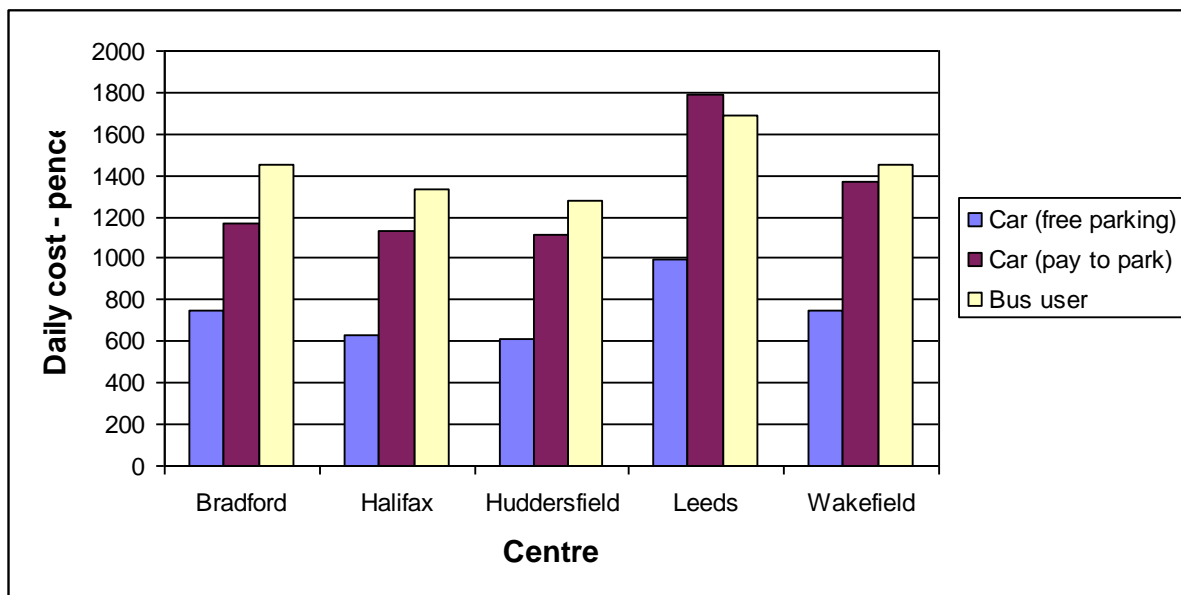
4.46 Table 4.30 shows the estimated indicative generalised costs for each of the district centres where journey time data have been collected. These are also shown graphically in Figure 4.7.

<sup>3</sup> Figure still used, despite Metro being able to calculate average bus fares, due to its use in the Saturn Transport Model.

Centre	Generalised cost (pence/day)				
	Distance (km)	Parking charge (p)	Car driver (free parking)	Car driver (pay to park)	Bus user
Bradford	12.97	2.01	751	1171	1453
Halifax	12.40	2.80	631	1129	1334
Huddersfield	11.41	2.80	612	1111	1283
Leeds	18.79	5.80	993	1792	1693
Wakefield	14.21	4.00	748	1367	1453

**Table 4.30** Estimated Generalised Central Area Commuting Costs 2006

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



**Figure 4.7** Estimated Generalised Central Area Commuting Costs 2006

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

4.47 Aside from the changes in assumed journey lengths, the principal changes from 2005 are that petrol costs have risen by 10% and bus fares (using an annual Metrocard) by 40% by 2009.

4.48 Leeds remains the only centre where the cost of commuting by car (for those who have to pay) is greater than the cost of travel by bus. However, the latest increase in the cost of parking in Wakefield has reduced the difference between bus and car travel significantly here.

4.49 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.

4.50 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 and fare structure . 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.

4.51 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.

4.52 Petrol price increases, re-allocation of road space and increased parking charges will increase car user costs. The use of broader demand management measures may still be required in the future to achieve significant levels of modal shift.

4.53 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 C16 : The Cost of Travel**

4.54 The cost of travel has a direct influence on people's mode choice. This background indicator gives information on the changes in the cost of travel by car and public transport at both the national and local levels since 1974.

4.55 National changes in the cost of travel by car and public transport between 1974 and 2008 (the latest year for which data is available) are shown in Figure 4.8. This shows that, after allowing for the effects of inflation :

- the overall cost of travel by car has increased by 5%
- petrol prices have increased by 45%
- the cost of travel by bus increased by 118%
- rail fares increased by 132% over the same period

4.56 Figure 4.9 shows real changes in the cost of transport locally since 1985. The figures show:

- bus fares have increased by 51%, (based on cost of an annual bus only MetroCard)
- rail fares have increased by 132%, (Based on cost of an annual Rail Z1-5 MetroCard)
- In both cases this is greater than the rate of inflation
- All motoring costs have decreased each year since 2000

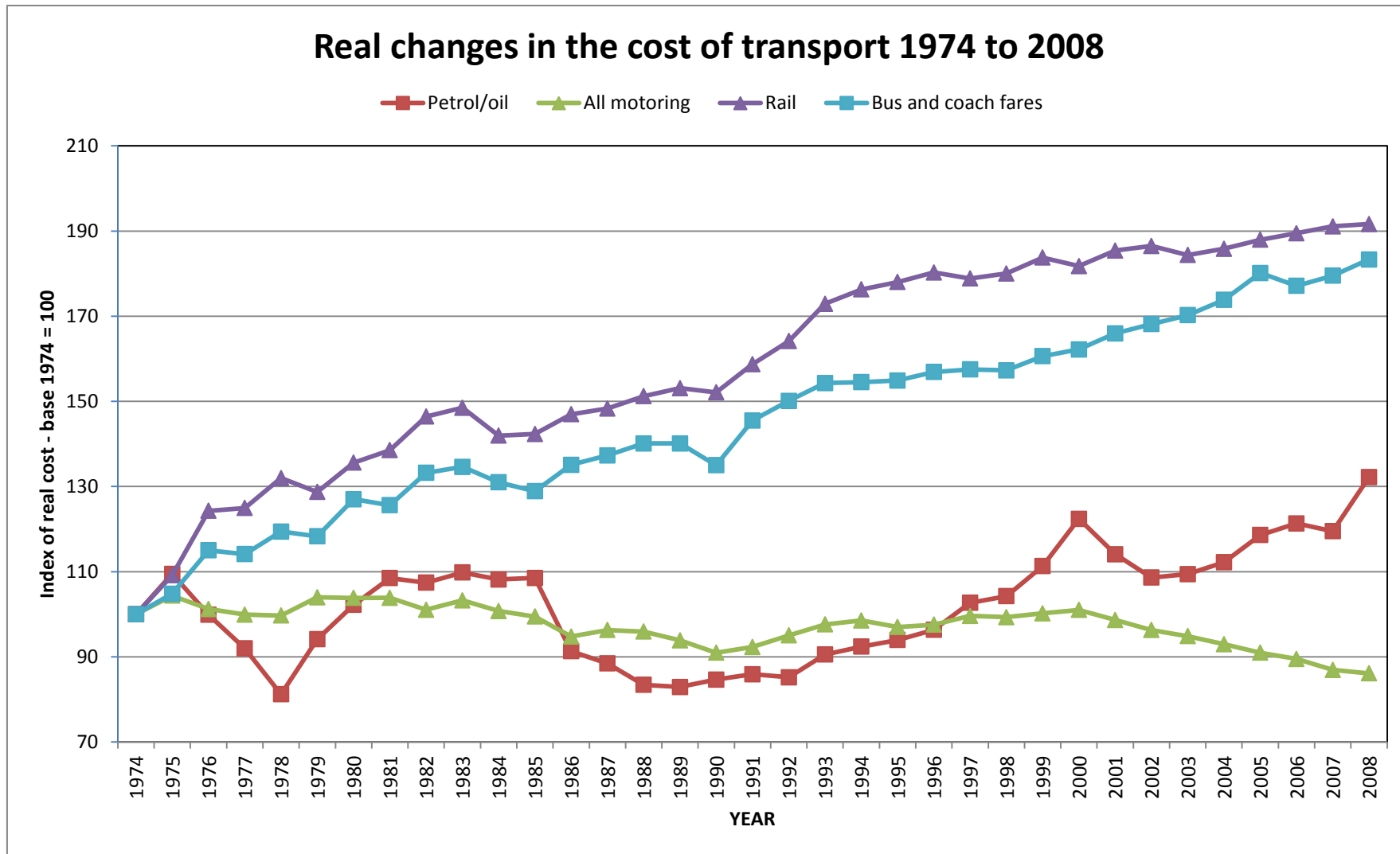


Figure 4.8 Change in National Transport Costs 1974 to 2008

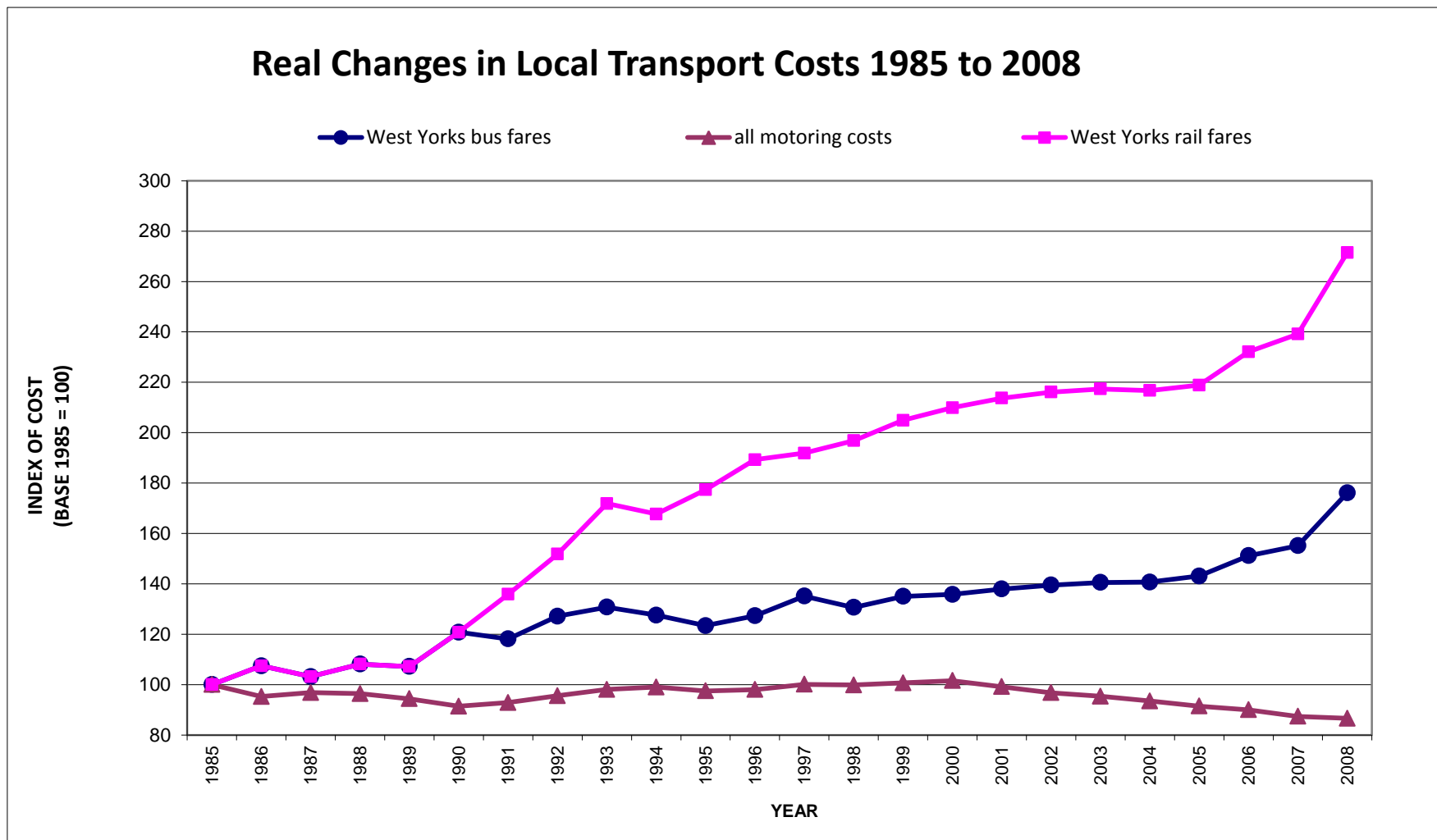


Figure 4.9. Real Changes in Local Transport Costs 1985 to 2008.



**Background Indicator C17 : All Day Commuter Parking Supply and Costs**

4.57 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 LTP 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”.*

4.58 Parking inventories have been conducted in all major centres to provide baseline data against which future changes can be measured. Table 4.31 shows the relative size of the parking study areas for each Centre, whilst inventory data are presented in Table 4.32.

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

Table 4.31 Size of Parking Survey Areas

Parking Type		Bradford	Halifax	Huddersfield	Leeds*	Wakefield **
<b>Public Short Stay</b>	Council	1725	356	1,813	1,482	603
	Private	3900	484	1,438	2,508	197
	<b>Total</b>	<b>5625</b>	<b>840</b>	<b>3,521</b>	<b>3,990</b>	<b>800</b>
<b>Public All Day Commuter</b>	Council Free	5514	113	1,029	0	30
	Council Pay	862	723	2,527	2,168	1,022
	Private	1668	629	150	3,486	1,826
	<b>Total</b>	<b>8064</b>	<b>1465</b>	<b>3,706</b>	<b>5,654</b>	<b>2,878</b>
<b>Other</b>	Customer	3839	3194	1,953	1,765	3,509
	PNR	9970	2825	6,925	6,698	2,915
	Permit	998	1176	13,412	2,036	1,550
<b>Total</b>		<b>28,496</b>	<b>9500</b>	<b>17,157</b>	<b>20,143</b>	<b>11,652</b>

\* not directly comparable with previous data, city centre core used in 2010, rather than CBA

\*\* Major redevelopment is taking place in Wakefield Centre which will affect car parking supply. It will be necessary to rebase City centre area to take into account expansion into the Waterfront area and further surveys will not be carried out until this has been completed.

Table 4.32 Parking Inventory 2010

4.59 The progress made by the districts in raising parking charges is shown below in Table 4.33. This shows the average cost of council controlled all day commuter parking, where charges are levied, and the % change in parking charges 2004 – March 2010. For LTP2 changes will be reported against a 2004 baseline.

Centre	Cost for stay of 8 hours or more in council controlled car park (£)							% change 2004 - 2010
	2004	2005	2006	2007	2008	2009	2010	
<i>Bradford</i>	1.90	1.83	1.90	1.90	3.00	3.00	3.50	+84%
<i>Halifax</i>	2.70	2.70	2.70	3.60	3.60	3.60	3.60	+33%
<i>Huddersfield</i>	2.80	2.80	2.8	4.00	4.00	4.00	4.00	+43%
<i>Leeds</i>	5.80	5.80	6.40	6.80	6.92	7.50	7.50	+29%
<i>Wakefield</i>	4.00	4.00	4.50	5.00	5.00	5.00	5.00	+25%

*Table 4.33 Average Cost Of Council Controlled All Day Parking And Changes In Parking Charges 2004 – 2010 (Where Charges Apply)*

4.60 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 and prices should increase at a greater rate than general inflation.

4.61 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 4.34 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*
Bradford	64
Halifax	18
Huddersfield	20
Dewsbury	70
Leeds	38
Wakefield	36

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

*Table 4.34 Percentage of Total All Day Parking Under Direct Council Control*

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

## CHAPTER 5 SAFER ROADS

### Introduction

5.1 The following indicators have been chosen to monitor our progress towards the “Safer Roads” strategy in LTP2. Progress towards LTP2 targets will be measured using three mandatory and one local key indicator. The remaining indicators are background trend indicators which will help assess overall progress for this key strategy area.

### Mandatory Indicator S1 : All Road User Casualty Trends

5.2 The downward trend of road casualties in West Yorkshire continued into 2009, with the casualty total of 9,211 being the lowest so far recorded since the County was formed in 1974. The reduction was distributed across all the various road user groups apart from pedal cyclist, where the total has increased. The year 2008 has recorded the lowest total for the number of people killed (71) on the roads of West Yorkshire. Although the total for 2009 is 84, this figure is still an improvement compared with earlier years. The number of serious casualties this year has not, however, changed appreciably compared with earlier years. The long term trend in the number of killed or seriously injured casualties has been downward, but the rate of decline has slowed in recent years and practically levelled off between 2005 and 2008. In view of this recent flat trend, there is some concern that the reduction in 2009 may, in part, be due to random fluctuation. After staying above the desired target line for the last two years, the reduction has brought the County in line with the Government’s 2010 target trajectory. (see Table 5.1 and Figure 5.1).

Year	KSI *	Fatal	Serious	Slight	Total
1994 - 1998 average	1,484	115	1,369	11,391	12,876
2005	1,085	99	986	9,714	10,803
2006	1,140	113	1,027	9,474	10,614
2007	1,132	103	1,029	8,850	9,982
2008	1,091	71	1,020	8,337	9,428
2009	973	84	889	8,238	9,211
% Change 2009 cf. 1994 -1998 average	-34%	-27%	-35%	-28%	-28%
% Change 2009 cf. 2008	-11%	+18%	-13%	-1%	-2%

\* Killed or Seriously Injured

Table 5.1 West Yorkshire Road Casualty Trends by Severity, 1994/98-2009.

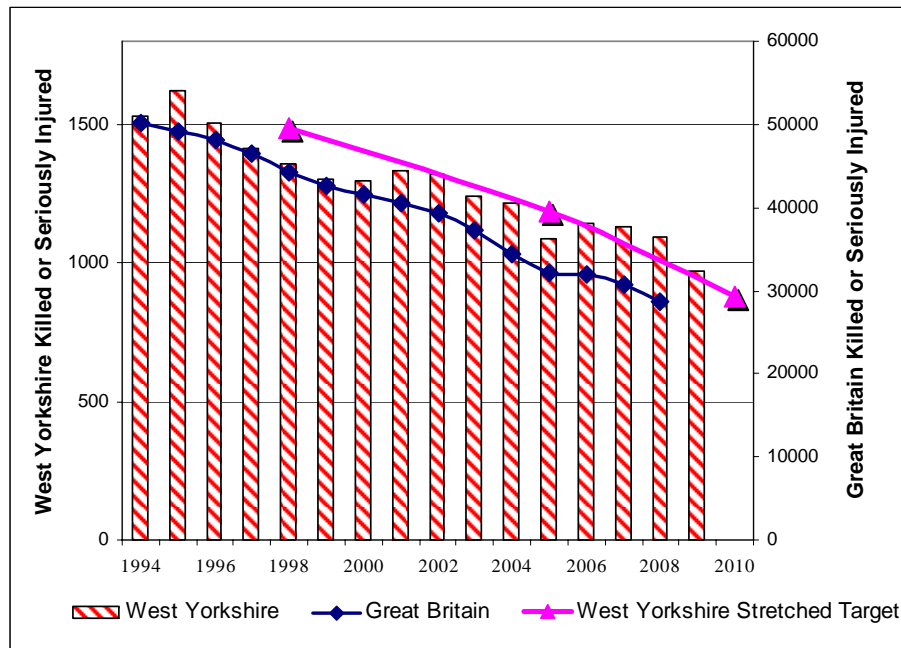


Figure 5.1 West Yorkshire KSI Casualty trend with 2010 target

### Mandatory Indicator S2 : Casualty Trends for Children

5.3 Progress towards the Government's target of a 50% reduction in the number of children killed or seriously injured suffered a set back this year, due to the total of 151 remaining almost the same as the previous year. Unless the present flat trend is broken and the downward impetus is re-established, West Yorkshire will not achieve the 2010 target (see Figure 5.2). The strong downward trend established during the 1990s has now fragmented and apart from some annual variability, there has not been any real progress made over the last four years. The graph of Figure 5.2 shows the 2009 total disappointingly above the stretched target line. With regard to the original target however, the total of 151 is right on track.

Year	KSI *	Fatal	Serious	Slight	Total
1994 - 1998 average	273	13	260	1,732	2,004
2005	133	4	129	1,064	1,197
2006	147	7	140	1,004	1,151
2007	175	5	170	999	1,174
2008	152	5	147	866	1,018
2009	151	9	142	888	1,039
% Change 2009 cf. 1994 -1998 average	-45%	-31%	-45%	-49%	-48%
% Change 2009 cf. 2008	-0.5%	+80%	-3%	+3%	+2%

\* Killed or Seriously Injured

Table 5.2 West Yorkshire Road Casualty Trends for Children 1994/98 - 2009

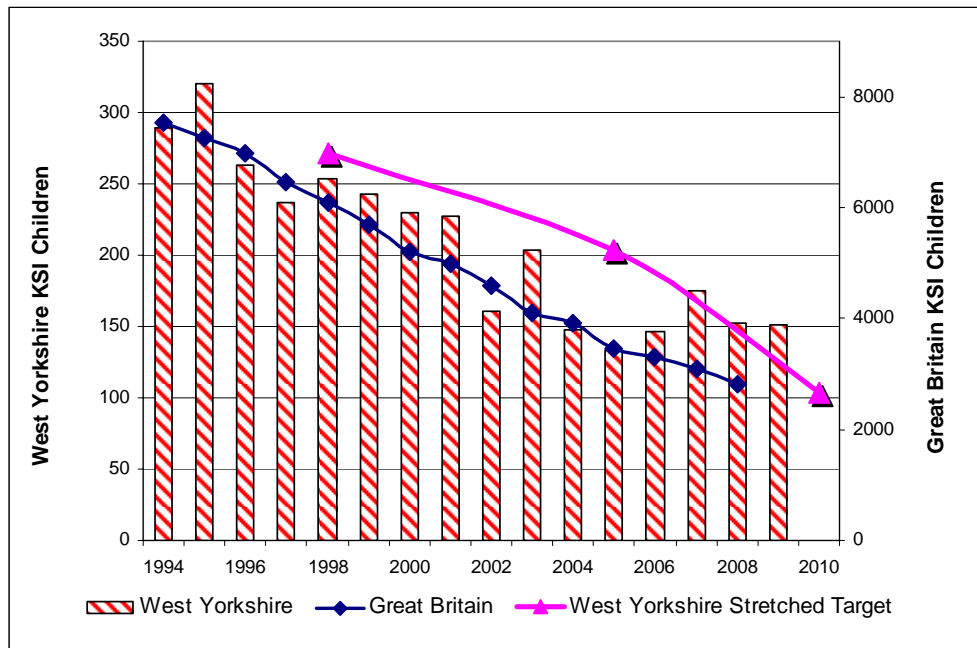


Figure 5.2 West Yorkshire KSI Child casualties with 2010 target

5.4 The largest proportion of child KSI casualties is associated with the pedestrian road user group, accounting for 71% of the total. The trend for this group since the low point of 2005 is disappointingly marginally upward.

**Mandatory Indicator S3 : Slight Casualty Numbers**

5.5 The number of slight casualties continued to fall throughout 2009 and the total of 8,238 is the lowest in over twenty years. Compared with the average of the previous five years, the number of slight casualties is falling across all road user groups apart from pedal cycle. The largest reduction is associated with car drivers and passengers. The trends are shown in Table 5.3 and Figure 5.3.

Year	Slight Casualties
1994 to 1998 Average	11,391
2005	9,718
2006	9,474
2007	8,850
2008	8,337
2009	8,238
% Change 2009 cf. 1994 -1998 average	-28%
% Change 2009 cf. 2008	-1%

Table 5.3 West Yorkshire Slight Casualties 1994/98 - 2009

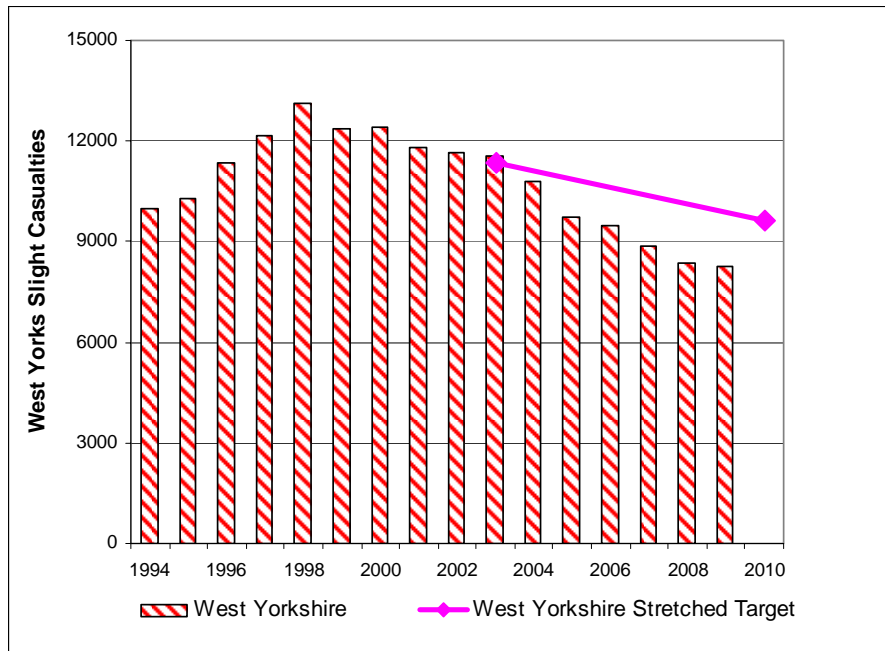


Figure 5.3 West Yorkshire Slight Casualties with 2010 Target

#### Local Key Indicator S4 : Casualty Trends for Different Road User Groups

5.6 The number of casualties in the different priority groups has been monitored for a number of years and will continue to be monitored and changes reported annually. The West Yorkshire trends for different groups of road user are shown in Table 5.4 for KSI and in Figure 5.4 for all casualties.

Year	Pedestrians	Pedal Cyclists	Motor Cyclists	Car Drivers	Car Passengers
1994 - 1998 average	525	106	158	388	232
2005	308	86	216	279	145
2006	314	86	196	326	169
2007	347	94	233	273	159
2008	364	84	198	272	133
2009	295	92	192	213	134
% Change 2009 cf. 1994 - 1998 average.	-44%	-13%	+22%	-45%	-42%
% Change 2009 cf. 2008	-19%	+10%	-3%	-22%	+1%

Table 5.4 West Yorkshire Killed or Seriously Injured (KSI) Trends for Different Road Users 1994/98-2009

5.7 The downward trend in the number of pedestrians killed or seriously injured stopped in 2005 / 2006 and then rose, disappointingly, for two successive years. The total, however, fell dramatically in 2009 to 295. This is the first time the number has been below 300 and is the lowest figure so far recorded in West Yorkshire.

5.8 There were 526 pedal cycle casualties (all severity) in 2009 and the present trend in the total of this vulnerable road user group is upward. The upward trend is entirely due to an increase amongst adult cycle casualties. In comparison, child cycle casualties continue to fall. The adult casualties are mainly associated with week days (only 18% at the weekend), and 58% of the week day casualties are clustered with the morning and evening commuting periods.

5.9 The number of motor cyclists killed or seriously injured has not changed a great deal. Apart from the 'spike' of 2007, the total has not moved far from 200 over the last four years. The current KSI trend from 2006 is therefore fairly flat. There is presently a downward trend amongst older riders, which contrasts with an upward trend amongst teenagers. The total of 49 teenage rider casualties represents one quarter of all KSI.

5.10 The number of car occupant casualties killed or seriously injured fell dramatically, such that the total of 347 is the lowest number ever recorded in West Yorkshire.

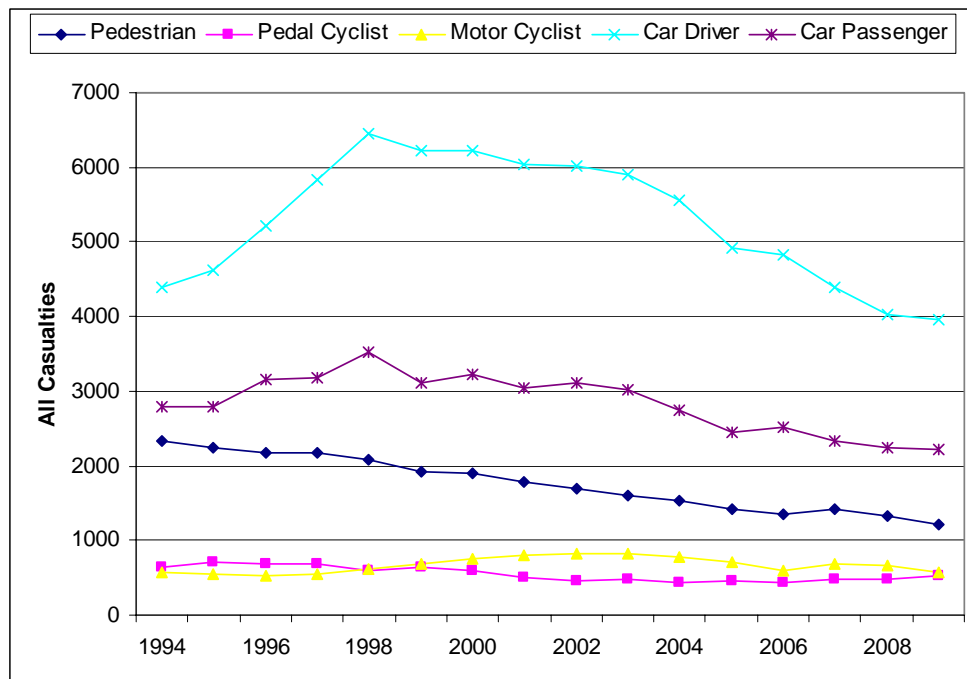


Figure 5.4 West Yorkshire Road User Casualty Trends 1994/98-2009

5.11 The West Yorkshire authorities will continue to monitor data on road casualties and report progress towards the LTP2 and National Targets in future monitoring reports.

### Background Indicator S5 : Town Centre Car Park Spaces with CCTV Cameras

5.12 An important element of the overall safe car journey is having a secure and safe place to leave the vehicle. Table 5.5 shows the number of off street car park spaces with CCTV coverage in the major town and city centres in West Yorkshire. The data refers to council owned car park spaces only.

	Year	Bradford	Halifax	Huddersfield	Leeds	Wakefield
No. of Spaces with CCTV	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
	2005	1,551	489	3087	2,137	1,189
	2006	1,551	489	3087	2,137	na
	2007	1,551	489	3,087	2,137	2,740
	2008	1,438	489	3,087	2,137	940 *
	2009	1,438	489	3,087	na	na
No. of Spaces without CCTV	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	193	964	668	831	538
	2005	193	964	668	831	530
	2006	193	1133	668	831	na
	2007	193	1133	668	831	588
	2008	170	1133	668	831	187 *
	2009	170	1119	668	na	na
% of Spaces with CCTV	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%
	2005	87%	50%	82%	72%	69%
	2006	87%	43%	82%	72%	na
	2007	87%	43%	82%	72%	82%
	2008	89%	43%	82%	72%	83% *
	2009	89%	41%	82%	na	85%

\* note loss of Marsh Way car park and other city centre redevelopment have affected parking supply in Wakefield.

Table 5.5 Local Authority Off-Street Car Parks with CCTV Surveillance

5.13 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 S6 : Rail/Bus Stations with CCTV Cameras**

5.14 As with road users, the added security of CCTV coverage at railway stations is an important factor in safer travel. Table 5.6 shows the number of railway station car parks so covered. Changes to this coverage will be reported in future monitoring reports.

	<b>Rail station car parks with CCTV</b>	<b>Of which staffed rail stations</b>	<b>Of which unstaffed rail stations</b>
<b>1999/00</b>	22 (43%)	10 (63%)	12 (34%)
<b>2004/05</b>	25 (45%)	12 (67%)	13 (35%)
<b>2005/06</b>	25 (45%)	12 (67%)	13 (35%)
<b>2006/07</b>	25 (45%)	12 (67%)	13 (35%)
<b>2006/07</b>	24 (45%)	13 (67%)	12 (35%)
<b>2007/08</b>	24 (45%)	13 (67%)	12 (35%)
<b>2008/09</b>	24 (45%)	13 (67%)	12 (35%)
<b>2009/10</b>	24 (45%)	12 (50%)	12 (50%)

*Table 5.6 Rail Station Car Parks with CCTV Surveillance*

**Background Indicator S7 : Town and City Centre Streets with CCTV Cameras**

5.15 Table 5.7 shows the changes in CCTV coverage in the major town and city centres since 1998 through the percentage of streets covered by cameras.

	<b>Bradford</b>	<b>Halifax</b>	<b>Huddersfield</b>	<b>Leeds</b>	<b>Wakefield</b>
1998	40%	0	90%	60%	93%
1999	40%	5%	90%	60%	93%
2000	40%	15%	90%	70%	93%
2001	40%	30%	94%	70%	93%
2002	55%	40%	94%	73%	93%
2003	60%	40%	95%	80%	93%
2004	65%	40%	96%	87%	93%
2005	65%	40%	96%	87%	93%
2006	65%	40%	96%	87%	93%
2007	na	40%	96%	90%	93%
2008	na	40%	96%	90%	93%
2009	na	na	96%	na	93%

*Table 5.7 Percentage of City Centre Streets Covered by CCTV*

5.16 Changes to CCTV coverage will be reported in future monitoring reports.

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## CHAPTER 6 BETTER AIR QUALITY

### Introduction

6.1 The following 6 indicators are being used to monitor our progress towards achieving the LTP2 shared priority of “Better Air Quality”. Progress towards targets in this area will be measured using 2 mandatory and 1 local key indicators. The remaining 3 indicators are background trend indicators which will help assess overall progress for this key strategy area.

6.2 These indicators are not exclusively related to Air Quality, but contain complimentary or proxy information connected with climate change mitigation and environmental noise.

6.3 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. NO<sub>2</sub> and PM<sub>10</sub> are the two major transport pollutants of concern. Road transport emissions contribute in the region of 75% and 50% respectively, towards total urban emissions

### Mandatory Indicator AQ1 : NO<sub>2</sub> Levels in Air Quality Management Areas

6.4 Air quality is currently measured at Haslewood Close in the Ebor Gardens, a declared Air Quality Management Area ( AQMA) in Leeds. The real time monitoring station is close to York Road, the major road traffic source of NO<sub>2</sub> as shown in Table 6.1. 2008 was a reasonably good year for dispersion with recorded concentrations generally lower than the preceding year across the district. 2009 continued this trend recording concentrations of 39µg/m<sup>3</sup> representing a 15% reduction from the 2004 baseline.

Leeds AQMA Monitoring	2004 (Index)	2005	2006	2007	2008	2009
NO <sub>2</sub> µg/m <sup>3</sup> (index)	45.8 (100)	41.3 (90)	41.6 (91)	43.0 (94)	39.8 (87)	39.0 (85)

Table 6.1 NO<sub>2</sub> Levels in the Ebor Gardens, Leeds AQMA 2004-2009

6.5 As monitoring capabilities improve, further targets will be set for other AQMAs throughout West Yorkshire as District's Air Quality Action Plans are developed. Figure 6.1 shows the current location of declared AQMAs and Areas of Concern throughout West Yorkshire.

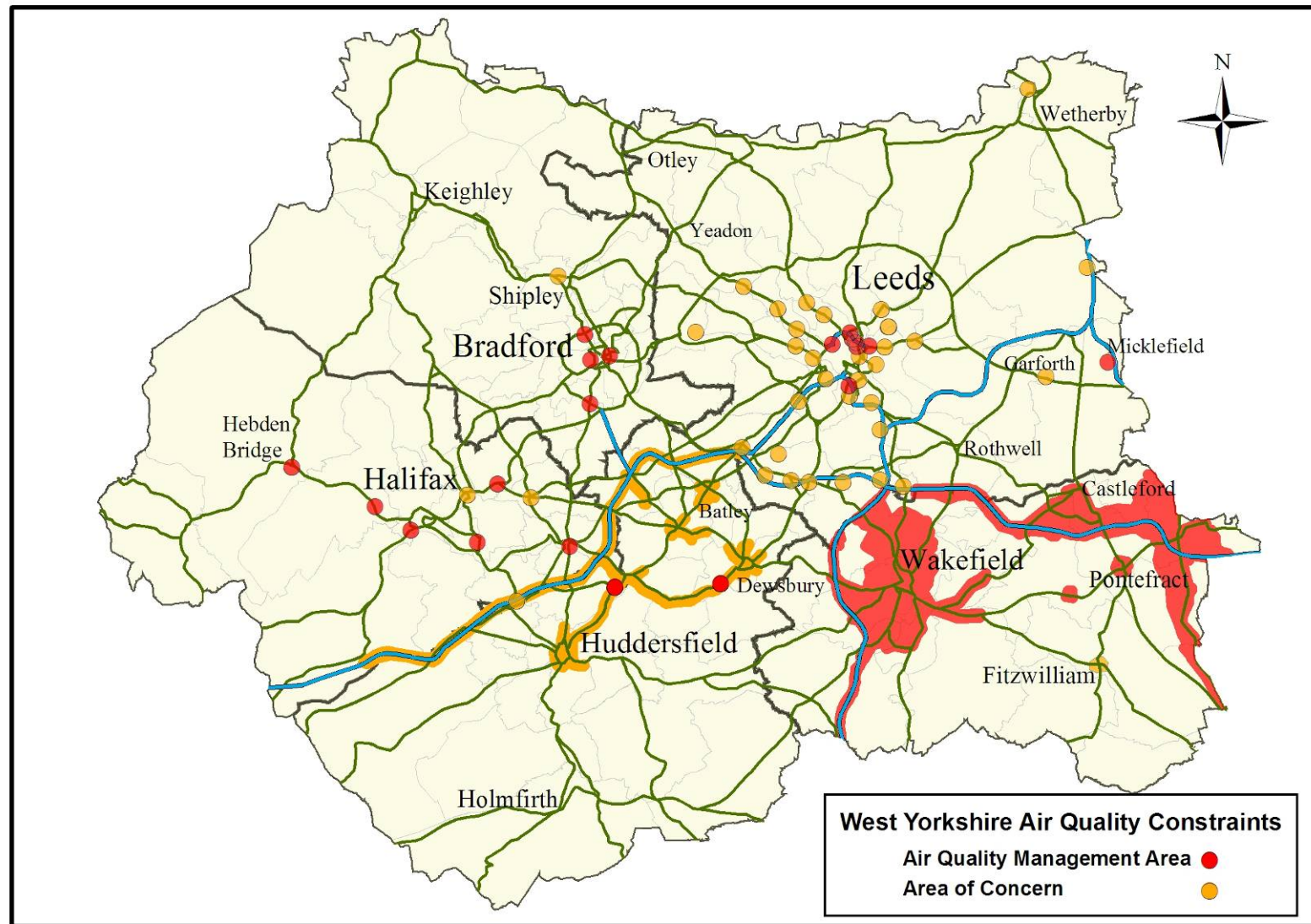


Figure 6.1 Location of Air Quality Management Areas and Areas of Concern.

### Mandatory Indicator AQ2 : Area Wide Traffic Flows

6.6 The West Yorkshire Long Term Monitoring Programme (LTMP) of automatic traffic counts was established in 1979 to monitor traffic flows at about 400 locations across West Yorkshire. In 1980, a sub-set of this programme, stratified to give a representative coverage of A, B and C/Unclassified roads was created to provide a statistically robust method for calculating changes in daily traffic flows across West Yorkshire. The location of the counting sites is shown in Figure 6. 2.

6.7 Table 6.2 below shows the change in the index of traffic volumes since 2000 relative to the LTP2 base year of 2004.

Year	Index of Traffic Volumes
2000	99.0
2001	99.0
2002	98.7
2003	100.6
2004	100.0
2005	102.2
2006	100.1
2007	100.3
2008	97.9
2009	97.8
Change 2004 to 2009	-2.2%

*Table 6.2 Changes in average 16 hour weekday traffic volumes, 2000 - 2009*

6.8 Changes to the index will be reported annually.

6.9 An alternative source of data for this indicator is data supplied by DfT on annual vehicle kilometres obtained from the National Traffic Census (NTC). Table 6.3 shows changes since 2000 using this source.

Year	Index of Traffic Volumes
2000	91.1
2001	92.1
2002	94.5
2003	98.3
2004	100.0
2005	100.2
2006	101.0
2007	104.3
2008	103.1
2009	102.1
Change 2004 to 2009	+2.1%

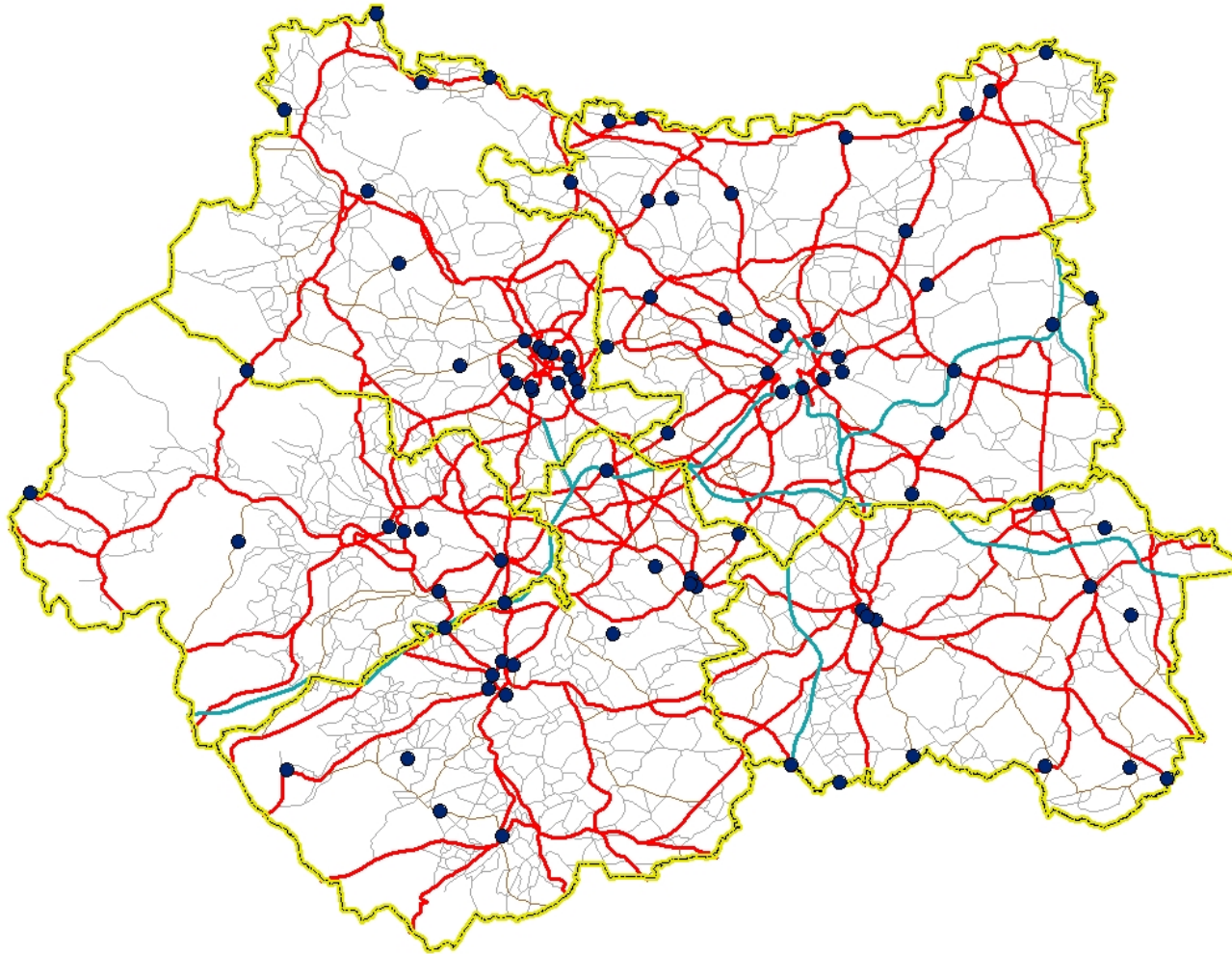
*Table 6.3 Changes in Vehicle Kilometers from National Traffic Census, 2000 to 2009*

6.10 In the past, the changes in flow calculated by NTC data have been greater than that indicated from our LTMP monitoring. We have retained the first methodology to derive our LTP2 target for the following reasons:

- Consistency with LTP1 and District strategy monitoring and targets
- A detailed analysis of the NTC statistics suggests that the majority of growth is on unclassified roads. The methodology used by DfT to establish vehicle kilometres from counts on minor roads is currently subject to revision following the Quality Review of Road Traffic Statistics.

6.11 We will continue to report both sets of statistics for this indicator but will track our progress towards the LTP2 target using figures derived from the LTMP.

Figure 6.2 Location of Annual Traffic Growth Count Sites



### Local Key Indicator AQ3 : Area Wide Road Transport Emissions : NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub>

6.12 Road transport emissions of oxides of nitrogen (NO<sub>x</sub>) which contains a mixture of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>), and carbon dioxide (CO<sub>2</sub>), the primary “greenhouse gas”, have been predicted for the West Yorkshire trunk / principal road network. Annual emission rates were predicted for PM<sub>10</sub> and NO<sub>x</sub> using the latest DfT / DEFRA approved vehicle emission factors (Released February 2003). The Design Manual for Roads and Bridges (DMRB) vehicle emission factors, published in 1999, were used to predict emissions of CO<sub>2</sub>.

6.13 All calculated emission rates take account of the observed annual traffic growth for all road types in each District and actual traffic count data on the Motorway network. A new improved Emission Database (EDB) has been created to coincide with the start of the LTP2 monitoring period. This EDB takes more account of the variation in the percentage of Heavy Goods Vehicles and has used ITIS / TrafficMaster speed data to replicate the average network speeds throughout the county. However, emissions are extremely speed sensitive and may underestimate the exacerbating effects of local congestion during peak periods.

6.14 Table 6.4 provides a summary of predicted road transport emissions for the West Yorkshire trunk / principal road network from the improved EDB.

Emissions		NO <sub>x</sub>	PM <sub>10</sub>	CO <sub>2</sub>
Year				
<b>2004</b> (Base Year)	Tonnes / yr	15,210	454	2,330,872
<b>2005</b>	Tonnes / yr	14,396	436	2,368,128
% Change from base year		-5.3%	-4.0%	1.6%
<b>2006</b>	Tonnes / yr	13,371	398	2,321,233
% Change from base year		-12.1%	-12.1%	-0.4%
<b>2007</b>	Tonnes / yr	12,454	358	2,315,153
% Change from base year		-18.0%	-21.2%	-0.7%
<b>2008</b>	Tonnes / yr	11,448	314	2,295,528
% Change from base year		-24.7%	-30.7%	-2.6%
<b>2009</b>	Tonnes / yr	10,367	278	2,225,736
% Change from base year		-31.8%	-38.6%	-4.5%

*NB figures have been recalculated from base year since last report.*

Table 6.4 Summary of Road Transport Emissions : NO<sub>x</sub>, PM<sub>10</sub> and CO<sub>2</sub> 2004-2009



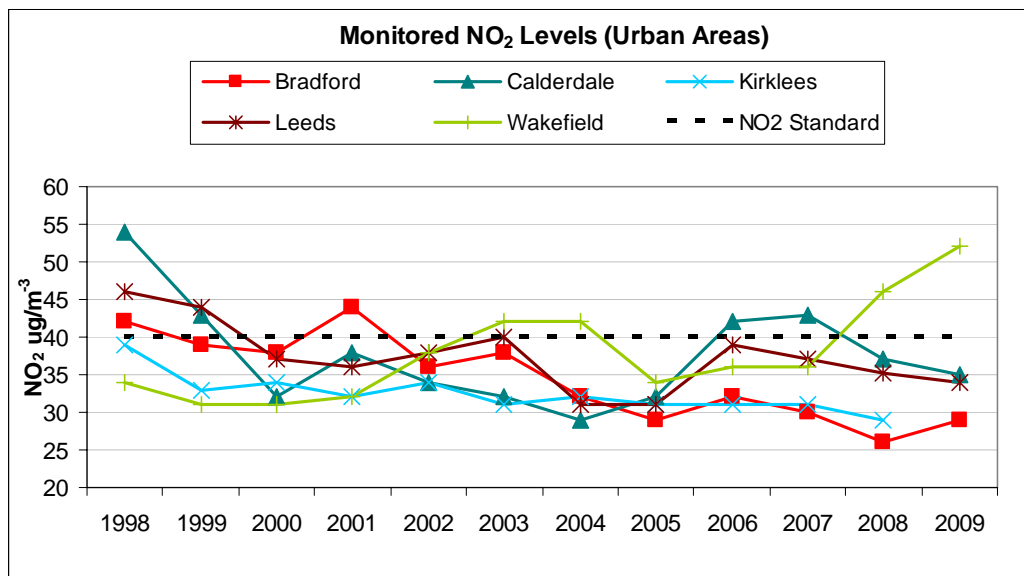
6.15 Approximately 15,210 tonnes and 2.33 million tonnes / year of NO<sub>x</sub>, and CO<sub>2</sub> emissions respectively, were estimated for the year 2004. The predicted annual emission rates of NO<sub>x</sub> 10,367 tonnes (-32%) and PM<sub>10</sub> 278 tonnes (-39%) for 2009 show a consistent reduction across the region since the base year. Whilst 2006 showed little change for CO<sub>2</sub> against the base year, during 2007 and 2008 a reduction in emissions was reported and this has continued with 2009 showing a 4% reduction from the 2004 base year.

**Background Indicator AQ4 : Air Quality Monitoring in Town and City Centres**

6.16 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.

6.17 Road transport emissions of nitrogen dioxide (NO<sub>2</sub>) and particulates (PM<sub>10</sub> reported separately as AQ5) contribute in the region of 75% and 50% respectively, towards total urban emissions. NO<sub>2</sub> and PM<sub>10</sub> represent the two major transport pollutants of concern.

6.18 Figure 6.3 illustrates the results of the annual average NO<sub>2</sub> monitoring within urban centres of each District. The 7 year period from 1998 shows the general trend of urban background NO<sub>2</sub> was improving until 2005, when all Districts easily complied with the annual average standard of 40 µg/m<sup>3</sup>. However, 2006 saw a significant increase in NO<sub>2</sub> levels in every district except Kirklees. There is no clear trend between 2005 and 2009 although all Districts except Wakefield recorded lower concentrations in 2009 than 2006.

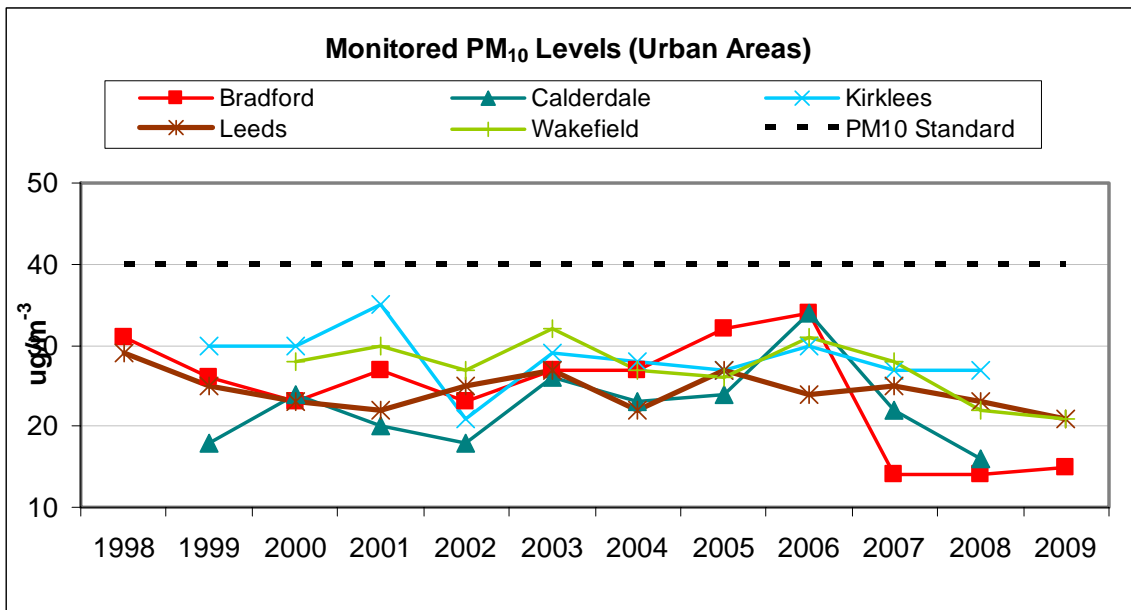


Note: Bradford monitoring station moved to a new location in 2007

Figure 6.3 West Yorkshire Annual Average NO<sub>2</sub> Monitoring 1998 -2009.

**Background Indicator AQ5 : Area Wide Road Transport Emissions : PM<sub>10</sub>**

6.19 Figure 6.4 indicates that all Districts comply with the annual average PM<sub>10</sub> standard of 40 µg/m<sup>3</sup>. Since monitoring began in 1998 there has been little change in general background PM<sub>10</sub> air quality within urban centres. The long term trend is unclear. Most Districts have seen a general increase in Annual Average PM<sub>10</sub> levels between 2002 and 2006. However 2007 saw a general reduction in PM<sub>10</sub> levels across the County down to somewhere close to the 2004 levels. 2008 and 2009 saw further slight reductions for Leeds and Wakefield but a slight increase in Bradford. Calderdale stopped monitoring PM<sub>10</sub> in 2009.



Note: Bradford monitoring station moved to a new location in 2007  
 Kirklees 2009 data not available  
 Calderdale stopped monitoring PM<sub>10</sub> in 2009

Figure 6.4 West Yorkshire Annual Average PM<sub>10</sub> Monitoring 1998-2009

**Background indicator AQ6 : Low Noise Road Surfacing**

6.20 Approximately 65% of the population are exposed to noise levels above the World Health Organisation guideline levels. Road transport is the most dominant and extensive source of environmental noise. Low Noise surfacing can significantly reduce road traffic noise levels at source.

6.21 Figure 6.5 shows the approximate lengths of road that have been re-surfaced with 'low noise' asphalt over the previous 5 years. In total, there has been approximately 761km of 'low noise' asphalt laid in West Yorkshire since the year 2000. 347km has been laid during the LTP2 period including 127km on the principal network, with just over 72km (21km on the principal network) of this being laid during the 2009/10 period.

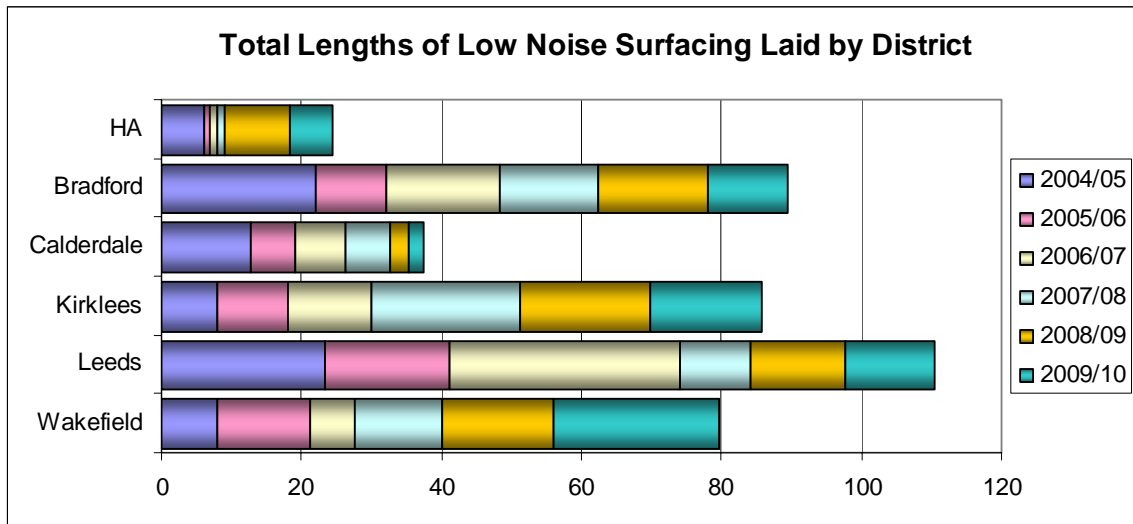


Figure 6.5 Total Length of Low Noise Asphalt Laid by District , 2004 to 2010

6.22 Figure 6.6 compares the actual lengths of 'low noise' asphalt laid within West Yorkshire and by the Highways Agency (HA) to an approximate percentage coverage of the trunk / principal road network within each district. Taken as a whole, approximately 38% of the trunk / principal road network within West Yorkshire is now surfaced with low noise asphalt.

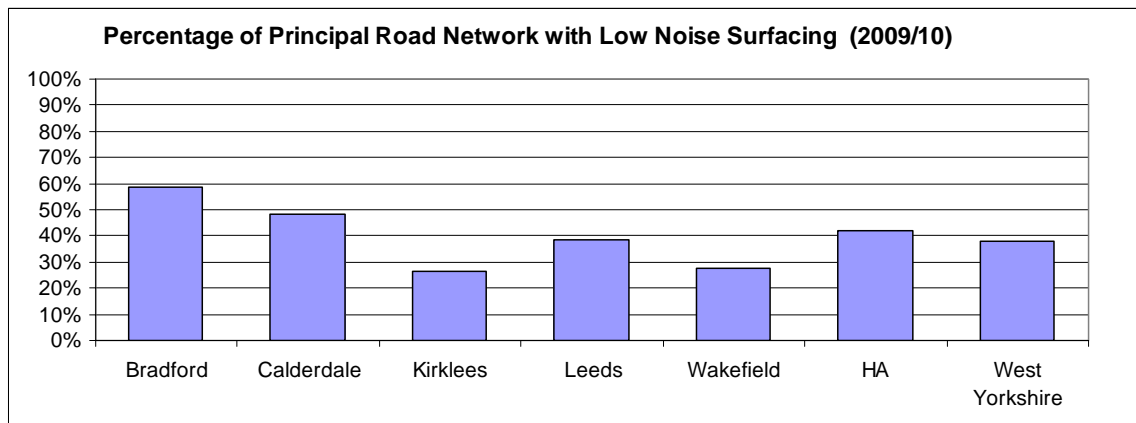


Figure 6.6 Percentage of Principal Road Network with Low Noise Asphalt

6.23 The use of low noise asphalt will continue to be monitored and reported annually.

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## CHAPTER 7 ASSET MANAGEMENT

### Introduction

7.1 The following four indicators have been selected to monitor our management of the transport assets of West Yorkshire. Progress towards LTP2 targets will be measured using two mandatory indicators and two local key indicators.

7.2 West Yorkshire averages for all road and footway condition performance indicators are calculated from weighted lengths, not an average of the five district values.

### Mandatory Indicator AM1 : Principal, Non-principal and Unclassified Road Condition

7.3 For four years the condition of the Principal and Non-Principal Classified roads has been measured using **Surface Condition Assessment** for the **National Network of Roads (SCANNER)**. The last two years' results have been reported using the same weighting set and are therefore directly comparable.

7.4 Recent results are shown below with individual district figures being weighted by road length to produce a West Yorkshire Average.

District	2004/05 TTS %	2005/06 Scanner %	2006/07 Scanner %	2007/08 Scanner %	2008/09 Scanner %	2009/10 Scanner %
Bradford	NA	18*	8	3	3	5
Calderdale	39	9	10	6	6	4
Kirklees	45	23*	12	4	5	7
Leeds	26	6	9	6	5	5
Wakefield	29	5	5	2	3	3
<b>Weighted Ave.</b>	<b>21.02</b>	<b>9.67</b>	<b>9.68</b>	<b>4.49</b>	<b>4.5</b>	<b>5.02</b>

*Table 7.1 Proportion of Principal Road Network Where Maintenance should be Considered (NI 168)*

7.5 The condition of Classified Non-Principal roads, BV97a, reported using CVI data has now been replaced with BV224a reported using data from the Scanner machine. This National Indicator was subsequently renumbered NI 169

7.6 The results are shown in Table 7.2 below.

District	2005/06 Scanner %	2006/07 Scanner %	2007/08 Scanner %	2008/09 Scanner %	2009/10 Scanner %
Bradford	27*	15	5	6	6
Calderdale	15	16	11	11	7
Kirklees	44*	25	7	9	8
Leeds	13	15	12	9	7
Wakefield	13	13	5	6	5
<b>Weighted Ave.</b>	<b>22.92</b>	<b>16.93</b>	<b>7.74</b>	<b>7.9</b>	<b>6.6</b>

*Table 7.2 Proportion of Non Principal Classified Roads where Maintenance Should be Considered (NI 169)*

7.7 The results for Bradford and Kirklees for 2005/06 marked \* in both Tables 7.1 and 7.2 are now known to be erroneous. The contractor who surveyed these two networks has acknowledged nationally that their data has exaggerated the condition of the all networks surveyed. 2006/07 is, therefore, the first meaningful figure that can be reported with confidence.

7.8 The reporting of the condition of unclassified roads has undergone many changes in rules and parameters over the years. Data is now reported using results averaged from the previous four years. It is anticipated that this will smooth out the fluctuations that have been experienced over the last five years shown below.

District	2005/06	2006/07	2007/08	2008/09	2009/10
Bradford	9	12	9	5	8
Calderdale	16	15	14	14	15
Kirklees	15	12	12	12	na
Leeds	24	26	22	16	14
Wakefield	22	22	19	15	14
<b>Weighted Ave.</b>	<b>17.62</b>	<b>18.32</b>	<b>15.80</b>	<b>12.66</b>	<b>12.41*</b>

\*No data for Kirklees

*Table 7.3 Percentage of Unclassified Roads Where Maintenance Should be Considered*

7.9 There is a degree of encouragement in the data in that the results are showing a gradual improvement when averages over a maximum four year cycles are plotted. The improvements across the five districts has however only been marginal. Greater investment is needed in the repair of unclassified roads if the gradual improvement is to be consolidated and extended.

### Mandatory Indicator AM2 : Footway Condition

7.10 BVPI 187 measures the condition of prestige, primary and secondary walking routes, but has been abandoned as a national indicator . The West Yorkshire authorities are continuing to report this PI in the absence of a national replacement. Fifty percent of these footways are surveyed each year using UKPMS DVI surveys; data has been collected for five years. Only alternate years' data can be compared with each other Therefore the West Yorkshire authorities believe that trends can be better assessed by taking a 100% sample over a two year period.

7.11 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

District	2005/06	2006/07	2007/08	2008/09	2009/10
Bradford	16	26	21	21	9
Calderdale	56	5	5	5	5
Kirklees	7	16	22	16	na
Leeds	30	19	19	17	19
Wakefield	32	23	20	8	12
<b>Weighted Ave.</b>	<b>22.32</b>	<b>20.29</b>	<b>18.65</b>	<b>14.78</b>	<b>11.9*</b>

\*No data for Kirklees

*Table 7.4 PI 187 Percentage of Prestige, Primary and Secondary Walking Routes where Maintenance Should be Considered.*

### Targets for Highway Maintenance Indicators

7.12 The West Yorkshire authorities remain cautious at predicting the trajectories and targets for the various performance indicators.

7.13 Both BVPI 223 and 224a, now measured by scanner, have little historical data to be able to develop a trend to assess the impact on carriageway condition of the current levels of spending.

7.14 BVPI 224b measures the condition on the greater part of the network, the unclassified local roads. A huge investment, over and above the current levels of LTP settlement, is needed to make an impact in the condition of this sub-network. However for some authorities the LTP highway maintenance settlement provides the majority of local maintenance budget.

### Local Key Indicator AM3 : Structures With Weight/Width Restrictions

7.15 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.

7.16 The percentage of structures with temporary weight or width restrictions is used to monitor performance in this area. The position at March 2010 is reported in Table 7.5, together with the 2004 baseline.

West Yorkshire: Weight And Width Restricted Structures												
District	MARCH 2004						MARCH 2010					
	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.	%	Total	No.	%	Total	No.	%	Total	No.	%
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	318	14	4.4	87	6	6.9
Leeds	229	5	2.2	112	1	0.9	229	4	1.7	113	11	9.7
Wakefield	85	0	0	60	6	10.0	85	0	0	60	5	8.3
WEST YORKS	1104	25	2.3	399	34	8.5	1132	21	1.85	400	34	8.50

*Table 7.5 Percentage of Structures with Temporary Weight or Width Restrictions, March 2004 and March 2009*

7.17 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. These represent about 1.5% of structures in West Yorkshire. In addition, continued pressure on private bridge owners is required to ensure that their weak structures are strengthened within a reasonable timescale.



### Local Key Indicator AM4 : Bus Shelters Meeting Modern Standards

7.18 Market research has indicated that people's perception of public transport is influenced greatly by their wait for a service. This can be seen in the comparison between the percentage of shelters meeting modern standards in West Yorkshire's and overall customer satisfaction with them. Since 2003/04 both have increased significantly.

7.19 Table 7.6 below shows the proportion of shelters meeting the above standards and indicates we are making good progress towards our target of 95% by 2010/11. Public satisfaction with bus shelters is also showing strong year on year improvement.

Year	% of shelters meeting modern standards *	Customer Satisfaction **
2003/04	40	NA
2004/05	46	NA
2005/06	57	NA
2006/07	68	6.64
2007/08	72	7.29
2008/09	79	7.62
2009/10	86	7.99

\* defined as having full glazing, a light and seat and meeting DDA requirements

\*\* measured on a scale of 1 to 10 with 10 being good and 7 being target score for public satisfaction

*Table 7.6 Proportion of Bus Shelters Meeting Modern Standards, 2003/04 to 2009/10*

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## **CHAPTER 8 PROGRESS TOWARDS LTP TARGETS**

### **Introduction**

8.1 Table 8.1 below shows the progress made towards the 17 Mandatory and 10 local targets in the LTP.

8.2 A “traffic light” colour code system is used to indicate whether we are on track (green), have no clear evidence (amber) or are not on track (red) to meet the 2010/11 target. In addition the direction of movement since 2008 is shown using arrows.

8.3 The table shows that we are not on track to meet 5 out of 17 of our Mandatory targets :

- Access to Hospitals
- Bus Punctuality
- Public Transport (Bus) Patronage
- Total Killed and Seriously Injured Road Casualties
- Child Killed and Seriously Injured Road Casualties

8.4 We have no clear evidence on a further 1 Mandatory and 3 local targets. This is mainly due to changes in survey methodology or revisions to existing databases.

8.5 Annual progress is measured against the trajectories as set out in Appendix F of the West Yorkshire Local Transport Plan 2006/07 – 2010/11 Appendices. Although on face value figures may be going up they will be deemed off target for the purposes of this Report if they are not going up at a sufficient rate to meet the trajectory.

CHAPTER 8 PROGRESS TOWARDS LTP TARGETS

Ref	Description	Base	2006/07	2007/08	2008/09	2009/10	Target	On Track?
M1	Access to Hospitals	89.5%	78%	75.4%	70.2%	71.3%	89.5%	
M2	Bus Punctuality	87%	82.6%	85.7%	88.5%	85%	95%	
M3	Satisfaction with local bus services *	54%	66.4%	(7.21)	(7.63)	(7.69)	59%	
M4	Overall Cycling Trips	100	104	111	115	122	110	
M5	Person Journey Time	4'03"	4'07"	4'06"	3'56"		4'20	
M6	Peak Period Traffic Flows (Index)							
	Bradford	100	102	96	94	98	103	
	Halifax	100	99	102	101	98	103	
	Huddersfield	100	101	104	97	99	103	
	Leeds	100	99	97	95	96	103	
	Wakefield	100	100	104	101	100	103	
M7	Car Mode share to school	30.6%	30.6%	30.5%	29.8%	28.9%	30.6%	
M8	PT Patronage (millions)	199.1	196.9	192.6	195.0	184.3	209.0	
M9	Total KSI	1,484	1,140	1,132	1,091	973	890	
M10	Child KSI	272	147	175	152	151	136	
M11	Total slight casualties	11,391	9,474	8,850	8,337	8,238	9642	
M12	NO <sub>2</sub> in Leeds AQMA (Index)	100	91	94	87	85	90	
M13	Change in Area Wide Traffic (Index)	100	100	100.3	97.9	97.8	105	
M14	Maintenance on PRN *	36%	10% (9.68%)	(4.49%)	(4.5%)	(5.02%)	27% (9%)	
M15	Maintenance on classified non PRN *	13%	17% (16.9%)	(7.74%)	(7.9%)	(6.6%)	5% (13%)	
M16	Maintenance on unclassified roads *	16%	18.3% (18.3%)	(15.8%)	(12.66%)	(12.41%)	9% (13.5%)	
M17	Maintenance on footways	24%	21%	19%	14.78%	11.9%	14%	

\* New Data source – revised target and trajectory needed

Table 8.1 Progress Towards Mandatory LTP2 Targets

CHAPTER 8 PROGRESS TOWARDS LTP TARGETS

Ref	Description	Base	2006/07	2007/08	2008/09	2009/10	Target	On Track?	
L1	Satisfaction with LTP funded PT facilities	87%	96%	No new data	No new data	No new data	90%		
L2	Peak Period Cycle Trips to Urban Centres								
	Halifax	100	108	123	na	134	120		
	Leeds	100	124	154	170	198	120		
	Wakefield	100	74	100	144	151	120		
L3	AM Peak Period Mode Split (% cars) +								
	Bradford	74	72	71	72	71	74		
	Halifax	74	69	68	Na	72	74		
	Huddersfield	64	61	59	61	59	65		
	Leeds	58	56	55	56	56	55		
	Wakefield	73	68	70	70	71	73		
L4	Peak period rail patronage to Leeds	10,209	17,196	18,915	19,547	18,656	12,240		
L5	Patronage on QBC's *	See Table 4.17							
L6	Pedestrian KSI's	525	314	347	364	295	420		
L7	NO <sub>x</sub> emissions on PRN (tonnes/yr)	15,198	13,359	12,453	11,604	10,367	12,158		
L8	CO <sub>2</sub> emissions on PRN (tonnes/yr)	2.330*10 <sup>6</sup>	2.321*10 <sup>6</sup>	2.315*10 <sup>6</sup>	2.295*10 <sup>6</sup>	2.226*10 <sup>6</sup>	2.329*10 <sup>6</sup>		
L9	Council Owned Structures with restrictions	2.3%	2.5%	2.0%	2.0%		1.5%		
L10	Bus shelters meeting modern standards	40%	68%	72%	79%	86%	95%		

\* New Data source – revised target and trajectory needed  
+ Provisional – methodology change

Table 8.2 Progress Towards Local LTP2 Targets

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