

# Part 2

## Commuting



## PART 2 COMMUTING

### Introduction

This section explores information on commuting patterns and the characteristics of commuters into and out of the district. Comprehensive data on commuting can currently only be obtained from the ten-yearly Census of Population, which matches respondents' home addresses to those of their places of work. The results of the 2001 Census, which have recently become available, are the primary source of information for this analysis.

### Changes between 1991 and 2001

Table 1 provides the aggregate figures for commuting into and out of Calderdale.

**Table 1 Commuting into and out of Calderdale**

	1991	2001	% Change (1991 - 2001)
<b>Residents in Employment</b>	<b>85330</b>	<b>88038</b>	<b>+3.2</b>
Residents working outside District (out-commuters)	20300	24711	+21.7
As % of Residents in Employment	23.8	28.1	+4.3
<b>Employment within Calderdale</b>	<b>81750</b>	<b>83269</b>	<b>+1.9</b>
in-commuters to Calderdale	16500	19942	+21.2
% of Employment in Calderdale	20.2	23.9	+3.7
<b>Total In- and Out-Commuting</b>	<b>36800</b>	<b>44653</b>	<b>+21.3</b>
Net out-commuting	3800	4769	+25.5
Daytime Population aged 16-74	n/a	131962	n/a
Resident Population aged 16-74	n/a	136731	n/a

Source: ONS, Census 1991, 2001. © Crown Copyright

The 1991 figures on in-and out-commuting have been adjusted from the raw data originally released. See Appendix D for explanation.

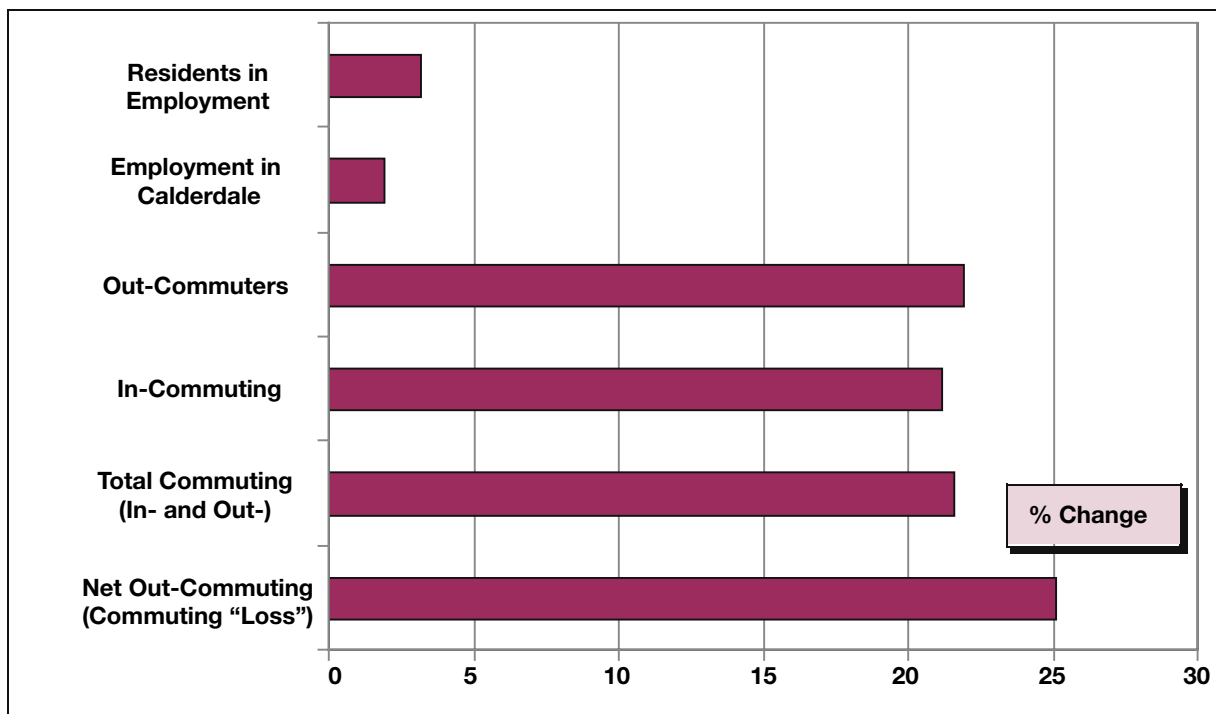
The key points shown by Table 1 are:

- altogether, almost 45,000 people travel into or out of Calderdale to work
- more than one quarter of residents in employment work outside the District
- almost one quarter of people in employment within Calderdale travel from other areas
- almost 5,000 more people travel out of Calderdale to work than travel in, confirming that the employment of residents has increased faster than employment within the district
- between 1991 and 2001, the number of people commuting out of Calderdale and into Calderdale both rose by over 20%

It can also be seen that Calderdale's "daytime population" aged 16-74 is smaller than its resident population of that age, reflecting net out-commuting. However, these figures do not take account of shopping and other purposes for people to come to or leave Calderdale.

The main developments are illustrated in Figure 1 below.

**Figure 1 Changes in Employment and Commuting. 1991-2001**



Source: calculated from ONS, Census 1991, 2001. © Crown Copyright

The impact of the above may include the following:

- there are increasing numbers travelling during the rush hours every day. The figures quoted above do not take account of all the commuting to work within Calderdale, and all the commuting that passes through Calderdale
- the implications of this for road congestion and crowded trains are evident and visible with knock-on effects on people's time and health, on freight transport and on local and wider pollution. In addition, the duration of the rush hour is getting "stretched" in both the morning and the evening
- as an ever greater proportion of employment in Calderdale comes from outside, and larger numbers of residents work outside the District, the link between the nature of the economy and the social composition of residents is reduced. This can have implications for the sort of retailing and other businesses that the towns of Calderdale can support, and for the other facilities required by residents
- where there are clear social and income contrasts between out- and in-commuters, there are likely to be implications for the levels and nature of housing demand and the availability of affordable housing

## Working at or from Home

In parallel with the growth in commuting, there has been a dramatic rise in numbers working at or from home. This is not a simple definition, since some people may work at home most of the week but go to work some days; others may work from home (and so have no other “place of work”) but travel a lot in their work. Accordingly, the figures given below are the best estimates that can be obtained from the 1991 and 2001 Censuses. 12% of the workforce (almost one in eight) now either work from home or have no fixed place of work

**Table 2 Working from Home**

	1991		2001	
	Number	%	Number	%
Working mainly at or from home	3175	3.7	7703	8.7
No fixed place of work	n/a	n/a	2884	3.3

Source: ONS, Census 1991, 2001. © Crown Copyright

## Distance Travelled to Work

Accompanying the growth in commuting, there has also been an increase in distance travelled to work. Table 3 provides figures for Calderdale residents working in Calderdale, and for in- and out-commuters. It shows that:

- commuters travelled far greater distances than Calderdale residents working within the District. Whilst not a surprising finding, the Table shows the impact of commuting on distances
- almost two thirds of all commuters travel 10 kilometres or further
- out-commuters tend to travel further than in-commuters, with 35% travelling further than 20 km (against 28% of in-commuters)

**Table 3 Distance Travelled to Work**

Distance Travelled	Residents Working in Calderdale		Out-Commuters	In-Commuters
	All	Those Travelling to Work (i)		
	%	%	%	%
0.5 km	61.7	74.1	6.5	11.0
5-10 km	17.8	21.4	22.8	28.7
10-20 km	3.7	4.4	36.0	32.8
20-30 km	0.1	0.1	17.6	12.5
30 kms and over	0.0	0.0	17.1	15.1
Working at/from Home or No Fixed Workplace	16.7 (ii)			

Source: ONS, Census 2001. © Crown Copyright

i. i.e. Excluding those working at or from home, or with no fixed workplace

ii. This figure is different from that given in Table 2 because it is calculated only on the basis of Residents working within Calderdale.

The above figures go some way to explain the changes in distance travelled to work between 1991 and 2001 by Calderdale residents, as shown in Table 4 below.

**Table 4 Changes in Distance Travelled to Work by Calderdale Residents**

Distance	1991 (i)	2001 (ii)	
	%	Number	%
0-5 km	61.4	40647	52.6
5-10 km	20.4	16895	21.9
10-20 km	11.4	11245	14.6
20 km and over	6.8	8464	11.0

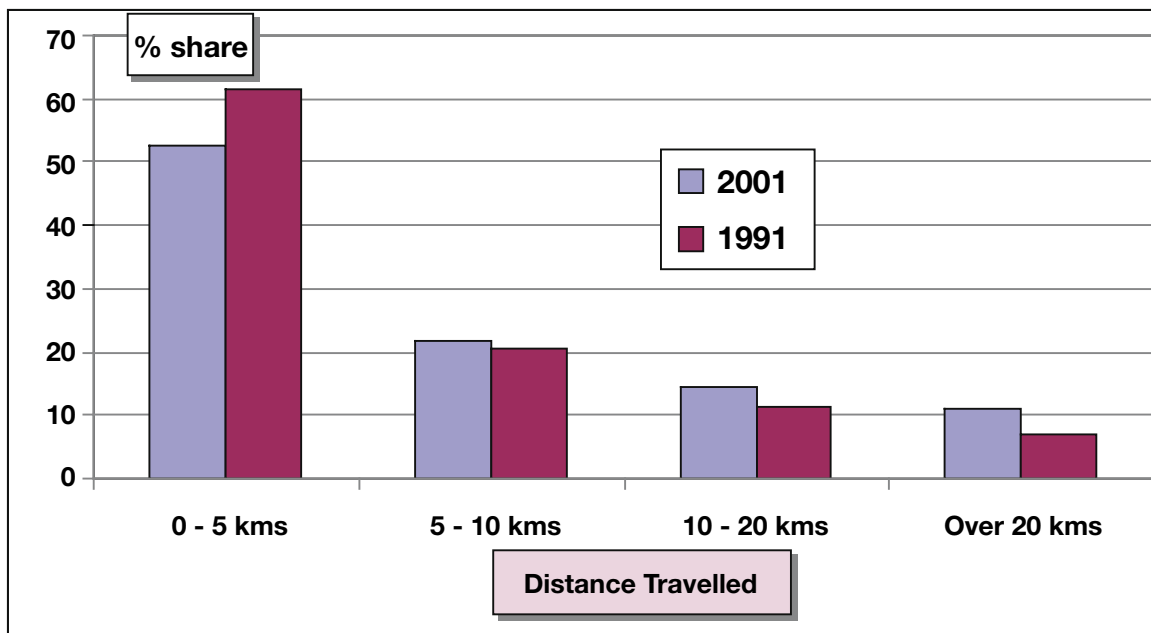
Source: ONS, Census 1991, 2001. © Crown Copyright

i. The 1991 Census figures omitted a substantial number for whom residence and/or workplace could not be identified. These have been allocated pro rata.

ii. Figures exclude those working mainly at or from home, those with no fixed place of work, and those working offshore or outside the UK.

The figures, illustrated below, show the scale of the change in the course of a decade, with the proportion living within 5 kilometres of work falling by 9%, whilst the proportion who work more than 10 kilometres from home has risen to over one quarter. These changes are much more significant for travel volumes than the effect of more residents working at or from home.

**Figure 2 Change in Distance Travelled to Work, 1991-2001**



Source: calculated from ONS, Census 1991, 2001. © Crown Copyright

The average distance travelled to work by *Calderdale residents* in 2001 was 11.0 kms compared to 13.3 kms for England. (These figures exclude those working at/from home.)

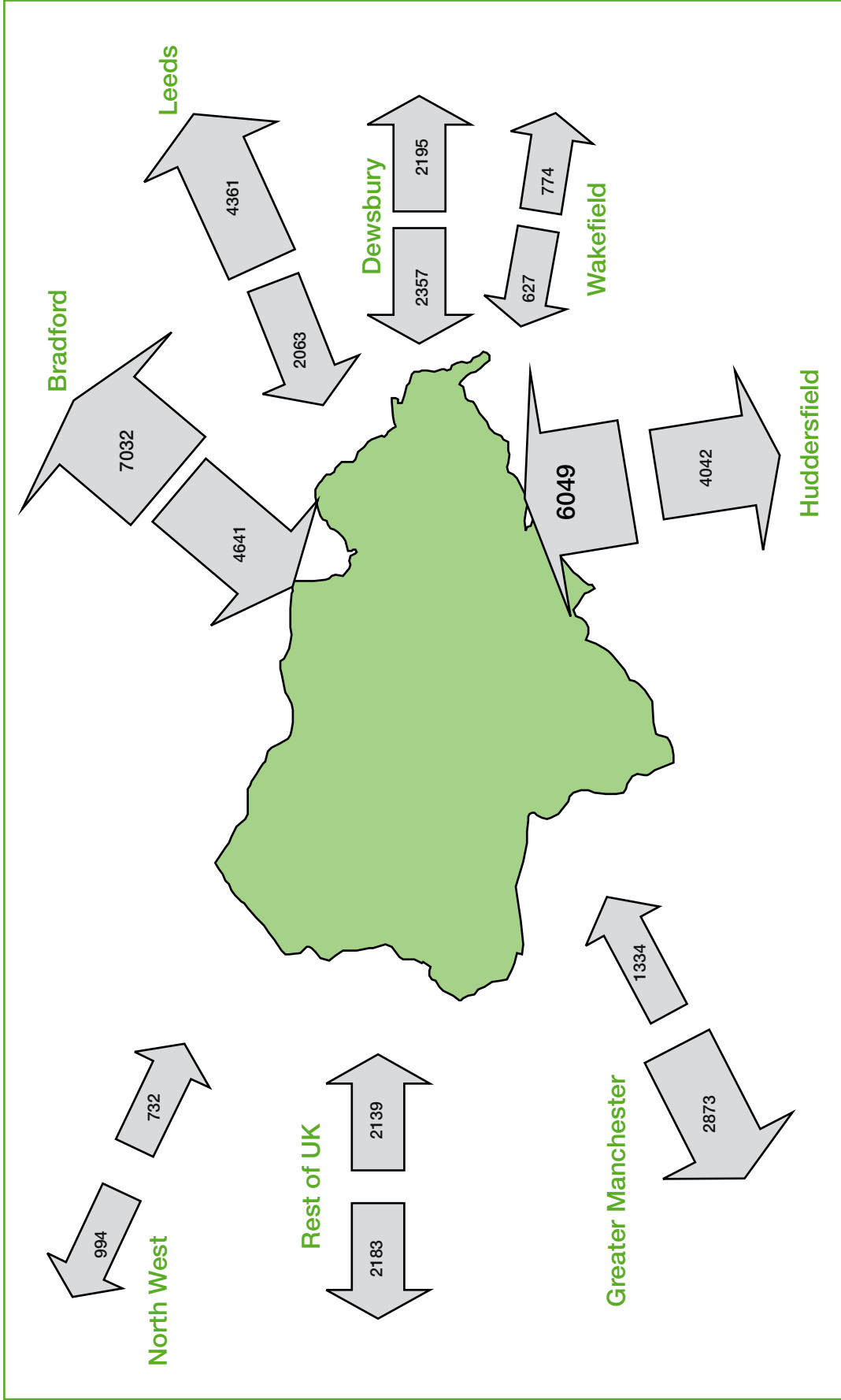
In comparison, the average distance travelled by all people *working in Calderdale* in 2001 was 8.0 kms, a rise of 2.6 kms (48%) on 1991.

These two figures confirm that on average out-commuters from Calderdale travel substantially further than in-commuters into Calderdale.

## Origins and Destinations of Commuters

Map 1 below illustrates daily trips in and out of Calderdale. It shows that the districts/towns to which Calderdale “loses” commuters are principally Bradford (net out-commuting of about 2,400), Leeds (2,300) and Greater Manchester (1,540). Huddersfield is the one area from which Calderdale has a large net “gain” – of about 2,000 per day.

**Map 2 Travel to work patterns to and from Calderdale 2001**



Source: Data from 2001 Census of Population © Crown Copyright  
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**Table 5 Changes in Commuting: Calderdale to and from other West Yorkshire Districts, Greater Manchester, and the Rest of the UK.**

Calderdale	1991	2001	Change 1991 - 2001	
	Number	Number	Number	%
To Bradford	6571	7032	+ 461	+ 7.0
From Bradford	4006	4641	+ 635	+ 15.9
Net Inflow/Outflow (+/-)	- 2565	- 2391	- 174 *	- 6.8 *
To Kirklees	5439	6237	+ 798	+ 14.7
From Kirklees	7819	8406	+ 587	+ 7.5
Net Inflow/Outflow (+/-)	+ 2380	+ 2169	- 211 *	- 8.9 *
To Leeds	3030	4361	+1331	+ 43.9
From Leeds	1132	2063	+ 931	+ 82.2
Net Inflow/Outflow (+/-)	- 1898	- 2298	+ 400 *	+ 21.1 *
To Wakefield	555	774	+ 219	+ 39.5
From Wakefield	368	627	+ 259	+ 70.4
Net Inflow/Outflow (+/-)	- 187	- 147	- 40 *	- 21.4 *
To Greater Manchester	2309	2873	+ 564	+ 24.4
From Greater Manchester	1152	1334	+ 182	+ 15.8
Net Inflow/Outflow (+/-)	- 1157	- 1539	+ 382 *	+ 33.0 *
To Rest of UK	2288	3177	+ 889	+ 38.9
From Rest of UK	1964	2871	+ 907	+ 46.2
Net Inflow/Outflow (+/-)	- 324	- 306	- 18 *	- 5.6 *

\* This figure shows whether the net inflow/outflow has grown (+) or decreased (-)

Source: ONS, Census 2001. © Crown Copyright

Table 5 shows the following changes in the origins and destinations of commuting out of and into Calderdale:

- there is a net outflow of commuters to Bradford, Leeds, Wakefield, Greater Manchester, and the Rest of the UK
- in contrast, there is a substantial net inflow from Kirklees
- for all 6 of the areas/Districts named above, there has been an increase in commuting both to and from Calderdale
- however, the extent of this increase has varied greatly. The smallest increases have been in Bradford (7% more commuting to Bradford and 16% more from Bradford) and Kirklees (15% and 7.5%). The largest increase has been commuting to or from Leeds (up 44% and 82% respectively), with commuting to and from Wakefield and the rest of the UK also having grown rapidly
- despite the overall increase in numbers commuting, in the case of Bradford, Wakefield and the Rest of the UK, the size of the net outflow has actually decreased, suggesting a trend towards a more balanced flow
- similarly, the net inflow from Kirklees has fallen, again hinting at a more even flow
- the size of the net loss to Leeds has increased, but less rapidly than the growth in commuting, again suggesting a slight balancing of the flows
- only with respect to Greater Manchester has the net outflow increased more rapidly than the overall change in commuting

## Mode of Travel

The Table below shows the mode of travel used by people in employment, broken down into:

- Calderdale residents working in Calderdale
- Calderdale residents commuting out of Calderdale to work
- Non-residents commuting into Calderdale to work

**Table 6 Commuters: Mode of Travel**

Mode of Travel	Calderdale Residents in Employment		Non-Residents
	Working in Calderdale *	Out-Commuters	In-Commuters
	%	%	%
Car driver	56.1	77.8	79.4
Car passenger	9.2	5.4	6.6
Bus	14.7	7.0	8.2
Train	0.6	6.0	1.9
Foot	16.4	1.5	1.6
Bicycle	1.1	0.4	0.6
Motorbike	0.9	1.0	1.1
Other	1.0	0.9	0.6

Source: ONS, Census 2001. © Crown Copyright

\* Figures for Calderdale residents working in Calderdale exclude those working mainly at or from home

The Table shows the very large impact of commuting, largely because of the greater distances involved, on mode of travel. About 20% fewer people living and working in Calderdale use the car to travel to work than is the case amongst commuters, the difference being accounted for almost entirely by bus travel and going to work on foot. These two modes, together with bicycle, account for about one third of journeys to work amongst this group.

Amongst commuters, Calderdale residents commuting to other areas are substantially more likely to use the train (6.0% against 1.9%). The explanation may be related to greater congestion involved in travelling into Bradford, Manchester or Leeds in the morning, than travelling to towns in Calderdale from these localities.

Table 7 shows how the mode of travel to work has changed for:

- all Calderdale residents in employment
- all people working in Calderdale

Figures are provided only for the aggregated categories. Those working from home are excluded from the figures, and 1991 figures excluded a substantial number who did not provide mode of travel to work.

**Table 7 Change in Mode of Travel to Work, 1991-2001**

Mode of Travel	Calderdale Residents in Employment		All People working in Calderdale	
	1991 %	2001 %	1991 %	2001 %
Car driver	57.3	62.8	56.4	62.2
Car passenger	8.3	8.1	8.3	8.6
Train	1.6	2.3	0.7	0.9
Bus	17.3	12.3	18.4	13.0
Foot	13.6	11.8	14.3	12.5
Cycle/Motorcycle	2.0	1.8	2.0	1.9
Other	-	0.8	-	0.9

Source: ONS, Census 1991, 2001. © Crown Copyright

The Table shows that:

- both for Calderdale residents and for all working within Calderdale, there has been a continued shift towards travelling to work in one's own car.
- the percentage increase in car drivers is almost exactly matched by the decreased percentage using the bus. There has been a substantial increase in the number of Calderdale residents using the train to travel to work, amounting to about 500 people (a 38% rise). However, its share in 2001 remains very small
- the percentage using bicycle or motorcycle remains at about the 1991 level, around 2% combined
- walking to work has continued to decline. This is likely to be more as a result of greater distances travelled to work than reluctance to walk
- perhaps surprisingly in the context of greater congestion, there has been no shift towards travelling to work as a passenger (which could be seen as an imperfect proxy for car-sharing).

## Profile of Commuters

This section considers in more detail the characteristics of commuters.

### Age

The Table below shows the age profile of in-commuters and out-commuters. Whilst younger adults (under 35) are the largest group of in-commuters to employment in Calderdale, the middle age group (aged 35-49) makes the largest group of out-commuters.

For both in-commuting and out-commuting, the “propensity to commute” falls considerably in the 50+ age group.

**Table 8 Profile of Commuters by Age**

Age	Calderdale Residents		Residents of other areas employed in Calderdale
	Employed in the district	Employed outside the district	
	%	%	%
16-34	34.7	36.2	41.1
35-49	38.0	41.7	38.8
50+	27.3	22.2	20.1

Source: ONS, Census 1991, 2001. © Crown Copyright

### Gender

The following Table shows that substantially more men than women commute. This can be attributed to the far higher part-time working rate amongst women, associated with childcare. Further, it is often not financially worthwhile travelling the longer distances usual in commuting where work is only part-time.

**Table 9 Profile of Commuters by Gender**

Gender	Calderdale Residents		Residents of other areas employed in Calderdale
	Employed in the district	Employed outside the district	
	%	%	%
Male	50.2	61.2	63.7
Female	49.8	38.8	36.3

Source: ONS, Census 1991, 2001. © Crown Copyright

## Industrial Sector

The Table below shows the rates of commuting into and out of Calderdale for different industrial sectors. It reveals the following:

- there is a substantial range of commuting rates. The proportion of employment in different sectors composed of in-commuters is highest in the Finance (32%) and Manufacturing (26%) sectors
- the lowest rates are 17% (Hotels & Restaurants) and 18% (Transport, Storage & Communications)
- out-commuting rates are highest for residents working in Finance; Transport, Storage & Communications; and Public Administration, Health, Education & Social Work
- out-commuting rates are lowest in the Hotels & Restaurants sector

These characteristics reflect trends in employment growth which were summarised in Part 1, along with the higher income levels in professional occupations (see also following information on Occupations).

**Table 10 Profile of Commuters by Industrial Sector**

Sector	Proportion of Employment in Sector provided by:		Proportion of Residents ...	
	Calderdale Residents %	In-Commuters %	Working in Calderdale %	Commuting out %
Manufacturing*	74	26	72	28
Transport, Storage & Communications	82	18	66	34
Construction	77	23	77	23
Wholesale & Retail	77	23	73	27
Hotels & Restaurants	83	17	89	11
Finance, Real Estate & Related Business	68	32	69	31
Public Admin, Education, Health & Social Work	80	20	68	32
Other	83	17	79	21

Source: ONS, Census 1991, 2001. © Crown Copyright

\* including electricity, gas and water supply

## Occupation

In terms of occupation, Table 11 shows that:

- commuting remains much higher among Managers, Professionals, and Associated Professional & Technical Occupations. These three occupational groups account for 55% of out-commuters and 53% of in-commuters.
- people in Personal Service, Sales & Customer Service, Process, Plant and Machine Operatives, and “Elementary Occupations” account for 24% of Out-Commuters and 23% of In-Commuters, despite accounting for 40% of residents working within Calderdale.
- Managers and Skilled Trades account for more in-commuters than out-commuters, whilst among Professional and Technical occupations the reverse is true.

The contrasts between commuters and non-commuters is likely to reflect pay and the trade-off between time taken and pay/career advancement. The relatively small differences between in- and out-commuters may be the result chiefly of the sectoral changes discussed above, with managers and skilled trades being highly represented in Finance and Manufacturing respectively.

**Table 11 Profile of Commuters’ Occupation**

Occupation	Residents working in Calderdale %	Out-Commuters %	In-Commuters %
Managers	12.2	20.5	22.3
Professional	7.9	16.9	14.5
Technical & Associate Professional	10.9	17.8	16.0
Administrative and Secretarial	12.9	11.5	11.3
Skilled Trades	13.8	9.2	12.6
Personal Service	8.8	3.7	2.9
Sales and Customer Service	7.3	5.4	4.7
Process, Plant & Machine Operatives	12.5	9.2	8.6
Elementary	13.7	5.8	7.1

Source: ONS, Census 1991, 2001. © Crown Copyright

## Qualifications

**Table 12 Profile of Commuter Qualifications - 2005**

<b>Qualification Level</b>	<b>Residents working in Calderdale</b>	<b>Out-Commuters</b>	<b>In-Commuters</b>
	<b>%</b>	<b>%</b>	<b>%</b>
NVQ Level 2 or above	69.7	81.4	73.8
NVQ Level 3 or above	44.8	65.0	48.3
NVQ Level 4 or above	24.0	46.9	30.9

*Source: Learning & Skills Council, Calderdale Household Survey, 2005*

The survey results from the LSC suggest a very strong contrast in qualifications between Calderdale residents working in Calderdale, in-commuters and out-commuters. Most notable is the very high qualification levels of out-commuters, with almost 47% having an NVQ Level 4 qualification or above, almost double the proportion among residents working within the District and also far higher than the figure for in-commuters.



## Traffic and Travel

### Car Use

The rise in employment, growth in the rate and distance of commuting, and increasing use of car to travel to work have combined to produce an increase of approximately 3,000 in the number of Calderdale residents travelling to work each day in their own car between 1991 and 2001. Over the same period, there has been a decrease in bus usage, for travel to work, of a similar number, possibly up to 4,000.

Journeys to work by Calderdale residents are only part of the traffic picture. The above estimates do not include in-commuters to Calderdale, people commuting through Calderdale to work, or the rise in travel as part of work, including the movement of freight.

In addition to travel to work and travel in work, there are other developments that have had a very substantial effect on the amount of journeys made, and the amount of road traffic. Broadly, these fall into the following categories:

- travel for leisure purposes. This has been affected by the rapid growth in car ownership, including numbers of households with more than 1 car and numbers of young people owning or having access to cars.
- shopping. Growth in out of town shopping and the readiness to travel long distances to shops. Car ownership and use is dynamically related to such developments
- the “school run”. For a range of reasons, numbers of children being taken to work in a car has risen very substantially over the last decade.

Of these three developments, the journey to school has had the most marked impact on rush hour traffic, in particular the morning rush hour. Although it is partly a local issue, there is a general impact on traffic beyond the neighbourhood of schools.

### Car Ownership

Data on vehicle registration shows that the number of vehicles registered in Calderdale has risen by 60% since 1979, to a total of 82,660 in 2002. In the last ten years (1992-2002) the increase has been 15%.

This number represents an average of about 1 vehicle per household. The 2001 Census showed that 25% of households now have two or more cars although 31% of households did not own a vehicle.

## Rush Hour Traffic

Traffic surveys provide data on weekday traffic flows across the District boundary on major roads. Comparisons of the peak flow into and out of the District in 1999 and 2003 are shown below:

**Table 13 Rush Hour Flows into and out of Calderdale\***

Time Period	1999 Number	2003 Number	Change 1999-2003 %
Morning 8.00 - 9.00			
In	11,350	11,800	+4.0
Out	10,610	10,430	-1.7
Total	21,960	22,230	+1.2
Evening 17.00 - 18.00			
In	11,440	11,980	+4.7
Out	11,060	10,960	-0.9
Total	22,500	22,940	+2.0

Source: CMBC Regeneration & Development Directorate, Transport Section

\* Main Roads only

The Table shows fairly moderate changes over the 4 year period, with increases in the number of vehicles coming into Calderdale but decreases in those going out. This reinforces the earlier observation that out-commuters are now somewhat less car-dependent than in-commuters, and may reflect the greater congestion or other difficulties (such as parking) in the destinations of out-commuters. (The data, of course, relates only to the specified rush hours and will not reflect movements starting before or after these hours.)

Cordon surveys measure the amount of traffic travelling into or out of a town on a number of key routes. The Table below shows the changes in the peak hour flows for Halifax, Brighouse and Sowerby Bridge.

**Table 14 Changes in traffic flows 1993 –2003**

Cordon Area	Increase in traffic flows (in- and out-flows combined) 1993 - 2003	
	Morning peak (8 am – 9 am) %	Evening Peak (5 pm – 6 pm) %
Halifax	+6.3	+6.8
Brighouse & Rastrick	+22.6	+17.1
Sowerby Bridge	+46.1	+41.9

Source: CMBC Regeneration & Development Directorate, Transport Section

The much slower increase in the Halifax peak flows may be indicative of the impact of congestion, and may suggest either a relative shift to other modes or increasing spreading of the rush hour flows outside the two peak hours measured here.