

## Section 1: Roads, Vehicles and Congestion

### Introduction

This section presents trends in the use of the road system, road condition, congestion and levels of expenditure on roads, together with information about public attitudes to congestion. It also covers trends in numbers of vehicles, car ownership and driving licences.

Road traffic in Great Britain has grown by 85 per cent since 1980, although it grew less since 1990 than in the 1980s. Many factors have affected traffic levels, including fuel prices, economic growth and an increase in car ownership and number of drivers. Nearly a third of households now have access to two or more cars, more than the proportion of households without access to a car. Men are still more likely to have a driving licence but the proportion of women holding a licence has been increasing at a faster rate.

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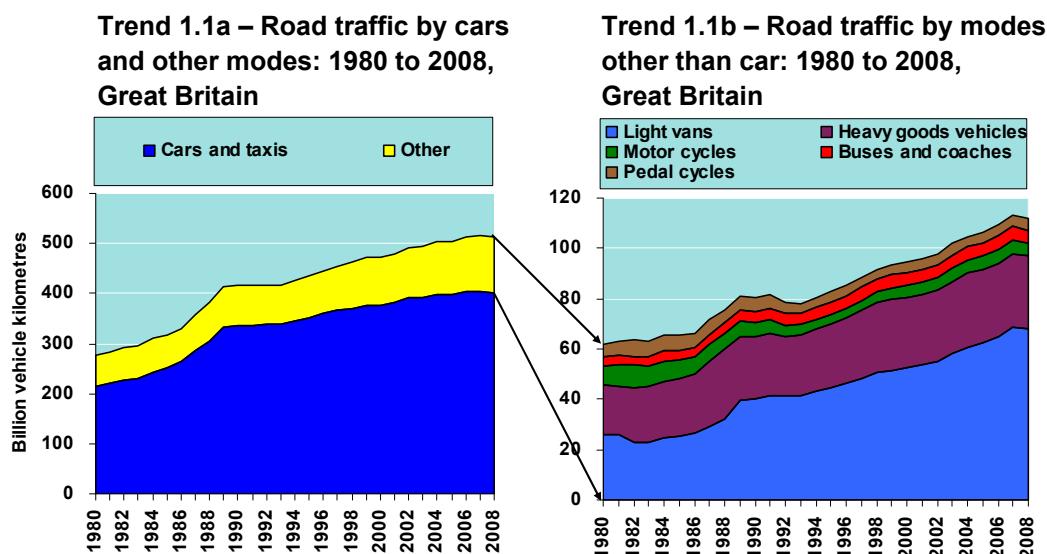
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## Road Traffic, Speed and Congestion

### 1.1 Road traffic



Source: Department for Transport

Total estimated road traffic increased by 85 per cent between 1980 and 2008, from 277 to 514 billion vehicle kilometres. Most of this growth occurred between 1980 and 1990; since 1990 traffic has increased by almost a quarter. Between 2007 and 2008, total road traffic fell by 3.6 billion vehicle kilometres (0.7 per cent).

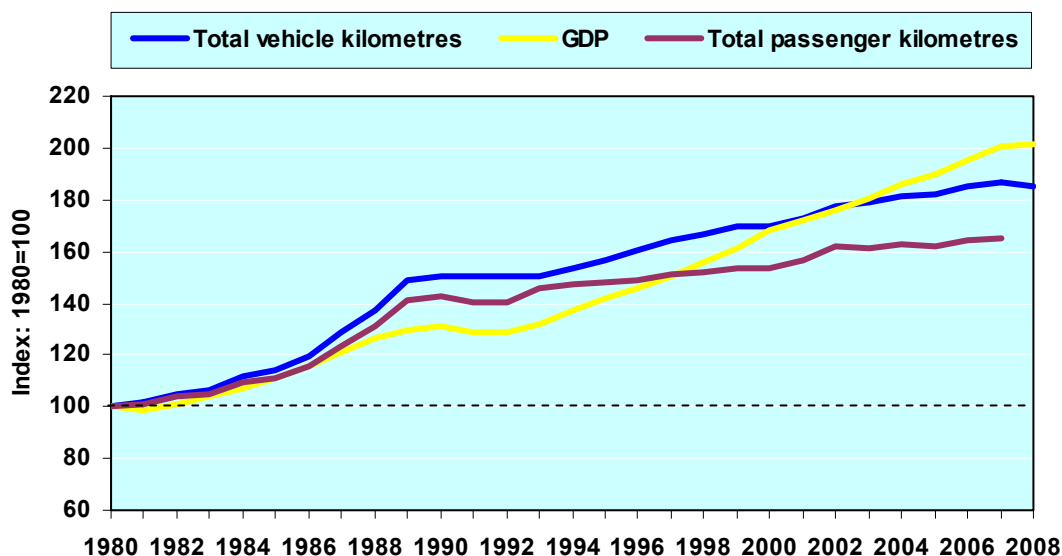
The majority of the growth has been in car traffic, which has risen by 87 per cent since 1980, from 215 to 402 billion vehicle kilometres. Car traffic grew sharply in the 1980s, but has risen more slowly since. Car traffic decreased between 2007 and 2008 by 2.3 billion vehicle kilometres. In 2008, car traffic accounted for 78 per cent of road traffic, this proportion has remained stable since 1980.

Light van traffic has increased more than two and a half times since 1980, from 26 to 68 billion vehicle kilometres. The distance travelled by heavy goods vehicles has also increased, from 20 to 29 billion vehicle kilometres, a rise of 46 per cent since 1980, but decreased by 0.6 billion vehicle kilometres between 2007 and 2008.

Bus and coach traffic increased by 47 per cent between 1980 and 2008, from 3.5 to 5.2 billion vehicle kilometres. Motorcycle traffic halved between 1980 and 1995, but then increased by 37 per cent between 1995 and 2008. Pedal cycle traffic grew in the early 1980s but fell by 37 per cent between 1984 and 1993, and then remained steady at 4 billion vehicle kilometres per year between 1993 and 1999. In 2008 it was 4.75 billion vehicle kilometres per year, an increase of 0.5 billion kilometres from 2007.

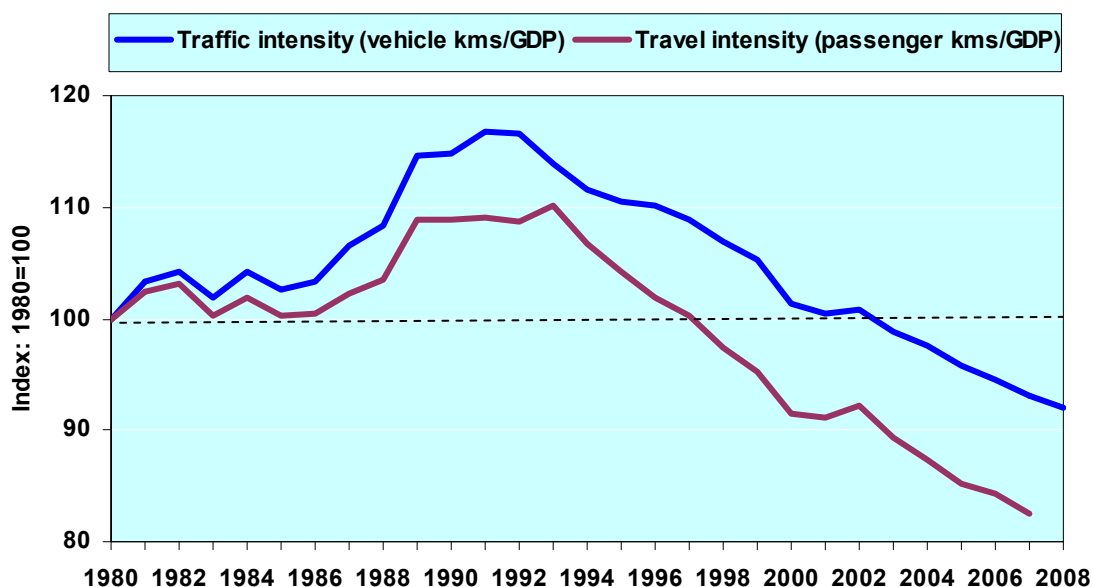
## 1.2 Road traffic and travel intensity

**Trend 1.2a – Road traffic, passenger kilometres and GDP: 1980 to 2008, Great Britain**



Source: Department for Transport and Office for National Statistics

**Trend 1.2b – Road traffic and travel intensity: 1980 to 2008, Great Britain**



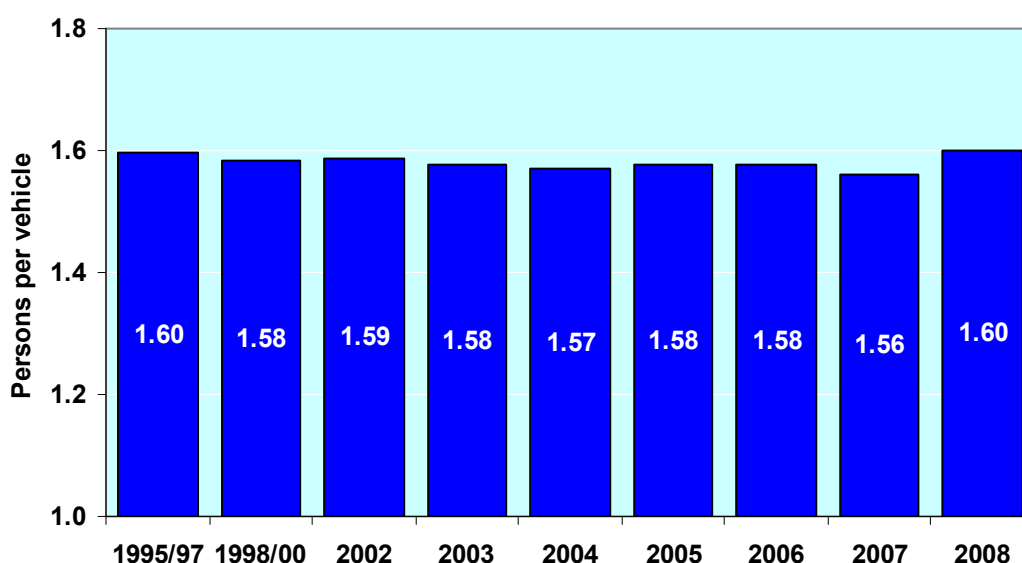
Source: Department for Transport and Office for National Statistics

- The challenge in achieving sustainable development is to ensure continuing economic growth while reducing adverse environmental and social impacts. Measures of traffic and travel intensity illustrate the extent to which economic growth and traffic growth have been decoupled. The comparison here is with gross domestic product (GDP), a measure of the size of the economy.

- Between 1980 and 1992, traffic (measured in vehicle kilometres) and overall travel (measured in passenger kilometres) grew at a faster rate than GDP. Since 1992, GDP has increased by 56 per cent compared with a rise in road traffic of 23 per cent.
- The traffic and travel intensity chart shows these relative changes more clearly; since 1992 there has been some decoupling of traffic and travel growth from economic growth.

### 1.3 Car occupancy

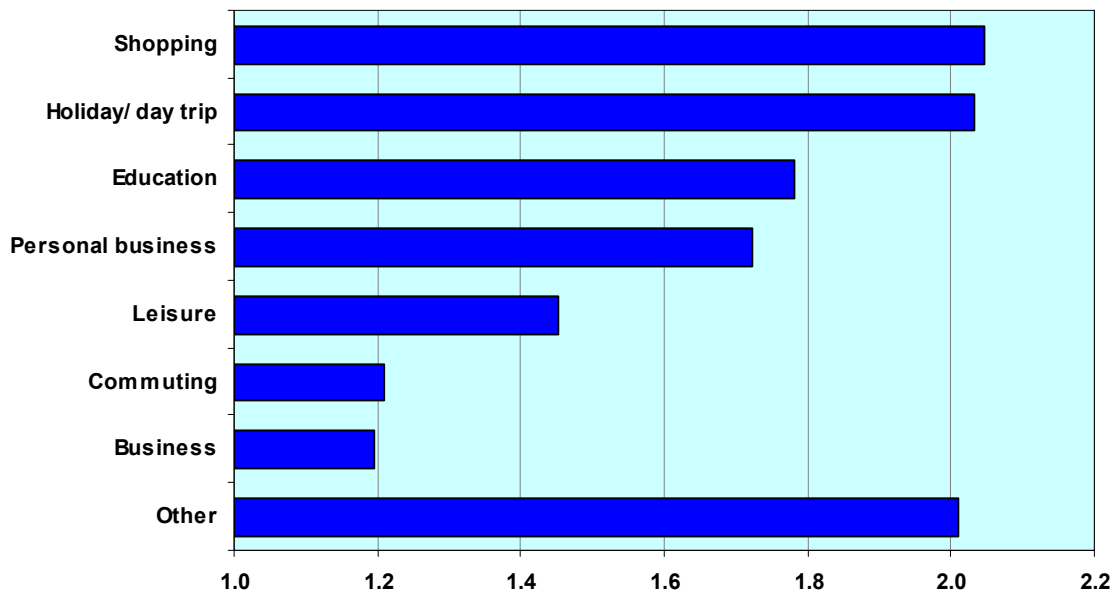
Trend 1.3a – Average car occupancy: 1995/97 to 2008, Great Britain



Source: Department for Transport

- The average number of occupants per car has returned to 1.60 in 1.60 after being lower after 1995/97 to 2007.
- In 2008, 60 per cent of cars on the road had only one occupant. 84 per cent of both commuting and business car trips had only the one occupant.

**Trend 1.3b – Average car occupancy by trip purpose: 2008, Great Britain**



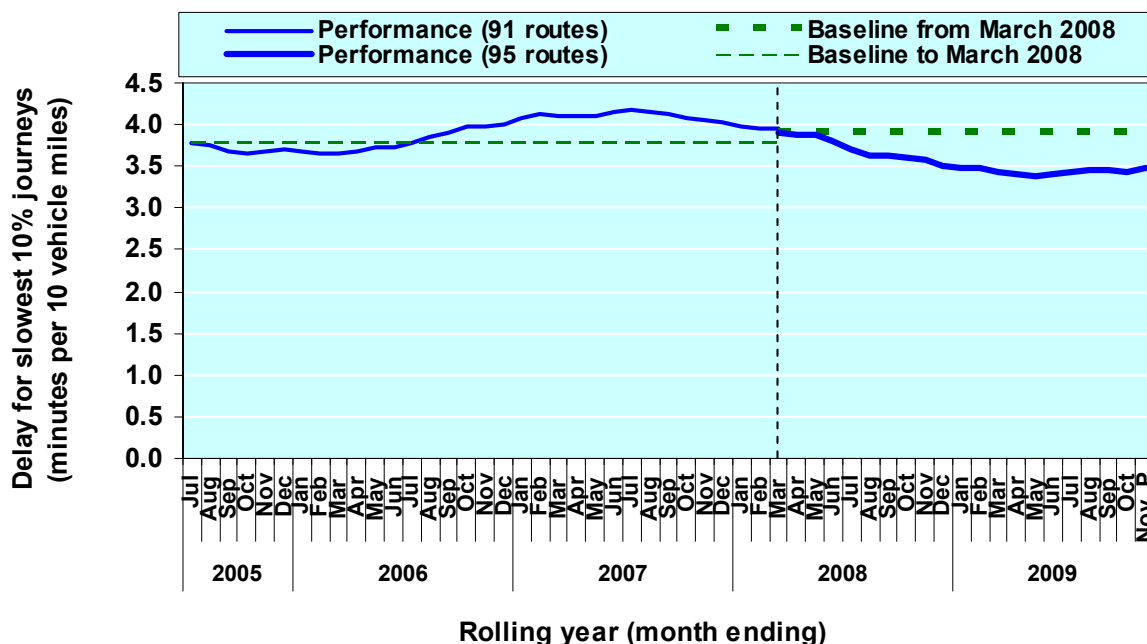
Source: Department for Transport

- Car occupancy varies according to the purpose of the trip. The highest occupancy rates in 2008 were for shopping and holiday/day trips (2.0 persons per car). The lowest rates were for commuting and business travel (1.2 persons per car).

## Average Congestion and Speed

### 1.4 Congestion

#### Trend 1.4a – Journey time reliability measure for the Strategic Road Network, England

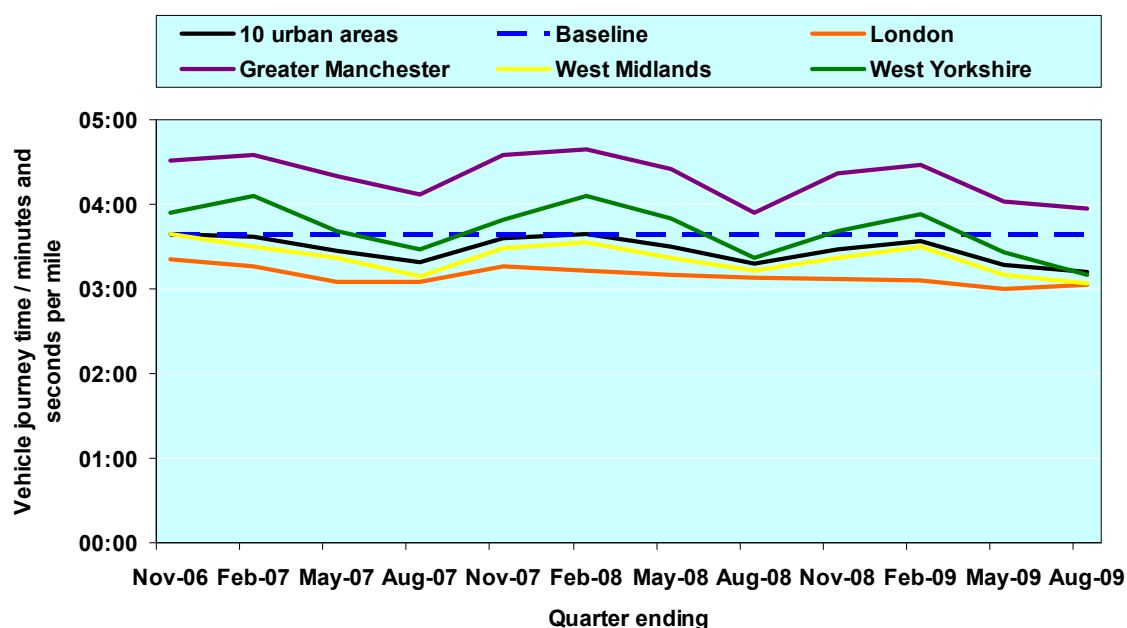


Source: Department for Transport  
National Statistics

- The Strategic Road Network (SRN) in England consists of all motorways and trunk ‘A’ roads managed by the Highways Agency, as well as the M6 Toll. Congestion for these purposes is defined as the average vehicle delay in minutes per 10 miles (derived from the differences between observed journey times and a reference journey time) experienced on the slowest 10 per cent of journeys for each monitored route. Chart 1.4a shows the monthly trend on a rolling 12 month basis.
- Provisional figures for the year ending November 2009 show that average vehicle delay on the slowest 10 per cent of journeys fell to 3.47 from 3.90 minutes per 10 miles since the year ending March 2008, a decrease of 11.0 per cent.
- The Government has a Public Service Agreement (PSA) to deliver reliable and efficient transport networks that support economic growth. One of the four indicators used to measure success against this PSA is reliability, measured using average vehicle delay on the SRN’s slowest 10 per cent of journeys. The baseline is the year ending March 2008, and the measure will be monitored for the period up to the year ending March 2011. Reliability performance will be assessed in the context of an expected increase in traffic of 1-2 per cent per year. There is no specific numerical target.

- For the Spending Review 2004, there was a PSA target that the average vehicle delay on the SRN's slowest 10 per cent of journeys should be less in the year ending March 2008 than in the baseline period August 2004 – July 2005.
- Improvements in data quality allowed an additional five routes to be included for the year ending March 2008 onwards, but deterioration of data on one route (M1 J6a-13) has led to it being temporarily excluded. As a result the total number of routes included increased from 91 to 95 routes for the year ending March 2008 onwards. There is now a small discontinuity with earlier periods.

**Trend 1.4b – Congestion in urban areas: journey times per mile in key areas: England, Nov 2006 to Aug 2009**



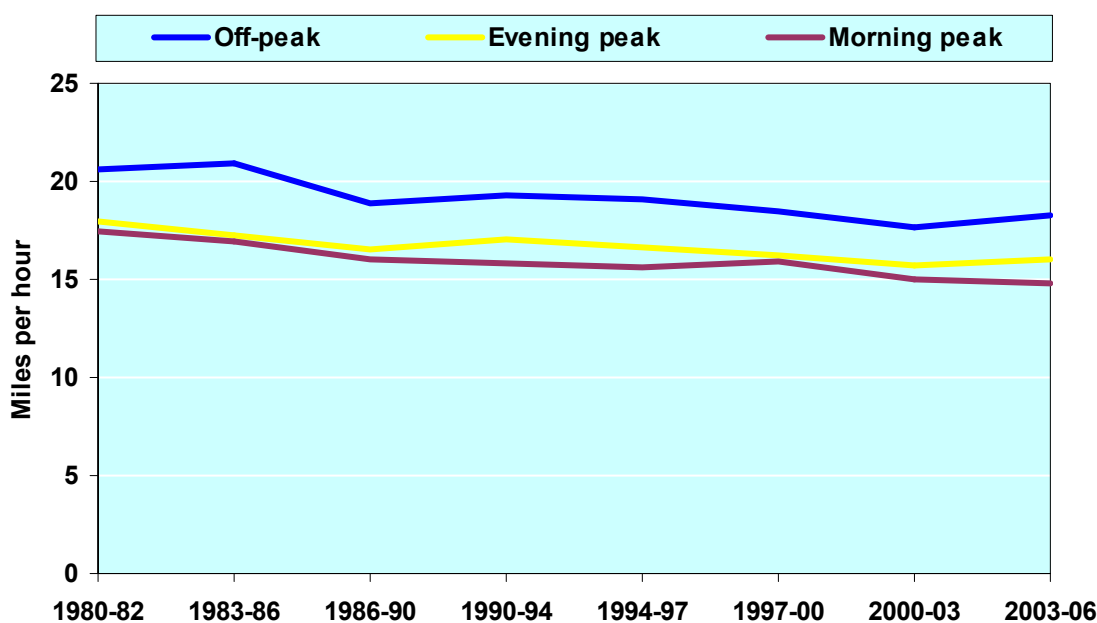
Source: Department for Transport  
 The data in this chart are outside the scope of National Statistics

- This chart shows estimates of non-stopping vehicle journey times, in minutes per mile, on a number of key routes in the ten largest urban areas in England. The data are presented on a quarterly basis within academic years and only cover journey times during the weekday morning peak and exclude school holidays.
- Across the ten urban areas, the average vehicle journey time was 3 minutes and 12 seconds per mile in the quarter ending August 2009. This is nearly 3 per cent faster than the quarter ending August 2008 and 4 per cent faster than the same period in 2007.
- However, caution should be exercised when assessing changes over time in this measure, due to evidence of seasonality in journey times, and comparisons between urban areas are made difficult due to the different type and nature of the urban routes monitored in each area.



- The Department for Transport also has an urban congestion Public Service Agreement (PSA) target. The target is that, by 2010/11, personal journey times across key routes in the 10 largest urban areas in England will increase from the baseline (2004/5 & 2005/6) by no more than 3.6 per cent. The PSA measure differs from the statistics shown above in that it is based on person rather than vehicle journey times and therefore takes account of vehicle occupancies and bus journey times.

**Trend 1.4c – Average traffic speeds in Greater London: 1980-82 to 2003-06, Greater London**



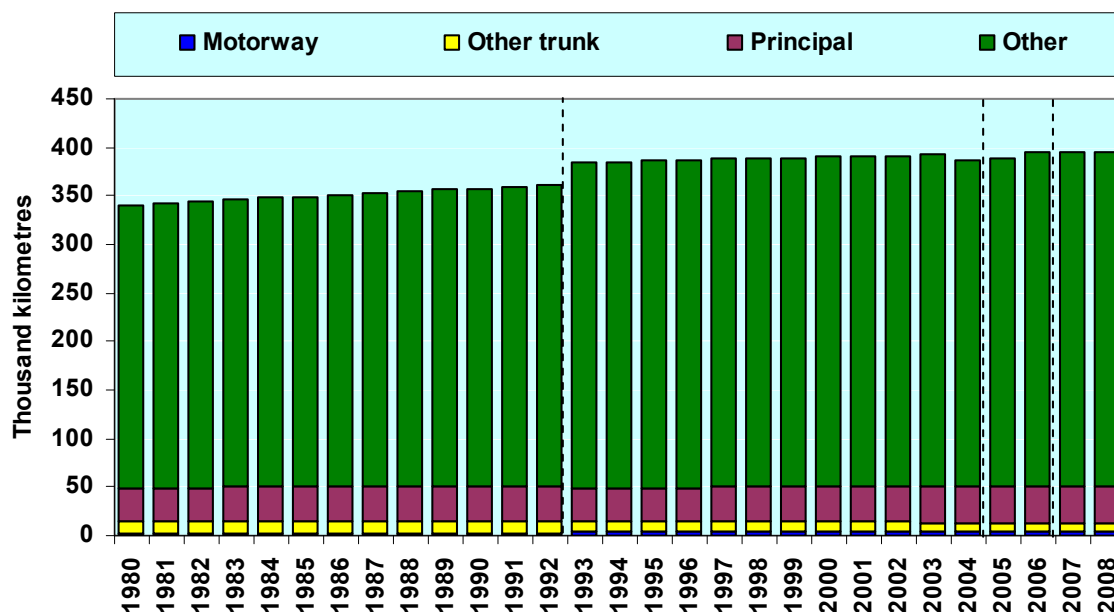
Source: Transport for London  
 The data in this chart are outside the scope of National Statistics

- Transport for London, who are responsible for most of the road network in London, run separate speed surveys covering the Greater London area. The last complete cycle was for 2003-06. Average traffic speeds in London were lower in the period 2003-06 than in 1980-82. However, average speeds during the evening peak and off-peak increased between 2000-03 and 2003-06.

## Road Length and Condition

### 1.5 Road length

#### Trend 1.5 – Road length by road type: 1980 to 2008, Great Britain

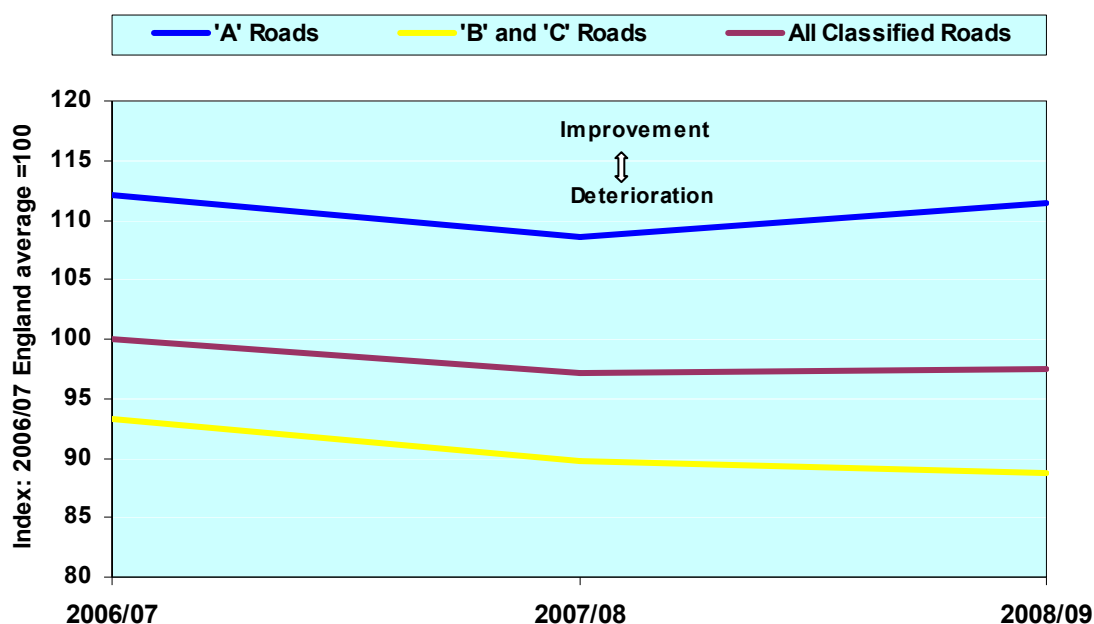


Source: Department for Transport

- The growth in traffic levels has been much greater than the increase in total road length. New information in both 2004 and 2006 has enabled better estimates of minor road lengths to be made and the estimates from 2004 cannot be compared directly with prior estimates. There is an additional discontinuity in 1993 due to a change in methodology.
- The total road length in Great Britain was estimated to be 394.5 thousand kilometres. This is an increase of nearly 55 thousand kilometres (16 per cent) since 1980.
- In 2008, motorways accounted for less than 1 per cent of road length, trunk roads (excluding motorways) 2 per cent, and other major roads 10 per cent. Minor roads (B, C and unclassified roads) made up 87 per cent of road length. There has been little change in these proportions since 1980. The length of the trunk road network has been particularly affected by the detrunking programme, with a number of roads being re-categorised as 'principal'.
- In 2008, motorways carried 20 per cent of traffic, trunk roads (excluding motorways) 13 per cent and other major roads 31 per cent. Minor roads carried 37 per cent of traffic.

## 1.6 Road condition

### Trend 1.6 Highway Condition Index for local classified roads in England: 2006/07 to 2008/09



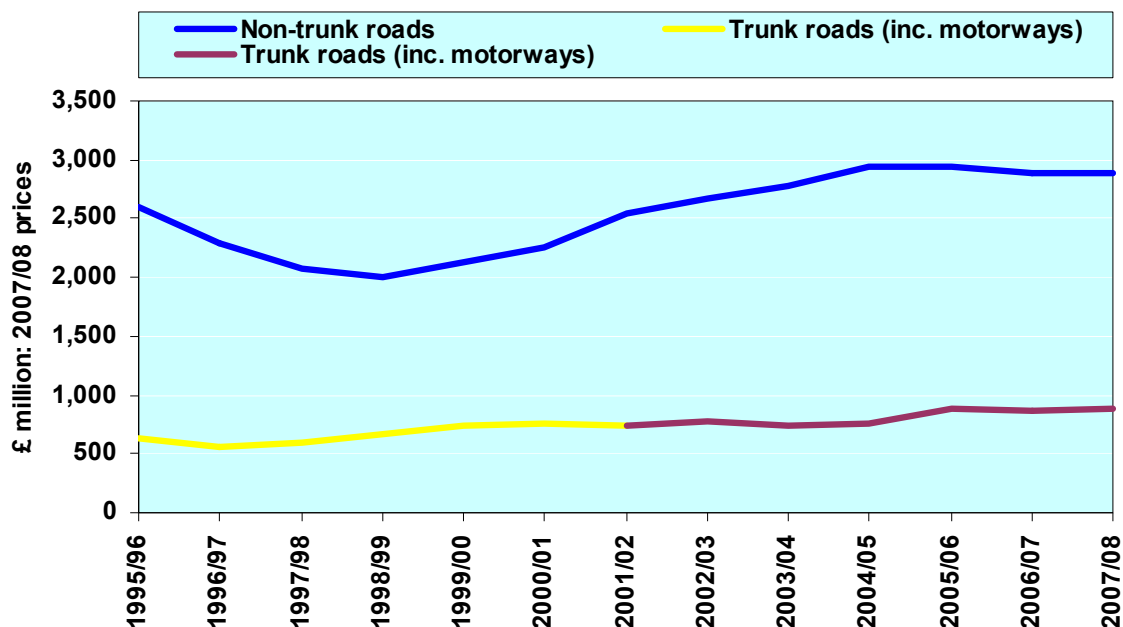
Source: National Road Condition Database, Department for Transport

- SCANNER surveys are machine-surveys that have been carried out on local authority 'A' roads since 2004/05 and 'B' and 'C' roads since 2005/06. The surveys measure a number of aspects of the condition of the road surface.
- The percentage of the lengths of road surveyed that are in a 'good' condition is used to calculate the Highways Condition Index (HCI). This replaces the Defects Index which was published in previous editions of Transport Trends.
- The average for all local authority maintained classified roads in England surveyed during 2006/07 represents the base (100) for the HCI. A significant increase for the HCI indicates that there has been an increase in the amount of road that is in 'good' condition and a significant decrease indicates deterioration in road conditions.
- There was a small decrease in the overall condition of classified roads between 2006/07 and 2007/08. This decrease comes from a deterioration in the condition of all types of roads. It should be noted that different sections of the road network would have been surveyed each year making comparisons over very short periods of time less reliable.

## Expenditure on Road Building and Maintenance

### 1.7 Expenditure and investment in roads

#### Trend 1.7a – Expenditure on road maintenance: 1994/95 to 2007/08, England



Source: Highways Agency, Communities and Local Government

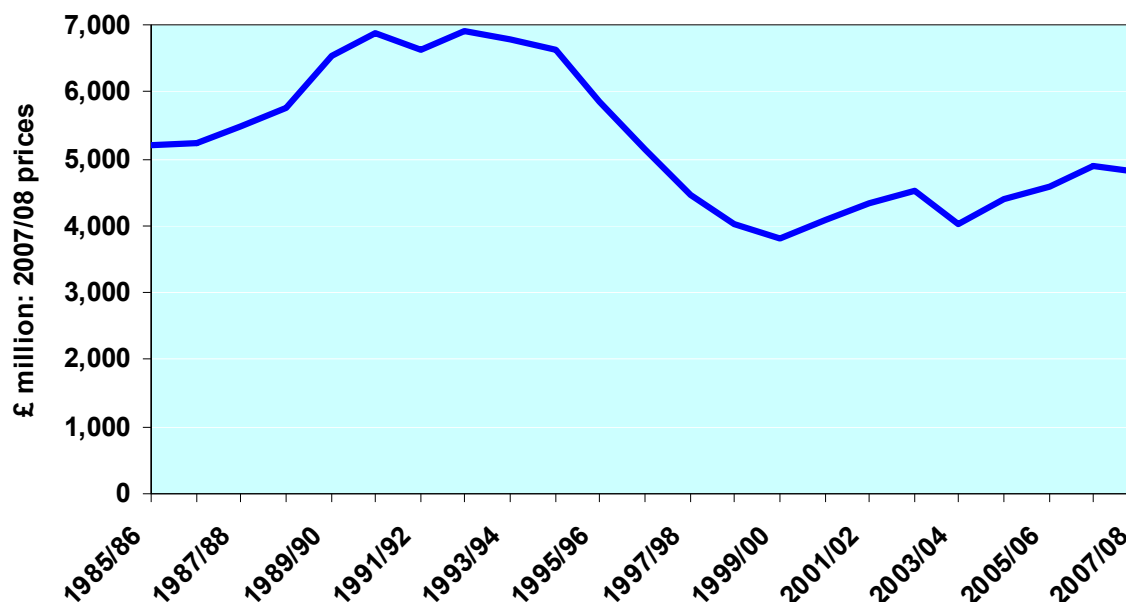
Since 2001/02, Highways Agency data have been collected on a resource accounting basis and cannot be compared with prior years. Figures were calculated on both systems in 2001/02.

These data are outside the scope of National Statistics

- Maintenance includes both structural and routine maintenance as well as expenditure on bridges.
- Total real expenditure on the all purpose trunk road and motorway network has increased by £3.9m from 2006-07 to 2007-08. Although structural spending fell by 6 per cent, it still accounted for 56 per cent of total expenditure.
- Total expenditure on the non-trunk road network fell slightly in 2007-08 by £0.6 million in real terms from the 2006-07 level. Structural maintenance in 2008-09 accounted for 60 per cent of the total £2.9 billion spent.
- Recent trends show that there has been an overall shift in spending from structural maintenance to routine and other treatments for motorways and ‘A’ roads. For instance, where expenditure has decreased by 6 per cent on the local authority Motorway and ‘A’ road network in the last four years, expenditure on routine and other treatments has actually increased by 24 per cent, offset by a 25 per cent decrease in spending on structural maintenance.

- For 'B', 'C' and unclassified roads whilst overall real term expenditure has remained roughly constant over the last four years, spending on routine and other treatments has increased by 6 per cent whilst expenditure on structural treatments has decreased by 3 per cent.

### Trend 1.7b – Investment in road infrastructure: 1985/86 to 2007/08, Great Britain



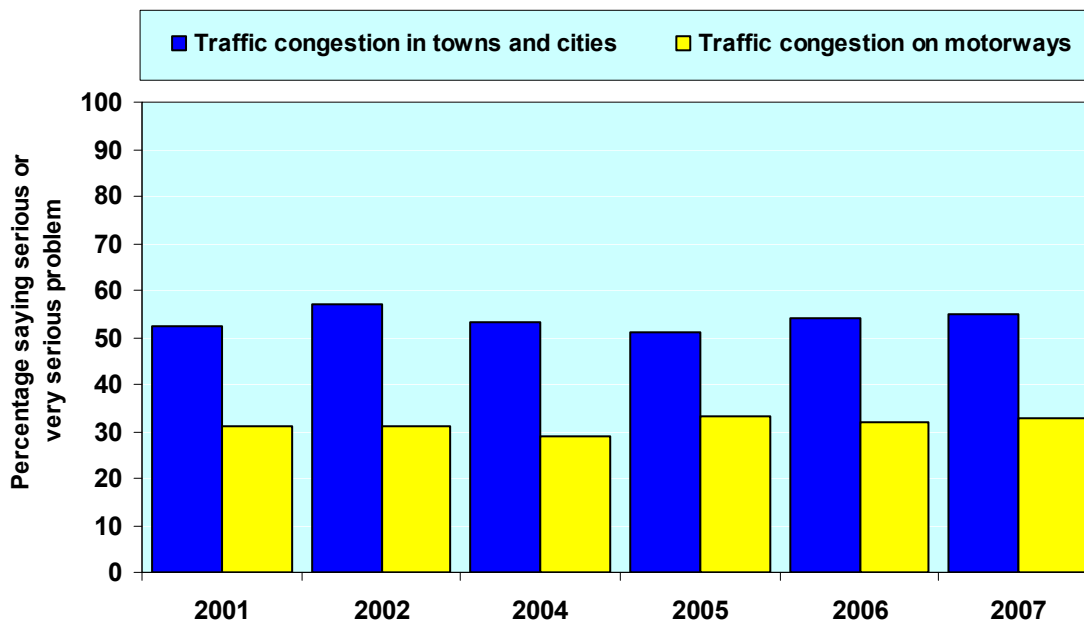
*Source: Compiled by Department for Transport  
The data in this chart are outside the scope of National Statistics*

- Investment includes expenditure on new construction, improvement and structural maintenance. Note that as maintenance expenditure also includes structural maintenance, there is some overlap between the expenditure figures used to produce Trend 1.7a and Trend 1.7b. As a part of the Spending Review 2002 settlement, expenditure on renewal maintenance was reclassified from capital to resource.
- Investment in roads infrastructure increased in the late 1980s and early 1990s and reached a peak in 1992/93 of £6.9 billion at 2007/08 prices. Investment fell between 1992/93 and 1999/2000, but has risen since then by 26 per cent to £4.8 billion in 2007/08.
- Private investment in road infrastructure has continued to remain a relatively small proportion of total investment. In the late 1990s, it had risen to account for nine per cent of total road infrastructure investment, mainly because of a number of large Design Build Finance Operate (DBFO) schemes, but fell to around 1.2 per cent in 2001/02. Since 2002/03, it has been difficult to separate exactly private from public expenditure due to the complexity of some of the joint funding arrangements, but private investment has increased again.

## Attitudes of Road Users

### 1.8 Road user attitudes

#### Trend 1.8 – Public attitudes to traffic problems: 2001 to 2007, Great Britain



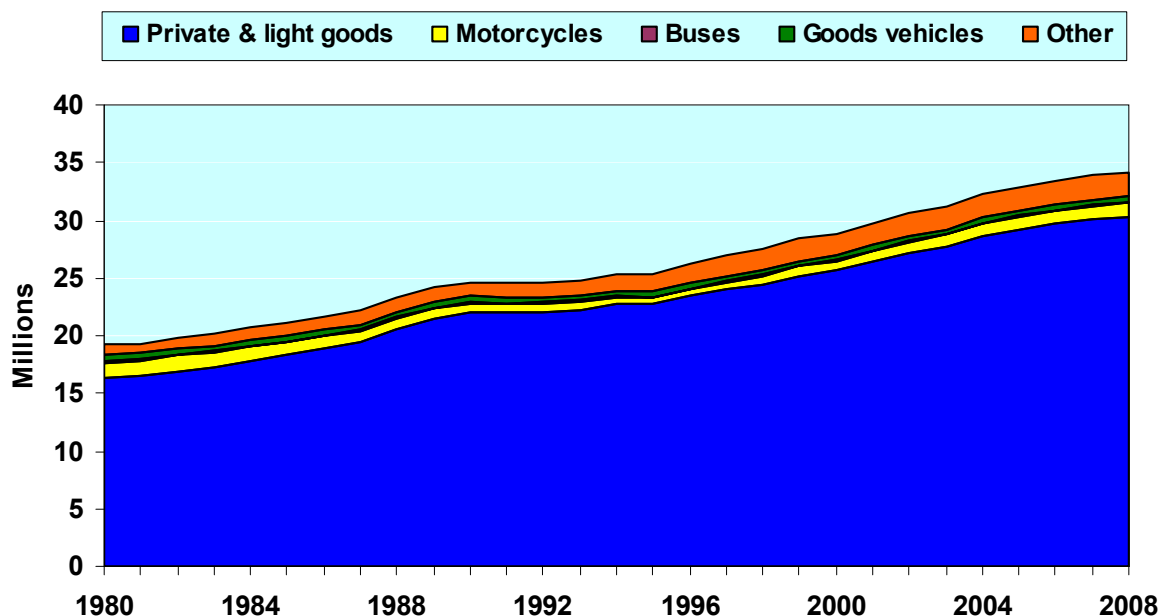
Source: British Social Attitudes Survey (by NatCen)  
 The data in this chart are outside the scope of National Statistics

- According to the British Social Attitudes Survey, congestion on motorways is a serious issue for nearly a third of people. However, they are more concerned about congestion in towns and cities, with over a half reporting it as a serious issue for them. There has been a slight fluctuation in attitudes over time, but no consistent trend.

## Vehicle Stock and Car Ownership

### 1.9 Motor vehicles currently licensed

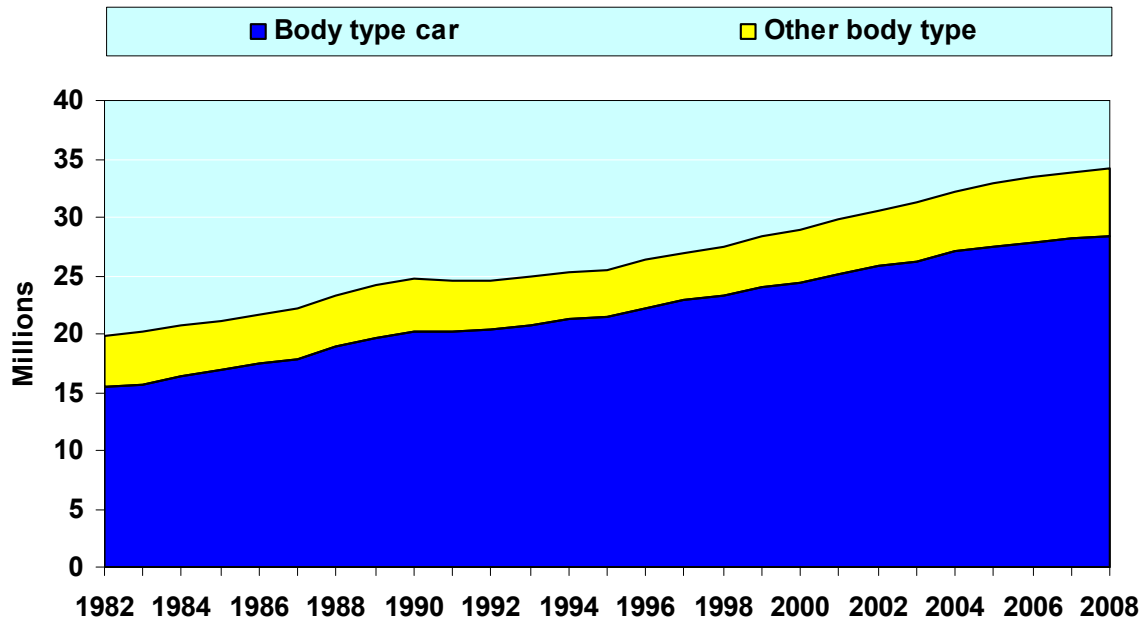
#### Trend 1.9a – Motor vehicles currently licensed by taxation class: 1980 to 2008, Great Britain



Source: DVLA & Department for Transport

- The number of licensed vehicles increased by 78 per cent between 1980 and 2008, from 19.2 to 34.2 million. The rise has been steady throughout this time, apart from a brief period of stability between 1989 and 1991.
- Changes in the vehicle taxation system make precise comparisons over the last twenty years difficult. However, almost all of the overall increase is accounted for by the 85 per cent increase in vehicles in the 'private and light goods' tax class between 1980 and 2008. The number of motorcycles fell by 15 per cent overall, though it has been rising since 1995. The number of buses fell by 1 per cent and goods vehicles by 14 per cent.

**Trend 1.9b – Motor vehicles currently licensed by body type: 1982 to 2008, Great Britain**



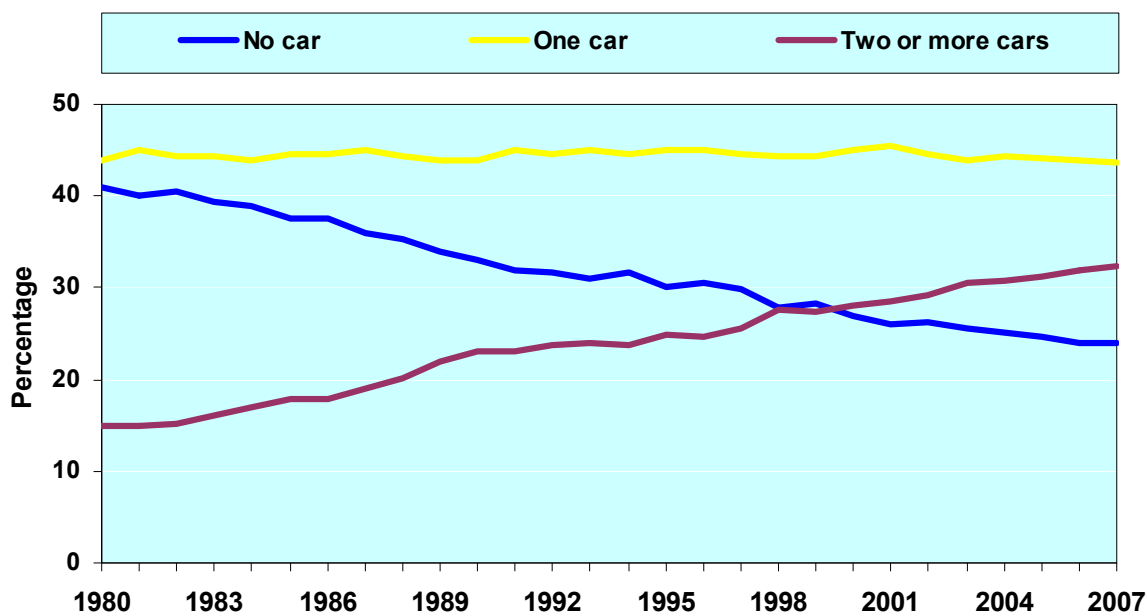
Source: DVLA & Department for Transport

- Across all the vehicle taxation classes, the number of licensed cars has increased steadily from 15.5 million in 1982 to 28.4 million in 2008, an 84 per cent increase.
- About 9 per cent of licensed cars were registered as company cars in 2008; this proportion has shown little change in recent years.



## 1.10 Household car ownership

### Trend 1.10 – Household access to a car: 1980 to 2007, Great Britain

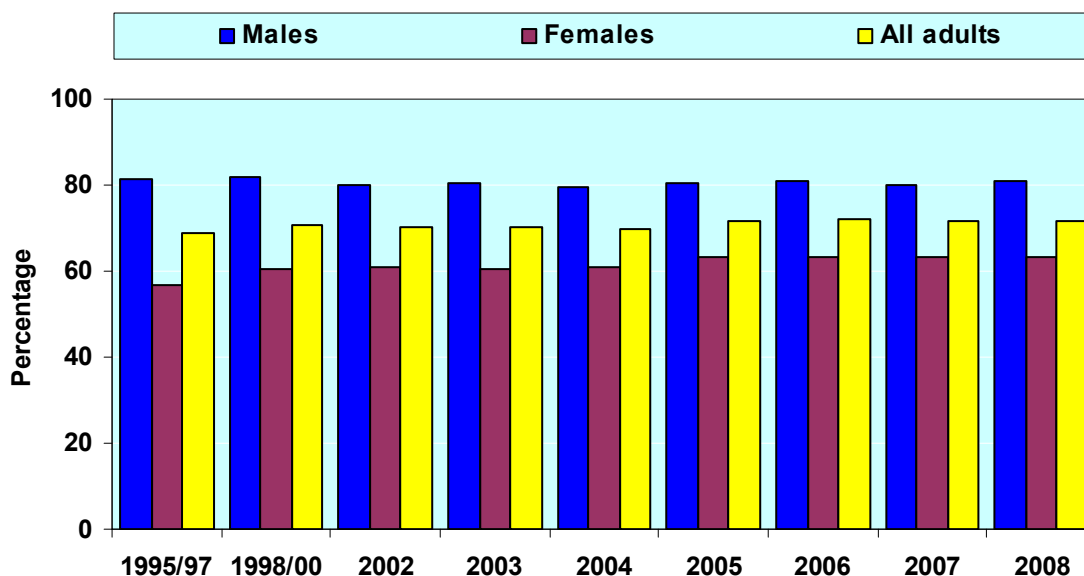


Source: Compiled by Department for Transport

- The substantial increase in the number of licensed cars is reflected in an increase in the proportion of households having access to one or more cars. In 1980, 41 per cent of households did not have access to a car. By 2007, this had fallen to 24 per cent.
- The proportion of households having access to one car has remained stable over the last 28 years, at around 45 per cent.
- In contrast, the proportion of households with access to two cars increased from 13 to 26 per cent. A further 6 per cent of households had access to three or more cars in 2007, compared with 2 per cent in 1980. This means that the proportion of households with access to two or more cars, at 32 per cent, is now higher than the proportion of households without access to a car.

## 1.11 People with a driving licence

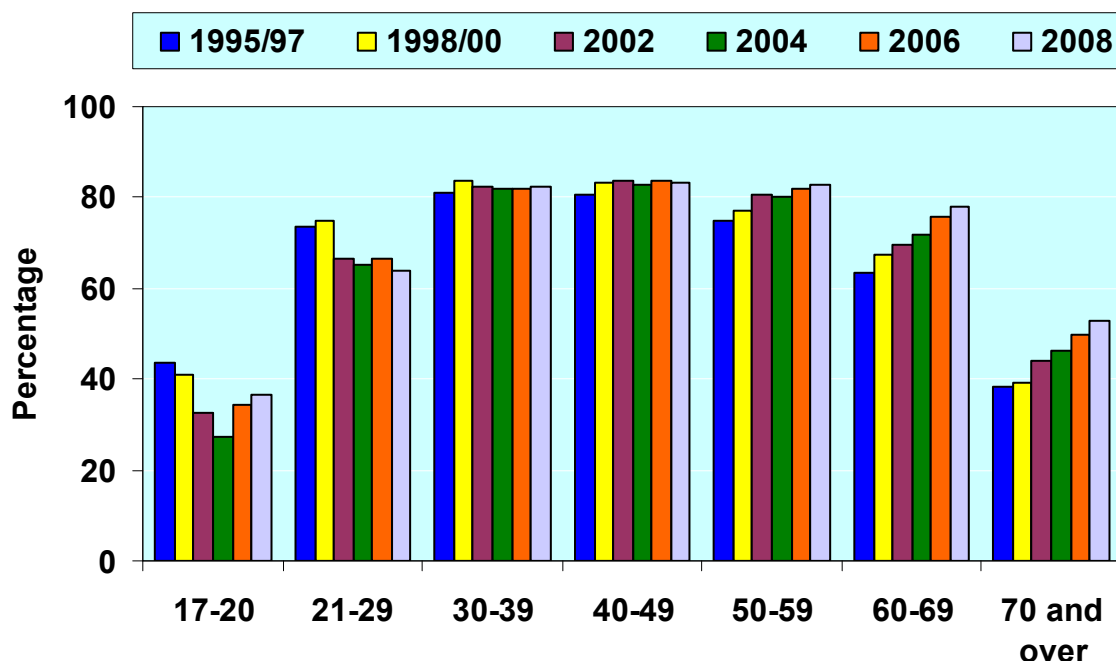
### Trend 1.11a – Males and females holding a driving licence: 1995/97 to 2008, Great Britain



Source: Department for Transport

- In 2008, 72 per cent of all adults aged 17 and over (an estimated 34.5 million people) held a full car driving licence, compared with 69 per cent (30.3 million) in 1995/1997.
- Overall, 65 per cent of women in 2008 held licences, compared with 81 per cent of men. The proportion of women holding licences has grown steadily in recent years while the proportion of men holding a licence has remained fairly stable, causing the gap in licence holding between men and women to narrow over time.

**Trend 1.11b – Adults holding a driving licence by age: 1995/97 to 2008, Great Britain**



Source: Department for Transport

- The number of older drivers has increased, as the cohorts of middle aged drivers reach retirement age. From 1995/97 to 2008, the proportion of people aged 70 and over who held a full driving licence increased from 38 per cent to 53 per cent. Some of this increase is due to past changes in the number of women obtaining driving licences. As the younger women with driving licences get older, the percentage of older adults with licences has increased.
- Over the same period, there was a decline in licence holding among young adults, with the proportion of 17-20 year olds who held a licence falling from 43 per cent to 36 per cent. Possible reasons for this decline include the cost of lessons, insurance and buying a car, the increasing difficulty of passing the driving test (including the theory test introduced in 1996) and the fact that more young people are students and unable to afford cars.