

## National Travel Survey – Analysis of travel trends for London

Produced by [REDACTED], June 2008

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### Introduction

The National Travel Survey is a household diary survey carried out annually by the Department for Transport. The survey has been carried out continuously since 1988, prior to that it was on an *ad hoc* basis, with the first survey carried out in 1965. The survey can provide us with an understanding of trends in travel behaviour for individuals and households.

The sample size of the National Travel Survey nearly tripled in 2002, and now includes around 8,000 households in total, of which just under 1,000 are in Greater London. Prior to 2002, the sample typically included between 300 and 400 households in Greater London. As all members of each household participate in the survey, the sample of individual respondents is larger, at around 2,200 London residents.

National Travel Survey respondents keep a travel diary of their trips within Great Britain over a seven day period; short walk trips are recorded only on the final day and this data is then grossed up for the full survey period. Daily averages as presented below include both weekdays and weekends, 24 hours a day, and the grossed up estimates of walk trips.

From 2002, the data are based on a larger sample, but the suggestion of a step change in trip rates between 1998/2000 and 2003/2004 may be also associated with the changes in survey fieldwork, including a new contractor, in 2002.

The analysis presented here covers the period 1995 to 2006, with the data in two-year blocks from 2002 and in three-year blocks prior to this date. Supporting data is available on request. All references in this paper to 'London' refer to Greater London, consisting of the 39 London boroughs. Further definitions are outlined in Appendix One.

TfL would like to thank the Department for Transport for producing the analysis presented in this report and for their support and guidance in the interpretation of findings.

## Summary

- For Greater London residents, overall seven-day average daily trip rates per person declined by around 11% between 1995/7 and 2005/6 and travel by car declined by nearly a fifth, from 1.3 to 1.1 trips per day over the same period. Distance spent travelling by car has decreased in line with the trip rate, the amount of time spent travelling less so; suggesting that car drivers are making fewer trips but that these trips on average are taking longer.
- Overall, travel has reduced by more at the weekends than during the week (by 13% compared to 10%), however, car travel has reduced more significantly during the week than at weekends (by 19% compared to 17%).
- The average daily trip rate by car of inner London residents is half that of outer London residents and only a third that of residents of the South East. Overall, residents of the South East make slightly more trips on average per day than Londoners.
- Despite making fewer trips per day on average and travelling a shorter distance, inner London residents spent more time travelling (66 minutes per day) than residents of outer London (65 minutes per day) or the South East (63 minutes per day).
- Among adults, those aged 30 to 59 make the highest number of trips per day on average (2.8), followed by those aged 17 to 29 (2.3), with those aged 60 plus making the fewest trips (2.2). Young people have seen the greatest decline in average trip rates between 1995/7 and 2005/6, and in particular in travel by car. Travel by older people has marginally increased over the same period.
- Household car ownership has remained fairly stable in London since the late 1980s, at around six in ten households. Car ownership levels are higher in outer than inner London.
- Those aged 30 to 59, in employment, without a disability, in larger households and from a White British ethnic group were more likely to have access to a car in the household.
- Trip rates amongst those without access to a car are around 20% lower than those with one car in the household. They travel around 40% less distance but for only around 10% less time. This suggests that those without a car are relatively more constrained in terms of the number of trips they can make and the distance they can travel.
- Nine in ten trips made by residents of England, Wales and Scotland with a destination in Greater London also had an origin in Greater London. Trips by car (as driver or passenger) and rail were more likely to have originated outside London, at 15% and 30% respectively. Note that the survey excludes international tourists and business travellers.
- Trips to London from outside London were more likely to have a destination in outer than inner London. Car was the mode most commonly used to travel to outer London, whilst rail was the most commonly used mode for travel to inner London.

## Travel by Londoners – by mode

Aggregate average trip rates, for a full seven day week and including walk trips, residents of Greater London surveyed in the National Travel Survey have declined from 2.8 per day in 1995/96 to 2.4 in 2005/06, an apparent reduction of about 11%. Distance travelled has apparently reduced very slightly and time spent travelling appears to have marginally increased.

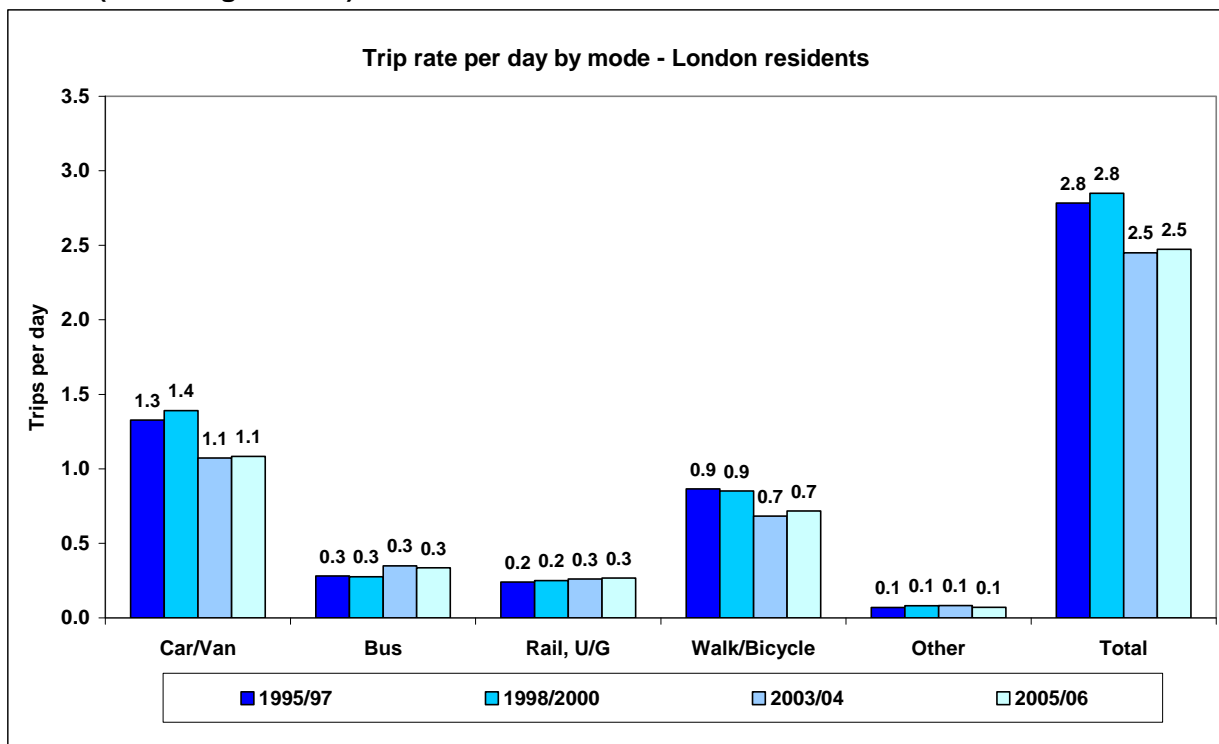
There has been a more significant decline in travel by car, with trip rates falling from 1.3 trips per day per resident in 1995/6 to 1.1 in 2005/6, an apparent reduction of about 18%. Distance travelled by car has decreased by a similar amount (17%) but time spent travelling has only decreased by 12%, suggesting that drivers are making fewer trips, but that these trips on average are taking longer.

Trip rates per person per day by public transport have increased over this period; by 19% for bus travel and 11% for Underground or rail travel. This is also reflected in substantial increases in distance travelled, 46% for bus and 23% for Underground or rail, and time spent travelling, 58% for bus and 32% for Underground or rail.

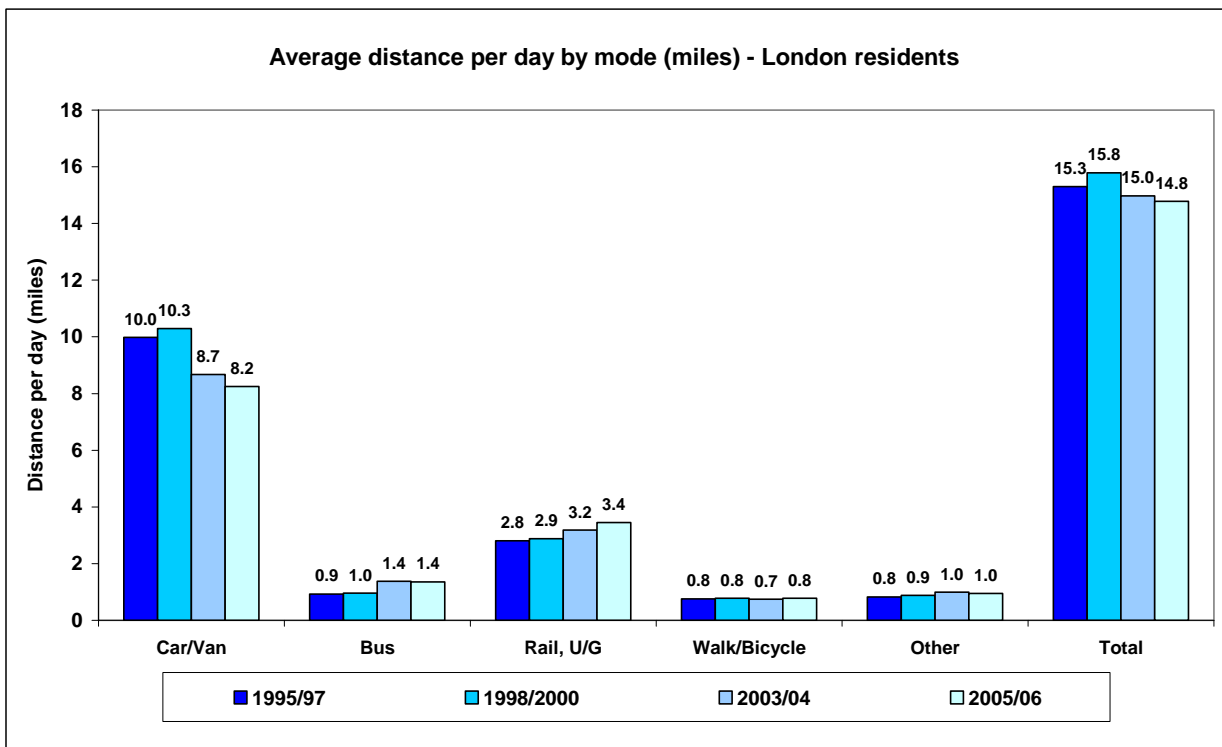
Trip rates per person per day for walking and cycling have decreased significantly (17%), time spent travelling less so (8%) and distance travelled has apparently increased by 3%. It is difficult to unravel these figures, but they might point to a decline in short walk trips and an increase in longer distance cycle trips. Although this analysis is based upon a small sample of cycle trips, this pattern has also been suggested by other DfT studies.

See Figures 1 to 3 for supporting data.

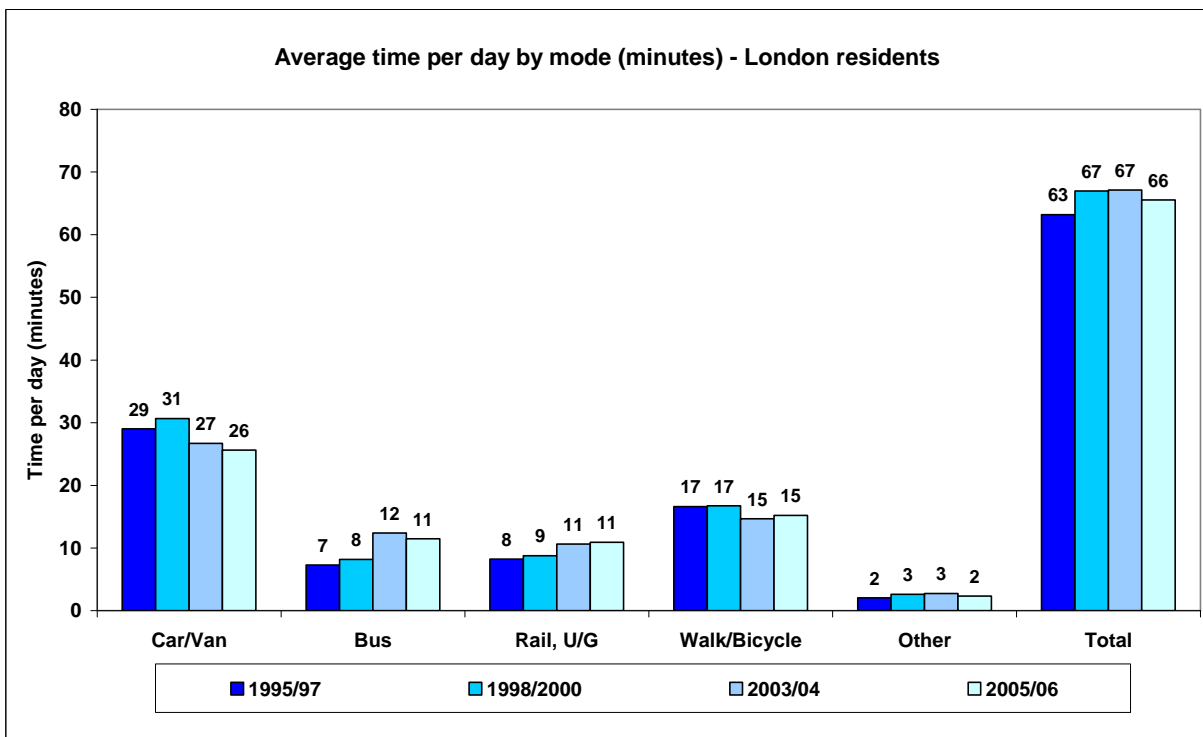
**Figure 1: Trips over seven days by main mode, London residents 1995/97 – 2005/06 (excluding 2001/02)**



**Figure 2: Average distance travelled per day by mode, London residents 1995/97 – 2005/06 (excluding 2001/02)**



**Figure 3: Average time travelling per day by mode, London residents 1995/97 – 2005/06 (excluding 2001/02)**



Note that data from 2001/02 is not included in these charts. However, including this data would reduce the seeming 'step change' between 1998/2000 and 2003/04 and demonstrate a more consistent downwards trend, as seen below in Figure 4.

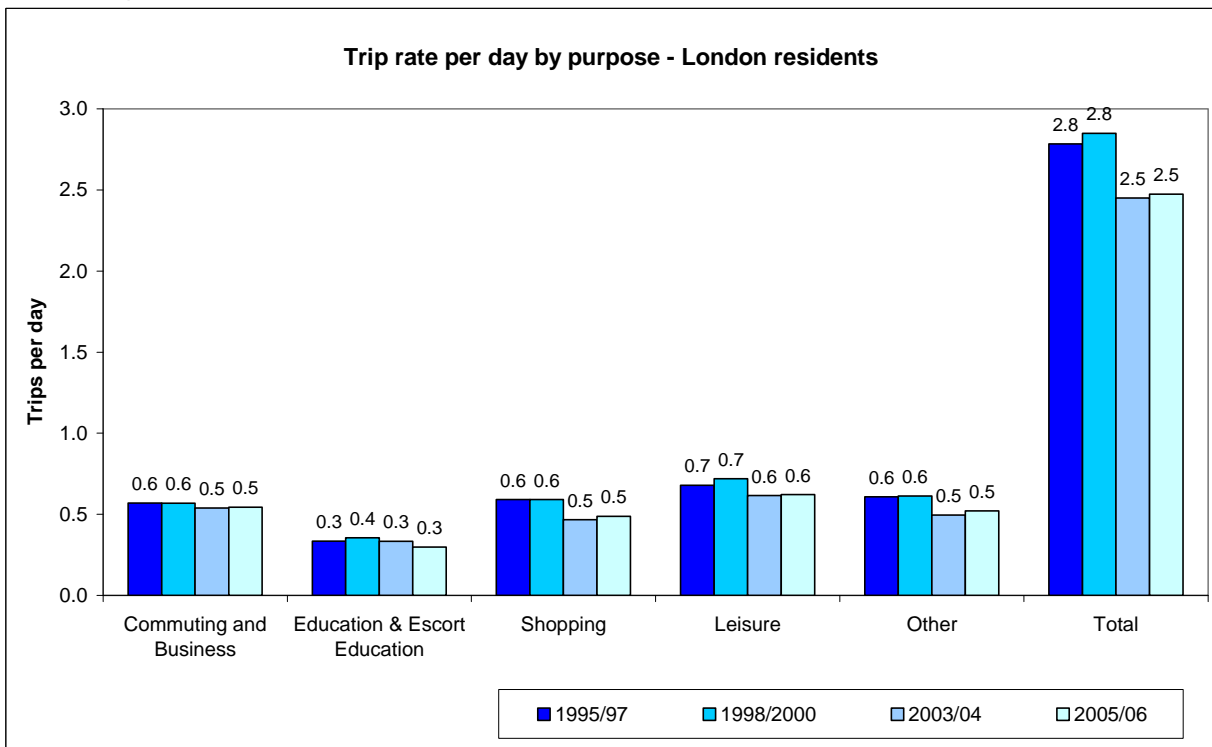
**Figure 4: Trips per person per day, London residents 1995-2006**



**Travel by Londoners – by purpose**

As shown by Figure 5, the decline in daily trip rates is seen across all purposes, although commuting and business trips have seen the least decline (5%) and shopping trips the greatest (17%).

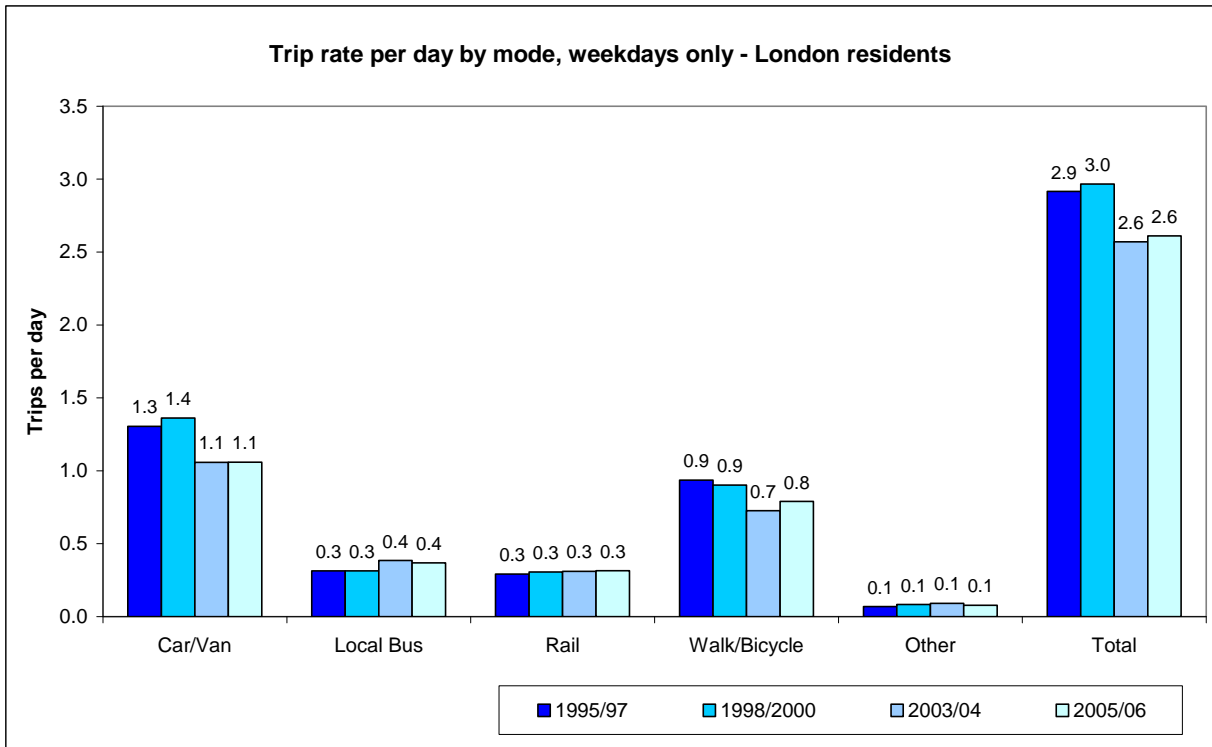
**Figure 5: Trips per day by purpose, London residents 1995/97 – 2005/06**



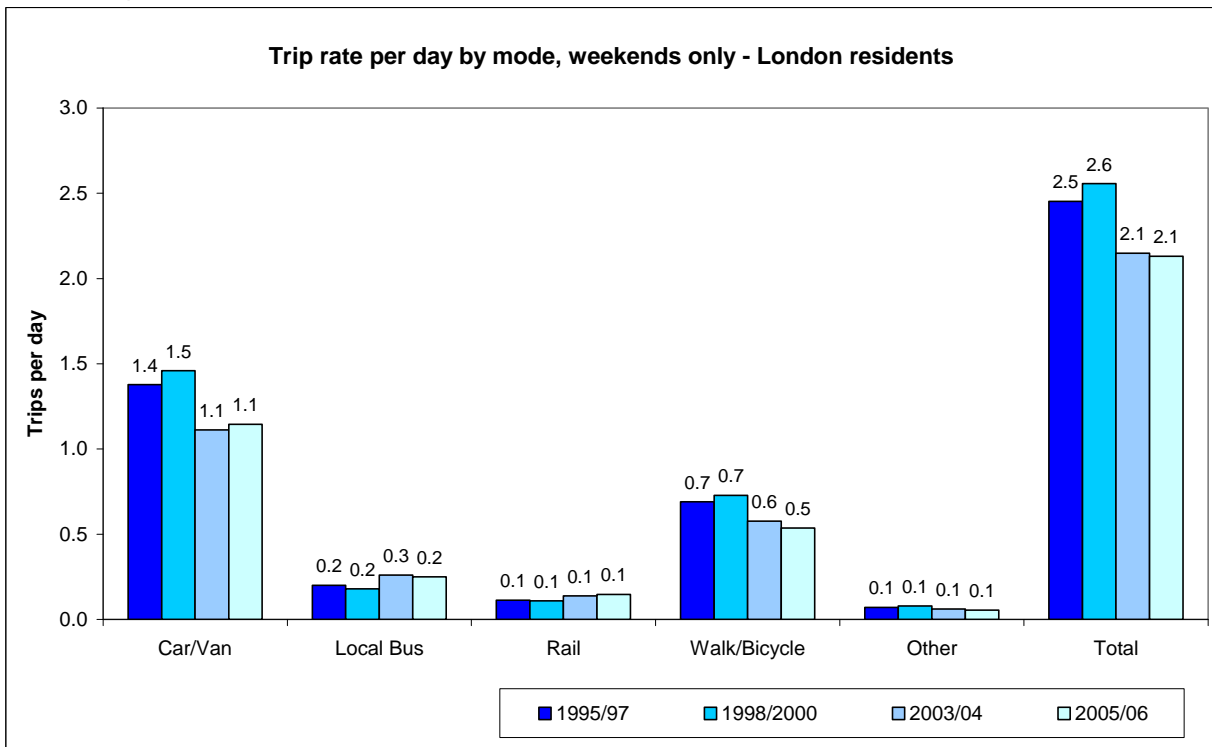
## Travel by Londoners – weekdays and weekends

Figures 6 and 7 show that the decline in trip rate has been somewhat greater at the weekend than on weekdays (-13% and -10% respectively between 1995/97 and 2005/06).

**Figure 6: Trips per day by mode, weekdays, London residents 1995/97 – 2005/06**



**Figure 7: Trips per day by mode, weekends, London residents 1995/97 – 2005/06**



## Travel by Londoners – comparing residents of inner and outer London and the South East

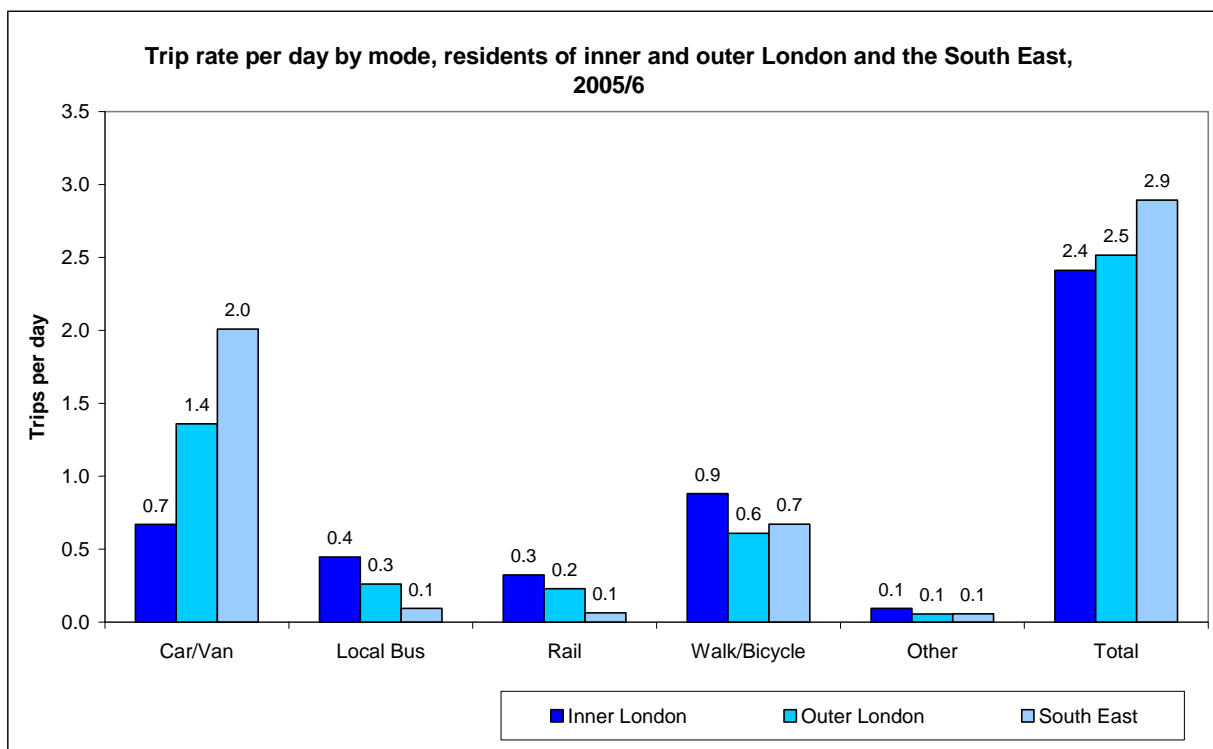
Although the overall trip rates of inner and outer London residents are similar, the modal split is quite different. In particular, the daily trip rate by car or van for outer London residents is twice that of inner London residents, whilst outer London residents make slightly fewer trips on average by all other modes. We can see that, despite this, outer London residents make greater use of public transport and less use of cars than residents of the South East. Some of this difference will be due to the higher proportion of travel to central and inner London by outer London residents.

The distance travelled and time spent travelling by mode vary accordingly, although it is worth noting that despite making fewer trips overall (2.4 per day compared to 2.5 in outer London and 2.9 in the South East) and travelling a much shorter distance (12.8km, 16.1km, 23.0km respectively), inner Londoners travelled for the longest amount of time per day on average, at 66 minutes compared to 65.2 and 62.9 minutes respectively for outer London and the South East. So, if a daily 'travel time' budget of around an hour is assumed, it is clear that the number of trips inner Londoners can make is significantly restricted in comparison to residents of outer London and elsewhere in the UK.

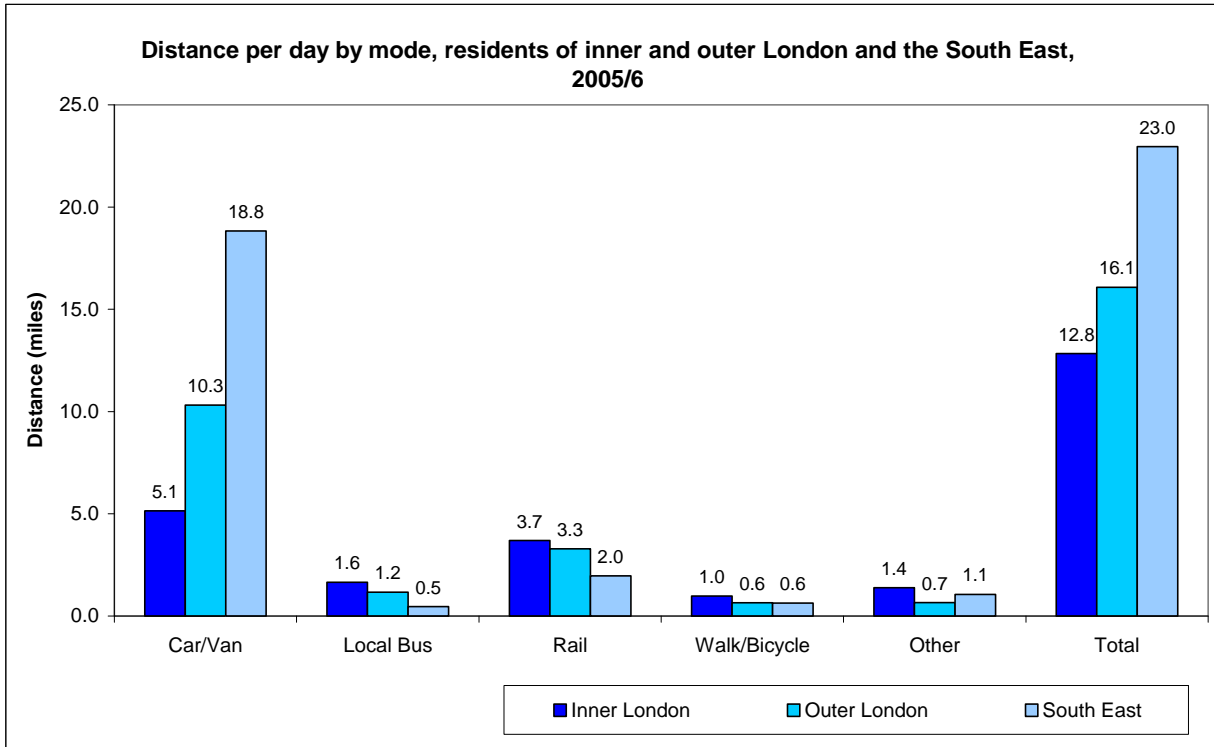
Trip rates by purpose were the same across London, and broadly similar to those of residents of the South East.

See Figures 8 to 10 for supporting data.

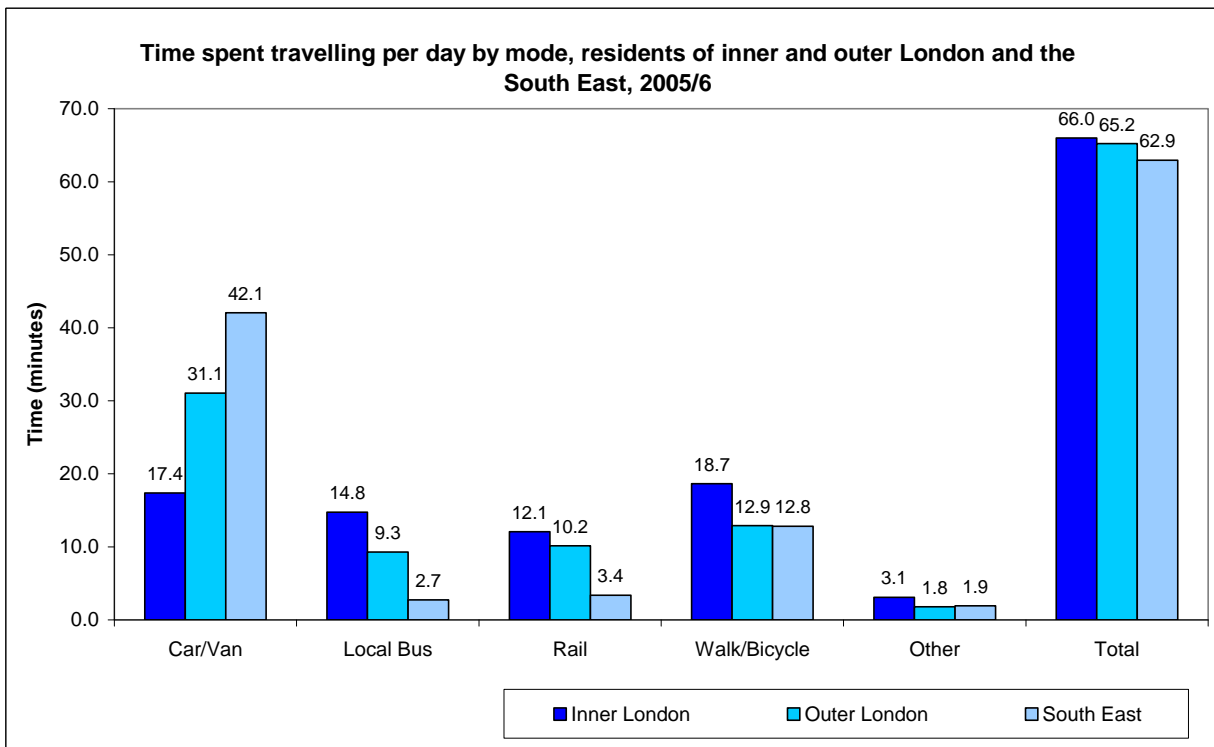
**Figure 8: Trips per day by mode, inner and outer London residents, 2005/06**



**Figure 9: Distance per day by mode, inner and outer London residents, 2005/06**



**Figure 10: Time travelled per day by mode, inner and outer London residents, 2005/06**



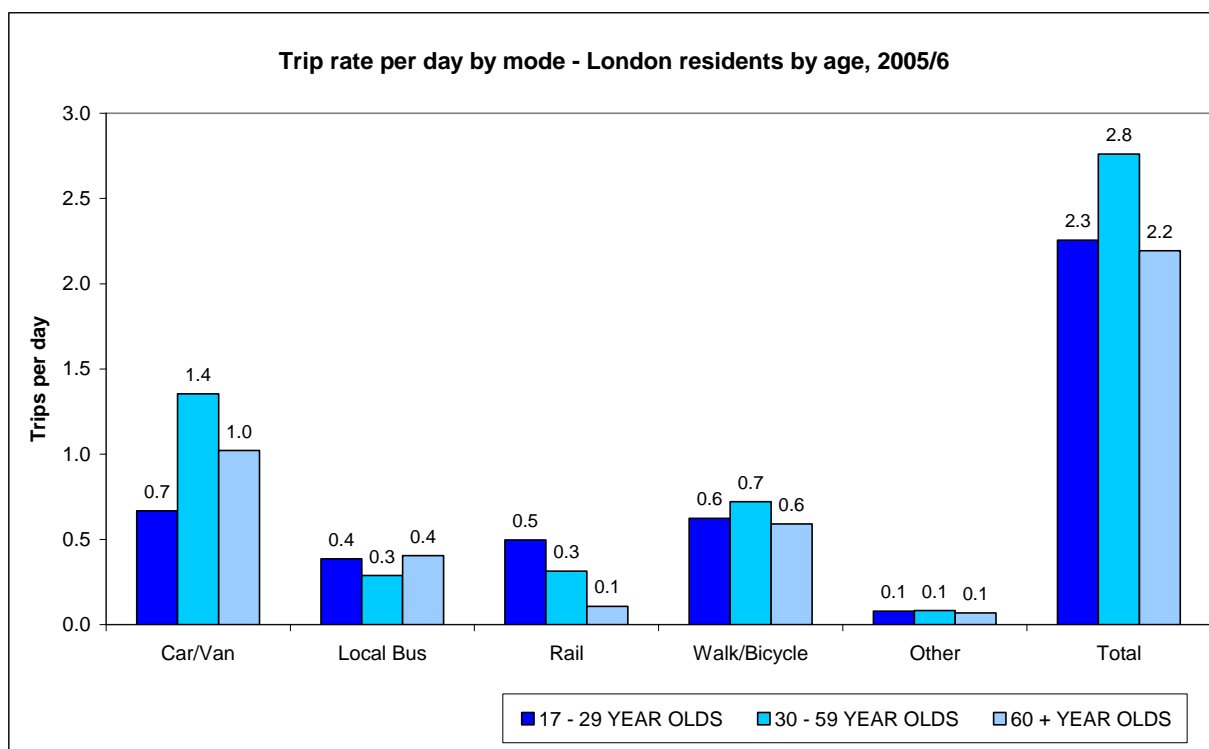
## Travel by Londoners – by age

Figure 11 shows that trip rates are highest amongst those aged 30 to 59, although younger people are more likely to travel by rail and both younger and older people make more trips by bus than the middle age group. We can see from Table 1 that the greatest decline in trip rates has been seen amongst those aged 17-29, where the average daily trip rate has dropped from 3.1 in 1995/7 to 2.3 in 2005/6. In comparison, the trip rate amongst those aged 60 plus has marginally increased over the same period, perhaps reflecting improving health and increased economic activity amongst this age group.

**Table 1 – Change in trip rate per day by age group and mode 1995/97 and 2005/06**

	17-29 year olds	30-59 year olds	60+ year olds	Total
Car/Van	-45%	-22%	19%	-18%
Local Bus	27%	23%	7%	19%
Rail	8%	5%	10%	11%
Walk/Bicycle	-38%	-12%	-12%	-17%
Other	-19%	18%	-8%	1%
<b>Total</b>	<b>-27%</b>	<b>-13%</b>	<b>5%</b>	<b>-11%</b>

**Figure 11: Trip rate per day by mode, London residents by age, 2005/06**



## Car Ownership

Household car ownership has remained fairly stable over time, as seen in Figure 12, with just over six in ten London households having access to one or more cars.

**Figure 12: Car ownership, London residents 1988-2005**

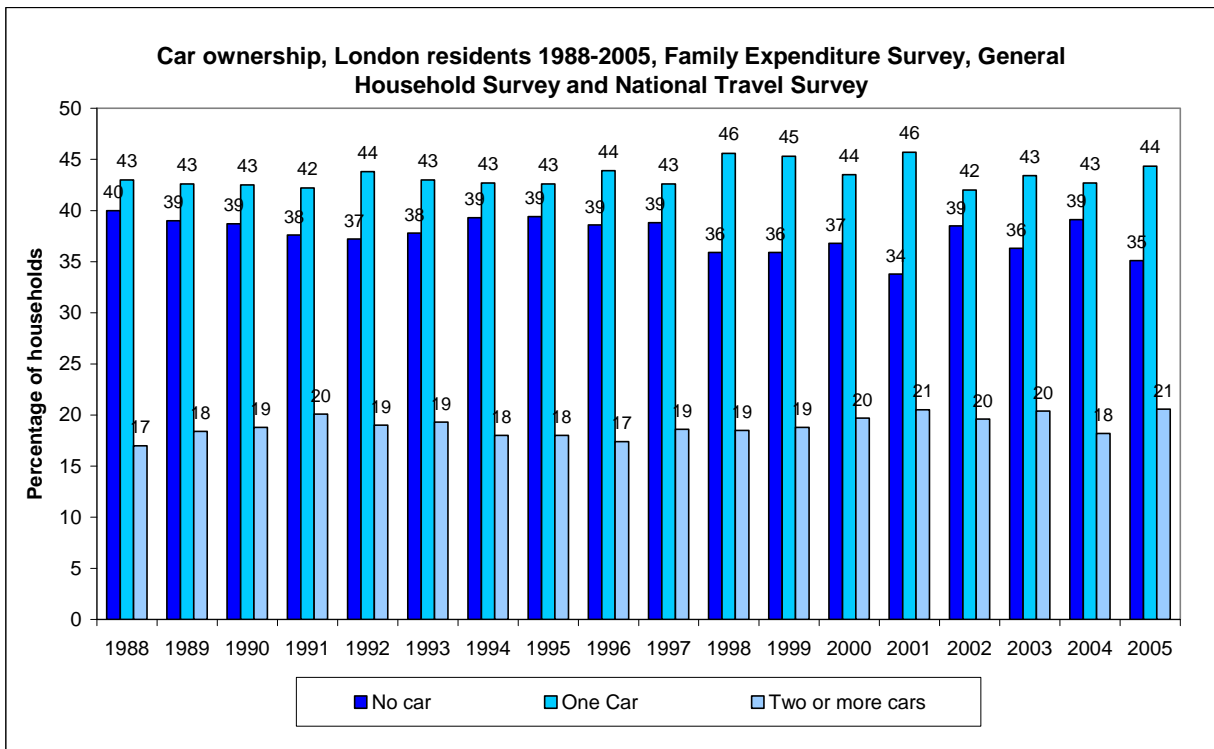
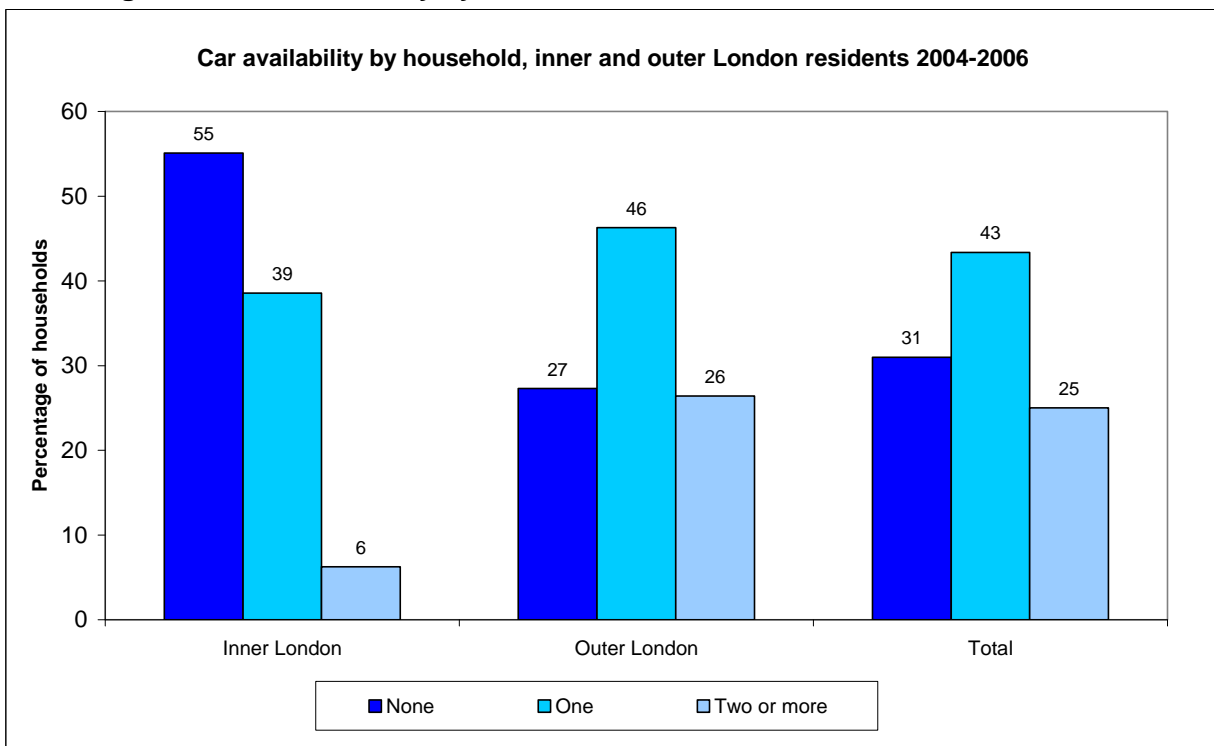


Figure 13 demonstrates that car ownership levels are significantly higher in outer than inner London, where only 45% of households have access to a car, compared to 72% in outer London.

**Figure 13: Car availability by household, inner and outer London 2004-2006**



Car ownership levels vary by demographic characteristics (17+ only, all from 2004-6 data):

- Car ownership levels are highest amongst those aged 30 to 59 (74% compared to 61% of those aged 17-29 and 69% of those aged 60 plus).
- Car ownership is higher amongst White British people than those from ethnic minorities.
- Those in employment (full or part-time) are more likely to have access to a car than the economically inactive. Unemployed, retired and permanently sick or disabled people are the least likely to have access to a car.
- More than half of those with a mobility difficulty did not have access to a car.
- Car ownership is directly related to household size, so that the average household size of those without a car is 1.9, compared to 2.4 for those with one car and 3.3 for those with two cars or more. 61% of one-person households do not have a car, compared to only 17% of households with four or more people.

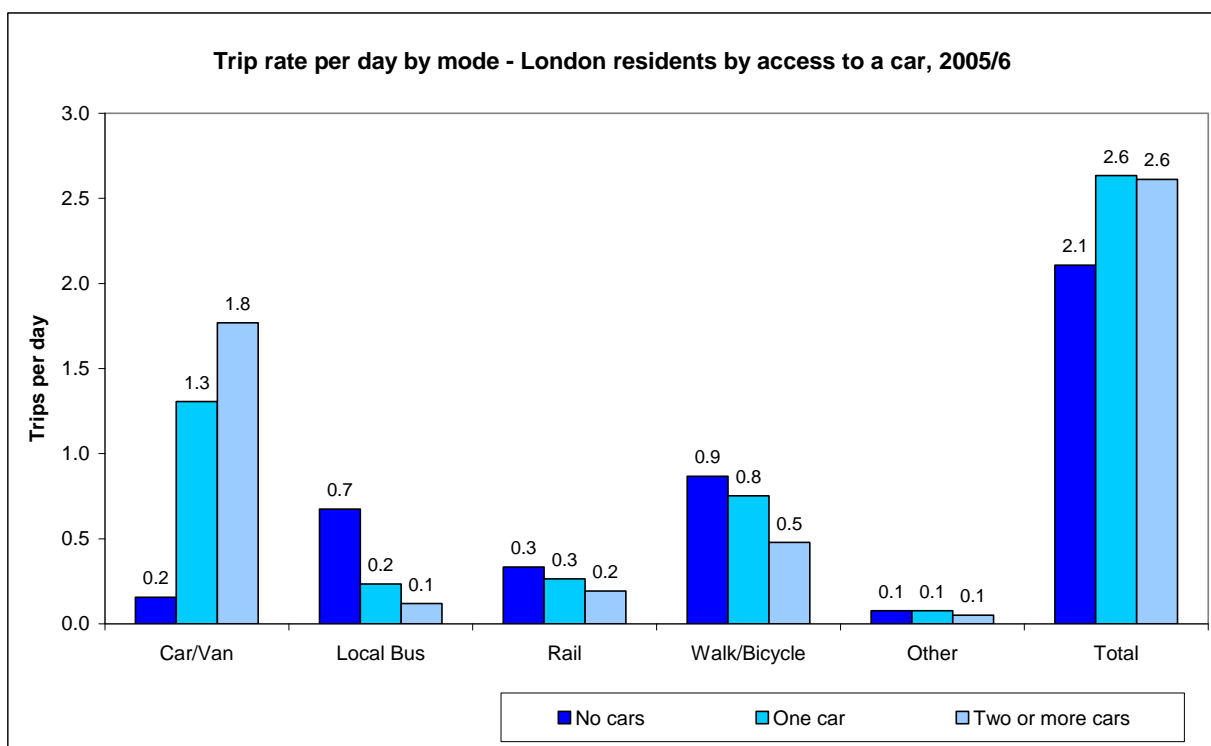
London residents without a car in the household are more likely to hold a travel pass (including season tickets, concessionary passes etc) than those with a car – 53% compared to 39% of those in households with one car and 24% in two-car households.

London residents without access to a car make fewer trips per day on average (2.1 compared to 2.6 for those with a car). This is likely to primarily reflect their age and economic activity status.

The trip rate of those without a car is around 20% lower than those with one car, and they travel nearly 40% less distance but they only travel for around 10% less time per day. So, it takes those without a car nearly as much time to travel a much shorter distance and they are able to make fewer trips. This may in part reflect the fact that those without a car are more likely to live in inner London, where this pattern also holds.

Those without access to a car in the household make only a small proportion of their trips by car and are more likely to travel by public transport, walking and cycling than those with access to a car. We can see from Figure 14 that changes in mode use over time have been broadly consistent between those with and without access to a car.

**Figure 14: Trip rate per day by mode, London residents by access to a car, 2005/06**



## Travel into, from and within London

Some 12% of all trips captured in the National Travel Survey (2002-6) had a destination in Greater London. Of these, 92% had originated in London, 5% in the South East and 3% in the Eastern region.

In comparison, only 8% of car as driver trips captured in NTS (2002-6) had a destination in Greater London. Car driver trips with a destination in London were less likely to also have an origin in Greater London (86%), with 8% originating in the South East region and 5% in the Eastern region.

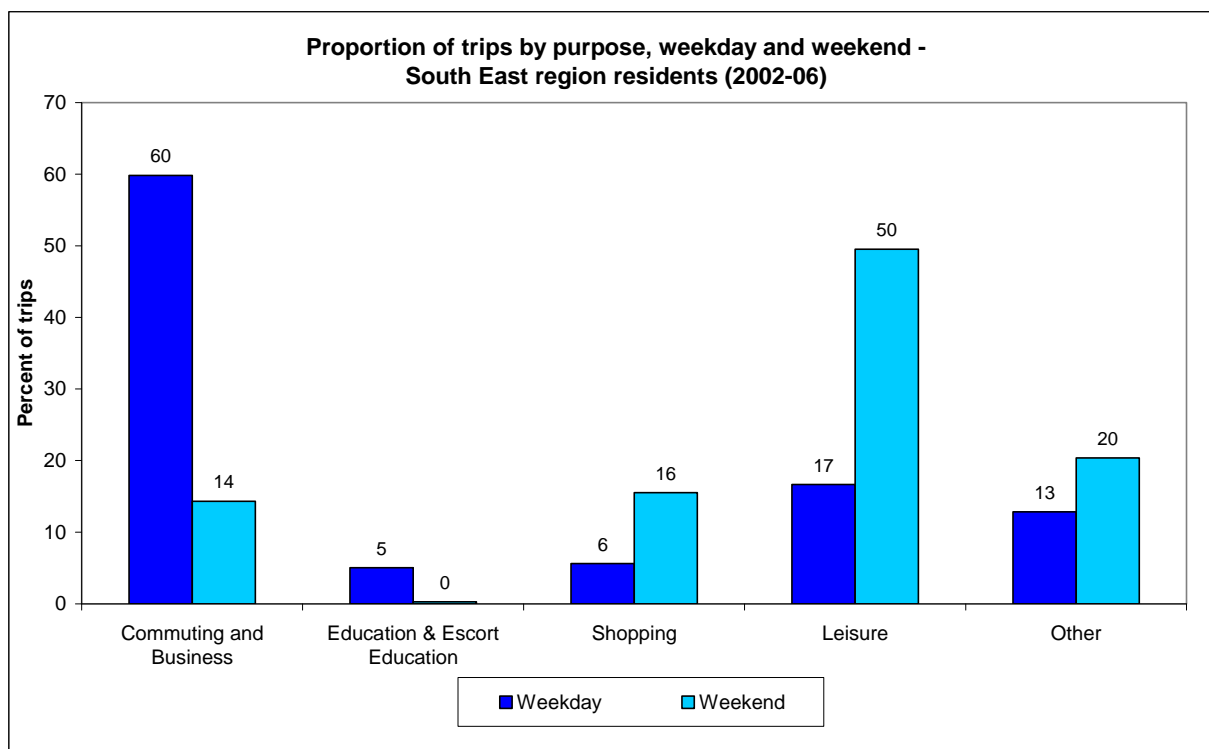
Some 44% of all surface rail trips captured in NTS (2002-06) had a destination in Greater London. Of these, two thirds originated in Greater London, with 17% originating in the South East and 11% in the Eastern region and the remainder elsewhere in the UK.

## Travel to London by residents of the South East region

Two thirds of all trips with a destination in London (and an origin elsewhere) made by residents of the South East in 2002-06 were to outer London.

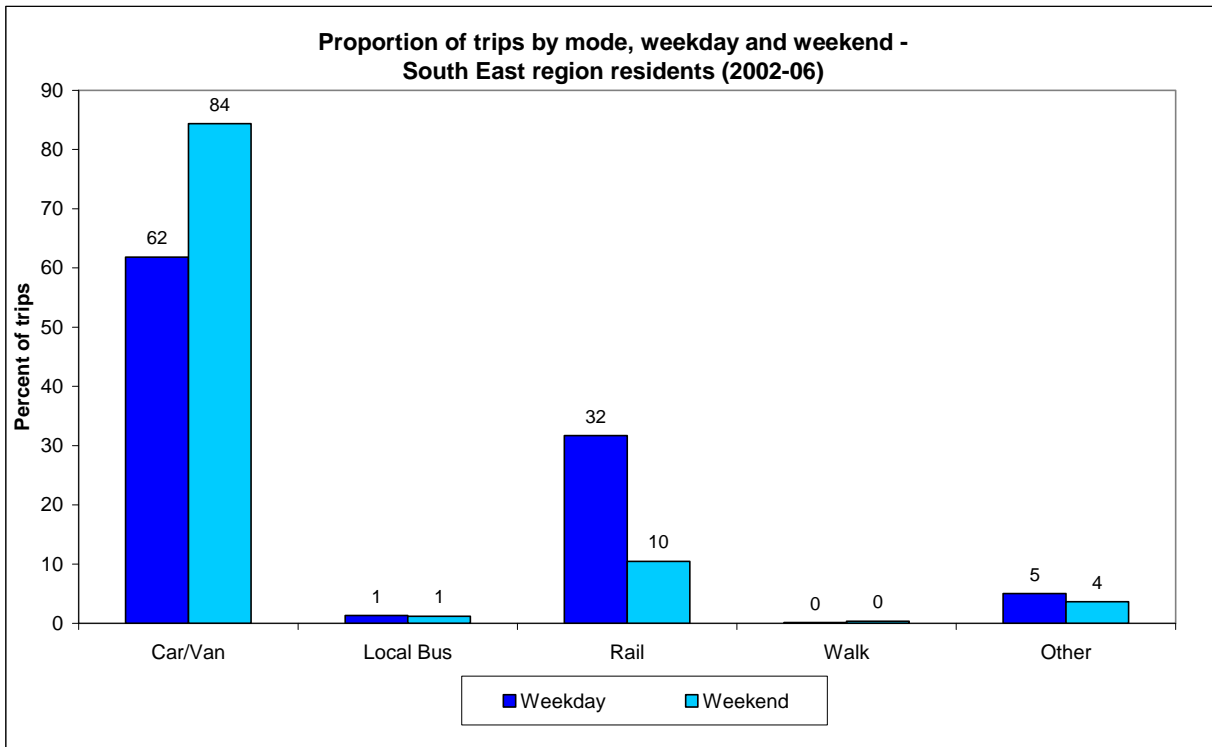
Figure 15 shows that half of all trips into London made by residents of the South East in 2002-06 were for commuting or business purposes, with a further third for the purpose of shopping and leisure. The proportion of trips made for commuting and business purposes has decreased marginally from 1995-2001, when 55% of all trips were for these purposes.

**Figure 15: Trips to London by purpose, weekday and weekend - South East region residents 2002-06**



As seen in Figure 16, two thirds of trips into London made by residents of the South East in 2002-06 were made by car or van, with rail the next most common mode, accounting for 27% of all trips. At the weekend, 84% of all trips into London (with a destination outside London) were made by car. Compared with the data from 1995-2001 there has been a marginal increase in the proportion of trips made by rail (from 25% to 27%) and a corresponding marginal decrease in the proportion of trips made by car (68% to 67%). These changes are within the range of statistical error and can therefore not be considered significant.

**Figure 16: Trips to London by mode, weekday, weekend - South East residents 2002-06**



Seven in ten trips made by residents of the South East to inner London in 2002-06 were made for the purposes of commuting or business, with leisure trips accounting for a further two in ten trips. In comparison, commuting and business trips account for only four in ten trips to outer London, with almost as many trips made for the purposes of shopping and leisure.

The mode split was sharply differentiated by whether South East residents were travelling to inner or outer London. Nearly nine in ten trips made by residents of the South East to outer London in 2002-06 were made by car, whereas two thirds of trips to inner London were made by rail.

### **Travel to London by residents of the Eastern region**

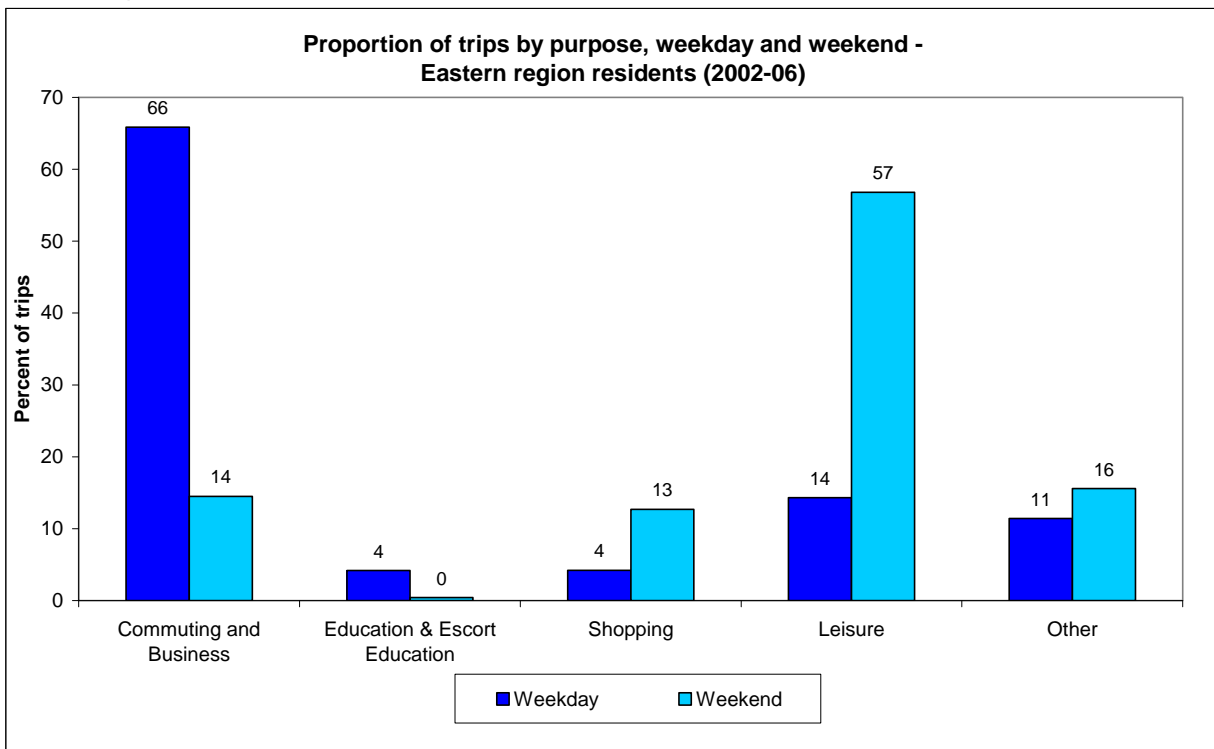
Residents of the Eastern region in 2002-06 were equally likely to be travelling to inner or outer London (49% and 51% of London trips respectively).

Two thirds of all trips into London on a weekday made by residents of the Eastern region in 2002-06 were for commuting or business purposes, with just under one in three for the purpose of shopping and leisure. The proportion of trips made for commuting and business purposes has decreased marginally from 1995-2001, when 58% of all trips were for these purposes.

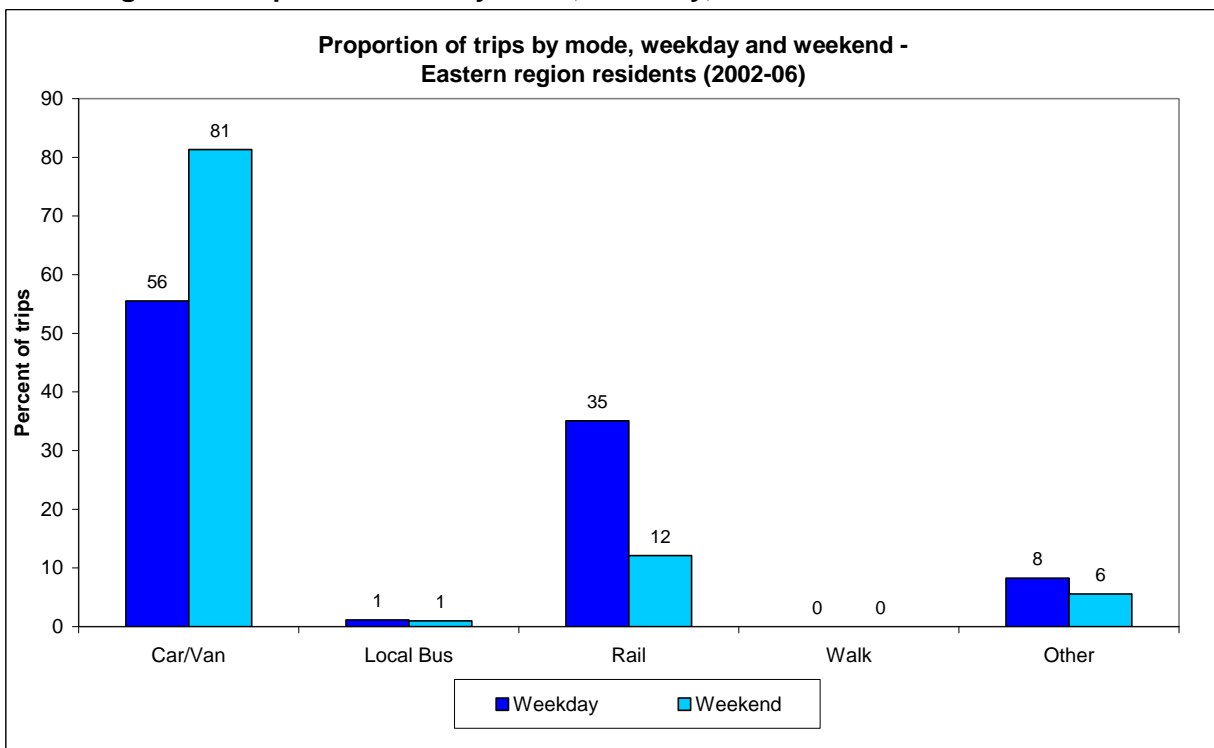
Just under six in ten trips into London made by residents of the Eastern region on a weekday in 2002-06 were made by car or van, with rail the next most common mode, accounting for 35% of all trips. At the weekend, 81% of all trips into London were made by car. There has been no change in modal split since 1995-2001.

See Figures 17 and 18 for supporting data.

**Figure 17: Trips to London by purpose, weekday, weekend - Eastern residents 2002-06**



**Figure 18: Trips to London by mode, weekday, weekend – Eastern residents 2002-06**



Three quarters of all trips made by residents of the Eastern region to inner London in 2002-06 were made for the purposes of commuting or business. In comparison, four in ten trips to outer London were made for both commuting and business and shopping and leisure purposes.

Again, the mode split was sharply differentiated by whether Eastern region residents were travelling to inner or outer London. Nine in ten trips made by residents of the Eastern region to outer London in 2002-06 were made by car, whereas just under six in ten trips to inner London were made by rail, with car accounting for only 30% of trips to inner London.

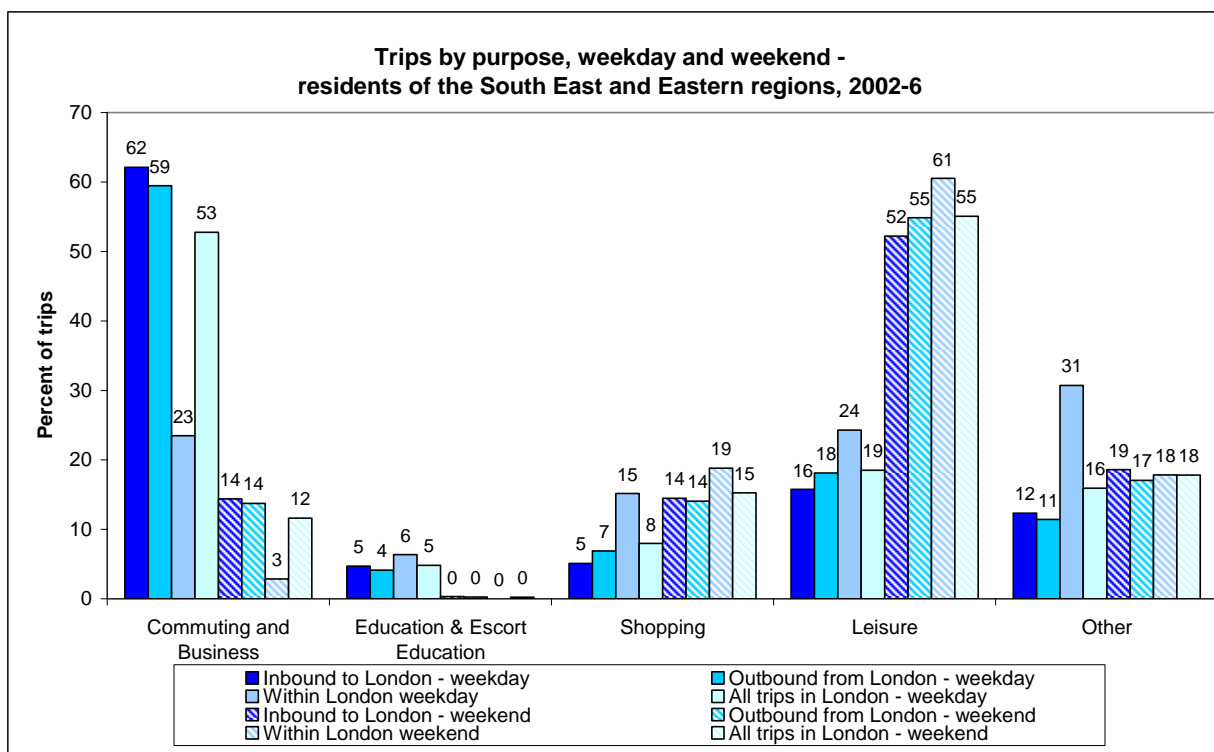
## Travel into, from and within London by residents of the South East and Eastern regions

Figure 18 shows that trips into and out of London made by residents of the South East and Eastern regions were most likely to be for commuting or business purposes, whereas trips made within London were more likely to be for shopping, leisure and other purposes.

At the weekend, non-London residents travelling into, out of and within London were more likely to be travelling for leisure purposes and less likely to be travelling for commuting or business purposes than during the week.

The profile of trips made into and out of inner and outer London by residents of the South East and Eastern regions was quite different, with around seven in ten trips to inner London and four in ten trips to outer London being for commuting and business purposes. However, the profile of trips made within these areas by residents of the South East and Eastern regions was quite similar, with around half of all trips made for shopping and leisure purposes.

**Figure 18: Trips by purpose – South East and Eastern region residents 2002-06**

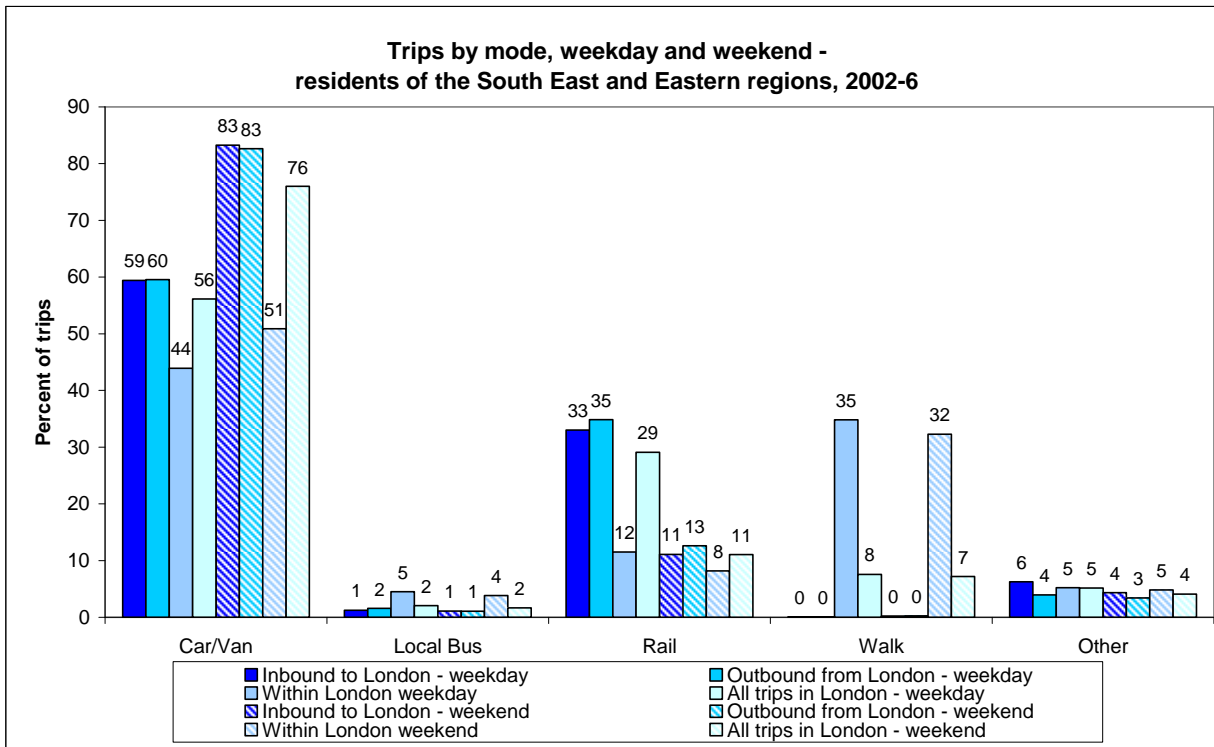


In total, as seen in Figure 19, six in ten trips made by residents of the South East and Eastern regions with an origin and/or destination in London were by car or van; car and van accounted for around two thirds of the trips inbound to and outbound from London and 45 percent of trips made within London by residents of these regions.

At the weekend, residents of the South East and Eastern regions were more likely to travel into and out of London by car or van (83% of trips compared to around 60% on weekdays) and somewhat more likely to travel within London by car (51% compared to 44% of trips on weekdays).

There was a striking difference between travel patterns to inner and outer London by this group. Nine in ten trips into or out of outer London and seven in ten trips within outer London made by residents of the South East and Eastern regions were by car. In comparison, around three in ten trips to and from inner London and under a fifth of trips within inner London were made by car; residents of the South East and Eastern regions were more likely to travel by rail to this area and to walk for trips made within the area.

**Figure 19: Trips to London by mode – South East and Eastern residents 2002-06**



16 July 2008

## **APPENDIX ONE**

### **Definitions of terms**

**(as presented in Transport Statistics Bulletin: National Travel Survey 2006)**

#### **Personal travel**

The subject of the National Travel Survey is personal travel. This is travel for private purposes or for work or education, provided the main reason for the trip is for the traveller himself or herself to reach the destination.

#### **Trips in course of work**

Trips made in the course of work are included provided that the purpose of the trip is for the traveller to reach a destination. Travel to deliver goods, or to convey a vehicle or passengers (e.g. as a bus driver or taxi driver), is not covered. Nor is travel as a conductor, guard or other member of a crew of public transport vehicles. Also excluded is travel as a driver or a member of a crew of public vehicles such as fire engines or ambulances; travel in industrial or agricultural equipment (cranes, bulldozers, tractors, etc.); travel in specially equipped vehicles used in the course of a person's work (police patrol cars, AA/RAC repair vehicles, Royal Mail vans, etc.); and trips in course of work by people paid to walk or cycle, such as policemen on the beat, traffic wardens, leaflet distributors, messengers, postmen, or roundsmen.

#### **Leisure travel**

Travel for a leisure purpose is normally included. However, trips which are themselves a form of recreation are not. Examples are yachting or gliding, which are done for the pleasure of going in a boat or plane rather than to get somewhere. Travel by foot away from the public highway is excluded unless both the surface is paved or tarred and there is unrestricted access. Thus, walks across open countryside on unsurfaced paths are excluded; and so are walks in pedestrian precincts or parks that are closed at night. Children's play on the street is not included as travel, but information about this is collected separately on Day 7.

#### **Geographical coverage**

Only travel within Great Britain is included. Trips to other places are included only up to the ticket control point at which the boat, plane or train using the Channel Tunnel, is boarded. Travel by road vehicle away from the public highway is excluded, but travel on public roads in parks and on cycleways is included.

#### **Trips**

The basic unit of travel, a trip, is defined as a one-way course of travel having a single main purpose. Outward and return halves of a return trip are treated as two separate trips. A trip cannot have two separate purposes, and if a single course of travel involves a mid-way change of purpose then it, too, is split into two trips. However, trivial subsidiary purposes (e.g. a stop to buy a newspaper) are disregarded.

#### **Stages**

A trip consists of one or more stages. A new stage is defined when there is a change in the form of transport or when there is a change of vehicle requiring a separate ticket.

## **Distance travelled**

The length of any trip stage is the distance actually covered, as reported by the traveller, and not the distance 'as the crow flies'.

## **Series of calls trips**

In order to reduce the burden on respondents, travel involving a number of stops for the same main purpose and using the same form of transport are treated as one continuous series of calls trip from the first such call to the last one. Such trips are excluded from data presented in this paper.

## **Modes of travel**

Walks of less than 50 yards are excluded.

Car includes light vans, 4x4 vehicles and privately owned lorries.

Rail includes surface rail (former British Rail) and London Underground services, but not any other rail service.

Local bus includes all 'local' services, but excludes express services, excursions and tours.

'Other' modes depend on the context, but may include other types of bus (works or school bus, private hire, express bus and tours and excursions), two-wheeled motor vehicles, motorcaravans, dormobiles, taxis/minicabs, domestic air travel and other private and public transport. For the purposes of this paper, Light Rail and bicycle are contained within the 'Other' mode category.

## **Main mode of travel**

The main mode of a trip is that used for the longest stage of the trip. With stages of equal length the mode of the latest stage is used.

## **Trip purpose**

The purpose of a trip is normally taken to be the activity at the destination, unless that destination is 'home' in which case the purpose is defined by the origin of the trip. The classification of trips to 'work' is also dependent on the origin of the trip. Purposes include:

Commuting and Business - trips to a usual place of work from home, or from work to home; and personal trips in course of work, including a trip in course of work back to work. This includes all work trips by people with no usual place of work (e.g. site workers) and those who work at or from home. Also trips to work from a place other than home or in course of work, e.g. coming back to work from going to the shops during a lunch break.

Education - trips to school or college, etc. by full time students, students on day-release and part time students following vocational courses. Also includes those escorting another person to a location for the purposes of education.

Shopping - all trips to shops or from shops to home, even if there was no intention to buy.

Leisure - visits to meet friends, relatives, or acquaintances, both at someone's home or at a pub, restaurant, etc.; all types of entertainment or sport, clubs, and voluntary work, non-vocational evening classes, political meetings, etc..

'Other' - purposes include Personal business, Holidays or day trips, Just walk and escort trips other than those for education purposes.

## **Households**

A household consists of one or more people who have the sampled address as their only or main residence and who either share at least one main meal a day or share the living accommodation. The survey excludes people who are not living in households, such as students in halls of residence.

**Work status**

A person is described as working if in paid employment, or self-employed, during the previous week. Persons absent on holiday, on strike, temporarily sick, on study leave, maternity leave, or absent for similar reasons, are included. Sandwich students and students working during vacation are excluded. The distinction between full-time and part-time work is determined by the respondent.

**Household vehicles**

The term 'car' is used for all three or four wheeled vehicles with a car body type, and also light vans, 4x4 vehicles, dormobiles and motorcaravans. Such vehicles are regarded as household cars if they are either owned by a member of the household, or available for the private use of household members. Vehicles used only for the carriage of goods, as public service passenger vehicles, or solely for hire by other people are excluded. Hired or borrowed vehicles are included only if they were available to the household over the whole of the sample travel week. Company cars provided by an employer for the use of a particular employee (or director) are included, but cars borrowed temporarily from a company pool are not.