



Transport
for NSW

Bureau of Transport Statistics

Household Travel Survey Report: Sydney 2012/13



November 2014

The Bureau of Transport Statistics (BTS) of Transport for NSW provides data on current and future demographic, employment and travel patterns. This information is used as input into transport and landuse planning, and policy making in New South Wales.

The BTS' main datasets include:

- Personal travel data for the Sydney Greater Metropolitan Area (GMA) from the continuous Household Travel Survey (HTS).
- Commercial vehicle forecasts for the Sydney GMA from the Freight Movement Model (FMM) and the Light Commercial Vehicle Model (LCVM).
- Travel zone population, workforce and employment forecasts for the Sydney GMA (5-yearly).
- Travel zone trip forecasts for the Sydney GMA (5-yearly) from the Sydney Strategic Travel Model (STM).
- Operator data for Sydney Trains, NSW Trains, State Transit Authority, Private Bus Operators and Harbour City Ferries including patronage data, ticket issues, real-time trip data, usage and load counts.

Copyright (Free to share)

Users are welcome to copy, reproduce and distribute the information contained in this report for non-commercial purposes only, provided acknowledgement is given to the BTS as the source.

Disclaimer

While all care is taken in producing and publishing this work, no responsibility is taken or warranty made with respect to the accuracy of any information, data or representation. The authors (including copyright owners) and publishers expressly disclaim all liability in respect of anything done or omitted to be done and the consequences upon reliance of the contents of this publication.

Transport for NSW

Bureau of Transport Statistics 2014
ISBN 978-0-7313-2868-0 (Paperback)
ISBN 978-0-7313-2869-7 (PDF)
September 2014



Contents

Summary	2
1. Introduction	2
2. Key findings and trends	4
3. Travel behaviour	8
4. Tables	15
4.1 Total travel	15
4.2 Purpose of travel	16
4.3 Mode of travel	17
4.4 Travel distance	23
4.5 Total duration	27
4.6 Travel by time of day	29
4.7 Profile of travellers	31
4.8 Vehicles	37
5. Appendices	39
5.1 About the HTS	39
5.2 HTS data items	40
5.3 Glossary	41
5.4 References	44

Summary

This report presents information on the travel behaviour and trends of residents within the Sydney Greater Capital City Statistical Area (GCCSA) collected during the Household Travel Survey (HTS). The results feature trip-making patterns of Sydney residents during the 2012/13 survey year as well as over the last decade (2002/03 – 2012/13).

During 2012/13 over four and a half million Sydney residents travelled over 145 million kilometres (km) on roads, trains, bus and ferries including 85 million km by driving a vehicle and 23 million km by public transport. While population growth (13%) over the last decade contributed to the general increase in trip-making and car-ownership in Sydney, interesting patterns emerged in relation to the socio-demographic characteristics of the travelling population and in regards to economic factors and technological development.

1. Introduction

The Household Travel Survey (HTS) is the largest and most comprehensive source of personal travel data for the Sydney Greater Metropolitan Area (GMA) including the Sydney Greater Capital City Statistical Area (GCCSA), and the Illawarra and Lower Hunter regions (Figure 1.1). As the longest running, continuous household travel survey in the country it provides a comprehensive picture of trip-making and travel patterns of Sydney residents.

The HTS plays an important role in understanding the current travel behaviour of residents within the GMA and enables the transport cluster to respond and work towards the challenges relating to transport. The information produced from the HTS is utilised extensively by various stakeholders including the NSW State Government (e.g. TfNSW; operating agencies such as Sydney Trains, Sydney Buses, Sydney Ferry, Roads and Maritime Services; Department of Premier and Cabinet), Federal Government, Local Councils, Universities and the Private sector. The data collected are all key inputs into the Strategic Travel Model (STM), which projects travel patterns in the GMA under different land use, transport and pricing scenarios and is used for major infrastructure assessment, policy and planning analysis.

The survey method uses a face-to-face interview approach with each respondent providing detail of all travel undertaken on a designated travel day. The 2012/13 estimates featured here are based on three years of pooled data collected from July 2010 to June 2013 from a combined gross sample of 14,636 GMA households of which 9,859 (67%) responded.

This report is a compilation of the information on the travel behaviour of Sydney residents produced from the Bureau of Transport Statistics' continuous Household Travel Survey (HTS). Data featured here are for residents of the Sydney GCCSA only (previously the Sydney Statistical Division) for 2012/13 and provides an update on the estimates from the previous year¹.

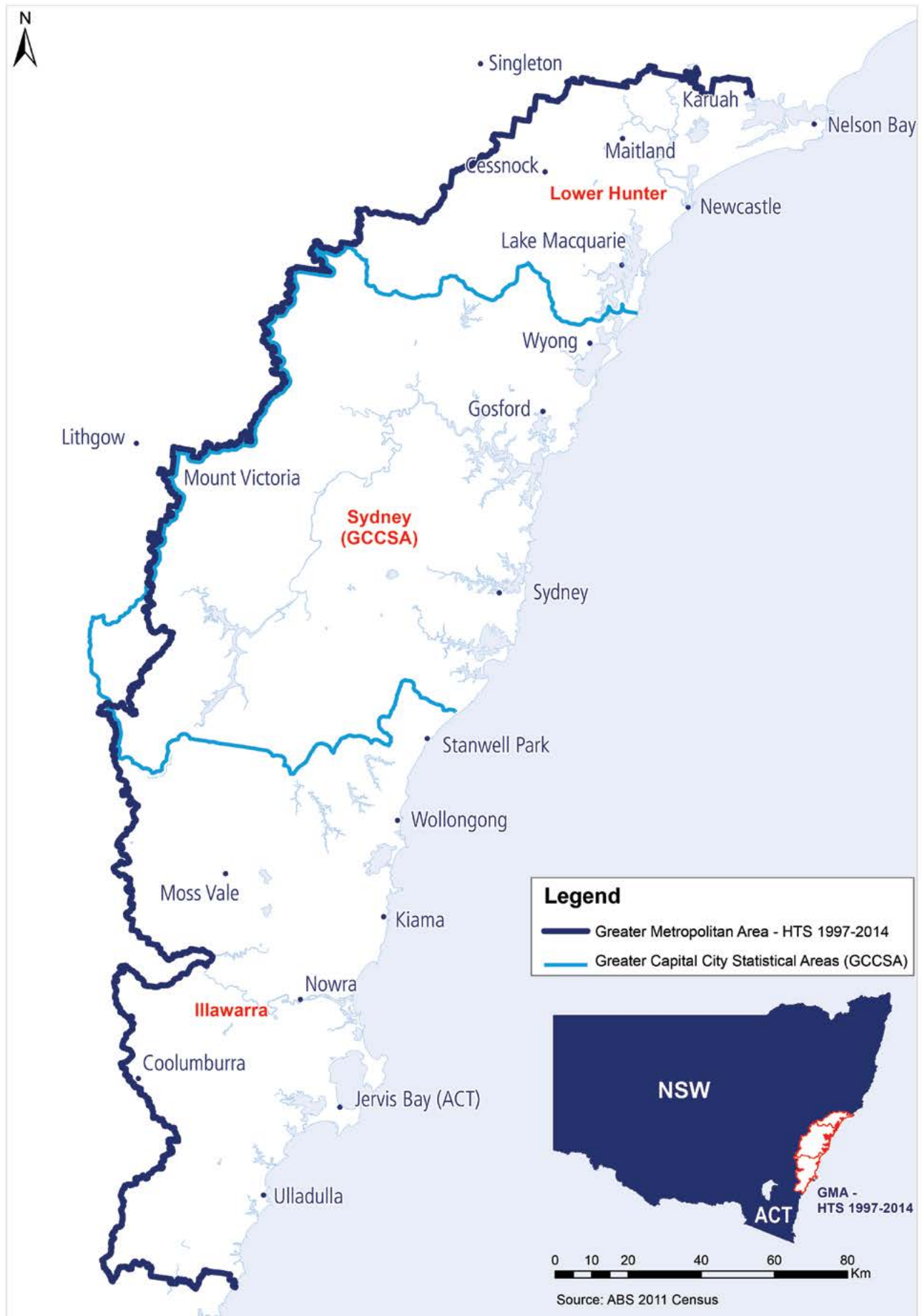
These results support the objectives of the Long Term Transport Master Plan of improving sustainability by growing the proportion of travel by sustainable modes such as public transport.

The report is divided into the following sections:

- **Section 1. Introduction**
- **Section 2. Key findings and trends**
Presents the main travel trends during the current survey period and over the last decade.
- **Section 3. Travel behaviour**
Presents the results of the travel behaviour of Sydney residents, including why, how, and how far they travel.
- **Section 4. Tables**
Quantitative survey results are provided including historical data and changes over the last decade.
- **Section 5. Appendices**
Contains background information about the HTS, its methodology, statistical validity and data items, including a glossary of terms and definitions to further clarify the concepts and methods used in this report.

¹ Previous estimates from 2001/02 were re-estimated to reflect the updated population benchmarks released by the Australian Bureau of Statistics.

Figure 1.1. Sydney Greater Metropolitan Area (GMA)




2. Key findings and trends


The following key findings and trends from the 2012/13 Household Travel Survey (HTS) are for the travel behaviour of residents within the Sydney GCCSA.


Key changes over the last decade (2002/03 - 2012/13)

- In 2012/13, over four and a half million Sydney residents each made an average of 3.7 trips every weekday and 3.2 trips on a weekend day. This equates to a total of 16.7 million trips each weekday and 14.6 million trips each weekend day (Table 2.1).
- Over the last decade, population growth followed a relatively steady upward trend with an overall increase of 13%. During the same period both weekend trips (10%) and weekday trips (7%) grew at a slower rate than population. Growth of weekend trips peaked in 2006/07 but slowed down during the latter part of the decade, particularly after 2010/11 (Figure 2.1).
- Total distance and Vehicle Kilometres Travelled (VKT) displayed similar dynamics from 2002/03 with small troughs during 2005/06 and 2009/10 (Figure 2.1).
- Growth in vehicle ownership (23%) expanded at almost double the rate of population, but at a similar rate to Gross State Product (24%) (Table 2.1).


Key stats 2012/13

On average
 **4.5 million people**
 in Sydney made

trips per weekday 
16.7 million **3.7** per person

trips per weekend day 
14.6 million **3.2** per person

totalling over **145 million km** travelled on road, train, bus, and ferry including **84 million km** by vehicle (VKT) and **23 million km** by public transport (PT)

Each person spent  **81 minutes** travelling

M T W T F

Key changes over the last decade









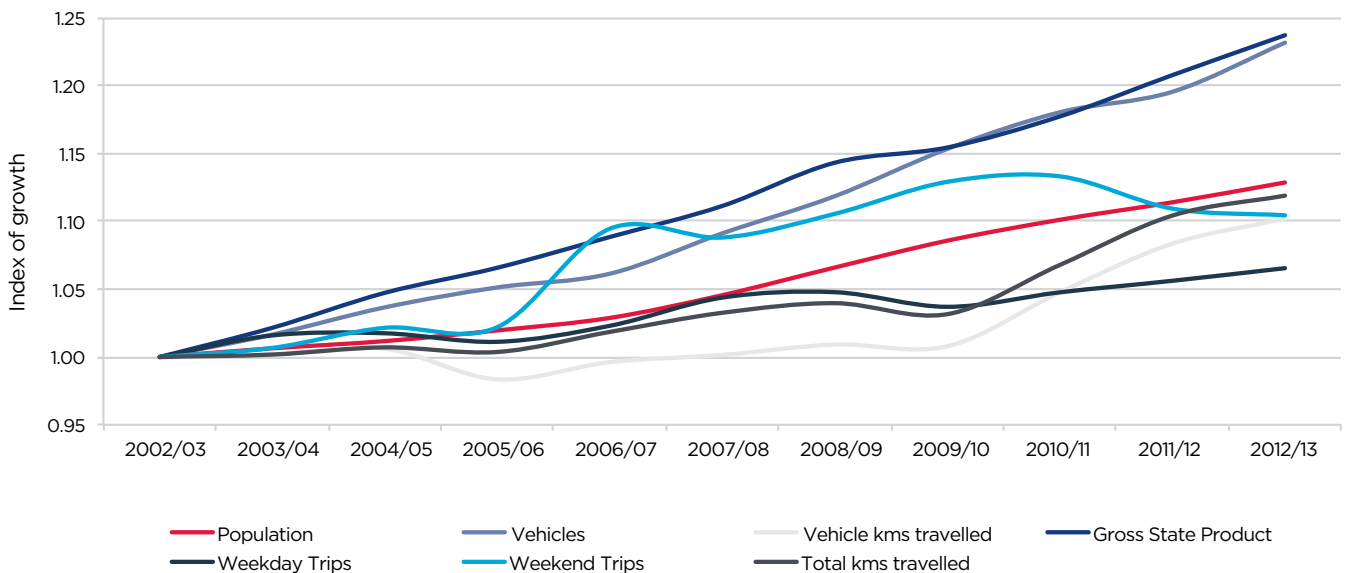
		Growth by mode		Growth by purpose	
	↑ 13% Population		↑ 24% Train trips	↑ 19% Education/childcare	↑ 7% Commute
	↑ 7% Weekday trips		↑ 19% Bus trips	↑ 16% Drop off, pick up	↑ 7% Shopping
	↑ 10% Weekend trips		↑ 5% Vehicle trips	↑ 11% Social/recreation	↓ 23% Personal business
	↑ 23% Vehicles		↑ 21% Total public transport		

Figure 2.1. Travel trends between 2002/03 and 2012/13



Key findings

- Over the last decade the use of public transport (PT) increased by 21%, which equates to approximately 350,000 additional PT trips on an average weekday.
- Younger age groups (below 40 years) are increasingly walking and using public transport, while the over 60 age groups are relying more on car use.
- Multi-vehicle households increased from 43% to 49% since 2002/03, but this is not reflected in an increase in distance travelled, as vehicle kilometres travelled (VKT) grew by only 10%.
- Increased patronage led to a 19% growth in PT kilometres (km) travelled. The average distance for commuter trips by train (18km each weekday) decreased while bus commuter travel (9km each weekday) increased.
- The growth in train trips (24%) was noticeably higher than the growth in distance travelled by train (16%) in the last decade, indicating that more people are making shorter train trips.
- Vehicle driver trips by males decreased over the last decade from 53% to 50% share of all trips, with corresponding increases in train and walk trips. For females, the share of car drivers remained relatively stable at 45%. Females are more likely to be car passengers than males (24% vs 19% respectively).

Table 2.1. Key Transport Indicators for residents of the Sydney GCCSA

Indicator ¹	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13	
Population ²	Persons ('000)	4,032	4,148	4,216	4,298	4,378	4,440	4,492	4,551	1.3%	12.9%
	No. of households ('000)	1,516	1,561	1,576	1,597	1,626	1,649	1,668	1,689	1.3%	11.4%
	No. of persons per household	2.66	2.66	2.68	2.69	2.69	2.69	2.69	2.69	0.0%	1.1%
Total travel	Trips										
	Trips av. weekday ('000)	15,645	16,005	16,331	16,393	16,224	16,392	16,525	16,670	0.9%	6.6%
	Trips av. weekend day ('000)	13,187	14,435	14,349	14,580	14,891	14,944	14,629	14,565	-0.4%	10.4%
	Trips per person - weekday	3.88	3.86	3.87	3.81	3.71	3.69	3.68	3.66	-0.5%	-5.7%
	Trips per person - weekend	3.27	3.48	3.40	3.39	3.40	3.37	3.26	3.20	-1.8%	-2.1%
	Trips per household - weekday	10.32	10.25	10.36	10.26	9.98	9.94	9.91	9.87	-0.4%	-4.4%
	Trips per household - weekend	8.70	9.25	9.10	9.13	9.16	9.06	8.77	8.62	-1.7%	-0.9%
Vehicles	Vehicles										
	Private vehicles ('000)	2,183	2,317	2,382	2,442	2,518	2,577	2,610	2,689	3.0%	23.2%
	Vehicles per household	1.44	1.48	1.51	1.53	1.55	1.56	1.56	1.59	1.9%	10.4%
Bicycles	Bicycles										
	Bicycle ownership ('000)	1,281	1,549	1,602	1,620	1,656	1,690	1,635	1,677	2.6%	30.9%
	Bicycles per household	0.84	0.99	1.02	1.01	1.02	1.02	0.98	0.99	1.0%	17.9%
Distance	Kilometres										
	Total travel ('000)	129,897	132,302	134,131	135,054	134,005	138,719	143,449	145,349	1.3%	11.9%
	Total travel per person	32.2	31.9	31.8	31.4	30.6	31.2	31.9	31.9	0.0%	-0.9%
	Av. trip length	8.3	8.3	8.2	8.2	8.3	8.5	8.7	8.7	0.0%	4.8%
	Vehicle travel (VKT) ('000) ³	76,213	75,920	76,327	76,916	76,814	79,847	82,585	83,988	1.7%	10.2%
	VKT per person	18.9	18.3	18.1	17.9	17.5	18.0	18.4	18.5	0.5%	-2.1%
PT passenger ('000)	19,425	21,499	23,138	22,911	22,317	22,164	23,406	23,182	-1.0%	19.3%	

Table 2.1. Key Transport Indicators for residents of the Sydney GCCSA (continued)

Indicator ¹	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13	
	Minutes										
Travel time	Av. work trip duration	32	34	34	34	34	34	35	35	0.0%	9.4%
	Av. non-work trip duration	18	18	18	18	18	18	19	19	0.0%	5.6%
	Daily travel time per person	81	82	82	82	79	80	80	81	1.3%	0.0%
	Trips '000										
Purpose ⁴ of travel (trips)	Social/recreation	3,644	3,682	3,664	3,721	3,697	3,851	3,955	4,057	2.6%	11.3%
	Serve passenger	2,656	2,974	3,014	2,995	2,909	2,973	3,005	3,067	2.1%	15.5%
	Shopping	2,508	2,473	2,549	2,550	2,560	2,595	2,666	2,670	0.2%	6.5%
	Commuting	2,367	2,464	2,530	2,551	2,558	2,575	2,525	2,528	0.1%	6.8%
	Work related business	1,525	1,358	1,445	1,426	1,416	1,315	1,305	1,305	0.0%	-14.4%
	Education/childcare	1,305	1,399	1,457	1,479	1,463	1,511	1,525	1,554	1.9%	19.1%
	Personal business	1,200	1,202	1,197	1,187	1,121	1,042	1,000	927	-7.3%	-22.8%
	Other	440	454	475	483	499	530	543	561	3.3%	27.5%
	Trips '000										
Mode ⁵ of travel (trips)	Vehicle driver	7,959	8,012	8,100	8,035	7,963	8,082	8,179	8,310	1.6%	4.4%
	Vehicle passenger	3,593	3,681	3,777	3,770	3,743	3,788	3,811	3,830	0.5%	6.6%
	Train	762	801	848	874	880	903	935	945	1.1%	24.0%
	Bus	893	925	965	989	987	1,011	1,038	1,058	1.9%	18.5%
	Walk only	2,770	2,906	2,976	3,083	3,076	3,080	3,095	3,076	-0.6%	11.0%
	Other modes	367	376	398	398	403	399	401	385	-4.0%	4.9%
	Kilometres '000										
Purpose ⁴ of travel (distance)	Social/recreation	29,083	27,292	27,095	27,367	26,877	29,424	31,637	33,149	4.8%	14.0%
	Serve passenger	15,974	16,986	16,855	17,603	17,328	18,122	18,408	18,713	1.7%	17.1%
	Shopping	12,335	12,663	13,314	12,603	12,292	13,072	13,939	13,837	-0.7%	12.2%
	Commuting	33,817	34,763	36,379	36,854	37,424	37,661	37,841	37,346	-1.3%	10.4%
	Work related business	20,642	20,713	20,903	20,194	20,160	19,547	20,435	20,946	2.5%	1.5%
	Education/childcare	8,164	9,723	9,765	10,166	9,837	10,837	11,129	10,999	-1.2%	34.7%
	Personal business	7,613	7,893	7,767	7,875	7,315	6,976	6,708	6,436	-4.1%	-15.5%
	Other	1,703	1,672	1,713	1,675	1,716	2,020	2,341	2,891	23.5%	69.8%
	Kilometres '000										
Mode ⁵ of travel (distance)	Vehicle driver	76,213	75,920	76,327	76,916	76,814	79,847	82,585	83,988	1.7%	10.2%
	Vehicle passenger	28,195	28,404	27,920	28,003	27,817	29,795	30,653	31,235	1.9%	10.8%
	Train	13,541	15,540	16,783	16,254	15,544	15,087	15,965	15,751	-1.3%	16.3%
	Bus	5,550	5,690	6,098	6,381	6,465	6,730	7,005	7,062	0.8%	27.2%
	Walk only	2,557	2,534	2,558	2,623	2,588	2,479	2,345	2,385	1.7%	-6.7%
	Other modes	1,949	2,103	2,249	2,478	2,468	2,483	2,733	2,760	1.0%	41.6%

Table 2.1. Key Transport Indicators for residents of the Sydney GCCSA (continued)

Indicator ¹	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	
		Trips %⁶							
Purpose ⁴ of travel (trips %)	Social/recreation	23.3%	23.0%	22.4%	22.7%	22.8%	23.5%	23.9%	24.3%
	Serve passenger	17.0%	18.6%	18.5%	18.3%	17.9%	18.1%	18.2%	18.4%
	Shopping	16.0%	15.5%	15.6%	15.6%	15.8%	15.8%	16.1%	16.0%
	Commuting	15.1%	15.4%	15.5%	15.6%	15.8%	15.7%	15.3%	15.2%
	Work related business	9.7%	8.5%	8.8%	8.7%	8.7%	8.0%	7.9%	7.8%
	Education/childcare	8.3%	8.7%	8.9%	9.0%	9.0%	9.2%	9.2%	9.3%
	Personal business	7.7%	7.5%	7.3%	7.2%	6.9%	6.4%	6.1%	5.6%
	Other	2.8%	2.8%	2.9%	2.9%	3.1%	3.2%	3.3%	3.4%
		Trips %⁶							
Mode ⁵ of travel (trips %)	Vehicle driver	48.7%	48.0%	47.5%	46.9%	46.7%	46.8%	46.9%	47.2%
	Vehicle passenger	22.0%	22.0%	22.1%	22.0%	21.9%	21.9%	21.8%	21.8%
	Train	4.7%	4.8%	5.0%	5.1%	5.2%	5.2%	5.4%	5.4%
	Bus	5.5%	5.6%	5.7%	5.8%	5.8%	5.8%	5.9%	6.0%
	Walk only	16.9%	17.4%	17.4%	18.0%	18.0%	17.8%	17.7%	17.5%
	Other modes	2.2%	2.2%	2.3%	2.3%	2.4%	2.3%	2.3%	2.2%
		Distance %⁶							
Purpose ⁴ of travel (distance %)	Social/recreation	22.5%	20.7%	20.3%	20.4%	20.2%	21.4%	22.2%	23.0%
	Serve passenger	12.4%	12.9%	12.6%	13.1%	13.0%	13.2%	12.9%	13.0%
	Shopping	9.5%	9.6%	10.0%	9.4%	9.2%	9.5%	9.8%	9.6%
	Commuting	26.1%	26.4%	27.2%	27.4%	28.1%	27.4%	26.6%	25.9%
	Work related business	16.0%	15.7%	15.6%	15.0%	15.2%	14.2%	14.3%	14.5%
	Education/childcare	6.3%	7.4%	7.3%	7.6%	7.4%	7.9%	7.8%	7.6%
	Personal business	5.9%	6.0%	5.8%	5.9%	5.5%	5.1%	4.7%	4.5%
	Other	1.3%	1.3%	1.3%	1.2%	1.3%	1.5%	1.6%	2.0%
	Distance %⁶								
Mode ⁵ of travel (distance %)	Vehicle driver	59.5%	58.3%	57.9%	58.0%	58.3%	58.5%	58.5%	58.7%
	Vehicle passenger	22.0%	21.8%	21.2%	21.1%	21.1%	21.8%	21.7%	21.8%
	Train	10.6%	11.9%	12.7%	12.3%	11.8%	11.1%	11.3%	11.0%
	Bus	4.3%	4.4%	4.6%	4.8%	4.9%	4.9%	5.0%	4.9%
	Walk only	2.0%	1.9%	1.9%	2.0%	2.0%	1.8%	1.7%	1.7%
	Other modes	1.5%	1.6%	1.7%	1.9%	1.9%	1.8%	1.9%	1.9%

1 Data are for average weekday unless otherwise indicated. Percentages are calculated from unrounded data.

2 Population and households refer to residents of occupied private dwellings only.

3 VKT - Vehicle Kilometres Travelled - is based on vehicle driver trips.

4 Trip purpose estimates are based on linked trips, with trips to return home coded to the previous 'priority' purpose.

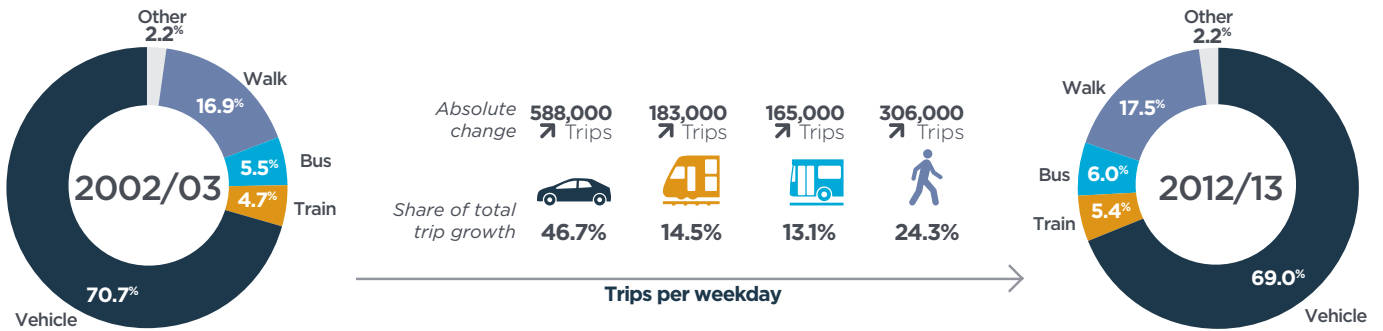
5 Estimates of trip and distance by mode are based on unlinked trips - except for 'walk only' trips.

6 Percentages do not always add to 100 due to rounding.

7 The annual estimates are based on three years of survey data pooled and weighted to the population benchmarks of the year of the estimate.

For more details about the weighting methodology, please refer to the appendix of the HTS Summary Report.

3. Travel behaviour



The HTS produces a continuously growing data set, which reveals important information on the travel behaviour of people living in the Sydney GMA² (Figure 1.1). The resulting complex data set provides interesting insights into the trip-making patterns and dynamics of Sydney residents. Some of these are presented in this report.

3.1 How do people travel?

Analysis of Sydney residents' mode choices revealed that total public transport use increased by 21% over the last decade. This equated to approximately 350,000 additional trips on an average weekday (Table 4.3.1). Whilst there was only a relatively small proportional mode shift to public transport (Table 4.3.2), when considering the absolute change in trip numbers, this shift accounted for a comparably large number of additional trips (Table 4.3.1). For example, a 0.5% proportional increase in bus trips over the decade equated to approximately 165,000 additional trips on average per weekday. While public transport has numerous social, economic and environmental benefits, car remains the dominant mode choice for Sydney residents accounting for 69% of all trips

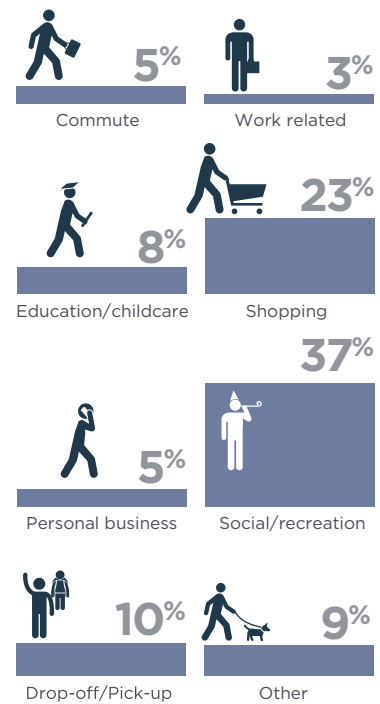
(Figure 3.1) across all purposes (Figure 3.2). However, growth in train (24%) and bus (19%) trips by far exceeded the 5% growth in car trips over the last decade (Table 4.3.1). The share of car trips dropped by 2% over the last decade, mainly due to the decrease in vehicle driver trips. This was accompanied by an apparent shift to public transport reflected in the expansion in shares of train and bus (Figure 3.1).

In particular, there has been a growing use of bus and train to undertake trips for education, with public transport shares increasing by 3% since 2002/03. Yet, the proportion of walk trips for this purpose fell by 5% (Table 4.3.3). The proportion of social/recreation trips made by walking increased from 25% to 28% between 2002/03 and 2012/13.

Growth in vehicle ownership at 23% was almost double that of population growth (13%). However, while there were more households with multiple vehicles, this was not reflected in a proportional increase in vehicle travel. Vehicle driver trips grew by only 4% and vehicle kilometres travelled (VKT) by only 10% over the last decade. This indicates that while people own more vehicles they do not necessarily drive more (Table 2.1). However, vehicle ownership and vehicle

travel are generally driven by various factors including income and fuel prices (Whelan 2007).

Why do people walk?



² Population and households in the context of the Household Travel Survey refer to residents of occupied dwellings only.

During 2012/13, 48% of Sydney commuters used public transport to avoid parking problems. Speed and cost were also important factors for about a third of public transport commuters while one in five cited proximity to public transport (Table 4.3.4). About 54% of those travelling to work by car said that they preferred the convenience and independence of a car (Table 4.3.5). Many of those who commute by car stated that public transport services were indirect (38%) or too slow (28%) to enable them to undertake their journey as required.

Figure 3.1: Distribution of trips by mode on an average weekday during 2002/03 and 2012/13

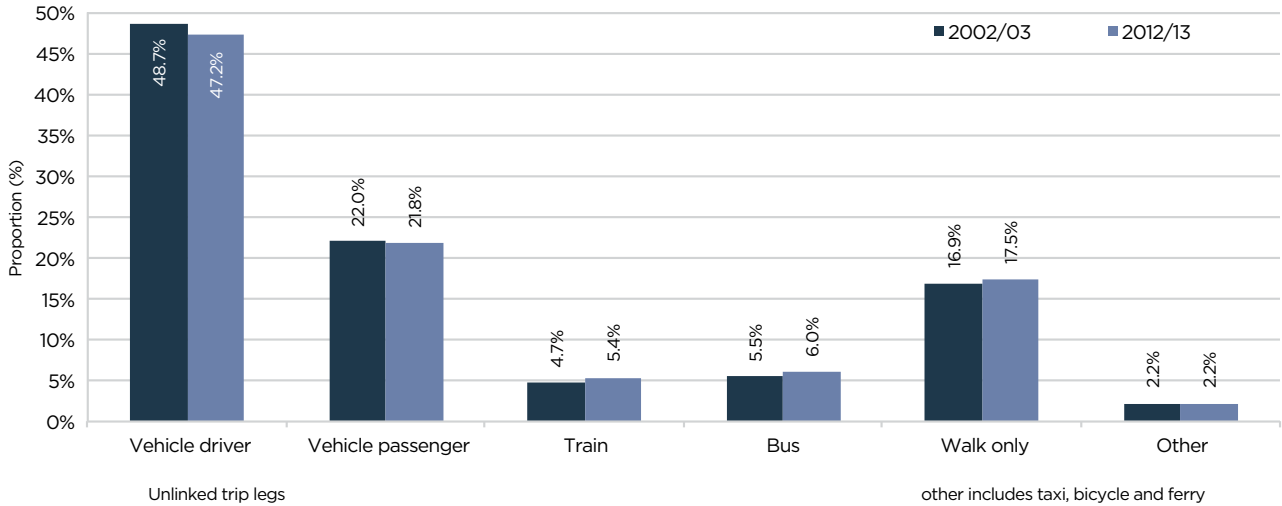
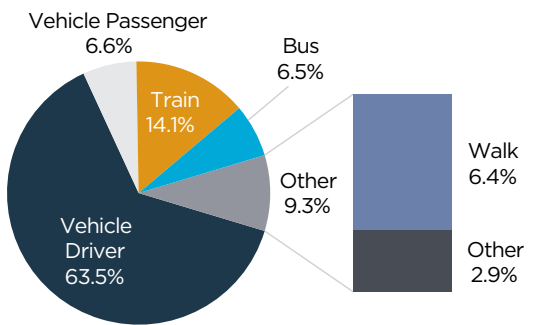
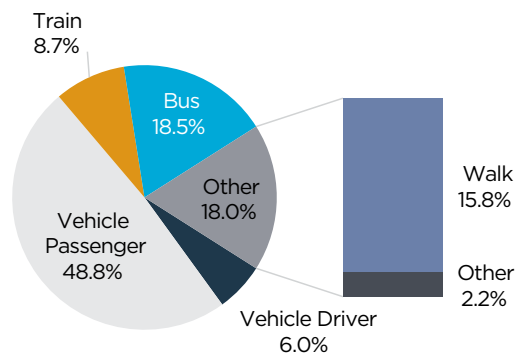


Figure 3.2. Mode share of trip purpose on an average weekday during 2012/13

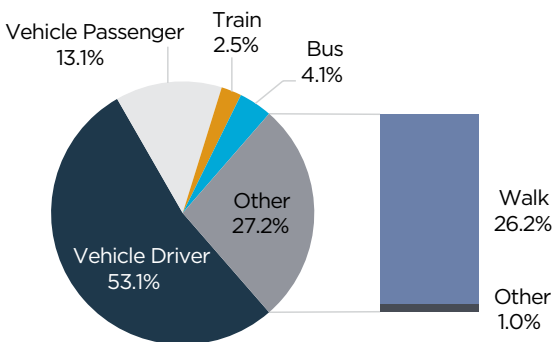
Commute



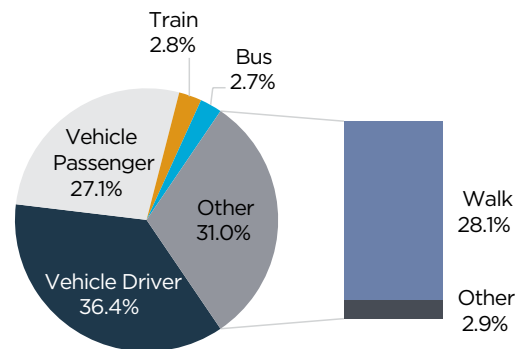
Education/Childcare



Shopping



Social/Recreation



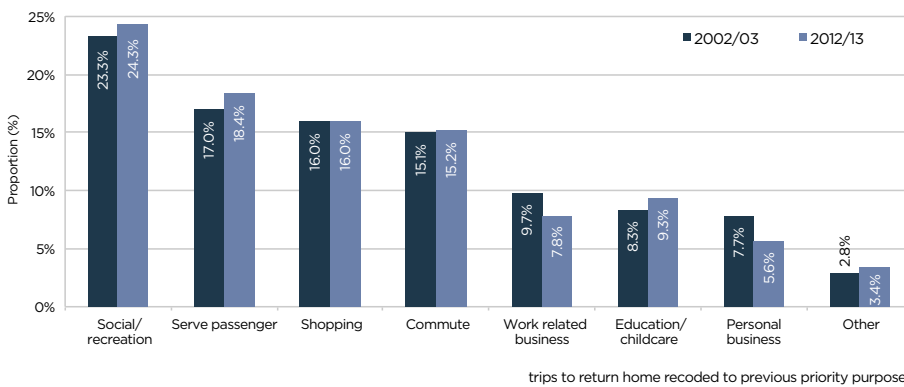
3.2 Why do people travel?

There are many reasons why people travel and these include going to work (commute), dropping children off at school, social/recreation, education/childcare, and shopping, personal and work related business. During 2012/13 almost a quarter of travel was undertaken for social and/or recreational purposes including trips to visit family or friends, eating out, walking for exercise or window-shopping.

As expected, travel purpose shares have remained relatively

stable over the last decade (Figure 3.3). This is somewhat supported by the results from the London Travel Demand Survey (TfL 2011), which reported relatively little change in purpose shares between 2005/06 and 2009/10. Over the last decade, trips for education experienced the highest growth and expanded faster (19%) than population growth (Table 2.1) and at 9% now surpass work related business at 8%.

Figure 3.3. Distribution of trips by purpose on an average weekday



3.3 Socio-demographics of travelling Sydney residents

Socio-demographic characteristics such as age, gender, household composition, income, labour force and others are known to influence travel behaviour. The following results are for the Sydney GCCSA.

3.3.1 Household composition and travel

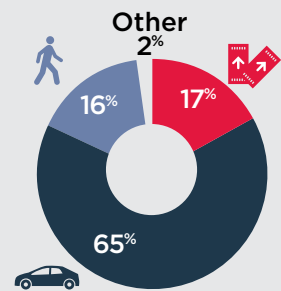
When examining trip rates according to household types, couples with children undertook the most trips per weekday (14.7) while single person households undertook the least number of trips on average (3.8 per weekday). This result was not surprising as it reflected the differences in the number of people in the households. However, at an individual level,

there was hardly any difference between persons that were part of 'couple with children' households (3.6 trips per person per weekday) and 'lone person' households (3.5 trips per person per weekday).

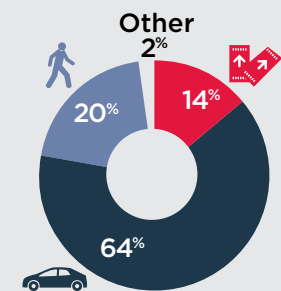
Generally, vehicle driver was the dominant mode for all household types, followed by walking except for couples with children for which vehicle passenger was the secondary mode choice (Table 4.7.7). Travel was undertaken mainly for social/recreational reasons for all household types except by couples with children, who predominantly travelled to drop off, pick up and accompany their children to various destinations (Table 4.7.8).

Age and choice of travel method

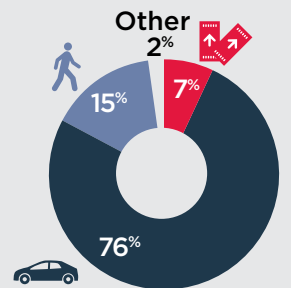
0-20 years



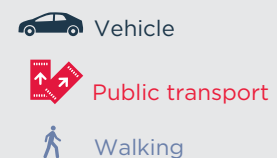
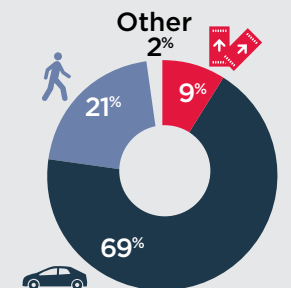
21 - 40 years



41 - 60 years



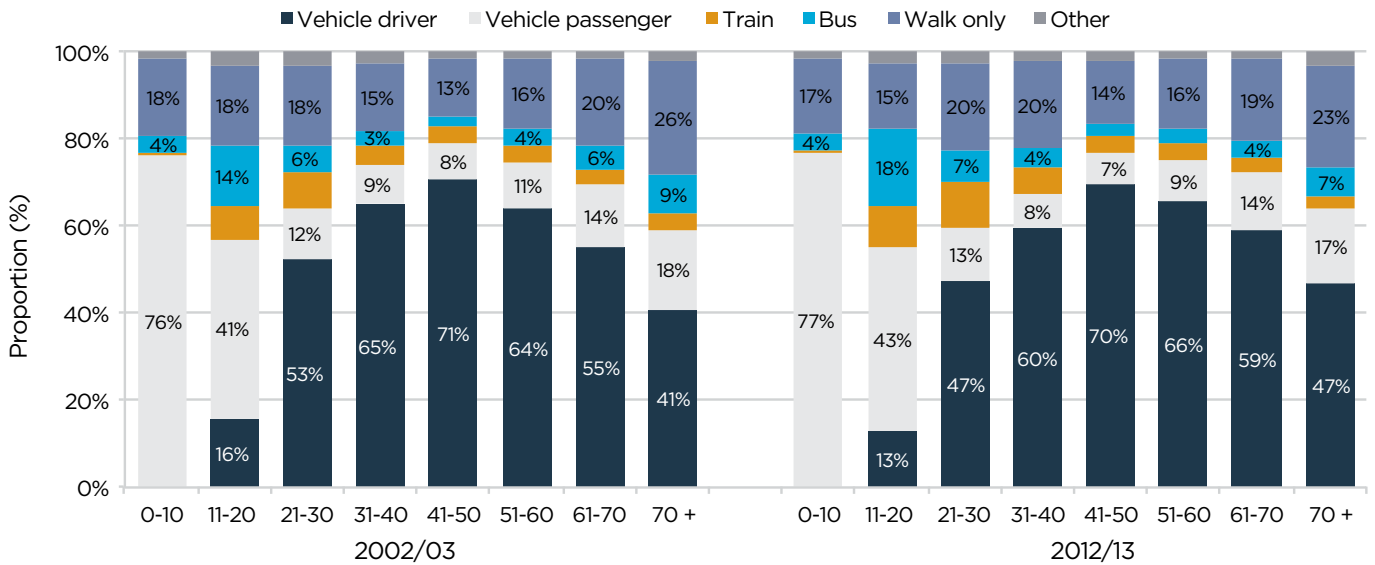
over 61 years



3.3.2 Age and choice of travel method

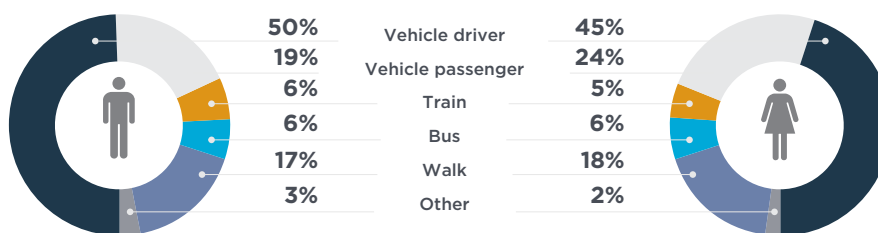
Over the last decade, public transport and walking modes have increased amongst younger age groups (below 30 years), while people over 60 are increasingly relying on using their car (Table 4.7.2; Figure 3.4). The growing representation of the younger age groups among public transport users may be related to their increased education participation and comparatively low access to vehicles (Figure 3.4). However, car remained the primary travel mode across all age groups and this applies to passengers and drivers (Figure 3.4).

Figure 3.4. Mode share of trips by age group in 2012/13



3.3.3 Gender and mode share

When assessing gender related mode choices during 2012/13, there were only minor differences with regard to travel by train, bus and walking. Whilst vehicle driver remained the most dominant mode for both genders, men were more likely to be drivers while women were more likely to be passengers (Table 4.7.1). However, over the last decade, there has been a 3.2 percentage point decline in the proportion of men driving and a 1.5 percentage point increase in men walking to their destinations. During the same period, the share of women travelling as passengers decreased while they increasingly utilised trains and buses (Table 4.7.1).

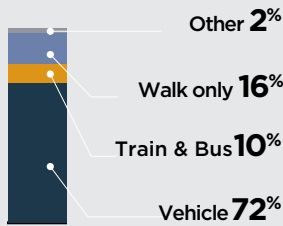


3.3.4 Labour force status, income and travel

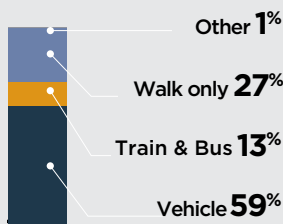
Income and labour force status are likely to have an effect on travel as price sensitivity is known to vary across these profile categories. Generally, those with lower incomes tend to walk and take public transport more than those with higher incomes (Table 4.7.5). The opposite trend can be seen for the use of car (Table 4.7.5). These findings are consistent with the travel patterns by labour force status (Table 4.7.3), which shows that unemployed people, including students, are more likely to walk and use public transport than other types of travellers.

When examining reasons for travel, social/recreation was dominant across all income groups while there was an increase in commuting with increasing income (Table 4.7.4). Similarly, for the majority of labour force groups, social/recreation is also the primary purpose of travel (Table 4.7.4), with the exception of people in full-time employment who primarily commute more than their travel for social/recreational purposes.

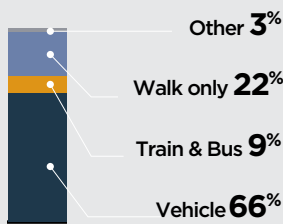
Labour force status and travel



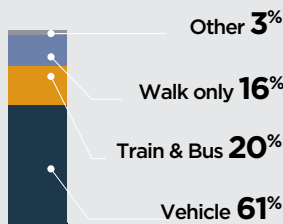
Employed (Full-time & Part-time)



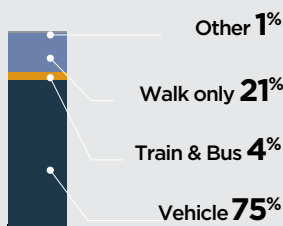
Unemployed



Retired or aged pensioner



Student (Full-time & Part-time)



Other (e.g. Keeping house, Voluntary work)

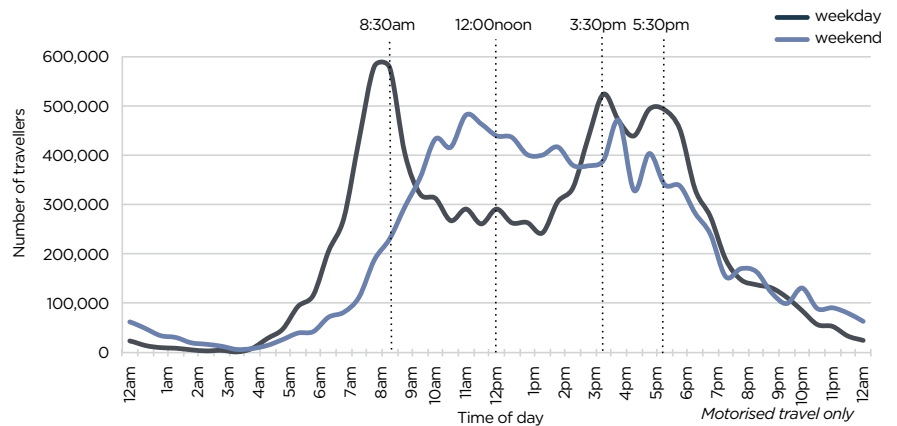
3.4 At what time of day do people travel?

On weekdays, the most critical period for our transport system is the morning peak around 8:30am, when people travel to work, take their children to school, transport freight and make deliveries to homes and businesses. There are two further afternoon peaks, around 3:30pm and 5:30pm, which coincide with trips to/from work and education (Figure 3.5).

Weekend travel does not have the same peak-patterns as

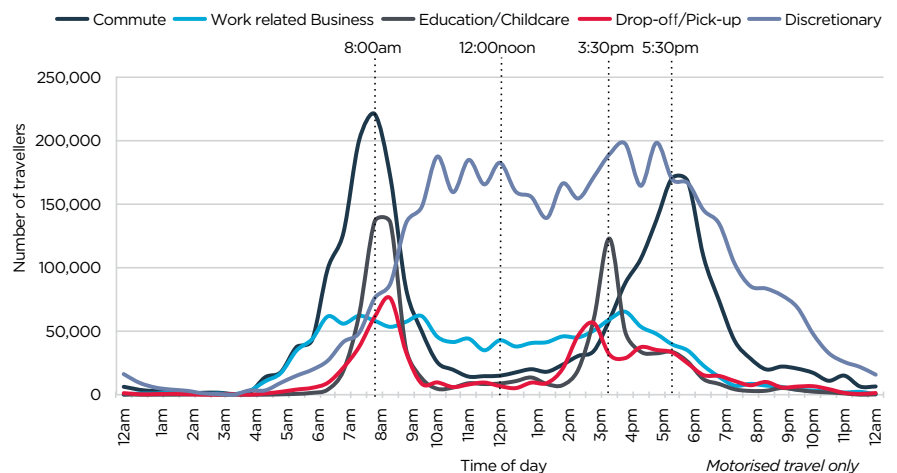
weekday travel, but tends to be more evenly spread throughout the day with two small peaks at approximately 11:00am and 4:00pm. Travel generally increases during late mornings and remains at this level most of the day (Figure 3.5). This is likely because more discretionary travel choices are made on weekends for trips such as shopping and social/recreation trips, which tend to be undertaken throughout the day (Figure 3.6).

Figure 3.5. Persons travelling on motorised modes by time of day, average weekday and weekend during 2012/13



Trips for work and education are the main contributors to peak travel (Figure 3.6). Trips to drop-off or pick-up someone are closely aligned with trips for education and are therefore adding pressure during time periods of highest travel demand. Additionally, trips for education are being increasingly made by private vehicle.

Figure 3.6: Persons travelling on motorised modes for selected purposes by time of day, average weekday in 2012/13



Travel by car and public transport display both distinct morning and afternoon peaks. Trips made by car drivers and train travellers aligned closely the timing of commuter trips, while trips by car passengers and bus riders align more closely with education trips (Figures 3.6 and 3.7). The average time spent travelling per person on weekdays has stayed constant at 81 minutes over the last decade, which is consistent with the concept of a fixed travel time budget. As the average duration of work trips has risen from 32 to 35 min, people appear to be making fewer trips to compensate, which is reflected in the slower growth of weekday trips relative to population. The increase in the average duration of non-work trips in the last 10 years has been marginal, i.e. from 18 to 19 min.

Figure 3.7: Persons travelling on motorised modes by time of day on an average weekday during 2012/13

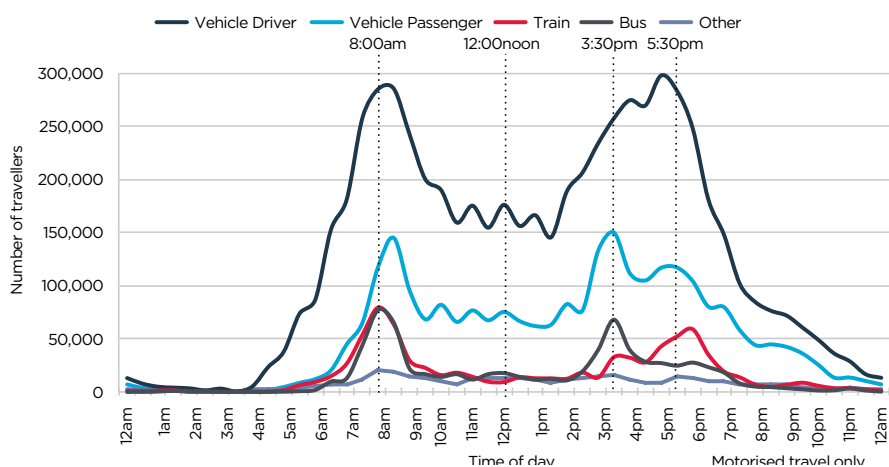
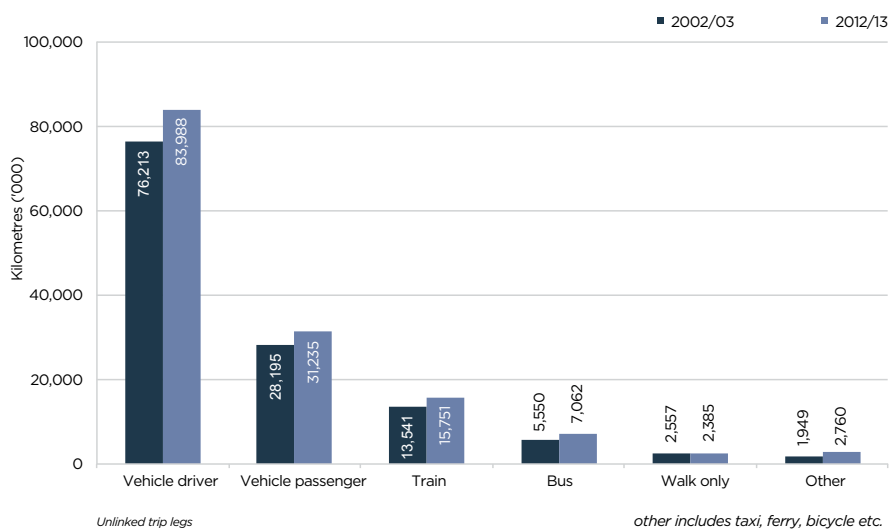


Figure 3.8. Total trip distance by mode



3.5 How far do people travel?

Travel distance appears to be an important determinant in travel choice behaviour and can be of importance in the selection of school locations, where to purchase a property and/or the location of employment. The distance travelled can be used to further describe the extent of travel by Sydney residents.

During the 2012/13 survey period, Sydney residents travelled over 145 million kilometres (km) per weekday, which equates to about 32 km per person. This represents an increase of 12% compared to a decade ago, which is consistent with the overall population increase (Table 2.1). Vehicle driver trips were the major contributors to distance travelled (Figure 3.8). However, VKT per person at 19 km has remained relatively stable in the last ten years implying that VKT growth has been mainly driven by population growth (Table 2.1).

In comparison, public transport (PT) passenger kilometres grew more strongly by 19%, resulting from the growth in train (24%) and bus (19%) travel. This indicates that the increase in PT kilometres is a result of increased PT patronage, rather than increased distances travelled on public transport (Table 2.1).

Technology and travel in the last decade...

Shopping trips
have been growing
slower than
population



Increasing use
of smart phone
and information
technology
(Source: ABS)



3 out of 4

internet users in New South Wales
engaged in online shopping (Source: ABS)

**Teleworking
at home**



148%

Work related
business trips

Personal
business trips

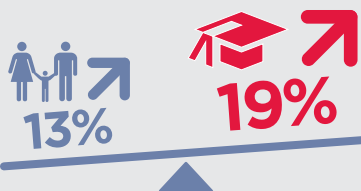
14%

23%

Education/childcare and travel

in the last decade...

Trips for education
have been expanding
faster than
population growth



Distance travelled
for education

suggesting that students may
travel further for their studies

35%

27%

Rise in full time
students
aged 15-64

in NSW between
2003 and 2013 (Source: ABS)



3.6 Time spent travelling

The time that Sydney residents spent travelling on an average weekday has remained relatively constant over the last decade ranging from 79 min to 81 min (Table 4.5.1). On an average weekday, travellers spent almost double the time undertaking work related trips than non-work related trips, accounting for an average 35 min and 19 min during 2012/13 respectively (Table 4.5.2). Sydney residents spent the most time travelling on trains followed by bus and vehicle driver trips while they spent the least walking.

The growth in train trips experienced over the decade (24%) was noticeably greater than the growth in distance travelled by train (16%) indicating that travellers are taking shorter train trips compared to ten years ago, and in particular during the latter five years (Table 2.1). This change coincided with major infrastructure improvements in the rail network such as the opening of the Epping to Chatswood Rail Line, which improved access to key employment centres.

3.7 Technology and travel

Over the last decade, personal business trips and work related business trips have decreased by 23% and 14% respectively (Table 2.1; Table 4.2.1). This continuous decline has accelerated over the last five years coinciding with the rise in smart phone and information technologies (ABS 2014), which may have reduced travel requirements for these purposes. Shopping trips grew by only 7% over the last decade, much slower than population growth (Table 2.1; Table 4.2.1).

The Australian Bureau of Statistics (ABS) estimated that in 2012/13, three out of four internet users in New South Wales engaged in online shopping (ABS 2014). The observed technology related trends are further supported by the 148% increase in the number of employees with teleworking arrangements, from approximately 89,000 a decade ago to 221,000 in 2012/13 (HTS 2012/13).

3.8 Education/ childcare and travel

Over the last decade, trips for education/childcare have expanded faster (19%) than population growth (13%). This result was supported by an estimated 27% increase in full-time students in New South Wales over the last decade, while the number of part-time students dropped by 4% (ABS 2014). Furthermore, distance travelled for the purposes of education has increased by 35% indicating that students are willing to travel further for their studies.

4. Tables

4.1 Total travel

Table 4.1.1: Total population, households and number of travellers

	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
'000										
Population ¹	4,032	4,148	4,216	4,298	4,378	4,440	4,492	4,551	1.3%	12.9%
ERP ²	4,136	4,256	4,325	4,409	4,492	4,555	4,609	4,673	1.4%	13.0%
Travellers - average day	3,379	3,536	3,567	3,639	3,697	3,751	3,766	3,813	1.2%	12.8%
PT users - average weekday	744	719	741	750	773	784	803	814	1.4%	9.4%
PT users - average day	601	583	603	613	639	649	661	668	1.1%	11.1%
PT users - last 7 days ³	N/A	1,150	1,178	1,202	1,266	1,290	1,325	1,322	-0.2%	N/A
Households	1,516	1,561	1,576	1,597	1,626	1,649	1,668	1,689	1.3%	11.4%
Average household size	2.66	2.66	2.68	2.69	2.69	2.69	2.69	2.69	0.0%	1.1%

Table 4.1.2: Number of trips⁴

	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
'000										
Average weekday	15,645	16,005	16,331	16,393	16,224	16,392	16,525	16,670	0.9%	6.6%
Average weekend day	13,187	14,435	14,349	14,580	14,891	14,944	14,629	14,565	-0.4%	10.4%
Average day	14,943	15,557	15,764	15,875	15,843	15,978	15,983	16,069	0.5%	7.5%
Average weekday AM peak	3,199	3,386	3,504	3,543	3,472	3,511	3,505	3,592	2.5%	12.3%
Total weekday (M - F)	78,226	80,027	81,653	81,967	81,121	81,958	82,626	83,350	0.9%	6.6%
Total weekend (S - S)	26,374	28,869	28,698	29,160	29,782	29,888	29,258	29,130	-0.4%	10.4%
Total weekly (M - S)	104,600	108,897	110,351	111,127	110,903	111,846	111,884	112,480	0.5%	7.5%

Table 4.1.3: Trip rates for persons⁵ and households (average weekday)

Day Type	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average weekday										
Per person	3.88	3.86	3.87	3.81	3.71	3.69	3.68	3.66	-0.5%	-5.7%
Per household	10.32	10.25	10.36	10.26	9.98	9.94	9.91	9.87	-0.4%	-4.4%

1 Population reported here is derived from the HTS and is for residents of private dwellings only.

2 ERP (ABS Estimated Resident Population) is higher than HTS population as it includes people in non-private dwellings.

3 Based on an average day for population aged over 14 years.

4 Number of trips is based on linked trips. See glossary for the definition of a linked trip.

5 Person trip rates are per capita, that is, they are estimated for the total population including those who did not make a trip.

4.2 Purpose of travel

Table 4.2.1: Number of trips by purpose¹ (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
	'000									
Social/recreation	3,644	3,682	3,664	3,721	3,697	3,851	3,955	4,057	2.6%	11.3%
Serve passenger	2,656	2,974	3,014	2,995	2,909	2,973	3,005	3,067	2.1%	15.5%
Shopping	2,508	2,473	2,549	2,550	2,560	2,595	2,666	2,670	0.2%	6.5%
Commute	2,367	2,464	2,530	2,551	2,558	2,575	2,525	2,528	0.1%	6.8%
Work related business	1,525	1,358	1,445	1,426	1,416	1,315	1,305	1,305	0.0%	-14.4%
Education/childcare	1,305	1,399	1,457	1,479	1,463	1,511	1,525	1,554	1.9%	19.1%
Personal business	1,200	1,202	1,197	1,187	1,121	1,042	1,000	927	-7.3%	-22.8%
Other	440	454	475	483	499	530	543	561	3.3%	27.5%
Total	15,645	16,005	16,331	16,393	16,224	16,392	16,525	16,670	0.9%	6.6%

Table 4.2.2: Proportion of trips by purpose (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	'000							
Social/recreation	23.3%	23.0%	22.4%	22.7%	22.8%	23.5%	23.9%	24.3%
Serve passenger	17.0%	18.6%	18.5%	18.3%	17.9%	18.1%	18.2%	18.4%
Shopping	16.0%	15.5%	15.6%	15.6%	15.8%	15.8%	16.1%	16.0%
Commute	15.1%	15.4%	15.5%	15.6%	15.8%	15.7%	15.3%	15.2%
Work related business	9.7%	8.5%	8.8%	8.7%	8.7%	8.0%	7.9%	7.8%
Education/childcare	8.3%	8.7%	8.9%	9.0%	9.0%	9.2%	9.2%	9.3%
Personal business	7.7%	7.5%	7.3%	7.2%	6.9%	6.4%	6.1%	5.6%
Other	2.8%	2.8%	2.9%	2.9%	3.1%	3.2%	3.3%	3.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

¹ Linked trips are used when reporting trips by purpose. Trips to 'return home' have been allocated to the previous 'priority purpose'. See glossary for further explanation and definitions.

4.3 Mode of travel

Table 4.3.1: Number of trips by mode¹ (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
	'000									
Vehicle driver	7,959	8,012	8,100	8,035	7,963	8,082	8,179	8,310	1.6%	4.4%
Vehicle passenger	3,593	3,681	3,777	3,770	3,743	3,788	3,811	3,830	0.5%	6.6%
Total vehicle	11,552	11,693	11,877	11,805	11,706	11,870	11,990	12,140	1.3%	5.1%
Train	762	801	848	874	880	903	935	945	1.1%	24.0%
Public Bus	557	577	590	597	589	595	597	604	1.2%	8.4%
Private Bus	336	348	375	392	398	416	441	454	2.9%	35.1%
Total public transport	1,655	1,726	1,813	1,863	1,867	1,914	1,973	2,003	1.5%	21.0%
Walk only	2,770	2,906	2,976	3,083	3,076	3,080	3,095	3,076	-0.6%	11.0%
Other ²	367	376	398	398	403	399	401	385	-4.0%	4.9%
Total	16,346	16,701	17,064	17,150	17,054	17,263	17,458	17,605	0.8%	7.7%

Table 4.3.2: Proportion of trips by mode (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
	'000							
Vehicle driver	48.7%	48.0%	47.5%	46.9%	46.7%	46.8%	46.9%	47.2%
Vehicle passenger	22.0%	22.0%	22.1%	22.0%	21.9%	21.9%	21.8%	21.8%
Total vehicle	70.7%	70.0%	69.6%	68.9%	68.6%	68.7%	68.7%	69.0%
Train	4.7%	4.8%	5.0%	5.1%	5.2%	5.2%	5.4%	5.4%
Public Bus	3.4%	3.5%	3.5%	3.5%	3.5%	3.4%	3.4%	3.4%
Private Bus	2.1%	2.1%	2.2%	2.3%	2.3%	2.4%	2.5%	2.6%
Total public transport	10.2%	10.4%	10.7%	10.9%	11.0%	11.0%	11.3%	11.4%
Walk only	16.9%	17.4%	17.4%	18.0%	18.0%	17.8%	17.7%	17.5%
Other ²	2.2%	2.2%	2.3%	2.3%	2.4%	2.3%	2.3%	2.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

¹ Mode figures are based on unlinked trips. Ferry and 'other' mode estimates are subject to high standard errors due to small sample sizes for these modes.

² Bicycle and taxi both comprise less than one per cent mode share.

Table 4.3.3: Proportion of trips by mode and purpose¹ (average weekday)

Purpose	Vehicle Driver	Vehicle Passenger	Train	Bus	Walk	Other ²	Total
2012/13							
Commute	63.4%	6.6%	14.1%	6.5%	6.4%	2.9%	100.0%
Work related business	80.5%	6.1%	3.3%	1.4%	6.9%	1.8%	100.0%
Education/childcare	6.0%	48.8%	8.7%	18.5%	15.8%	2.2%	100.0%
Shopping	53.1%	13.1%	2.5%	4.1%	26.2%	1.0%	100.0%
Personal business	53.0%	19.2%	4.3%	4.8%	17.8%	0.9%	100.0%
Social/recreation	36.4%	27.1%	2.8%	2.7%	28.1%	2.9%	100.0%
Serve passenger	58.5%	29.6%	0.9%	0.8%	9.9%	0.3%	100.0%
2011/12							
Commute	63.7%	6.6%	14.2%	7.0%	5.9%	2.7%	100.0%
Work related business	80.6%	5.7%	3.4%	1.5%	6.9%	1.9%	100.0%
Education/childcare	5.9%	48.4%	8.8%	17.8%	16.8%	2.4%	100.0%
Shopping	51.7%	13.3%	2.7%	4.0%	27.2%	1.0%	100.0%
Personal business	52.8%	18.9%	3.6%	4.2%	19.2%	1.2%	100.0%
Social/recreation	35.9%	27.4%	2.6%	2.8%	28.1%	3.2%	100.0%
Serve passenger	57.5%	30.5%	1.1%	0.7%	9.7%	0.6%	100.0%
2010/11							
Commute	63.1%	6.7%	14.4%	7.1%	6.2%	2.4%	100.0%
Work related business	80.3%	6.9%	3.2%	1.4%	6.3%	2.0%	100.0%
Education/childcare	5.5%	49.9%	8.4%	16.5%	17.0%	2.7%	100.0%
Shopping	52.1%	12.6%	2.8%	4.1%	27.3%	1.1%	100.0%
Personal business	52.8%	17.8%	3.3%	4.6%	19.8%	1.6%	100.0%
Social/recreation	35.6%	27.8%	2.4%	2.9%	28.1%	3.2%	100.0%
Serve passenger	56.7%	31.0%	1.1%	0.8%	9.9%	0.5%	100.0%
2009/10							
Commute	61.9%	6.5%	15.4%	7.8%	6.4%	2.1%	100.0%
Work related business	80.1%	6.3%	2.9%	1.3%	7.2%	2.3%	100.0%
Education/childcare	4.8%	50.0%	8.3%	15.9%	18.4%	2.6%	100.0%
Shopping	51.7%	13.3%	2.8%	4.0%	27.1%	1.1%	100.0%
Personal business	53.0%	17.2%	3.1%	4.9%	19.2%	2.6%	100.0%
Social/recreation	35.1%	27.5%	2.4%	2.7%	29.0%	3.3%	100.0%
Serve passenger	55.7%	32.8%	0.8%	0.7%	9.5%	0.6%	100.0%

¹ The data used in this table are based on linked trips. In the analysis of trip purposes, trips to return home are allocated to the previous 'priority purpose'. Mode is based on the 'priority mode' of the linked trip. For further details, please refer to the glossary.

² Other includes ferry.

Table 4.3.3: Proportion of trips by mode and purpose¹ (average weekday) continued

Purpose	Vehicle Driver	Vehicle Passenger	Train	Bus	Walk	Other ²	Total
2008/09							
Commute	60.9%	6.5%	15.7%	7.5%	7.2%	2.3%	100.0%
Work related business	79.4%	7.1%	3.0%	1.3%	6.9%	2.4%	100.0%
Education/childcare	5.3%	51.0%	8.4%	16.8%	16.1%	2.3%	100.0%
Shopping	51.7%	13.2%	2.8%	4.0%	27.2%	1.1%	100.0%
Personal business	53.0%	16.1%	3.6%	4.9%	19.8%	2.6%	100.0%
Social/recreation	35.7%	27.0%	2.7%	2.7%	28.8%	3.1%	100.0%
Serve passenger	55.9%	33.0%	0.7%	0.5%	9.6%	0.4%	100.0%
2007/08							
Commute	60.8%	6.8%	15.6%	7.6%	6.8%	2.3%	100.0%
Work related business	80.3%	5.6%	3.5%	1.3%	7.0%	2.3%	100.0%
Education/childcare	5.7%	51.6%	9.1%	16.4%	14.9%	2.3%	100.0%
Shopping	52.8%	13.6%	2.5%	3.7%	26.5%	1.1%	100.0%
Personal business	52.9%	16.7%	3.7%	4.5%	19.9%	2.3%	100.0%
Social/recreation	35.7%	27.0%	2.7%	2.8%	28.5%	3.3%	100.0%
Serve passenger	56.5%	32.9%	0.7%	0.4%	8.9%	0.5%	100.0%
2006/07							
Commute	62.8%	7.3%	14.2%	6.9%	6.5%	2.2%	100.0%
Work related business	80.9%	5.8%	3.7%	1.1%	6.6%	1.9%	100.0%
Education/childcare	6.4%	51.6%	9.4%	16.7%	14.3%	1.7%	100.0%
Shopping	53.1%	13.1%	2.2%	4.0%	26.5%	1.1%	100.0%
Personal business	54.0%	16.4%	3.3%	4.4%	20.2%	1.7%	100.0%
Social/recreation	35.6%	26.7%	2.8%	2.8%	28.8%	3.4%	100.0%
Serve passenger	57.0%	32.5%	0.7%	0.4%	8.9%	0.5%	100.0%
2002/03							
Commute	63.5%	7.9%	14.2%	5.8%	5.6%	2.9%	100.0%
Work related business	82.4%	6.7%	2.4%	1.2%	5.8%	1.5%	100.0%
Education/childcare	6.5%	47.3%	7.1%	17.5%	20.3%	1.3%	100.0%
Shopping	52.7%	13.6%	2.8%	4.0%	26.0%	1.0%	100.0%
Personal business	53.2%	17.1%	4.3%	4.0%	20.1%	1.3%	100.0%
Social/recreation	36.9%	29.0%	2.5%	2.9%	25.4%	3.4%	100.0%
Serve passenger	56.1%	32.5%	0.7%	0.9%	9.5%	0.3%	100.0%

¹ The data used in this table are based on linked trips. In the analysis of trip purposes, trips to return home are allocated to the previous 'priority purpose'. Mode is based on the 'priority mode' of the linked trip. For further details, please refer to the glossary.

² Other includes ferry.

Table 4.3.4: Reasons for travelling to work by public transport, weekdays 2012/13

Reason	Percent ¹
Avoids parking problems	48%
Cheaper	36%
Faster	34%
Less stressful than other forms	26%
Do not have a car	23%
Live or work close to public transport	19%
Arrives closer to destination	15%
Enjoy time to read and relax	15%
Don't drive/no licence	13%
Car used by someone else	7%
Environmental reasons	5%
Other	5%
Employer assistance in public transport costs	2%

Table 4.3.5: Reasons for travelling to work by work car, weekdays 2012/13

Reason	Percent ¹
Prefer convenience/independence of car	54%
PT services are indirect	38%
PT services are too slow	28%
PT doesn't go where required	18%
PT timetable constraints	16%
Employer provides/subsidises car/parking	15%
Use car for work trips	14%
Use car for other non-work trips	12%
PT is unavailable here	9%
PT services are too infrequent	10%
Carpooling arrangements	6%
PT services are unreliable	4%
Other	5%
PT uncomfortable	3%

¹ Respondents could give more than one response, therefore percentages add to more than 100%

Table 4.3.6: Public transport¹ fare type, average weekday 2002/03 to 2012/13

Fare type	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Train								
Full Fare	61.9%	61.4%	62.1%	64.3%	65.6%	64.2%	62.6%	61.7%
Child Fare	1.8%	1.2%	1.4%	1.6%	0.9%	0.9%	1.2%	1.0%
Free School Pass	7.6%	9.0%	8.6%	7.8%	7.8%	8.4%	8.9%	9.1%
Free Fare Other	4.0%	3.0%	3.0%	4.5%	4.3%	4.0%	3.6%	3.5%
Concession- Pensioner/Aged	7.8%	8.3%	7.9%	6.9%	6.5%	6.7%	6.1%	4.6%
Concession - Student and Other	16.4%	16.4%	16.6%	14.8%	14.3%	15.3%	17.4%	19.8%
Other Fare	0.5%	0.7%	0.3%	0.1%	0.5%	0.3%	0.3%	0.2%
Fare type not provided	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Bus								
Full Fare	36.7%	37.1%	37.0%	37.6%	39.0%	38.1%	36.2%	34.6%
Child Fare	2.4%	0.8%	1.6%	1.9%	1.7%	2.1%	1.7%	2.0%
Free School Pass	24.9%	28.0%	28.3%	27.4%	25.0%	24.4%	25.3%	27.4%
Free Fare Other	4.5%	4.2%	3.0%	3.5%	3.9%	5.0%	4.8%	4.5%
Concession- Pensioner/Aged	12.6%	14.8%	14.4%	13.9%	13.7%	11.5%	10.3%	9.2%
Concession - Student and Other	17.0%	14.0%	14.6%	15.0%	16.3%	18.7%	21.6%	22.2%
Other Fare	1.6%	1.0%	1.0%	0.5%	0.3%	0.2%	0.1%	0.1%
Fare type not provided	0.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

¹ Fare type and ticket type is collected for all public transport modes but only train and bus are reported here.

Table 4.3.7: Public transport¹ ticket type, average weekday 1999/00 to 2012/13

Ticket type	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Train								
Single	10.3%	9.0%	9.2%	9.9%	9.5%	9.1%	8.2%	8.7%
Return	24.5%	27.1%	26.3%	25.1%	25.0%	24.4%	24.6%	22.7%
Daily	8.9%	8.0%	7.8%	6.9%	7.1%	7.9%	9.4%	9.5%
Weekly	37.5%	36.2%	37.8%	37.0%	36.3%	34.9%	34.2%	33.2%
Monthly/Fortnightly ²	0.0%	0.0%	0.0%	0.0%	1.8%	3.7%	5.2%	7.0%
Quarterly/Yearly	3.1%	3.7%	3.3%	3.4%	3.3%	3.6%	3.4%	4.0%
Fixed multiple trips	0.3%	0.9%	1.1%	1.4%	0.8%	0.8%	1.4%	2.2%
Free travel	11.6%	12.1%	11.7%	12.2%	12.2%	12.5%	12.4%	12.6%
Other	3.6%	3.0%	2.9%	4.0%	4.0%	3.1%	1.1%	0.2%
Ticket type not provided	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Bus								
Single	26.3%	22.1%	21.6%	23.8%	23.5%	21.5%	17.8%	15.4%
Return	4.9%	3.8%	4.8%	4.5%	4.5%	3.7%	2.9%	2.6%
Daily	11.9%	12.9%	12.2%	12.0%	12.2%	12.2%	13.7%	13.6%
Weekly	8.8%	8.8%	9.9%	8.4%	9.3%	9.4%	9.7%	10.4%
Monthly/Fortnightly ²	0.0%	0.0%	0.0%	0.0%	0.3%	0.4%	0.4%	0.5%
Quarterly/Yearly	1.4%	1.4%	1.4%	1.0%	0.9%	1.1%	0.8%	1.0%
Fixed multiple trips	15.8%	17.7%	18.1%	19.0%	20.0%	21.8%	24.3%	24.3%
Free travel	29.4%	32.3%	31.3%	31.0%	28.8%	29.3%	30.1%	31.9%
Other	1.3%	0.9%	0.7%	0.2%	0.4%	0.5%	0.4%	0.2%
Ticket type not provided	0.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1 Fare type and ticket type is collected for all public transport modes but only train and bus are reported here.

2 Fortnightly tickets were first introduced in 2009/10. Monthly tickets were first introduced in 2010/11.

4.4 Travel distance

Table 4.4.1: Distance travelled, average weekday

	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average distance (km)										
Av. trip length	8.3	8.3	8.2	8.2	8.3	8.5	8.7	8.7	0.0%	4.8%
Av. km per person	32.2	31.9	31.8	31.4	30.6	31.2	31.9	31.9	0.0%	-0.9%
Av. VKT per person	18.9	18.3	18.1	17.9	17.5	18.0	18.4	18.5	0.5%	-2.1%
Total distance ('000 km)										
Total km	129,897	132,302	134,131	135,054	134,005	138,719	143,449	145,349	1.3%	11.9%
Total VKT	76,213	75,920	76,327	76,916	76,814	79,847	82,585	83,988	1.7%	10.2%
Total PT Passenger km	19,425	21,499	23,138	22,911	22,317	22,164	23,406	23,182	-1.0%	19.3%

Table 4.4.2: Distance travelled by mode (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Total distance ('000 km)										
Vehicle driver	76,213	75,920	76,327	76,916	76,814	79,847	82,585	83,988	1.7%	10.2%
Vehicle passenger	28,195	28,404	27,920	28,003	27,817	29,795	30,653	31,235	1.9%	10.8%
Train	13,541	15,540	16,783	16,254	15,544	15,087	15,965	15,751	-1.3%	16.3%
Bus	5,550	5,690	6,098	6,381	6,465	6,730	7,005	7,062	0.8%	27.2%
Walk only ¹	2,557	2,534	2,558	2,623	2,588	2,479	2,345	2,385	1.7%	-6.7%
Walk linked ²	1,891	2,111	2,195	2,398	2,309	2,298	2,162	2,169	0.3%	14.7%
Other	1,949	2,103	2,249	2,478	2,468	2,483	2,733	2,760	1.0%	41.6%
Total	128,006	130,192	131,935	132,656	131,696	136,422	141,287	143,181	1.3%	11.9%
Average distance (km)										
Train	17.8	19.4	19.8	18.6	17.7	16.7	17.1	16.7	-2.3%	-6.2%
Vehicle driver	9.6	9.5	9.4	9.6	9.6	9.9	10.1	10.1	0.0%	5.2%
Vehicle passenger	7.8	7.7	7.4	7.4	7.4	7.9	8.0	8.2	2.5%	5.1%
Bus	6.2	6.1	6.3	6.5	6.5	6.7	6.8	6.7	-1.5%	8.1%
Walk only	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.0%	-11.1%

¹ 'Walk-only' trips are those where the whole trip is made by walking and no change of mode is involved.

² 'Walk-linked' trips are walking trips where the purpose is access to, or egress from, another mode e.g. Walk to the station to catch the train or walk from the train upon arrival at the other end.

Table 4.4.3: Proportion of distance travelled by mode (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Vehicle driver	59.5%	58.3%	57.9%	58.0%	58.3%	58.5%	58.5%	58.7%
Vehicle passenger	22.0%	21.8%	21.2%	21.1%	21.1%	21.8%	21.7%	21.8%
Train	10.6%	11.9%	12.7%	12.3%	11.8%	11.1%	11.3%	11.0%
Bus	4.3%	4.4%	4.6%	4.8%	4.9%	4.9%	5.0%	4.9%
Walk only ¹	2.0%	1.9%	1.9%	2.0%	2.0%	1.8%	1.7%	1.7%
Other	1.5%	1.6%	1.7%	1.9%	1.9%	1.8%	1.9%	1.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.4.4: Distance travelled by purpose (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Total distance ('000 km)										
Commute	33,817	34,763	36,379	36,854	37,424	37,661	37,841	37,346	-1.3%	10.4%
Work related business	20,642	20,713	20,903	20,194	20,160	19,547	20,435	20,946	2.5%	1.5%
Education/childcare	8,164	9,723	9,765	10,166	9,837	10,837	11,129	10,999	-1.2%	34.7%
Shopping	12,335	12,663	13,314	12,603	12,292	13,072	13,939	13,837	-0.7%	12.2%
Personal business	7,613	7,893	7,767	7,875	7,315	6,976	6,708	6,436	-4.1%	-15.5%
Social/recreation	29,083	27,292	27,095	27,367	26,877	29,424	31,637	33,149	4.8%	14.0%
Serve passenger	15,974	16,986	16,855	17,603	17,328	18,122	18,408	18,713	1.7%	17.1%
Other	1,703	1,672	1,713	1,675	1,716	2,020	2,341	2,891	23.5%	69.8%
Average distance (km)										
Commute	15.0	14.6	14.9	14.9	15.1	15.2	15.7	15.5	-1.3%	3.3%
Work related business	12.7	14.2	13.6	13.5	13.6	14.4	15.1	15.3	1.3%	20.5%
Education/childcare	6.3	7.1	6.8	6.9	6.8	7.3	7.5	7.2	-4.0%	14.3%
Shopping	5.1	5.3	5.5	5.2	5.0	5.2	5.4	5.4	0.0%	5.9%
Personal business	6.3	6.6	6.6	6.8	6.6	6.7	6.6	6.8	3.0%	7.9%
Social/recreation	8.0	7.4	7.3	7.4	7.3	7.8	8.1	8.3	2.5%	3.8%
Serve passenger	6.3	6.1	6.0	6.3	6.3	6.5	6.5	6.4	-1.5%	1.6%

1 'Walk-only' trips are those where the whole trip is made by walking and no change of mode is involved.

Table 4.4.5: Proportion of distance travelled by purpose (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Commute	26.1%	26.4%	27.2%	27.4%	28.1%	27.4%	26.6%	25.9%
Work related business	16.0%	15.7%	15.6%	15.0%	15.2%	14.2%	14.3%	14.5%
Education/childcare	6.3%	7.4%	7.3%	7.6%	7.4%	7.9%	7.8%	7.6%
Shopping	9.5%	9.6%	10.0%	9.4%	9.2%	9.5%	9.8%	9.6%
Personal business	5.9%	6.0%	5.8%	5.9%	5.5%	5.1%	4.7%	4.5%
Social/recreation	22.5%	20.7%	20.3%	20.4%	20.2%	21.4%	22.2%	23.0%
Serve passenger	12.4%	12.9%	12.6%	13.1%	13.0%	13.2%	12.9%	13.0%
Other	1.3%	1.3%	1.3%	1.2%	1.3%	1.5%	1.6%	2.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.4.6: Trips by distance³ category and mode (average weekday) - 2012/13

Mode	Up to 1km	1.01-2km	2.01-5km	5.01-10km	10.01-20km	More than 20 km	Total
	'000						
Vehicle driver	568	1,063	2,297	1,829	1,445	1,090	8,291
Vehicle passenger	299	574	1,245	880	524	295	3,817
Train	12	39	169	197	251	276	945
Bus	33	122	428	291	129	55	1,058
Ferry	0	5	9	11	21	0	46
Taxi	2	11	44	26	14	6	103
Walk only	2,294	587	185	9	1	0	3,076
Bicycle	18	25	32	11	15	3	105
Other	10	19	24	18	9	14	94
Total	3,236	2,444	4,432	3,273	2,410	1,740	17,535

Table 4.4.7: Trips by distance⁴ category and purpose (average weekday) - 2012/13

Purpose	Up to 1km	1.01-2km	2.01-5km	5.01-10km	10.01-20km	More than 20 km	Total
	'000						
Commute	148	159	397	526	663	632	2,525
Work related business	117	101	238	225	262	351	1,294
Education/childcare	245	264	413	312	201	119	1,554
Shopping	739	399	757	443	218	113	2,667
Personal business	169	130	271	183	103	69	926
Social/Recreation	967	584	898	688	521	370	4,028
Serve passenger	480	496	934	658	345	153	3,065
Other	267	70	82	64	44	31	557
Total	3,130	2,202	3,990	3,099	2,357	1,838	16,617

³ Based on unlinked trips and in-vehicle time only.

⁴ Based on linked trips and door-to-door travel time.

Table 4.4.8: Average trip distance, mode by purpose (average weekday) - 2002/03 and 2012/13

Purpose	Vehicle driver	Vehicle passenger	Train	Bus	Walk only	Other
2002/03 (km)						
Commute	13.6	8.5	20.2	6.3	1.2	5.5
Work related business	14.3	12.5	17.7	10.3	0.9	5.9
Education/childcare	14.3	4.6	13.9	6.2	1.1	5.5
Shopping	5.7	6.4	14.7	4.6	0.7	5.0
Personal business	6.5	9.0	14.2	5.0	0.8	3.4
Social/recreation	9.7	10.0	17.2	7.2	1.1	5.2
Serve passenger	6.0	7.1	18.0	6.3	0.9	7.2
Other	6.9	7.6	8.5	7.8	0.6	4.8
2012/13 (km)						
Commute	14.0	8.6	17.8	8.9	1.1	6.6
Work related business	16.7	16.5	22.1	8.1	0.8	5.2
Education/childcare	14.5	5.0	13.5	5.9	0.9	11.1
Shopping	6.1	7.1	14.2	5.7	0.6	4.1
Personal business	7.3	9.0	13.4	4.4	0.8	4.1
Social/recreation	10.2	10.8	17.1	6.4	0.9	7.6
Serve passenger	6.3	6.8	17.3	5.8	0.7	8.2
Other	8.7	12.6	15.1	5.8	0.5	5.4

4.5 Total duration

Table 4.5.1: Time spent travelling (average weekday)

	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average time (mins)										
Average trip duration	21	21	21	21	21	22	22	22	0.0%	4.8%
Time spent travelling a day per person	81	82	82	82	79	80	80	81	1.3%	0.0%

Table 4.5.2: Average trip duration by purpose¹ (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average time (mins)										
Non-work trips	18	18	18	18	18	18	19	19	0.0%	5.6%
Education/childcare	21	22	22	22	22	22	23	23	0.0%	9.5%
Social/recreation	22	21	21	21	21	22	22	22	0.0%	0.0%
Shopping	15	15	15	15	15	15	15	15	0.0%	0.0%
Personal business	18	18	19	19	19	19	19	20	5.3%	11.1%
Serve passenger	14	14	14	15	15	15	15	15	0.0%	7.1%
Work trips	32	34	34	34	34	34	35	35	0.0%	9.4%
Commute	33	33	34	34	34	34	34	35	2.9%	6.1%
Work related business	26	29	29	29	28	29	30	30	0.0%	15.4%

Table 4.5.3: Average trip duration by mode² (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average time (mins)										
Vehicle driver	19	19	19	20	20	20	20	20	0.0%	5.3%
Vehicle passenger	17	16	16	16	17	17	17	18	5.9%	5.9%
Train	28	33	34	32	29	27	28	27	-3.6%	-3.6%
Bus	22	23	22	23	23	22	22	22	0.0%	0.0%
Walk only	11	11	11	11	10	10	10	11	10.0%	0.0%

1 Duration by purpose estimates are based on linked trips.

2 Mode estimates are based on unlinked trips.

Table 4.5.4: Average trip duration, mode by purpose (average weekday) - 2002/03 and 2012/13

	Vehicle driver	Vehicle passenger	Train	Bus	Walk only	Other
2002/03 (mins)						
Commuter	25	17	31	21	13	17
Work related business	26	25	31	30	9	46
Education/childcare	27	12	22	21	12	20
Shopping	13	15	24	20	8	17
Personal business	15	18	23	19	10	17
Social/recreation	20	20	30	25	13	27
Serve passenger	13	15	28	20	10	19
Other	16	31	17	24	7	20
~ 2012/13 (mins)						
Commuter	26	18	29	24	14	26
Work related business	30	33	37	25	10	30
Education/childcare	27	12	22	21	12	30
Shopping	14	15	24	20	8	29
Personal business	17	19	24	19	12	17
Social/recreation	20	22	28	21	13	49
Serve passenger	14	15	29	22	10	29
Other	19	27	29	23	7	24

4.6 Travel by time of day

Table 4.6.1: Persons travelling¹ on motorised modes by time of day (average weekday)

Time of day	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
	'000									
6:30 am	189	200	205	190	181	180	193	205	6.2%	8.5%
8:00 am	457	509	548	557	537	538	550	580	5.5%	26.9%
10:00 am	280	272	283	290	286	296	315	313	-0.6%	11.8%
12:00 noon	252	259	261	276	272	284	283	291	2.8%	15.5%
3:30 pm	431	469	481	478	471	478	508	524	3.1%	21.6%
5:30 pm	433	461	471	481	487	495	501	492	-1.8%	13.6%
7:30 pm	202	188	168	176	156	175	180	189	5.0%	-6.4%
10:30 pm	72	73	73	71	63	64	60	57	-5.0%	-20.8%

Table 4.6.2: Morning peak² trips (average weekday)

	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Morning peak trips ('000)	3,199	3,386	3,504	3,543	3,472	3,511	3,505	3,592	2.5%	12.3%
Total trips ('000)	15,645	16,005	16,331	16,393	16,224	16,392	16,525	16,670	0.9%	6.6%
% of total day in AM peak	20.4%	21.2%	21.5%	21.6%	21.4%	21.4%	21.2%	21.5%	1.4%	5.4%

Table 4.6.3: Morning peak trips by purpose³ (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Commute	875	904	932	949	937	939	917	929	1.3%	6.2%
Work related business	330	312	345	335	313	281	275	298	8.4%	-9.7%
Education/childcare	573	617	642	651	643	655	658	681	3.5%	18.8%
Shopping	232	236	232	231	239	246	254	245	-3.5%	5.6%
Personal business	148	142	151	151	149	141	136	121	-11.0%	-18.2%
Social/recreation	314	318	318	349	346	381	388	395	1.8%	25.8%
Serve passenger	716	839	866	861	825	845	853	893	4.7%	24.7%
Other	12	18	18	16	20	22	25	29	16.0%	141.7%
Total	3,199	3,386	3,504	3,543	3,472	3,511	3,505	3,592	2.5%	12.3%

1 Estimates based on unlinked trips.

2 Estimates of morning peak trips are based on linked trips arriving at their destination between 6.31 am and 9.30 am.

3 The purpose analysis uses linked trips. The trip purpose definition allocates return home trips to the previous 'priority purpose'. Refer to the glossary for details.

Table 4.6.4: Proportion of morning peak trips by purpose (average weekday)

Purpose	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Commute	27.3%	26.7%	26.6%	26.8%	27.0%	26.8%	26.2%	25.9%
Work related business	10.3%	9.2%	9.9%	9.4%	9.0%	8.0%	7.9%	8.3%
Education/childcare	17.9%	18.2%	18.3%	18.4%	18.5%	18.7%	18.8%	19.0%
Shopping	7.3%	7.0%	6.6%	6.5%	6.9%	7.0%	7.2%	6.8%
Personal business	4.6%	4.2%	4.3%	4.3%	4.3%	4.0%	3.9%	3.4%
Social/recreation	9.8%	9.4%	9.1%	9.9%	10.0%	10.9%	11.1%	11.0%
Serve passenger	22.4%	24.8%	24.7%	24.3%	23.8%	24.1%	24.3%	24.9%
Other	0.4%	0.5%	0.5%	0.4%	0.6%	0.6%	0.7%	0.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.6.5: Morning peak trips by mode⁴ (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Vehicle driver	1,687	1,767	1,810	1,812	1,784	1,808	1,802	1,856	3.0%	10.0%
Vehicle passenger	708	798	824	820	806	832	826	835	1.1%	17.9%
Total private vehicle	2,395	2,565	2,634	2,632	2,590	2,640	2,628	2,691	2.4%	12.4%
Train	244	265	288	300	302	304	303	308	1.7%	26.2%
Bus	273	288	309	304	302	299	325	334	2.8%	22.3%
Ferry ⁵	13	11	11	12	12	14	15	12	-20.0%	-7.7%
Total public transport	530	564	608	616	616	617	643	654	1.7%	23.4%
Walk only	463	438	463	500	510	500	508	507	-0.2%	9.5%
Other	58	61	65	63	57	61	58	69	19.0%	19.0%
Total	3,446	3,627	3,771	3,812	3,772	3,818	3,836	3,921	2.2%	13.8%

Table 4.6.6: Proportion of morning peak trips by mode (average weekday)

Mode	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Vehicle driver	48.9%	48.7%	48.0%	47.5%	47.3%	47.4%	47.0%	47.3%
Vehicle passenger	20.5%	22.0%	21.9%	21.5%	21.4%	21.8%	21.5%	21.3%
Total private vehicle	69.4%	70.7%	69.9%	69.0%	68.7%	69.2%	68.5%	68.6%
Train	7.1%	7.3%	7.6%	7.9%	8.0%	8.0%	7.9%	7.9%
Bus	7.9%	7.9%	8.2%	8.0%	8.0%	7.8%	8.5%	8.5%
Ferry	0.4%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.3%
Total public transport	15.4%	15.5%	16.1%	16.2%	16.3%	16.2%	16.8%	16.7%
Walk only	13.4%	12.1%	12.3%	13.1%	13.5%	13.1%	13.2%	12.9%
Other	1.7%	1.7%	1.7%	1.7%	1.5%	1.6%	1.5%	1.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

⁴ Mode analysis uses unlinked trips.

⁵ Ferry estimates may have high standard errors.

4.7 Profile of travellers

Table 4.7.1: Travellers by sex and mode¹ (average weekday)

Mode	2002/03		2006/07		2007/08		2008/09	
	Males	Females	Males	Females	Males	Females	Males	Females
'000								
Vehicle driver	4,296	3,664	4,071	3,941	4,156	3,944	4,167	3,868
Vehicle passenger	1,528	2,065	1,603	2,078	1,655	2,122	1,666	2,104
Train	397	365	424	377	436	412	465	409
Bus	402	491	450	476	467	498	477	512
Walk only	1,225	1,546	1,314	1,592	1,368	1,608	1,424	1,659
Other	238	129	233	143	262	136	248	150
Total	8,086	8,260	8,095	8,606	8,344	8,720	8,447	8,703
Share of trips (%)								
Vehicle driver	53.1%	44.4%	50.3%	45.8%	49.8%	45.2%	49.3%	44.5%
Vehicle passenger	18.9%	25.0%	19.8%	24.1%	19.8%	24.3%	19.7%	24.2%
Train	4.9%	4.4%	5.2%	4.4%	5.2%	4.7%	5.5%	4.7%
Bus	5.0%	5.9%	5.6%	5.5%	5.6%	5.7%	5.6%	5.9%
Walk only	15.1%	18.7%	16.2%	18.5%	16.4%	18.4%	16.9%	19.1%
Other	2.9%	1.6%	2.8%	1.7%	3.2%	1.5%	2.9%	1.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mode	2009/10		2010/11		2011/12		2012/13	
	Males	Females	Males	Females	Males	Females	Males	Females
Vehicle driver	4,163	3,799	4,227	3,855	4,228	3,951	4,249	4,061
Vehicle passenger	1,610	2,133	1,609	2,179	1,603	2,207	1,648	2,182
Train	464	417	478	425	492	442	501	444
Bus	475	513	475	536	489	548	480	578
Walk only	1,444	1,633	1,423	1,656	1,452	1,643	1,409	1,668
Other	262	141	237	162	239	162	223	163
Total	8,418	8,636	8,450	8,813	8,504	8,954	8,510	9,095
Share of trips (%)								
Vehicle driver	49.5%	44.0%	50.0%	43.7%	49.7%	44.1%	49.9%	44.6%
Vehicle passenger	19.1%	24.7%	19.0%	24.7%	18.9%	24.7%	19.4%	24.0%
Train	5.5%	4.8%	5.7%	4.8%	5.8%	4.9%	5.9%	4.9%
Bus	5.6%	5.9%	5.6%	6.1%	5.7%	6.1%	5.6%	6.4%
Walk only	17.2%	18.9%	16.8%	18.8%	17.1%	18.3%	16.6%	18.3%
Other	3.1%	1.6%	2.7%	1.8%	2.9%	1.9%	2.7%	1.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

¹ Mode data uses unlinked trip legs except for walk trips.

Table 4.7.2: Mode¹ share by age of travellers (average weekday)

Age Group	Vehicle Driver	Vehicle Passenger	Train	Bus	Walk only	Other ²	Total
2012/13							
0-10	0.0%	76.6%	0.7%	4.0%	17.3%	1.4%	100.0%
11-20	12.8%	42.7%	9.1%	17.8%	14.9%	2.8%	100.0%
21-30	47.3%	12.6%	10.4%	7.4%	19.7%	2.7%	100.0%
31-40	59.6%	7.8%	6.3%	4.2%	19.9%	2.3%	100.0%
41-50	69.6%	7.3%	4.0%	2.6%	14.3%	2.1%	100.0%
51-60	65.7%	9.4%	4.2%	3.2%	15.8%	1.7%	100.0%
61-70	58.9%	13.5%	3.4%	3.9%	18.7%	1.7%	100.0%
70 +	46.9%	17.1%	2.7%	6.9%	23.4%	3.1%	100.0%
2011/12							
0-10	0.0%	76.1%	1.0%	4.0%	17.1%	1.8%	100.0%
11-20	12.7%	43.1%	8.8%	16.8%	15.7%	2.9%	100.0%
21-30	45.8%	12.8%	11.0%	7.9%	19.7%	3.0%	100.0%
31-40	60.3%	8.0%	5.5%	4.0%	19.5%	2.7%	100.0%
41-50	69.2%	7.5%	4.3%	2.6%	14.5%	1.8%	100.0%
51-60	64.2%	10.0%	4.1%	3.2%	17.1%	1.4%	100.0%
61-70	59.4%	13.5%	3.4%	3.9%	18.2%	1.6%	100.0%
70 +	43.7%	17.1%	2.8%	7.9%	24.9%	3.6%	100.0%
2010/11							
0-10	0.0%	77.1%	0.9%	4.1%	16.3%	1.6%	100.0%
11-20	13.6%	42.1%	8.2%	16.0%	16.9%	3.1%	100.0%
21-30	46.6%	13.5%	10.3%	7.5%	19.5%	2.6%	100.0%
31-40	61.3%	7.9%	5.4%	3.9%	18.8%	2.7%	100.0%
41-50	68.9%	7.5%	4.4%	2.9%	14.4%	1.8%	100.0%
51-60	63.1%	10.0%	4.1%	3.2%	17.7%	1.9%	100.0%
61-70	57.4%	13.7%	3.3%	4.2%	19.7%	1.8%	100.0%
70 +	42.3%	17.5%	2.9%	8.5%	25.3%	3.5%	100.0%
2009/10							
0-10	0.0%	78.6%	0.8%	3.4%	15.5%	1.7%	100.0%
11-20	13.9%	41.3%	8.1%	15.5%	18.1%	3.2%	100.0%
21-30	46.7%	12.6%	10.2%	7.5%	20.1%	2.9%	100.0%
31-40	62.6%	7.7%	5.3%	3.6%	18.2%	2.5%	100.0%
41-50	67.9%	7.5%	4.6%	3.0%	15.2%	1.8%	100.0%
51-60	62.8%	9.9%	4.0%	3.3%	17.8%	2.1%	100.0%
61-70	56.9%	13.8%	3.3%	4.7%	19.3%	1.9%	100.0%
70 +	39.7%	18.1%	2.3%	9.3%	27.3%	3.2%	100.0%

1 Mode data uses unlinked trip legs except for walk trips.

2 Other includes ferry.

Table 4.7.2: Mode¹ share by age of travellers (average weekday) continued

Age Group	Vehicle Driver	Vehicle Passenger	Train	Bus	Walk only	Other ²	Total
2008/09							
0-10	0.0%	79.8%	0.5%	2.9%	15.4%	1.4%	100.0%
11-20	14.5%	40.9%	8.4%	16.7%	16.4%	3.1%	100.0%
21-30	48.6%	12.3%	9.6%	6.4%	20.2%	2.8%	100.0%
31-40	62.1%	7.7%	5.1%	3.7%	19.0%	2.4%	100.0%
41-50	68.1%	7.3%	4.5%	3.0%	15.1%	2.1%	100.0%
51-60	63.0%	9.8%	4.3%	3.4%	17.4%	2.1%	100.0%
61-70	54.7%	13.9%	3.5%	5.5%	20.4%	2.0%	100.0%
70 +	41.2%	18.6%	2.4%	8.2%	26.7%	2.9%	100.0%
2007/08							
0-10	0.0%	80.5%	0.5%	2.6%	15.1%	1.4%	100.0%
11-20	14.3%	41.1%	8.4%	16.2%	16.4%	3.4%	100.0%
21-30	49.2%	11.8%	9.4%	6.7%	19.7%	3.2%	100.0%
31-40	64.4%	7.5%	5.0%	3.4%	17.8%	2.0%	100.0%
41-50	68.7%	7.4%	4.2%	2.8%	14.6%	2.2%	100.0%
51-60	63.6%	10.0%	4.0%	3.3%	17.2%	1.9%	100.0%
61-70	53.4%	14.6%	4.1%	6.0%	19.8%	2.1%	100.0%
70 +	41.7%	18.1%	2.0%	8.4%	27.0%	2.9%	100.0%
2006/07							
0-10	0.0%	80.0%	0.6%	2.7%	15.5%	1.2%	100.0%
11-20	14.4%	41.5%	8.3%	16.0%	16.1%	3.7%	100.0%
21-30	49.4%	12.3%	8.6%	6.3%	20.1%	3.3%	100.0%
31-40	65.9%	7.6%	4.8%	3.2%	16.5%	2.0%	100.0%
41-50	69.6%	6.9%	4.0%	2.7%	14.8%	2.0%	100.0%
51-60	62.9%	10.6%	4.3%	3.7%	16.9%	1.6%	100.0%
61-70	52.2%	14.7%	3.7%	6.2%	21.3%	1.9%	100.0%
70 +	43.0%	16.8%	2.4%	8.2%	26.6%	3.0%	100.0%
2002/03							
0-10	0.0%	76.1%	0.6%	3.9%	17.9%	1.4%	100.0%
11-20	15.9%	41.1%	7.5%	13.9%	18.4%	3.1%	100.0%
21-30	52.6%	11.8%	8.3%	5.8%	18.3%	3.3%	100.0%
31-40	65.0%	9.1%	4.5%	3.4%	15.2%	2.8%	100.0%
41-50	70.6%	8.3%	3.7%	2.7%	13.0%	1.6%	100.0%
51-60	63.8%	10.8%	3.7%	3.8%	16.3%	1.4%	100.0%
61-70	55.3%	14.2%	3.7%	5.5%	19.9%	1.5%	100.0%
70 +	41.0%	18.1%	3.8%	8.8%	26.0%	2.3%	100.0%

1 Mode data uses unlinked trip legs except for walk trips.

2 Other includes ferry.

Table 4.7.3: Labour force and mode¹ in 2002/03 and 2012/13 (average weekday)

Mode	Full-time worker	PT/ Casual/ Voluntary Worker	FT/PT Adult Student	Pensioner	Unemployed/ Keeping House	Primary/ Secondary Student	Child not at school	Other
2002/03								
Vehicle driver	65.1%	65.2%	42.2%	44.8%	60.3%	1.8%	0.0%	20.7%
Vehicle passenger	8.8%	11.8%	15.4%	16.0%	15.1%	60.6%	79.2%	0.0%
Train	6.1%	3.1%	9.5%	4.0%	2.1%	4.0%	0.5%	11.2%
Bus	3.7%	3.5%	10.9%	7.7%	2.5%	12.0%	1.3%	33.9%
Walk only	13.5%	14.6%	19.8%	25.6%	19.1%	18.8%	18.3%	34.2%
Other ²	2.8%	1.8%	2.2%	1.8%	0.9%	2.8%	0.7%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
— 2012/13								
Vehicle driver	62.6%	65.6%	36.5%	48.6%	56.6%	2.3%	0.0%	40.2%
Vehicle passenger	7.6%	10.0%	18.7%	17.6%	13.0%	61.3%	76.7%	16.5%
Train	6.7%	4.6%	13.2%	3.0%	2.7%	4.4%	1.1%	10.7%
Bus	4.0%	3.9%	11.6%	6.1%	3.6%	14.2%	2.2%	2.7%
Walk only	16.5%	14.6%	17.6%	22.2%	23.2%	15.2%	19.4%	28.2%
Other ²	2.6%	1.3%	2.5%	2.5%	0.9%	2.6%	0.7%	1.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.7.4: Labour force and purpose in 2002/03 and 2012/13 (average weekday)

Purpose	Full-time worker	PT/ Casual/ Voluntary Worker	FT/PT Adult Student	Pensioner	Unemployed/ Keeping House	Primary/ Secondary Student	Child not at school	Other
2002/03								
Commute	28.9%	17.7%	8.7%	1.3%	0.8%	1.2%	0.0%	0.0%
Work related business	19.6%	9.7%	1.6%	1.4%	0.1%	0.4%	0.0%	0.0%
Education/ childcare	0.4%	0.6%	23.3%	0.2%	0.1%	43.3%	15.7%	0.0%
Shopping	12.3%	19.6%	15.7%	34.4%	28.5%	5.5%	1.4%	9.2%
Personal business	5.5%	8.0%	8.2%	18.5%	12.5%	3.3%	1.9%	5.8%
Social/recreation	16.8%	21.3%	28.4%	33.8%	29.4%	29.2%	24.1%	81.3%
Serve passenger	10.9%	21.0%	13.1%	10.0%	28.4%	16.8%	56.8%	3.6%
Other	5.8%	2.1%	0.9%	0.3%	0.1%	0.3%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
— 2012/13								
Commute	29.6%	18.3%	9.3%	1.4%	0.6%	0.9%	0.0%	0.0%
Work related business	16.3%	7.9%	2.4%	0.8%	0.4%	0.1%	0.0%	0.0%
Education/ childcare	0.2%	0.6%	22.4%	0.0%	0.3%	49.2%	17.0%	0.0%
Shopping	13.4%	18.4%	15.4%	32.9%	27.7%	5.1%	0.9%	29.0%
Personal business	3.7%	6.6%	6.1%	12.8%	9.3%	1.9%	1.7%	21.6%
Social/recreation	19.0%	22.1%	28.9%	36.9%	27.7%	26.5%	23.9%	34.1%
Serve passenger	11.7%	23.4%	13.5%	13.9%	32.3%	15.8%	55.9%	11.9%
Other	6.2%	2.8%	2.0%	1.3%	1.7%	0.6%	0.7%	3.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

1 Mode data uses unlinked trip legs except for walk trips.

2 Other includes ferry.

Table 4.7.5: Income and mode¹ in 2002/03 and 2012/13 (average weekday)

Mode	Nil to \$25,000	\$25,001 to \$50,000	\$50,001 to \$75,000	\$75,001 to \$125,000	\$125,001 and above
2002/03					
Vehicle driver	36.1%	46.5%	50.7%	53.5%	52.0%
Vehicle passenger	23.1%	23.3%	22.1%	21.7%	20.5%
Train	4.7%	4.0%	4.6%	4.9%	4.9%
Bus	7.8%	5.8%	5.7%	5.0%	4.0%
Walk only	26.4%	18.4%	15.2%	12.7%	15.3%
Other ²	1.9%	2.0%	1.7%	2.1%	3.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
2012/13					
Vehicle driver	40.0%	45.3%	48.9%	49.2%	48.6%
Vehicle passenger	23.0%	23.1%	22.1%	21.9%	19.9%
Train	5.3%	5.5%	5.8%	5.0%	5.4%
Bus	7.9%	7.3%	6.2%	5.3%	4.9%
Walk only	22.1%	17.0%	15.5%	16.2%	18.3%
Other ²	1.8%	1.8%	1.5%	2.4%	2.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.7.6: Income and purpose in 2002/03 and 2012/13 (average weekday)

Purpose	Nil to \$25,000	\$25,001 to \$50,000	\$50,001 to \$75,000	\$75,001 to \$125,000	\$125,001 and above
2002/03					
Commute	3.2%	12.3%	16.0%	20.7%	19.1%
Work related business	2.3%	8.9%	12.1%	11.4%	11.5%
Education/childcare	10.1%	9.1%	8.1%	8.2%	7.0%
Shopping	24.6%	17.6%	14.9%	13.0%	13.3%
Personal business	13.1%	8.1%	6.9%	5.7%	6.4%
Social/recreation	29.9%	23.4%	21.7%	21.7%	21.9%
Serve passenger	16.3%	18.7%	17.6%	16.1%	16.4%
Other	0.4%	1.9%	2.7%	3.4%	4.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
2012/13					
Commute	4.3%	10.5%	16.6%	17.7%	19.8%
Work related business	2.6%	6.9%	9.5%	9.1%	8.5%
Education/childcare	11.0%	10.2%	9.6%	8.7%	8.4%
Shopping	23.4%	19.3%	15.0%	14.4%	12.7%
Personal business	8.8%	6.8%	4.9%	4.9%	4.3%
Social/recreation	28.4%	25.6%	22.5%	22.6%	24.8%
Serve passenger	19.9%	18.7%	18.7%	18.6%	16.9%
Other	1.5%	2.1%	3.2%	3.8%	4.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

1 Mode data uses unlinked trip legs except for walk trips.
 2 Other includes ferry.

Table 4.7.7: Household type and mode¹ in 2002/03 and 2012/13 (average weekday)

Mode	Lone person	Couple only	Couple with children	One parent with children	Other
2002/03					
Vehicle driver	47.0%	53.9%	49.8%	41.4%	39.5%
Vehicle passenger	6.9%	14.7%	27.6%	20.8%	17.2%
Train	6.2%	5.2%	3.8%	5.3%	6.8%
Bus	8.9%	4.8%	4.4%	7.5%	8.1%
Walk only	27.6%	18.4%	12.8%	22.3%	24.8%
Other ²	3.5%	2.9%	1.6%	2.7%	3.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
— 2012/13					
Vehicle driver	49.1%	51.9%	47.2%	44.4%	37.9%
Vehicle passenger	6.1%	13.6%	27.0%	23.7%	16.7%
Train	7.0%	5.5%	4.4%	6.3%	9.1%
Bus	7.3%	3.8%	5.6%	8.5%	8.9%
Walk only	27.5%	22.5%	13.9%	15.5%	24.5%
Other ²	2.9%	2.7%	2.0%	1.6%	2.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.7.8: Household type and purpose in 2002/03 and 2012/13 (average weekday)

Purpose	Lone person	Couple only	Couple with children	One parent with children	Other
2002/03					
Commute	13.8%	17.4%	14.4%	13.1%	19.9%
Work related business	12.8%	12.2%	9.4%	5.6%	9.1%
Education/childcare	0.9%	0.5%	11.1%	13.5%	8.8%
Shopping	23.5%	23.0%	12.6%	16.2%	15.2%
Personal business	13.4%	10.4%	6.0%	7.5%	6.8%
Social/recreation	27.5%	25.4%	21.5%	25.0%	24.4%
Serve passenger	4.4%	7.6%	22.7%	16.9%	11.3%
Other	3.6%	3.7%	2.3%	2.3%	4.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
— 2012/13					
Commute	15.4%	18.2%	14.0%	13.1%	19.5%
Work related business	8.1%	8.9%	7.8%	6.0%	8.2%
Education/childcare	0.4%	0.5%	12.5%	13.8%	9.1%
Shopping	25.9%	22.4%	12.4%	16.1%	16.4%
Personal business	10.3%	8.6%	3.9%	5.8%	5.1%
Social/recreation	31.0%	29.2%	22.0%	23.2%	24.3%
Serve passenger	4.0%	8.1%	24.4%	19.4%	13.2%
Other	5.0%	4.2%	2.9%	2.6%	4.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

1 Mode data uses unlinked trip legs except for walk trips.

2 Other includes ferry.

4.8 Vehicles

Table 4.8.1: Number of households in Sydney by number of vehicles

Household vehicles	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
'000										
None	219	208	200	207	212	202	191	184	-3.7%	-16.0%
One	649	650	646	637	630	649	674	671	-0.4%	3.4%
Two	478	524	538	544	563	570	574	594	3.5%	24.3%
Three or more	171	180	192	208	221	228	229	239	4.4%	39.8%
Total households	1516	1561	1576	1597	1626	1649	1668	1689	1.3%	11.4%

Table 4.8.2: Proportion of households in Sydney by number of vehicles

Household vehicles	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
None	14.4%	13.3%	12.7%	13.0%	13.1%	12.3%	11.5%	10.9%
One	42.8%	41.6%	41.0%	39.9%	38.7%	39.3%	40.4%	39.7%
Two	31.5%	33.5%	34.1%	34.1%	34.6%	34.6%	34.4%	35.2%
Three or more	11.3%	11.5%	12.2%	13.1%	13.6%	13.8%	13.7%	14.2%
Total households	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.8.3: Average vehicle occupancy per trip

Trip type	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	% change 11/12 - 12/13	% change 02/03 - 12/13
Average weekday										
All day	1.45	1.46	1.47	1.47	1.47	1.47	1.47	1.46	-0.7%	0.7%
AM peak	1.42	1.45	1.46	1.45	1.45	1.46	1.46	1.45	-0.7%	2.1%
Average day										
Trips to work ¹	1.11	1.11	1.10	1.11	1.11	1.11	1.10	1.10	0.0%	-0.9%
Non-work trips	1.69	1.69	1.69	1.70	1.70	1.69	1.68	1.67	-0.6%	-1.2%

¹ The estimate of vehicle occupancy for work trips may involve passengers travelling for non-work purposes.

Table 4.8.4: Proportion of trips by vehicle occupancy²

Vehicle Occupancy	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Average weekday								
One	66.6%	66.0%	66.4%	66.3%	66.7%	66.6%	66.4%	66.7%
Two	21.9%	22.0%	21.4%	21.5%	21.5%	21.8%	22.2%	22.2%
Three	7.4%	7.9%	8.1%	7.8%	7.6%	7.3%	7.3%	7.1%
Four	2.9%	3.0%	3.0%	3.3%	3.2%	3.3%	3.2%	3.1%
Five or more	1.3%	1.2%	1.1%	1.1%	0.9%	0.9%	1.0%	0.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average weekend day								
One	49.1%	48.6%	48.7%	47.8%	49.1%	49.6%	50.4%	50.5%
Two	30.3%	31.0%	31.6%	31.5%	30.6%	29.1%	28.3%	28.9%
Three	10.3%	11.1%	11.0%	11.2%	11.3%	10.9%	10.5%	10.1%
Four	7.5%	5.8%	5.5%	6.1%	6.1%	6.8%	7.4%	6.9%
Five or more	2.8%	3.4%	3.2%	3.3%	3.0%	3.6%	3.4%	3.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 4.8.5: Proportion of distance travelled by vehicle occupancy²

Vehicle Occupancy	2002/03	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Average weekday								
One	72.3%	72.5%	73.1%	73.2%	72.9%	73.0%	72.5%	72.8%
Two	18.1%	18.0%	17.3%	17.3%	18.0%	17.8%	18.5%	18.1%
Three	5.7%	5.9%	6.0%	5.7%	5.5%	5.3%	5.4%	5.3%
Four	2.7%	2.7%	2.5%	2.7%	2.7%	3.0%	2.9%	3.0%
Five or more	1.2%	0.9%	1.0%	1.0%	0.9%	0.8%	0.8%	0.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Average weekend day								
One	43.6%	45.4%	45.8%	44.7%	44.8%	43.8%	45.1%	44.8%
Two	30.7%	31.1%	32.3%	31.1%	30.7%	30.1%	29.6%	31.0%
Three	11.4%	12.0%	10.6%	10.9%	12.0%	12.7%	12.6%	11.7%
Four	10.6%	6.6%	5.8%	6.9%	6.7%	7.9%	7.8%	8.1%
Five or more	3.7%	5.0%	5.5%	6.4%	5.8%	5.4%	4.8%	4.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

² Based on unlinked trips in private vehicles only.

5. Appendices

5.1 About the HTS

The Household Travel Survey (HTS) is the largest and most comprehensive source of personal travel data for the Sydney Greater Metropolitan Area (GMA). The Sydney GMA includes the Sydney Greater Capital City Statistical Area (GCCSA), and the Illawarra and Lower Hunter regions. It extends from Port Stephens in the North, to Shoalhaven in the South and the Blue Mountains in the West (Figure 1.1).

This survey has been running continuously since 1997/98 and is the longest running continuous household travel survey in Australia.

Prior to the HTS, three major one-off household travel surveys were conducted in Sydney in 1971, 1981 and 1991/92. These had large samples (over 12,000 households) and used a face-to-face interview method. In 1997, the HTS was established to meet the needs of transport data users for more timely information. This is conducted by collecting personal travel data on a continuous basis. The HTS uses a similar method to the 1991/92 Home Interview Survey (HIS).

Survey method

The HTS consists of a face-to-face interview survey carried out every day from July to June of each financial year. The face-to-face method ensures high data quality and maximises response rates.

A simple travel diary is used by each householder to record the details of all travel undertaken for their nominated 24-hour period. An interviewer then interviews

each householder to collect the details of each trip. The interviewer records the mode of travel, trip purpose, start and end location, and time of departure and arrival. Vehicle occupancy, toll roads used and parking are recorded for private vehicle trips and fare type and cost for public transport trips.

Detailed socio-demographic information is also collected on the household. This includes dwelling type, household structure and vehicle details, as well as age, gender, employment status, occupation and income of individual household members.

Sample design and statistical validity

The sample of the continuous HTS is designed on a three-yearly cycle so that the pooling of three years of data gives a sample size similar to that achieved in the 1991/92 HIS. About 5,000 randomly selected households are approached each year to participate in the survey.

The annual estimates reported here are based on three waves of data pooled and weighted to the latest estimated resident population (ERP). The 2012/13 estimates are based on the 2010/11, 2011/12 and 2012/13 waves of survey data, weighted to the 2012 ERP. The estimates for 2001/02 up to 2011/12 in previous reports have also been updated based on the more recent ERP for these years.

The 2012/13 trip estimates in this report are based on three years of pooled data collected from July 2010 to June 2013. A sample of 14,636 households in the Greater Metropolitan Area were approached during this period, of which 9,859 (67%) responded. From these responding households, 25,596 people were interviewed, giving a total of 106,885 trip records as the basis for the 2012/13 estimates.

Data expansion

The data collected in the HTS are expanded (weighted) to estimate the travel of the population in the survey area for a given year. The survey data are weighted based on the annual Estimated Resident Population (ERP) produced by the ABS. HTS further uses ABS data on households and individuals from the latest Census of Population to adjust the ERP to produce population benchmarks of residents in private dwellings only, which are then used in the weighting process.

Table A.1. Waves and ABS ERP for weightings for each HTS reference year

Reference year	Waves of the HTS in the 3-year pooled dataset	ABS ERP for weighting
2012/13	2010/2011, 2011/2012, 2012/2013	June 2012 Preliminary ERP based on 2011 Census
2011/12	2009/2010, 2010/2011, 2011/2012	June 2011 Final ERP based on 2011 Census
2010/11	2008/2009, 2009/2010, 2010/2011	June 2010 Final ERP based on 2011 Census
2009/10	2007/2008, 2008/2009, 2009/2010	June 2009 Final ERP based on 2011 Census
2008/09	2006/2007, 2007/2008, 2008/2009	June 2008 Final ERP based on 2011 Census
2007/08	2005/2006, 2006/2007, 2007/2008	June 2007 Final ERP based on 2011 Census
2006/07	2004/2005, 2005/2006, 2006/2007	June 2006 Final ERP based on 2006 Census
2005/06	2003/2004, 2004/2005, 2005/2006	June 2005 Final ERP based on 2006 Census
2004/05	2002/2003, 2003/2004, 2004/2005	June 2004 Final ERP based on 2006 Census
2003/04	2001/2002, 2002/2003, 2003/2004	June 2003 Final ERP based on 2006 Census
2002/03	2000/2001, 2001/2002, 2002/2003	June 2002 Final ERP based on 2006 Census
2001/02	1999/2000, 2000/2001, 2001/2002	June 2001 Final ERP based on 2001 Census

5.2 HTS data items

People & households	
Work characteristics	Household characteristics
Main occupation	Dwelling type
Work schedule	Ownership status of dwelling
Working hours & their flexibility	Number of household vehicles
Industry of employment	Number of bicycles (adult & child)
Employer assistance with transport	Structure of household
Tele-working and car pooling	
Licence holding and mobility	Personal characteristics
Types of driver's licences	Age
Reason for no driver's licence	Gender
Physical disabilities preventing or restricting use of transport	Personal income
	Employment status
	Country of birth
Public transport use	
Tickets and fares	Modes
Amount paid	Train
Fare type	Bus (private, public, school)
Ticket type	Ferry (private, public)
Multi-modal tickets	Monorail, light rail, taxi, aircraft
Reasons for commute by public transport	Trip characteristics
	Trip origin and destination
	Purpose of trip
	Time of day of trip
	Trip length - distance and duration

Vehicle use		
	Vehicle characteristics	Trip characteristics
	Vehicle make and model	Trip origin
	Vehicle age	Trip destination
	Engine characteristics	Time of day of trip
	Type of registration and ownership	Trip purpose
	Type of fuel used	Number of vehicle occupants
		Trip length - distance and duration
	Reasons for commute by car	Parking
		Cost of parking and who pays
		Type of parking used
	Toll roads used	
Non-motorised modes		
	Walking and cycling	Trip purpose
	Trip origin	Time of day
	Trip destination	Distance
	No. working adult/ child bikes in household	

1 Monorail service was discontinued in 2013.

5.3 Glossary

Full name	Acronym (if available)	Description
AM peak or Morning peak		Unless otherwise stated, this refers to trips arriving at their destination between 6.31 am and 9.30 am on a weekday.
Aeronautical Reconnaissance Coverage Geographic Information System	ARCGIS	A geographic information system (GIS) for working with maps and geographic information. The system provides an infrastructure for making maps and geographic information available throughout an organization, across a community, and openly on the Web
Australian Bureau of Statistics	ABS	Australia's official national statistical agency.
Australian Standard Geographical Classification	ASGC	The ASGC was used from 1984 to 2011 by the Australian Bureau of Statistics (ABS) for the collection and dissemination of geographic statistics. The ASGC has been progressively replaced by the Australian Statistical Geography Standard (ASGS).
Australian Statistical Geography Standard	ASGS	The geographical standard developed by the ABS for the collection and dissemination of geographic statistics. It replaced the Australian Standard Geographical Classification from July 2011, as the standard geographical framework for ABS data.
Average Annual Growth Rate	AAGR	Average Annual Growth Rate
Average day		Average of Mondays to Sundays. Used to calculate annual estimates, by multiplying average day by 365.
Average weekday		Average of travel over Monday to Friday including public and school holidays.
Average weekend day		Average of travel undertaken on Saturdays and Sundays.
Bureau of Transport Statistics	BTS	Is a Centre of Excellence within Transport for NSW that provides objective and credible transport data, advice and analysis on transport in NSW.
Central Business District	CBD	Is the commercial and often geographic heart of a city
Distance		A network distance (road, walk, and cycle) in kilometres, travelled between the trip origin and destination. See <i>Trip Length</i>
Estimated Resident Population	ERP	Is the official measure of the population of Australia, based on the concept of usual residence. Adjustments are made on the latest Census population counts, to include usual residents who are overseas for less than 12 months and to exclude overseas visitors who are in Australia for less than 12 months.
Freight Movement Model	FMM	The FMM produces base year and forecast estimates of heavy commercial (articulated and rigid trucks) travel movements for the Sydney Greater Metropolitan Area (GMA) at travel zone level.
Greater Metropolitan Area (GMA)	GMA	The conurbation of greater metropolitan Sydney including the Blue Mountains, Central Coast, Newcastle and the Lower Hunter, and Wollongong. In terms of the Australian Bureau of Statistics' ASGC it comprises the Sydney Statistical Division, Newcastle Statistical Subdivision and Illawarra Statistical Division.

Full name	Acronym (if available)	Description
Gross State Product	GSP	Gross State Product, is a measurement of the economic output of an entity, e.g. Sydney Statistical Division.
Home Interview Survey	HIS	Survey of personal travel carried out in 1981 and 1991/92
Household Travel Survey	HTS	A household survey of personal travel for residents of the Sydney GMA, conducted annually since June 1997. The survey collects information about people's day-to-day travel such as where they go, when they travel, the purpose of the trip, the means of transport used and the costs associated with the trip.
Household vehicles		Number of registered vehicles usually garaged at the household overnight, whether privately or company owned.
Illawarra Region		Covers the Dapto – Port Kembla SA3, the Illawarra Catchment Reserve SA3, Kiama – Shellharbour SA3, Shoalhaven SA3, Southern Highlands SA3 and the Wollongong SA3.
Illawarra Statistical Division		Covers the Local Government Areas of Wollongong, Shellharbour, Kiama, Shoalhaven and Wingecarribee.
Journey to Work	JTW	Commuting to and from work whether on land, air, water, by vehicle or on foot.
Linked trip		A linked trip is a journey from one activity to another, ignoring changes of mode. A linked trip may comprise one or more unlinked trip legs. See <i>Unlinked Trips</i> and <i>Priority Mode</i> .
Local Government Area	LGA	A geographical area under the responsibility of an incorporated local government council or an incorporated indigenous government council. LGAs are a non-ABS Structure of the Australian Statistical Geography Standard (ASGS), and are defined by the Departments of Local Government, or their equivalent in each state or territory. The ABS approximates the officially defined boundaries with aggregations of Mesh Blocks.
Mode		The mode of transport used for the trip. Unlinked trips have only one mode and one purpose. Where a linked trip comprises more than one journey leg by different modes, a 'priority' mode is allocated to the linked trip based on a pre-determined priority list of modes. See <i>Priority Mode</i> .
Motorised travel		Trips by private vehicle, train, bus, ferry, monorail, light rail or aircraft.
Newcastle Region		Covers the Lake Macquarie – East SA3, the Lake Macquarie – West SA3, the Lower Hunter SA3, the Maitland SA3, the Newcastle SA3 and the Port Stephens SA3.
Newcastle Statistical Subdivision		Covers the Local Government Areas of Newcastle, Cessnock, Lake Macquarie, Maitland and Port Stephens.
New South Wales	NSW	State of New South Wales.
Population		Residents of private dwellings. HTS estimates are slightly lower than the ABS Estimated Resident Population (ERP), which include residents of non-private dwellings (gaols, hospitals, hotels, etc.).
PM or Afternoon peak		Unless otherwise stated, refer to weekday trips departing between 3:01 pm and 6:00 pm.
Priority mode		Where a linked trip is comprised of unlinked trips that uses more than one mode, a <i>priority</i> mode is allocated to the linked trip according to the following hierarchy, which is generally the mode with the largest likely (but not necessarily actual) duration of the trip:
Priority mode hierarchy		<ul style="list-style-type: none"> Ferry HIGHEST Train Light rail/monorail Bus Vehicle driver Vehicle passenger Taxi Bicycle Walk Other LOWEST
Priority purpose		<p>BTS collects data on a detailed list of trip purposes, including the purpose 'return to home'. 'Return home' makes up about 34% of unlinked trips on an average weekday (Figure A.1).</p> <p>To give a better picture of what drives trip making, data in this report allocated 'return home' to the main previous purpose. If a person is returning home from work this trip is defined as a commute FROM work rather than a trip TO home. Return home trips with multiple previous purposes are allocated based on a hierarchy or priority. If while returning home from work a person stopped off quickly at the shops, the main previous purpose is work not shopping.</p>

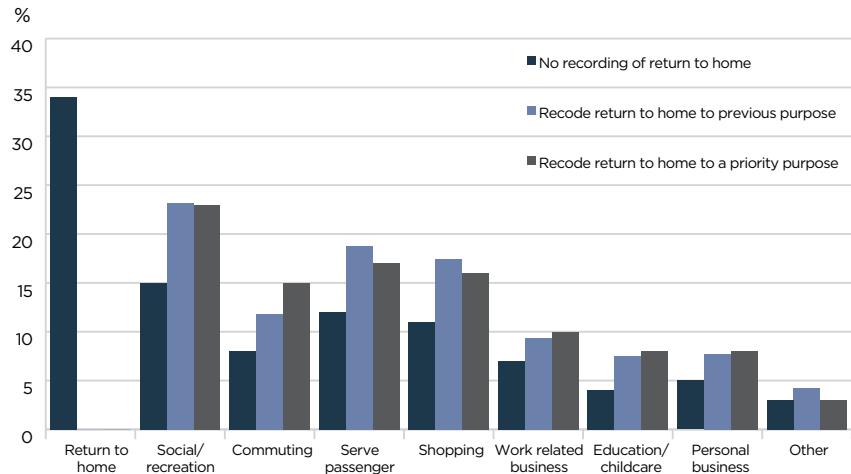
Full name	Acronym (if available)	Description
Priority purpose hierarchy		Work
		Highest
		Work related business
		Education
		Purpose with the longest activity time
		Serve passenger

HIGHEST



LOWEST

Figure A.1 Share of trips by purpose - as defined



Private vehicle		Includes all motorised vehicles such as cars, 4WDs, vans, motorbikes, motor scooters, utes and trucks.
Public transport	PT	Train, government and private bus, ferry, monorail and light rail.
Strategic Travel Model	STM	A BTS model used to project travel patterns in Sydney, Newcastle and Wollongong under different land use, transport and pricing scenarios. It can be used to test alternative settlement, employment and transport policies, to identify likely future capacity constraints, or to determine potential usage levels of proposed new transport infrastructure or services.
Statistical Area Levels 1-4		ABS geographies that are part of the new ASGS first implemented in the 2011 census.
Statistical Area Level 1	SA1	The second smallest geographic area defined by the ASGS. The SA1 has been designed for use in the Census of Population and Housing as the smallest unit for the processing and the release of Census data.
Statistical Area Level 2	SA2	An area defined in the ASGS and consists of one or more whole SA1s. SA2s are based on officially gazetted State suburbs and localities. In urban areas SA2s largely conform to whole suburbs and combinations of whole suburbs, while in rural areas they define functional zones of social and economic links.
Statistical Area Level 3	SA3	SA3s are built from aggregations of whole SA2 boundaries to represent regions of between approximately 30,000 people and 130,000 people to cover the whole of Australia. SA3 boundaries fit within whole SA4 boundaries.
Statistical Area Level 4	SA4	SA4s are aggregations of whole SA3 boundaries and fit wholly within state and territory boundaries. SA4s are designed to reflect one or more whole labour markets for the release of Labour Force Survey data. SA4s are required to have large populations of over 100,000 people in order to enable accurate labour force survey data to be generated on each SA4.
Sydney Statistical Division		Covers the 43 Local Government Areas, and includes the statistical regions of Inner Sydney, Eastern Suburbs, St George-Sutherland, Canterbury-Bankstown, Fairfield-Liverpool, Outer South Western Sydney, Inner Western Sydney, Central Western Sydney, North Western Sydney, Lower Northern Sydney, Central Northern Sydney, Northern Beaches, and Central Coast.
Statistical Division	SD	A Statistical Division (SD) is an Australian Standard Geographical Classification (ASGC) defined area used prior to the 2011 Census. They consisted of one or more Statistical Subdivisions (SSDs) and covered, in aggregate, the whole of Australia without gaps or overlaps. They did not cross State or Territory boundaries and were the largest statistical building blocks of states and territories
Statistical Subdivision	SSD	The SSD is an ASGC defined area used prior to the 2011 Census which represented an intermediate level, general purpose, regional type geographic unit. SSDs consisted of one or more Statistical Local Areas (SLAs).
Statistical Local Area	SLA	A Statistical Local Area is an ASGC defined area used prior to the 2011 Census which consists of one or more Collection Districts (CDs). Statistical Local Areas have been made available in 2011 to provide a bridging unit between the ASGC and the ASGS.

Full name	Acronym (if available)	Description																				
Greater Capital City Statistical Area	GCCSA	Greater Capital City Statistical Areas (GCCSAs) are geographical areas that are designed to represent the functional extent of each of the eight state and territory capital cities. They replace the current Capital City Statistical Divisions and will provide a stable definition for these cities which will be used for the output of a range of social and economic survey data (Source: ABS).																				
Total Kilometres Travelled	TKT																					
Travel zone	TZ	Small geographic area defined by the BTS and is used as the basis for transport modelling and data analysis.																				
Trip duration		Travel time is derived from respondent's reported trip start and end times. Total trip duration is calculated as door-to-door travel time, including changes of mode and wait time. Trip duration by mode, means in-vehicle time only.																				
Trip length (distance)		This is the network distance based on the automatically generated shortest path between the origin to destination addresses. Total distance reported is a door-to-door distance, including changes of mode. Distance by mode refers to in-vehicle distance only.																				
Trip purpose categories		<p>Child care: Trips by children to attend child care.</p> <p>Commuting: The first trip to work of the day, usually from home, excluding trips to return to work. This also includes the first trip to a second job, if any.</p> <p>Work related business: Work related trips away from respondent's usual work address. Also for respondents without a fixed work address e.g. a plumber, household interviewers, etc. who work at various locations.</p> <p>Education: Trips by students to attend educational institutions - kindergarten, primary and secondary school, technical college or universities.</p> <p>Home: Trips to return home. This publication reports trips to return home according to the previous priority purpose. See <i>Priority Purpose</i> above.</p> <p>Personal business: Transact personal business not involving "goods" e.g. bank, library, doctor.</p> <p>Serve passenger: The purpose is to drop-off, pick-up or accompany another person e.g. Man drops his children to school on the way to work, a young child "comes along for the ride" on a parent's trip to the bank, a woman takes an elderly parent to a medical appointment.</p> <p>Shopping: Trips to a shop, defined as premises that sell "goods".</p> <p>Social/Recreation: Social visits, entertainment, sporting activities, hobbies, holidays, etc.</p> <p>Other: Trips for purposes not identified elsewhere.</p>																				
Unlinked trip		<p>An unlinked trip is a single trip leg. Linked trips are made up of unlinked trips where there has been a change of mode or purpose. E.g. A person living in Parramatta and working in Sydney CBD, who travels by train with a walk trip at either end of the train trip, has made three unlinked and one linked trip:</p> <table border="1"> <thead> <tr> <th>Trip</th> <th>Origin</th> <th>Destination</th> <th>Mode</th> <th>Purpose</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Home</td> <td>Parramatta Stn</td> <td>Walk</td> <td>Change mode</td> </tr> <tr> <td>2</td> <td>Parramatta Stn</td> <td>Central Station</td> <td>Train</td> <td>Change mode</td> </tr> <tr> <td>3</td> <td>Central Stn</td> <td>Workplace</td> <td>Walk</td> <td>Work</td> </tr> </tbody> </table>	Trip	Origin	Destination	Mode	Purpose	1	Home	Parramatta Stn	Walk	Change mode	2	Parramatta Stn	Central Station	Train	Change mode	3	Central Stn	Workplace	Walk	Work
Trip	Origin	Destination	Mode	Purpose																		
1	Home	Parramatta Stn	Walk	Change mode																		
2	Parramatta Stn	Central Station	Train	Change mode																		
3	Central Stn	Workplace	Walk	Work																		
Vehicle Kilometres Travelled	VKT	Is the volume of motor vehicle traffic, derived by multiplying the <i>Number of Vehicles</i> by <i>Distance Travelled</i> .																				
Work related business	WRB	Work related trips away from respondent's usual work address. Also for respondents without a fixed work address e.g. a plumber, household interviewers, etc. who work at various locations.																				

5.4 References

ABS (2014) Australian Bureau of Statistics. Accessible online via <http://www.abs.gov.au/>.

TfL (2011) Transport for London. Travel in London, Supplementary Report: London Travel Demand Survey (LTDS). 58pp.

Whelan, G. (2007) Modelling Car Ownership in Great Britain. *Transportation Research Record A* 41 (3): 205-219.

For customised data, maps and standard products, contact:

Bureau of Transport Statistics

T 02 8202 2702 F 02 8202 3890

E btsinfo@transport.nsw.gov.au

W bts.nsw.gov.au

Level 3 18 Lee Street Chippendale NSW 2008 | PO Box K659 Haymarket 1240

Disclaimer

While all care is taken in producing this work, no responsibility is taken or warranty made with respect to the accuracy of any information, data or representation. The authors (including copyright owners) expressly disclaim all liability in respect of anything done or omitted to be done and the consequences upon reliance of the contents of this information.

© Transport for New South Wales

Users are welcome to copy, reproduce and distribute the information contained in this report for non-commercial purposes only, provided acknowledgement is given to the Bureau of Transport Statistics as the source.

ISBN 978-0-7313-2868-0