

# Thames Valley seat belt survey 2009

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**PUBLISHED PROJECT REPORT PPR 416**

**Thames Valley seat belt survey, 2009**

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**Prepared for: Project Record: Thames Valley seat belt survey, 2009**  
**Client: Thames Valley Safer Roads Partnership**  
**(Richard Owen)**

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## **Executive summary**

TRL carries out a series of regular surveys for the Department for Transport on the use of seat belts and other restraints by vehicle occupants of all ages and in all seating positions. The DfT survey is carried out once a year at 32 sites in two extensive study areas centred on Crowthorne and Nottingham. The 32 sites were selected to be typical of a general type of traffic condition, not to be considered in isolation.

Five of the sites in the annual DfT survey are located in the Thames Valley. In 2008 the Thames Valley Safer Roads Partnership commissioned TRL to survey an additional five sites in the Thames Valley region in order to estimate the rate of seat belt use on built-up roads in their region. The additional sites, in Aylesbury, Banbury, Oxford, High Wycombe and Milton Keynes, were surveyed using the same methodology as the regular DfT survey.

This report describes the results of a repeat survey in the Thames Valley area carried out in 2009. Results from the two Thames Valley survey – 2008 and 2009 are compared with results from the Thames Valley sites and the built-up sites from the most recent DfT survey.

The overall seat belt wearing rates for car drivers in the Thames Valley survey in 2009 were similar to the results from 2008, and this is also true of the DfT survey results. There has been a significant increase observed in the proportion of other car occupants wearing seat belts, now much closer to the DfT results. The proportion of taxi passengers and van drivers observed wearing seat belts in the Thames Valley survey increased from 2008 rates and the rate for van passengers has remained constant. The proportion of taxi drivers wearing seat belts in 2009 has decreased compared to the 2008 results, although these fluctuations will be affected by small numbers.

The proportion of drivers observed using hand-held and hands free mobile phones at Thames Valley survey sites was lower in 2009 than in 2008.





## **1 Introduction**

The protection offered to car occupants by seat belts and other restraint systems became generally recognised in Great Britain in the 1970s, and front seat belt wearing was made compulsory in cars and vans in January 1983. In 1982, the Department of Transport established a monthly survey of seat belt wearing by drivers and front seat passengers of cars and vans, in order to monitor the effects of the new law. This was conducted at sites distributed throughout Great Britain.

In October 1988, TRRL (as TRL was known at the time) established on behalf of the Department of Transport a regular series of surveys of the use made of seat belts and other restraints by car occupants of all ages and in all seating positions. These have continued to the present day. It has provided invaluable information which has been extensively used to monitor the level of use made of seat belts and other restraints, target publicity campaigns and inform the general public.

To facilitate accurate observations, most study sites are situated at junctions controlled by traffic signals and the observations are carried out by a team of experienced survey staff. The 32 sites selected typically follow the general type of traffic conditions, and are not considered in isolation. The Crowthorne study area contains five sites in the Thames Valley. In 2008 the Thames Valley Safer Roads Partnership commissioned TRL to survey five additional sites in the north of the Thames Valley region. This survey was conducted using the same methodology as the DfT survey. This survey was repeated in 2009 and comparisons have been drawn between the results.

Chapter 2 gives the locations of the five additional sites along with the locations of comparable sites from the DfT survey. Chapter 3 presents results from the Thames Valley surveys with corresponding results the DfT survey.

## 2 Survey sites

Three groups of survey sites are compared in the results section:

- Thames Valley survey sites detailed in Section 2.1;
- Sites in the Thames Valley region from the DfT annual survey (Section 2.2);
- Sites from the DfT survey which are 'built-up' (Section 2.3).

### 2.1 Thames Valley sites

The following table shows the locations of the Thames Valley study sites. Photographs of these sites can be found in Walter et al (2008).

**Table 2.1: Positions of Thames Valley survey sites**

Site No.	Site name	Speed limit (mph)	Road No.	Junction with	Traffic direction	OS Grid Reference
101	Aylesbury	30	A418	Fowler Road	SW bound	480990 213240
102	Banbury	30	A361	Warwick Road	S bound	445360 240790
103	Oxford	30	A420 Botley Road	Rewley Road	E bound	450640 206290
104	High Wycombe	30	A40	Rayners Ave.	SE bound	489862 191173
105	Milton Keynes	30	Grafton Gate	Silbury Boulevard	SE bound	485690 238800

### 2.2 Department for Transport survey Thames Valley sites

Five sites from the annual DfT survey are located in the Thames Valley region. Table 2.2 gives their location and survey day. The 2008 results from these sites are compared with the results from the 2008 and 2009 Thames Valley survey. It should be noted that not all the sites in this table are in built up areas.

**Table 2.2: Positions of DfT survey sites in the Thames Valley**

Site No.	Site name	Site position	Survey day
1	Henley	A4130 entering town on bridge	Wednesday
2	Streatley	A329 at jn with B4009 towards Wallingford	Tuesday
3	Reading	A4 London Rd at jn with A329M towards Reading	Friday
4	Sonning	B478 before bridge travelling towards A4	Monday
16	Windsor	B3022 at jn with B3175 travelling west	Monday

### **2.3 Department for Transport survey built up sites**

The results from the Thames Valley survey and the DfT Thames Valley survey sites are benchmarked against the results of all built up sites from the DfT Autumn 2008 survey. The sites are located in:

- Reading
- Sandhurst
- Camberley
- Fleet
- Milford
- Southampton
- Petworth
- Windsor
- Isleworth
- Chiswick (2 sites)
- Sutton-in-Ashfield (2 sites)
- Annesley Woodhouse
- Nottingham (2 sites)
- Radcliffe

### 3 Results

Details on data collection, manipulation and analysis can be found in Section 3 of Walter et al (2008). Weights are applied to the data, as described in Walter et al (2008), in order that the sites are represented fairly in the overall results.

The same sites are used in each survey, on the same day of the week, so that observations in successive surveys are made in conditions that are as consistent as possible. The number of vehicles observed per day at a single site is not large, which means that results for that site such as the seat belt wearing rate for drivers tend to be affected by random variation. In view of this, results have only been presented for groups of sites, not for individual sites. It is recommended that data from the groups of sites should be pooled for analysis, in order to monitor changes in seat belt wearing reliably.

The following tables show derived results from four surveys (weekdays only):

- The built up sites from the Autumn 2008 DfT seat belt survey (DfT BU);
- The Thames Valley sites from the Autumn 2008 DfT seat belt survey (DfT TV);
- The sites in the Thames Valley seat belt survey, in March 2008 (TV 08)
- The sites in the Thames Valley seat belt survey, in March 2009 (TV 09).

**Table 3.1: Number of vehicle occupants surveyed**

		DfT BU	DfT TV	TV 08	TV 09
car	driver	12,325	3,491	3,421	3,326
	front seat passenger	3,206	812	1,075	954
	rear seat passenger	1,532	366	462	371
taxi	driver	381	46	267	182
	passenger	211	47	96	120
van	driver	2,184	630	261	545
	passenger	456	140	59	124

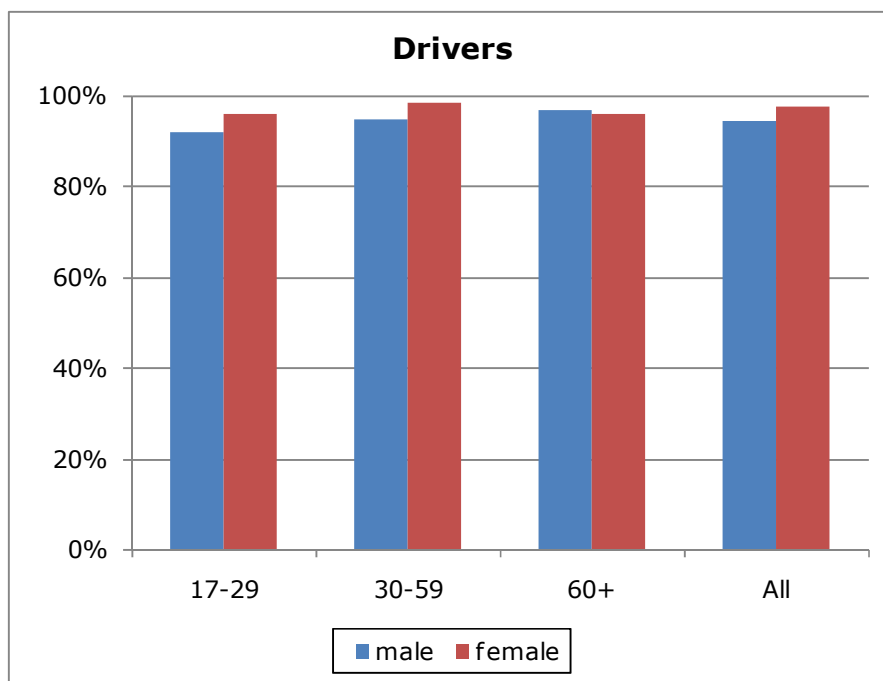
**Table 3.2: Restraint use by vehicle occupants in survey**

		DfT BU	DfT TV	TV 08	TV 09
car	driver	96%	96%	95%	96%
	front seat passenger	96%	96%	92%	94%**
	rear seat passenger	88%	86%	77%	84%**
taxi	driver	50%	51%	58%	47%**
	passenger	63%	57%	40%	57%**
van	driver	76%	81%	81%	86%**
	passenger	61%	68%	73%	72%

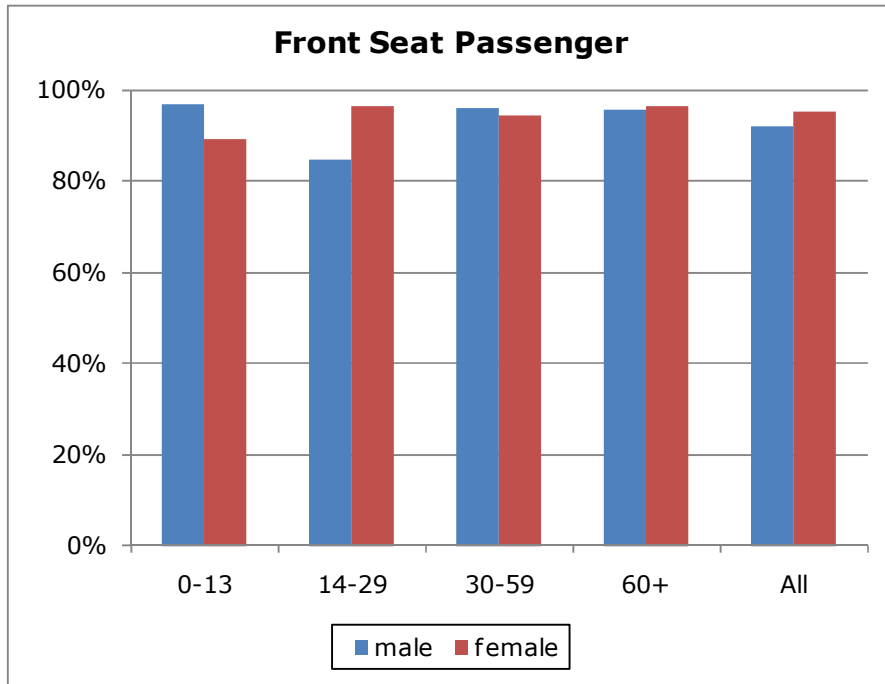
\* $p < 0.05$ , \*\* $p < 0.01$

**Table 3.3: Restraint use of car occupants by age and gender**

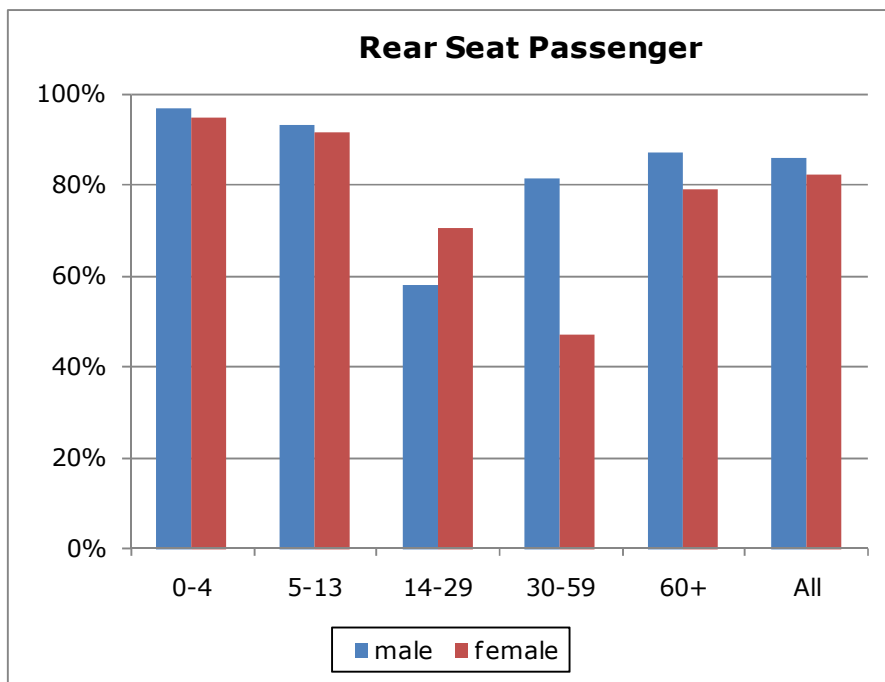
		DfT BU		DfT TV		TV 08		TV 09	
		Male	Female	Male	Female	Male	Female	Male	Female
driver	17-29	93%	98%	95%	99%	92%	97%	92%	96%
	30-59	95%	97%	95%	97%	94%	98%	95%	98%
	60+	97%	98%	97%	98%	96%	93%	97%	96%
	All	95%	97%	95%	97%	94%	97%	94%	97%
front seat passenger	0-13	98%	98%	98%	93%	84%	90%	97%	89%
	14-29	90%	96%	92%	96%	93%	89%	85%	96%
	30-59	92%	96%	88%	99%	89%	92%	96%	94%
	60+	98%	98%	97%	99%	93%	98%	96%	97%
	All	94%	97%	92%	98%	90%	92%	92%	95%
rear seat passenger	0-4	99%	98%	100%	97%	90%	93%	97%	95%
	5-13	90%	90%	92%	95%	71%	79%	93%	92%
	14-29	54%	68%	58%	76%	50%	59%	58%	70%
	30-59	77%	77%	60%	60%	33%	52%	81%	47%
	60+	76%	80%	64%	94%	62%	89%	87%	79%
	All	88%	87%	85%	87%	71%	72%	86%	82%



**Figure 3.1: Restraint use of car driver by age and gender in TV survey**



**Figure 3.2: Restraint use of car driver by age and gender in TV survey**



**Figure 3.3: Restraint use of car driver by age and gender in TV survey**

**Table 3.4: Child restraint use of front seat passengers in cars by age**

	DfT BU			DfT TV		
	0-4	5-9	10-13	0-4	5-9	10-13
seat belt	19%	79%	97%	18%	67%	93%
booster with sb	12%	19%	1%	15%	19%	3%
child seat	41%	0%	0%	37%	9%	0%
rear facing baby seat	27%	0%	0%	31%	0%	0%
no restraint/cheated	2%	2%	2%	0%	6%	3%
booster without sb	0%	0%	0%	0%	0%	0%
on lap	0%	0%	0%	0%	0%	0%
Total child passengers	58	143	97	13	42	32

	TV 08			TV 09		
	0-4	5-9	10-13	0-4	5-9	10-13
seat belt	0%	29%	96%	10%	65%	90%
booster with sb	9%	54%	1%	35%	27%	0%
child seat	30%	0%	0%	22%	3%	0%
rear facing baby seat	57%	0%	0%	26%	0%	0%
no restraint/cheated	0%	11%	3%	7%	6%	10%
booster without sb	4%	6%	0%	0%	0%	0%
on lap	0%	0%	0%	0%	0%	0%
Total child passengers	11	44	37	13	28	20

**Table 3.5: Child restraint use of rear seat passengers in cars by age**

	DfT BU			DfT TV		
	0-4	5-9	10-13	0-4	5-9	10-13
seat belt	3%	44%	88%	3%	41%	89%
booster with sb	16%	40%	1%	22%	43%	0%
child seat	67%	7%	0%	62%	12%	0%
rear facing baby seat	13%	0%	0%	11%	0%	0%
no restraint/cheated	1%	8%	11%	1%	5%	11%
booster without sb	0%	0%	0%	0%	0%	0%
on lap	0%	1%	0%	0%	0%	0%
Total child passengers	657	308	121	137	59	18

	TV 08			TV 09		
	0-4	5-9	10-13	0-4	5-9	10-13
seat belt	5%	31%	79%	6%	54%	76%
booster with sb	13%	46%	3%	21%	38%	16%
child seat	56%	1%	0%	57%	0%	0%
rear facing baby seat	20%	0%	0%	11%	0%	0%
no restraint/cheated	2%	15%	18%	2%	8%	8%
booster without sb	3%	6%	0%	0%	0%	0%
on lap	0%	0%	0%	2%	0%	0%
Total child passengers	179	95	26	170	51	15

**Table 3.6: Driver mobile phone use by survey**

	Driver using:	DfT BU	DfT TV	TV 08	TV 09
car	hand-held	1.4%	1.8%	1.1%	1.1%
	hands-free	0.8%	1.0%	1.6%	0.8%**
taxi	hand-held	2.8%	7.4%	1.4%	0.9%
	hands-free	1.1%	1.8%	2.3%	0.0%**
van	hand-held	2.2%	1.9%	4.6%	2.4%**
	hands-free	0.7%	0.5%	3.8%	0.8%**

\*\* $p < 0.01$

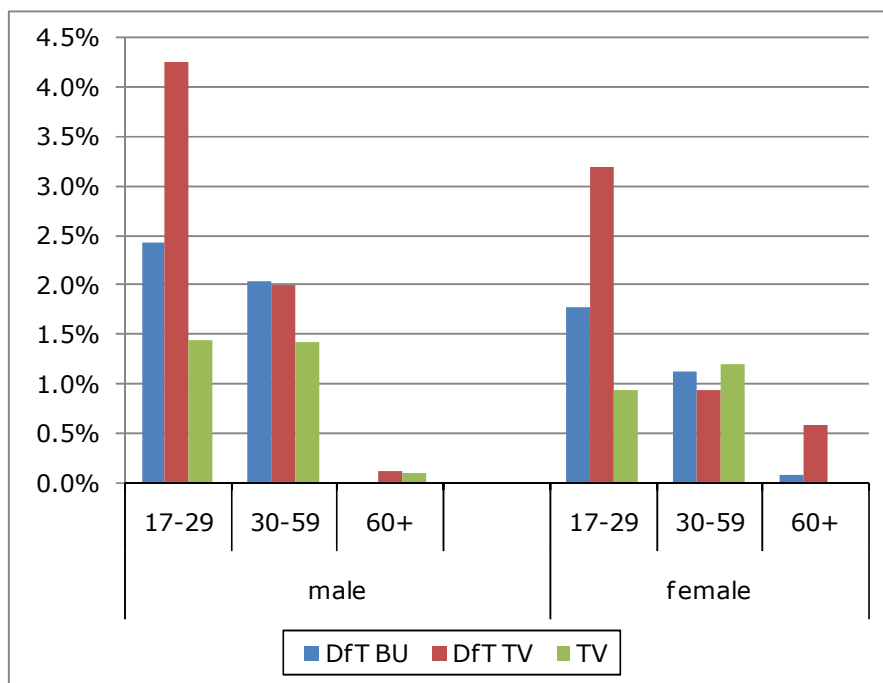


**Table 3.7: Car driver hand-held mobile phone use by gender and age**

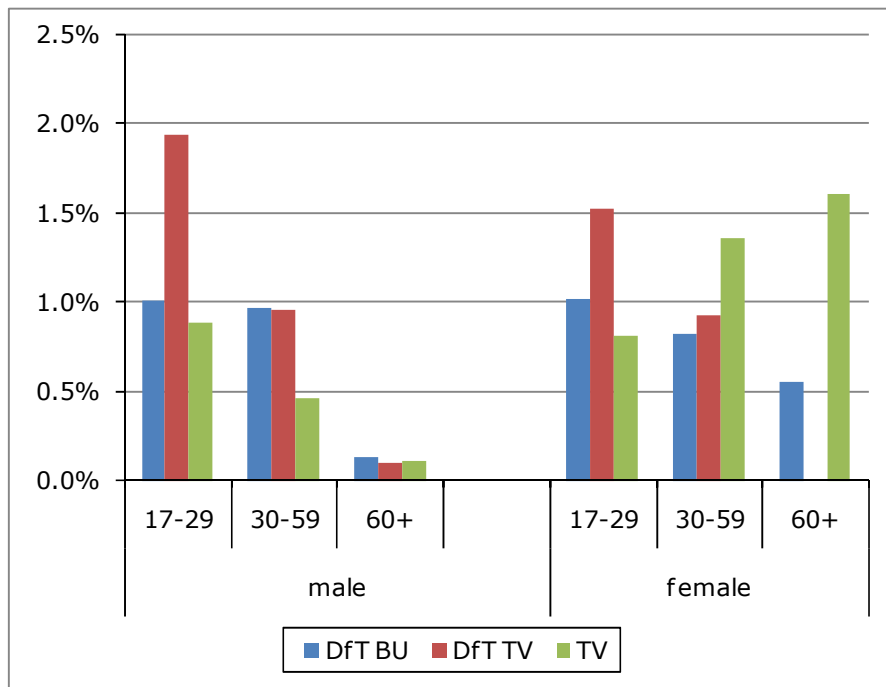
		DfT BU	DfT TV	TV 08	TV 09
male	17-29	2.4%	4.3%	1.9%	1.5%
	30-59	2.0%	2.0%	1.4%	1.4%
	60+	0.0%	0.1%	0.0%	0.1%
female	17-29	1.8%	3.2%	2.2%	0.9%
	30-59	1.1%	1.0%	0.5%	1.2%
	60+	0.1%	0.6%	0.0%	0.0%

**Table 3.8: Car driver hands free mobile phone use by gender and age**

		DfT BU	DfT TV	TV 08	TV 09
male	17-29	1.0%	1.9%	1.7%	0.9%
	30-59	1.0%	1.0%	2.3%	0.5%
	60+	0.1%	0.1%	1.1%	0.1%
female	17-29	1.0%	1.5%	1.4%	0.8%
	30-59	0.8%	0.9%	0.9%	1.4%
	60+	0.6%	0.0%	0.0%	1.6%



**Figure 3.4: Hand-held mobile phone use by car drivers in TV survey**



**Figure 3.5: Hands free mobile phone use by car drivers in TV survey**

## 4 Conclusions

This report has presented the main findings of the survey that was carried out on behalf of Thames Valley Safer Roads Partnership in March 2009, and compared with corresponding results from the previous Thames Valley survey in 2008 and the DfT seat belt survey that was carried out in Autumn 2008.

Over 4,000 vehicles were surveyed at the five sites in 2009. Seat belt wearing, demographics and child car seat use were collected for over 5,600 occupants. The proportion of car drivers observed wearing seat belts in the Thames Valley survey rose slightly to 96% in 2009, which is the same level as found by the DfT survey. Seat belt wearing rates for car passengers and taxi passengers all rose towards the levels found by the DfT results in 2009, and van driver rates rose above. The proportion of taxi drivers and van passengers wearing seat belts were lower in 2009 than in 2008.

The proportion of drivers using hand-held or hands free mobile phone was lower in 2009 than in 2008. Hands free and hand-held mobile phone use by car and taxi drivers was lower in the TV survey than the DfT survey. However, the level of mobile phone use by van drivers (hands free and hand-held) was higher in the TV survey than the DfT survey.

## **Acknowledgements**

The work described in this report was carried out in the Statistics and Engineering Group of the Transport Research Laboratory. The authors are grateful to Jeremy Broughton who carried out the technical review and auditing of this report.

## **Reference**

LK Walter, S Buttress, G Buckle (2008). Thames Valley Seat Belt Survey. TRL Published Project Report, PPR 373. Transport Research Laboratory: Crowthorne.



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ISSN 0968-4093

ISBN 978-1-84608-804-9



9 781846 088049

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