



SAFETY PERFORMANCE OF TRAFFIC MANAGEMENT AT MAJOR MOTORWAY ROAD WORKS

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This report reviews the fourth motorway safety performance study carried out on behalf of the Highways Agency. Previous studies were carried out in 1982, 1987 and 1992. The studies have provided the Agency with key information on the safety of traffic management at major works.

This study has monitored 29 major motorway road work sites over the period November 2001 to July 2003. The sample covered approximately 730km of road, over a total of 3,340 days which equates to an exposure of 4,176 million vehicle kilometres. This level of exposure is approximately 3.5 times greater than the study carried out in 1992. For this exposure, 423 Personal Injury Accidents (PIAs) were recorded at the work sites and, for control, data was also collected for 1187 PIAs over the previous 3 years at the sites when no road works were present.

The study showed that there was no significant difference in the rate of PIAs when road works were present on the motorway. When compared with the 1992 results the 'with' works PIA rate has reduced from 0.174 to 0.101. This figure is same as the national average PIA rate for motorways (0.10) to two decimal places. It is thought that this reduction is due to the many safety measures and practices introduced by the Highways Agency over the past decade. These measures have increased driver awareness and improved driver behaviour through road works to the extent that generally even where the measures have not been introduced the PIA rate has reduced to a figure close to the National average.

The severity and number of casualties were also reduced with the presence of road works. The cumulative cost associated with each fatal, serious and slight PIA was calculated for the 'with' and 'without' works periods using figures from the Highways Economic Note 1 (HEN1). Overall there were less fatal and serious PIAs in the 'with' works period and this resulted in a reduction in PIA costs of £292,860.

No significant difference was observed in the PIA rate for sites with and without speed cameras. However, there was a 2% reduction in the proportion of Fatal PIAs and a 1% reduction in the proportion of Fatal and Serious PIAs recorded at the sites with speed cameras, when compared to the without works period.

The most frequent PIA types observed at the works sites were Multiple Vehicle Shunts, Multiple Vehicle (Overtaking errors) and Single Vehicle (hit other object) accidents.

Factors such as weather, road conditions, number of vehicles involved and lighting conditions were also analysed but all did not have a significant effect on road work PIAs.

The conclusion of this study is that due to the increased number of safety measures and practices over the past decade, the risk (in terms of PIAs) when road works are present is similar to the risk when no road works are present. However, it should be noted that this study has only investigated PIAs and there is no evidence to suggest that the trend has been the same for damage only accidents. The inclusion of damage only accidents in such a study would be practically impossible as no adequate and formal records of damage only accidents on the roads are recorded. A review of the Highways Agency's HAWSAR records indicate that there have been very few reported workforce accidents associated with the 29 road work sites.

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