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September 2012

Reports Published – September 2012

PUBLISHED PROJECT REPORTS

PPR620 Analysis of police collision files for pedestrian fatalities in London, 2006-10
by J Knowles, L Smith, R Cuerden, E Delmonte
Price £45, code 4X)

PPR628 Development and validation of algorithms for the automatic detection of fretting based on multiple line texture data Research into pavement surface disintegration: Phase 2 - interim report
by S McRobbie, J Iaquina and A Wright (TRL), P Trumper and J Kennedy (Jacobs)
Price £30, code 2X)

Prices current at September 2012

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Summary September 2012

Published Project Report PPR620

TRL

Pages: 146, ISBN: 978-1-908855-16-9

This study analysed 197 police fatal files where a pedestrian was killed in London in the period 2006–2010, with the overall aim of providing a better understanding of how fatal pedestrian collisions in London could be prevented. The files were broadly representative of fatal pedestrian collisions in London over the period.

The fatal files were coded into a database based on Haddon's Matrix, which included items related to the environment, the pedestrian, vehicle(s) and their driver(s)/rider(s) in terms of pre-event, event and post-event.

The project identified the factors or primary interventions, which if they had been in place may have prevented the collision occurring (primary prevention). Further, the project considered the causes of the injuries and where practical identified the secondary interventions, which if they had been in place may have reduced their severity.

Several groups of fatalities were identified as being of special interest because of particular characteristics of the collisions. These groups generally accounted for a substantial proportion of the fatalities. In each case, the collisions within each group were analysed in terms of who was involved, the contributory factors, injuries and possible countermeasures.

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Transport for London, Delivery Planning - Surface Planning

Summary September 2012

Published Project Report PPR628

TRL

Pages: 46, ISBN: 978-1-908855-18-3

The current TRACS fretting parameter is known to have some shortcomings. To overcome these number of intermediate parameters have been developed which are designed to be surface type independent, and which make use of data collected across the whole survey lane. Each of these parameters provides some useful information about the condition of the pavement surface in ways which are closely related to the presence of fretting, but none of the parameters, taken in isolation, can be relied upon to give a definitive answer to the question of whether or not a particular length of the network is fretted.

The work described in this report discusses the intermediate parameters, and how they can be combined, in a simple and practical way, to give a final output parameter which can be used by the engineers responsible for planning and performing the maintenance of the Highways Agency network. The parameter has been designed, and is suitable, for use at a network level, rather than for scheme level investigations, and makes use of some assumptions about the likely characteristics of fretting on the Highways Agency network.

The model makes use of a methodology in which the pseudo-texture characteristics of a short, local length of the pavement are compared with the pseudo-texture characteristics of a much larger surrounding, global length of pavement. The methodology essentially looks for localised lengths where the surface texture appears rougher than the surrounding length. The method has known weaknesses in a number of situations, however, it is not anticipated that situations likely to cause such issues will be frequently encountered on the Highways Agency network.

Discussions of the agreement between the reference data and the algorithm output are presented, as are some specific in depth investigations on selected sites of interest. Additionally, some evidence is provided of the reproducibility of the intermediate parameters, regardless of whether the raw data has been collected using HARRIS1 or HARRIS2. The output model is presented, along with a recommendation that the performance of the model and the intermediate parameters be reviewed following some network wide experience and feedback.

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