

Developing safer roads signs using behavioural science: A ‘slippery’ example

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Currently drivers are warned about areas of potentially lower skid resistance by the WR3 or TR2 road signs; however, research has suggested that these are not well understood. In the interests of reducing risk to drivers in such areas, it was therefore important for the Transport Agency to develop static slippery road surface (SRS) signage that was both understandable and cost-effective. To do so, the Transport Agency took the innovative step of engaging behavioural scientists to examine both drivers’ understanding of, well as their behavioural responses to, SRS signage. The research team employed an iterative design process, beginning with a literature review in which the ergonomic and psychological factors influencing road signage effectiveness in relation to comprehension and behavioural response were identified. Alternative temporary warning signage, designed in accordance with these factors was then developed. This alternative temporary warning signage was then compared and judged against the current SRS signage through two interactive workshops, one with public representatives, followed by another with an expert panel. The outcomes of these workshops led the Steering Group to decide maintain the existing sign, but to select two alternative supplementary plates displaying “slow when wet” or “slippery when wet” for on-road testing. Metrocounters were used to measure the free vehicle speed associated with each of the signs at three different curves in both wet and dry conditions. In wet conditions, the presence of a sign resulted in a significant and practical speed reduction at all three curves. The sign that led to the greatest reduction in free vehicle speed differed at each of the curves; however, the sign with the “slow when wet” supplementary plate was most consistent. This project demonstrates the benefits of taking a behavioural science approach to developing effective signage for road networks.