

Making Roads Motorcycle Friendly

A New Zealand perspective

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Deaths and injuries for motorcyclists on New Zealand roads are an issue too large to simply ignore. For the period 2009 to 2014, on average, 320 people (drivers and riders) lost their lives on New Zealand roads and over 13,000 sustained injuries. Of those, motorcyclists comprised 14% of deaths (44) and 9% of injuries (1200). The size of the issue cannot be written off as statistical “noise” – action is required.

Safer Journeys

In May 2011, New Zealand signed up to the UN Decade of Action for Road Safety initiative, a world-wide effort to save 5 million lives over the ten year period 2011 to 2020. As part of its commitment, the Ministry of Transport (MoT) released their initial Safer Journeys strategy document, including the adoption of a Safe System approach to improving the safety of New Zealand roads

Safer Journeys acknowledged the risks associated with travel on the New Zealand road network and encouraged the sector to undertake improvements.

In support of the Safer Journeys strategy, the MoT released its Safer Journeys 2011–2012 Action Plan, which reinforced the desired behaviours for the improvement of road safety and specifically identified motorcycling in NZ as an area for improvement. The action plan for 2013 to 2015 continued the specific support for safety performance improvements for motorcyclists. Initial discussions are under way for development of the next action plan with increased focus on motorcycle safety to further reduce fatalities and serious injuries on the New Zealand network.

The Guides

As part of its actions under the Safer Journeys strategy, the NZ Transport Agency has produced three guides. The *High Risk Rural Roads Guide* and *High Risk Intersections Guide* deal predominantly with the broader aspects of road safety on the New Zealand road network.

The third document in the series, *Safer Journeys for Motorcycling on New Zealand Roads* (FIGURE 1), is specifically targeted at the risks faced by motorcyclists using the network. It has been developed to provide road authorities, practitioners and policy makers with best practice advice to help identify, target and address key road safety issues on high-risk motorcycle routes in New Zealand.

It includes methods to assess and measure personal risk or crash rate (a measure of the number of high-severity crashes, per 100 million vehicle kilometres of travel on the road) and collective risk or crash density (a measure of the number of high severity (fatal and serious) crashes, per kilometre of road per year).



FIGURE 1 Safer Journeys for Motorcycling in New Zealand (cover)

In addition, it provides a range of countermeasures to assist road designers and engineers in developing appropriate best practice treatments to address road

sections that are considered high-risk for motorcyclists.

The guide primarily focuses on safe roads and roadsides. However, acknowledging that this is only one of the four pillars of the Safe System approach, the guide also recognises that safe speeds, safe vehicles and safe road use are needed to create a Safe System for motorcyclists. The guide outlines the issues associated with each of these elements and identifies possible treatments to address them.

Motorcycle Safety Advisory Council (MSAC)

While the *Safer Journeys for Motorcycling on New Zealand Roads* guide provides a tool for risk identification and mitigation, there was also a need to address the investment into infrastructure improvements for motorcyclist safety.

In 2011, The Minister for the Accident Compensation Corporation (ACC) set up the Motorcycle Safety Advisory Council (MSAC) to administer the Motorcycle Safety Levy (MSL) funds collected through motorcycle registrations. The \$30 levy (per registered motorcycle) generates approximately \$1.8M per year, specifically targeted towards the improvement of motorcyclist safety on New Zealand roads.

MSAC's role is to identify opportunities for investment of the MSL funds, recommend such activities to ACC and ensure it is utilised on initiatives that will actually make motorcycling on New Zealand roads safer.

To inform the sector of risks and myths related to motorcycling, MSAC and the Transport Agency both fund (singly and jointly) research activities specifically related to motorcycle and motorcyclist safety. MSAC is currently collating much of this information for presentation on its website (msac.org.nz).

Two research areas that have been particularly emotive are the interaction of motorcyclists and wire rope safety barriers (WRSB), and the affect of audio profile tactile line markings (ATP or "rumble strips") on motorcycle stability.

In both cases, the research does not support the widely held (and erroneous) views of some motorcyclists. WRSB is no more dangerous than other currently used road safety barrier systems (notwithstanding that all road safety barrier systems are a potential hazard for motorcyclists). ATP is no more hazardous than other road

marking materials (notwithstanding that all road markings can be more slippery when wet).

Motorcycle Black Routes

In partnership with the Transport Agency, MSAC has worked to identify so-called “motorcycle black routes” and target treatments to improve the safety performance of the routes for motorcyclists. Identifying these routes also involves consultation with motorcycle riders and clubs to ensure the popular routes are able to be treated which can be challenging. To ensure all stakeholders understand the intent is safety improvement, and not enforcement, a degree of trust and transparency is required.

Initially three “black routes” were identified. The proposed safety works on these routes were to be funded by the Transport Agency as “demonstration projects” as part of their commitment to the Safer Journeys strategy. The 3 routes were:

- a) State Highway (SH) 75 from Christchurch to Akaroa;
- b) SH2 Rimutaka Hill; and
- c) SH2/SH25/SH25A/SH26 Southern Coromandel Loop.

However a) and b) have had to be deferred. The opportunity to improve SH75 was lost due to the February 2011 Christchurch earthquake, which affected the road, but more understandably diverted available resources in the region. Similarly, improvements to the Rimutaka Hill road (SH2) were deferred pending completion of the Muldoon’s Corner project. Thankfully this has also improved this portion of the route and further safety improvements have also been made as part of the Transport Agency’s ongoing safety works programme.



FIGURE 2 High Risk Route sign on SH2 Rimutaka Hill

In addition, motorcycle specific “high risk route” safety signage (FIGURE 2) has also been installed on the Rimutaka Hill road with a structured survey to evaluate riders’ and other road users on their understanding of these signs. This work is being undertaken by Opus Research on behalf of MSAC.

Southern Coromandel Loop Project

Due to the delays on the other two projects, the Southern Coromandel Loop project was progressed ahead of schedule. This has proved to be a challenging but rewarding project for those involved. Much of the work undertaken involved common treatments such as corner treatments for sightline improvements, road safety barrier installation, shoulder sealing and signage improvements. There were also some less common treatments applied, including construction of helicopter landing pads to improve medical response times and installation of perceptual countermeasures (PCMs) on selected tight bends (Error! Reference source not found.).

The use of PCMs is not a new concept, but their application on motorcycle routes is less common. The Southern Coromandel Loop project countermeasures have been installed at curves where fatal motorcycle crashes have occurred. Lane position and motorcycle speed information has been gathered pre-installation by Hamish Mackie (Mackie Research) and post-installation data is being gathered to assess the effectiveness of the treatments.



FIGURE 3 Perceptual Countermeasures and Helicopter Landing Area on Sothern Coromandel Loop

Making Roads Motorcycle Friendly

There are a number of higher level tools available for use in identifying and treating routes with low safety performance for motorcyclists. However, MSAC recognised there was a need for a more openly targeted, easy-to-read guide to the issues. Building on the work of their Australian sister agencies, MSAC asked the Transport Agency to prepare a New Zealand version of the successful *Making Roads Motorcycle Friendly* (MRMF, Figure 4) document using New Zealand specific examples of the common hazards. This document was published in September 2014 and is available from the MSAC website.

MRMF Seminar Series

To further reinforce the messages contained in the MRMF document, MSAC held a series of five half-day seminars across New Zealand. An open invitation to attend was sent to the consulting, contracting and local government sectors in New Zealand. The seminars, held in Auckland, Rotorua, Dunedin, Christchurch and Wellington during the week of 9 – 13 February 2015 were well attended by over 210 people.

At the seminars, the intent and content of the MRMF document were formally presented. This was followed by an open forum during which questions were answered by an “expert” panel comprising representatives from the Transport Agency’s engineering, motorcycle training and investment groups, along with a

motorcycle officer from NZ Police. To assess the effectiveness and impact of the seminar series, a formal assessment has been undertaken, including surveys of attendees and invited non-attendees. The survey will include reasons for non-attendance and impact on behaviour changes from the seminar learnings.



FIGURE 4 Making Roads Motorcycle Friendly (cover)

Moving forward

Without doubt there is still much work to be done. However it is hoped that the development of these tools and their introduction to the sector will raise awareness of the straightforward nature of many interventions for motorcyclist safety and the benefits that such works have for all road users.