




BP4: Specified Highway Remedial Measures

Reference: BP4 001	Title of Project:	Victoria Motorcycle Blackspot Program
Version: 1	Website:	Safety Programme Report: http://www.msf-usa.org/imsc/proceedings/b-Andrea-StrategicMotorcycleSafetyPrograminVictoriaAustralia.pdf
Brief Description of Project:	 <p><i>The Motorcycle Blackspot Program</i> The Victoria MBP is funded in part by the Motorcycle Safety Levy applied to all PTWs above 126cc (with some exceptions). The MBP has been divided into three areas; <i>loss-of-control</i> crashes, <i>intersection</i> crashes and <i>long routes</i> with high numbers of motorcycle crashes. The development of appropriate motorcycle <i>loss-of-control</i>, <i>intersection</i>, and <i>long route</i> treatments is based on the detailed investigation of sites, including the location of crashes, identification of contributing factors leading to crashes, site inspections by engineers and an experienced motorcyclist contractor (in the case of <i>loss-of-control</i> and <i>intersection</i> projects) taking into account motorcyclists' needs and riding behaviour. Sites meeting the crash criteria set out below are eligible for inclusion in the MBP.</p> <p><i>Loss-of-Control Sites:</i></p> <ul style="list-style-type: none"> • Metropolitan blacklengths – at least 3 <i>loss-of-control</i> motorcycle casualty crashes and a rate of 2 casualty crashes per kilometre over the last 5 years. • Rural blacklengths – at least 3 <i>loss-of-control</i> motorcycle casualty crashes and a minimum rate of 0.5 casualty crashes per kilometer over the last 5 years. • Blackspots (metropolitan and rural) – a minimum of 3 <i>loss-of-control</i> motorcycle casualty crashes over the last 5 years. <p>(Note: <i>Loss-of-control</i> blackspots include intersections and lengths of road less than approx. 500 metres.)</p>	

Intersection Sites:

- A minimum of 3 motorcycle casualty crashes over the last 5 years.

Long Routes:

- Routes for which the proportion of motorcycle casualty crashes exceeds 11% of all casualty crashes.

The treatment of *long routes* with high frequencies of motorcycle crashes under the MBP is based upon a blanket approach to provide the benefits of consistency of road treatment on substantial lengths of road. This contrasts to treatments for *loss-of-control* crashes and *intersection* crashes, which are based upon a more detailed analysis of individual motorcycle crash histories on shorter lengths of road.

The underlying objective of a *long route* treatment is to provide consistent engineering treatments for the whole length of road for the purpose of reducing casualty motorcycle crashes. This is to enhance predictable riding conditions along the entire route and reduce potential surprises for motorcyclists.

Unlike the eligibility criteria for *loss-of-control* and *intersection* projects, *long route* treatments have no requirement for minimum numbers of motorcycle crashes. Rather, eligibility is based on routes for which the proportion of motorcycle crashes to all crashes exceeds the State average of 11%. These routes are then prioritised according to a number of factors including:

- number of motorcycle crashes;
- proportion of motorcycle crashes relative to all road crashes;
- number of motorcycle crashes per kilometre; and
- treatment cost per motorcycle crash.

Site inspections of all candidate *loss-of-control* and *intersection* sites are undertaken by an experienced motorcyclist. The purpose of these inspections is to gain the perspective of a motorcycle rider with experience in crash investigation and / or professional road safety reviews of roads, on issues that may impact on rider safety.

	<p>Projects developed under the MBP aim to:</p> <ul style="list-style-type: none"> • <i>Enhance sight lines and delineation:</i> This may require the removal or relocation of plantings, poles or other fixed objects (e.g. bus shelters) on the road side, or the extension of no parking zones adjacent to intersections. The installation of lighting or improved road delineation (in particular edge lines, flexible guide posts and chevron alignment markers) may be required in specific circumstances. • <i>Control vehicle speed:</i> Treatments may include appropriate geometric modifications, the installation of warning and speed advisory signs, or other measures (e.g. the use of appropriately designed roundabouts) to reduce vehicle speed to safe levels at an intersection. • <i>Improve the road surface:</i> Measures may include improving skid resistance, correcting road camber, relocation of drains, correcting the level of service pit covers, repairing rough edges (including in close proximity to tram tracks), and replacing hazardous surface materials such as stone pitchers. • <i>Reduce the risk of crashes with fixed roadside objects:</i> Measures may include the provision of safe run-off areas by sealing shoulders and bell mouths, which will allow motorcyclists to recover from errors and prevent gravel from moving onto the road. Measures may also include the removal or relocation of hazardous objects, the substitution of roadside furniture that is less hazardous for motorcyclists, such as more frangible road signs and flexible plastic delineators on crash barriers. • <i>Provide effective signage or controls:</i> These may include roadside signage and on-road markings. In some circumstances traffic signal phasing may need to be adjusted to permit sufficient time for traffic to clear the intersection. At particularly busy intersections, crash experience and other evidence may indicate that the installation of a fully controlled right turn phase is warranted. • <i>Manage traffic flows:</i> May be assisted by the prohibition of right hand turns, installation of traffic islands to guide right turning traffic, or installation of advanced warning signs where road or intersection conditions are not readily perceptible to riders (e.g. to facilitate orderly lane changing).
<p>Monitoring Data:</p>	<p>A preliminary evaluation conducted in March 2006 showed an indicative 38% reduction in motorcycle casualty crashes at the first 51 sites treated under the Motorcycle Blackspot Program. The evaluation was completed by Monash University.</p>

Results:	As at the end of July 2007, 95 projects have been completed under the MBP. An additional 17 projects have recently been approved and are expected to be completed by June 2008. The 112 projects currently in the MBP have a total value of about \$11.6 million. The estimated Benefit Cost Ratio of all projects in the Motorcycle Blackspot Program was 5.2 based on the calculated benefits derived for different treatments types implemented under blackspot programs for all road users.
Key Effective Conclusions:	<p>The indicative 38% reduction in motorcycle casualty crashes is evidence that the systematic and innovative approach to road improvements for motorcycle safety being taken in Victoria is working.</p> <p>The challenge of delivering cost effective results at junctions in urban locations has been broken down into the following key actions:</p> <ul style="list-style-type: none"> • reduce conflict points; • reduce the severity of crashes; • increase the conspicuity of motorcyclists; • improve the surface; and • provide a more forgiving environment for the rider.
Projects for Comparison:	UK IHIE Motorcycle Guidelines (BP2 012).
Justification:	<p>The Victoria MBP sets out a clear protocol using collision data to identify PTW 'blackspots' and to monitor the effectiveness of measures applied.</p> <p>The initiative appears to meet the eSUM objective for WP3, BP4 in offering the potential for reduction in risk of collision through targeted engineering measures.</p>