



# Queensland Motorcycle Safety Strategy

2009 – 2012







## Acknowledgements

On 28 April 2008, Queensland Transport released the *Motorbike Safety in Queensland – Consultation Paper*<sup>1</sup>. The consultation paper proposed 16 initiatives to deal with known motorcycle safety issues. More than 2300 online and written responses were received from motorcyclists and other road users, organisations representing motorcyclists, trainers, manufacturers and retailers, and businesses using motorcycles. Workshops were held during April with the Motorbike Safety Working Group, the Queensland Road Safety Committee, and the Q-Ride Registered Service Providers.

Extensive comments were provided on the 16 proposed initiatives, and other alternatives were suggested. There was considerable comment about drivers not looking out for motorcyclists, or riders not being visible to car drivers. All responses were collated by road safety researchers, Associate Professor Barry Watson and PhD student Darren Wishart of the Centre for Accident Research and Road Safety (CARRS-Q). Two consultation reports were produced and are published online at: [www.transport.qld.gov.au](http://www.transport.qld.gov.au)

Queensland Transport thanks the members of the Motorbike Safety Working Group, the Queensland Road Safety Committee, and the Q-Ride Registered Service Providers for their contribution to the development of the Strategy.

Queensland Transport would also like to thank the motorcyclists, organisations and the general community who shared their views on how motorcycle safety could be improved in Queensland.

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<sup>1</sup> *Motorcycle Safety in Queensland – Consultation Paper* is available from: [www.transport.qld.gov.au](http://www.transport.qld.gov.au)

# Context

Motorcycle and moped riding increased in popularity in Queensland during the past five years. More people are using motorcycles for regular commuting and for recreation, leading to a steady increase in motorcycle registrations and the number of people obtaining a motorcycle licence<sup>2</sup> (Figure 1).

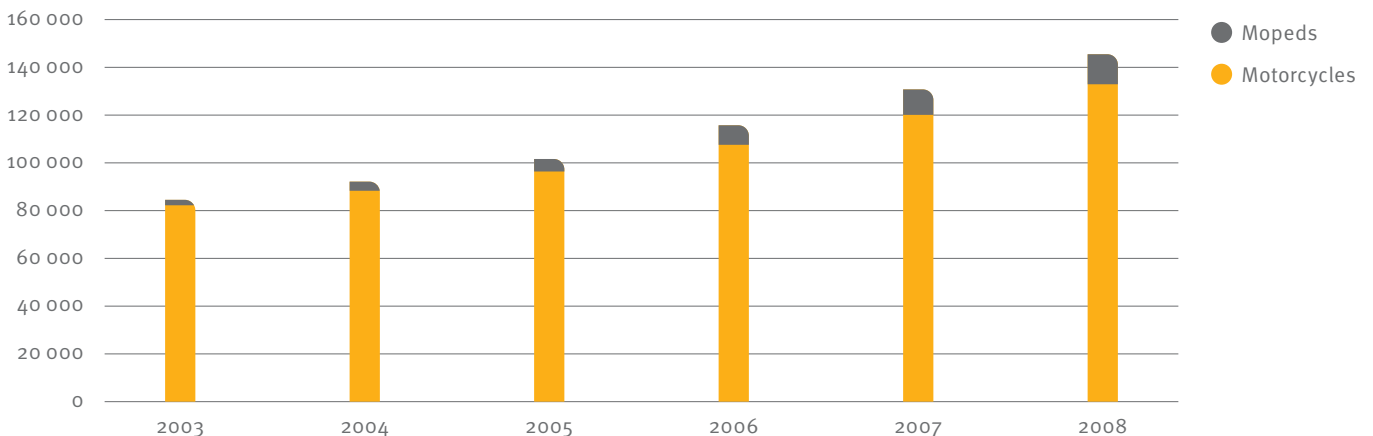
In Queensland (as at 31 December 2007)<sup>3</sup>:

- there were 138 722 registered motorcycles (4% of all vehicles registered);
- since 2003, the number of motorcycle registrations increased by 56%, more than three times the rate of increase for cars;
- over 12 000 mopeds were registered<sup>4</sup> (9% of all motorcycles registered), an increase of 150% from 2004;
- there were 570 649 people licensed to ride motorcycles (20% of all current licence holders); and
- more than four people held a motorcycle licence, for every motorcycle registered.

Motorcycles are an alternative to car travel and public transport. Aside from the enjoyment of riding, there are broader benefits, such as reducing road congestion and potentially lowering greenhouse gas emissions. With constant economic changes and a greater interest in more cost efficient forms of transport, the growth in motorcycle use is expected to continue.

However, motorcycle riding remains a higher risk activity than using any other motor vehicle. As the number of motorcycles has increased, so has the number of motorcyclists involved in fatal or injury crashes. This is happening in Queensland and across Australia.

Figure 1: Motorcycle and moped registrations in Queensland at 30 June



<sup>2</sup> Data Analysis Unit, Queensland Transport.  
<sup>3</sup> Data Analysis Unit, Queensland Transport.

<sup>4</sup> **moped** means a motorbike with an engine capacity of not more than 50mL; and that has a manufacturer's top rated speed of not more than 50km/h; and is not a bicycle (Schedule 7, *Transport Operations (Road Use Management – Driver Licensing) Regulation 1999*). Scooters with a higher engine capacity are defined as motorbikes.















- Collaborate with the Motor Accident Insurance Commission (MAIC) to commission and conduct motorcycle safety research, including education and training programs for riders.
  - Continue road maintenance and infrastructure projects aimed specifically at enhancing motorcycle safety, including the Motorcycle Mass Action Program (*Safer Roads Sooner* package managed by the Department of Main Roads).
  - Participate in the development of a national guideline for protective gear for motorcyclists, and once complete, promote to motorcyclists.
  - Conduct research to obtain relevant and accurate data on the use of mopeds and motor-trikes (three wheel motorcycles), including crash involvement.
  - Research best practice moped and motor-trike training and licensing options.
  - Research the risks associated with dormant and returning riders, and investigate alternatives to encourage appropriate skills refreshment for riders returning after an extended break from riding.
- further training for learners, including consideration of hazard perception testing;
  - provisional stage(s); and
  - restricting the minimum and maximum learner licence periods.
- Investigate the benefits of introducing a zero alcohol limit for all motorcycle riders.
  - Investigate the feasibility of providing online registration of Q-Ride competency declarations.

Actions for continued monitoring and/or investigation throughout the term of the Strategy and beyond are to:

- Investigate improvements to the quality of motorcycle crash and exposure data.
- Monitor developments at the national level for alternative methods to identify speeding motorcyclists (including consideration of Radio Frequency Identification Devices and front number plates) and investigate alternative technologies.
- Participate in the development of an Australian Standard or rating system (possibly based on the European Standard) setting technical specifications for motorcyclist gear prescribed as 'protective'.
- Conduct on-going research into motorcycle rider behaviour.
- Monitor the development of advanced safety technology and promote features showing evidence of road safety benefits via public education campaigns.
- Monitor and evaluate the effectiveness of the Q-SAFE and Q-Ride motorcycle licensing systems in Queensland.
- Monitor both Australian and international developments relating to targeted road safety improvements for motorcycle safety.

The Government is committed to enhancing the motorcycle graduated licensing system as well as continuing to take tangible steps to improve motorcycle safety. However, a number of actions require further research before developing initiatives for implementation during the term of the Strategy. These actions are to:

- Investigate further enhancements to the motorcycle graduated licensing system including:
  - pre-learner training;





### Learner Approved Motorcycle Scheme (LAMS)

RE licence holders are currently restricted to riding motorcycles with an engine capacity of 250mL or less. The limit was introduced many years ago, when engine capacity generally related to the power of the motorcycle. This is no longer the case as advancements in engine technology mean that some modern



motorcycles meeting the 250mL restriction are very powerful and unsuitable for novice riders.

A power-to-weight ratio provides a better indication of a motorcycle’s potential performance than engine capacity alone<sup>22</sup>. A number of Australian jurisdictions, including New South Wales, Victoria, South Australia, Tasmania and the Northern Territory have introduced a Learner Approved Motorcycle Scheme (LAMS). This scheme has replaced the traditional 250/260mL restriction with one based on a maximum power-to-weight ratio of 150kW/t and an upper engine capacity of 660mL. Introducing the combined power-to-weight/ engine capacity restriction into Queensland would provide RE licence holders with access to a much larger range of motorcycles (in New South Wales, there are more than 300 learner-approved motorcycles, in addition to most of the motorcycles up to 250mL<sup>23</sup>). The introduction of a LAMS restriction will:

- more comfortably accommodate larger riders (a major criticism of the 250mL restriction);
- ensure motorcycles are not physically too large or too heavy for novice riders;
- provide a more progressive step-up to larger capacity motorcycles;
- remove the urgency for riders to progress to an unrestricted class R licence because they can ride a higher capacity motorcycle from the outset; and
- allow riders to train and gain experience on a motorcycle that they are more likely to ride in the longer term.

<sup>22</sup> Haworth and Mulvihill (2005), Review of motorcycle licensing and training, Report No 240, Monash University Accident Research Centre.

<sup>23</sup> Six 250mL ‘race replica’ motorcycles are excluded from the LAMS list and are not permitted for novice riders.



## Consumption of alcohol at any level can have a greater impact on motorcycle riders than on car drivers.<sup>24</sup>

### Alcohol restrictions

Consumption of alcohol at any level can have a greater impact on motorcycle riders than on car drivers<sup>24</sup>. Riding a motorcycle places different and additional demands on the rider, such as coordination, balance, and concentration<sup>25</sup>. Motorcycles are less stable and more sensitive to rider dexterity and road conditions<sup>26</sup> and in the event of a crash, more serious injuries are sustained by a motorcyclist, compared to a car driver. Any impairment that reduces a rider's ability to cope with these demands can significantly increase crash risk.

The potential impact of alcohol on a rider's crash risk is not isolated to young motorcyclists. In one study, experienced motorcyclists riding on a closed course showed impairment of riding performance, including slower reaction times, passing at a closer distance to hazards, with faster maximum speeds and increased variability in speed at low alcohol levels<sup>27</sup>. The researchers proposed that larger impairments could be expected for less experienced riders, on less familiar roads, with more complex and novel tasks. Experienced motorcyclists using a motorcycle simulator more frequently left the roadway at 0.038–0.059 blood alcohol level<sup>28</sup>.

Riders are most likely to crash in their first year of gaining a motorcycle licence, with the crash involvement rate declining significantly in subsequent years<sup>29</sup>. This high crash rate in the first year is not exclusive to young people, as

the 30–49 age group makes up 36% of licensed first year riders involved in fatal crashes, where age and licence history was known.

Consumption of alcohol even at low (legal) levels has been shown to have a larger impact on young licence holders than on older road users<sup>30</sup>. For this reason, a zero blood/breath alcohol limit applies to all learner and provisional drivers and riders in Queensland under the age of 25 years. Currently, learner and provisional drivers aged 25 years or older must comply with the general alcohol limit (0.05).

A number of Australian jurisdictions require newly licensed riders to comply with a zero alcohol limit. First year RE and R licence holders in Queensland are already subject to a restriction on carrying passengers for the first 12 months, recognising that their skills are still developing. The zero alcohol restriction will apply in Queensland to all newly licensed motorcyclists, regardless of age, recognising the risks that novice riders face until they have accumulated sufficient riding experience. It is expected that this new restriction will commence in late 2009.

24 Mannering and Grodsky (1995), Statistical analysis of motorcyclists' perceived accident risk, *Accident Analysis and Prevention*, 27(1): 21-31.

25 Haworth, Ozanne-Smith, Fox and Brumen (1994), Motorcycle-related injuries to children and adolescents, Report No 56, Monash University Accident Research Centre.

26 Peek-Asa and Krause (1996), Alcohol use, driver, and crash characteristics among injured motorcycle drivers, *Journal of Trauma – Injury Infection and Critical Care*. 41(6):989-993.

27 Creaser, Ward, Rakauskas, Boer, Shankwitz and Nardi (2007), Effects of alcohol on motorcycle riding skills, DOT HS 810 877, National Highway Traffic Safety Administration.

28 Colburn, Meyer, Wrigley and Bradley (1993), Should motorcycles be operated within the legal alcohol limits for automobiles, *Journal of Trauma – Injury Infection and Critical Care*, 35(2): 183-186.

29 Queensland Transport (2006), Response to Issues Paper No. 11 – *Inquiry into the Q-RIDE Rider Training Program*, [www.parliament.qld.gov.au/view/committees/documents/TSAFE/inquiry/Q-RIDE/Submissions/48a%20-%20Queensland%20Transport.pdf](http://www.parliament.qld.gov.au/view/committees/documents/TSAFE/inquiry/Q-RIDE/Submissions/48a%20-%20Queensland%20Transport.pdf)

30 Mayhew and Simpson (2001), Graduated licensing for motorcyclists, Traffic Injury Research Foundation.

