Inquest into the death of Hossam Mohammed Elshazly

Hossam Mohammed Elshazly died on 17 January 2009 from multiple injuries after he fell from his bicycle and was run over by a truck's trailer at the roundabout intersection of the Captain Cook Highway and Trinity Beach Road near Cairns.

Coroner Kevin Priestly delivered his findings of inquest on 29 June 2011.

The Queensland Government responds to recommendations directed to government agencies at inquests by informing the community if a recommendation will be implemented or the reason why a recommendation is not supported. The departments named in this response will provide implementation updates until the recommendation is delivered. Further information relating the implementation of recommendations can be obtained from the responsible minister named in the response.

Recommendation 1

That Department of Main Roads establish a program to review the current design standards that are relevant to cyclist safety and to develop guidelines to assist traffic engineers and managers in assessing the need for, and when to retrofit, treatment options (risk mitigation measures) to existing infrastructure. The safety implications of changes to standards should be risk assessed and the treatment options costed.

Response and action: the recommendation is implemented.

Responsible agency: Department of Transport and Main Roads.

On 22 September 2015, the Deputy Premier, Minister for Transport, Minister for Infrastructure, Local Government and Planning and Minister for Trade and the Minister for Main Roads, Road Safety and Ports and Minister for Energy and Water Supply responded:

Austroads commissioned the project Treatments for Bicycles at Roundabouts which aims to develop criteria for when bicycle lanes should be included on roundabouts, understand whether and how cyclists use marked cycle lanes in roundabouts, and investigate whether the current roundabout design could be amended to better slow motor vehicles to improve the safety of bicyclists and pedestrians. Upon completion of the Austroads project, the Department of Transport and Main Roads (TMR) commissioned GTA Consultants to develop a Queensland supplement to the Austroads guidelines for the retrofit of roundabouts for bicycle safety. This work was finalised at the end of June 2014. Targeted consultation then occurred with internal and external stakeholders and the final document endorsement process was initiated in December 2014.

The final guidelines will be released as a technical note. Technical notes contain information relating to the department's technical documents, and should be read alongside the relevant standards, manuals or guidelines, which in this case are the *Road Planning and Design Manual*, *Manual of Uniform Traffic Control Devices* and the *Traffic and Road Use Management* manual.

The technical note will be endorsed by TMR's Chief Engineer. Once endorsed, the technical note will be made publically available through the Technical Publications page on TMR's website. The content will also be progressively integrated into the relevant sections of the *Road Planning and Design Manual*, *Manual of Uniform Traffic Control Devices* and the *Traffic and Road Use Management* manual. Pending endorsement, the technical note will be published in July as part of the next

technical publications release, and the subsequent integration will occur over the following 12 months.

On 11 February 2016 the Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply and the Minister for Transport and the Commonwealth Games responded:

The final technical note (Technical Note 136 - Providing for Cyclists at Roundabouts) was endorsed and published in August 2015 and is publically available through the technical publications page on the TMR's website.

The content in the technical note will be progressively integrated into the relevant sections of the TMR *Road planning and design manual*, *Manual of uniform traffic control devices* and the *Traffic and road use management manual*.

Recommendation 2

That the guidelines so developed be disseminated to the regions to assist traffic engineers in assessing and prioritising locations on their road network for cost/risk effective retrofitting to current standards. Regional traffic engineers and managers can then allocate available funding to the highest priorities as well as apply for further funding if the level of risk supports that application.

Response and action: the recommendation is implemented.

Responsible agency: Department of Transport and Main Roads.

On 22 September 2015, the Deputy Premier, Minister for Transport, Minister for Infrastructure, Local Government and Planning and Minister for Trade and the Minister for Main Roads, Road Safety and Ports and Minister for Energy and Water Supply responded:

The draft guideline was disseminated for peer review within the Department of Transport and Main Roads (TMR) and selected local government representatives and feedback addressed.

The bicycle planning and design training courses delivered by TMR's Traffic Engineering Unit to designers, engineers and planners will incorporate new content related to roundabout safety assessment guidance. This course is delivered four times per year.

On 11 February 2016 the Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply and the Minister for Transport and the Commonwealth Games responded:

TMR's regions were made aware of the release of the technical note, as were all subscribers to the department's RSS[1] feed for the update of technical publications. The bicycle planning and design training courses delivered by TMR's Traffic Engineering Unit to designers, engineers and planners incorporates new content related to roundabout safety assessment guidance. This course is delivered four times per year.

The safer roads sooner vulnerable user sub-program provides a funding source to treat bicycle safety issues. It includes provision for proactive treatment of safety issues and references the crash prediction models developed in response to recommendation three.

[1] RSS file contains details of the latest items available within a website.

Recommendation 3

The Department of Main Roads should explore whether there exists an opportunity to incorporate into Netrisk a module that would allow its key functionality to apply to the state of infrastructure with safety implications for cyclists and to prioritise the need for retrofitting as between particular locations.

Response and action: the recommendation is implemented.

Responsible agency: Department of Transport and Main Roads.

On 22 September 2015, the Deputy Premier, Minister for Transport, Minister for Infrastructure, Local Government and Planning and Minister for Trade and the Minister for Main Roads, Road Safety and Ports and Minister for Energy and Water Supply responded:

Implementation of the original recommendation to incorporate a module in Netrisk is no longer viable as the Department of Transport and Main Roads (TMR) is now adopting the Australian National Risk Assessment Model (ANRAM) to replace Netrisk. As this stage, a means to rate infrastructure specifically for cyclists has not yet been incorporated into ANRAM, so alternative means of proactively evaluating crash likelihood for cyclists have been developed.

TMR recently commissioned a project to develop a 'cycling crash prediction and risk assessment methodology'. The crash prediction models developed in this project have now been included in the Safer Roads Sooner minor works program technical guidelines, which provides TMR regional staff with a means to quantify potential risks for cyclists and prioritise these sites for treatment.

The 'cycling crash prediction and risk assessment methodology' project was peer reviewed by Griffith University. The review recommended further work to improve the robustness of the models. A traffic survey project is currently underway to capture additional data at 40 roundabout sites in order to provide the additional details required to develop a more robust risk assessment model. TMR will seek to have this work integrated into ANRAM in the future.

On 11 February 2016 the Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply and the Minister for Transport and the Commonwealth Games responded:

Implementation of the original recommendation to incorporate a module in Netrisk is no longer viable as TMR is now adopting the Australian National Risk Assessment Model (ANRAM) to replace Netrisk. At this stage, a means to rate infrastructure specifically for cyclists has not yet been incorporated into ANRAM, so alternative means of proactively evaluating crash likelihood for cyclists have been developed.

TMR commissioned a project to develop a 'cycling crash prediction and risk assessment methodology'. The crash prediction models developed in this project have been included in Appendix B of Technical Note 136 - Providing for Cyclists at Roundabouts. The appendix is published as a spreadsheet calculator which provides road designers and engineers with a means to proactively quantify the probability of cyclist crashes at a roundabout.

Ongoing refinement and improvement to the models will be required to reach a point where they are robust enough to be integrated into ANRAM.

On 8 July 2016 the Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply and the Minister for Transport and the Commonwealth Games responded:

TMR continues to improve the methodology until a point in time where a decision can be made about the integration of the models into the ANRAM.

On 14 May 2017 the Minister for Main Roads, Road Safety and Ports and Minister for Energy, Biofuels and Water Supply responded:

TMR continues to improve the crash prediction models that are currently available for use by practitioners and published in Appendix B of Technical Note 136 - Providing for Cyclists at Roundabouts. The models can be used to assess and prioritise proposals for new cycling infrastructure projects.

ANRAM is a project managed by TMR on Austroads' behalf. TMR will continue to advocate for the inclusion of cyclist safety modelling functionality into ANRAM when participating in Austroads' steering group activities for the ANRAM project.

On 26 February 2018 the Minister for Transport and Main Roads responded:

TMR frequently reviews and updates the processes and models it uses to identify high risk sites that need investigation and improvement. This applies for all road users, including cyclists. TMR works with other states and territories to continually develop Austroads' ANRAM which is used for analysis of crash risk across the major road network.

TMR uses the latest Austroads technical guidelines developed with its partners in other states, territories and New Zealand. These are supplemented by technical guidelines developed by TMR for use in Queensland. Some of this guidance is focussed specifically on the safety of cyclists. For example, appendix B of technical note 136 – Providing for Cyclists at Roundabouts provides models that can be used to assess and prioritise proposals for new cycling infrastructure projects.

TMR funds the retrofit of dedicated cycling infrastructure on routes identified as high priority in the principal cycle network plan priority route maps. Funding is allocated via the cycling infrastructure program to works on state controlled roads, and through 50/50 grants to local governments for works on local roads. Funding is prioritised through a multi-criteria analysis, including safety as a criterion. The Queensland Government has committed $182.5 million over the next four years through this program.