



Our ref: MC78469

13 NOV 2014

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Dear Dr Bean

Thank you for your letter to the Honourable Scott Emerson MP, Minister for Transport and Main Roads, about Bicycle Awareness Zones. The Minister has asked that I respond on his behalf.

The CBD Bicycle User Group (BUG) is a valued stakeholder of the Department of Transport and Main Roads (TMR), and is recognised for the very significant role it has in advocating for improved conditions for cyclists in Queensland's capital city. In your letter you have raised a number of issues and questions. Accordingly, this response has been broken into sections to address the broader issues and also to specifically answer the questions you have asked.

### **Installation of Pavement Markings and Signage on Moggill Road**

The installation of the Bicycle Awareness Zone (BAZ) symbol on Moggill Road is part of the Narrow Lane Treatment Trial of a new combination of Traffic Control Devices. The Moggill Road site was chosen as it was one of only two sites in Queensland that had a 'crash cluster' of overtaking bicycle crashes over the last five years. The trial is testing the BAZ symbol with the recently developed Warning Sign "Lane Narrows – Change Lane to Overtake Cyclists". As this was a road user behavioural response evaluation of a Traffic Control device, TMR chose not to publicise it, as it could have potentially skewed the results.

The preliminary results of this trial have showed that the pavement markings and signage combination did influence the lateral positioning of the vehicles passing the cyclists, resulting in a safer road environment and safer passing behaviours. However, these preliminary findings also recommended more in-depth research be undertaken into passing distances. This research is currently underway and should be completed by the end of this year.

As the preliminary results of the evaluation have indicated that this treatment has improved cyclist safety, TMR would be hesitant to remove it, at least until the more in-depth research is complete. Additionally, while it may be possible to include bicycle lanes on some sections of Moggill Road in its current state, the section near Blacon Street (to which you refer) is constrained by a narrow road corridor and adjoining properties. It would likely require major roadworks to narrow the median or realign the entire road. It would be likely to invoke significant costs such as utility relocations and land resumptions of private property, detrimentally impacting on local residents and traffic operations.

If you require further information on the evaluation of the Narrow Lane Treatment trial project, please contact Mr Mark McDonald, Senior Technologist (Bicycles, Pedestrians and Motorcycles), on 30666494 or by email at mark.d.mcdonald@tmr.qld.gov.au. As indicated previously, the final results of this trial should be available by the end of this year, at which time, the treatment will be reviewed.

## **Review and update of Technical Documents**

Thank you for your comprehensive and well researched feedback on Technical Note 39, in Volume 1 of the Traffic and Road Use Management (TRUM) manual. As with all TMR's technical documents, these are reviewed on a regular basis. TMR welcomes feedback of this nature from industry and user groups.

In your letter you asked if the timing of the update was in any way related to the TMR response to the Parliamentary Inquiry. You may note that in the 2009 edition of Technical Note 1.39 Section 10 Review of guidance note, states "*This note is to be reviewed 24 months from the date of adoption (May 2009) and every 24 months thereafter. The next review is due in May 2011*". Since 2009 the Traffic Engineering team had been compiling feedback from both industry stakeholders and users on required amendments. The review of the 2009 version began in 2011, and was scheduled for release in 2012. However, due to reallocation of resources to other projects, personnel were not able to be allocated to the publication of the updated version and therefore, it was delayed until 2013.

You also questioned the various inputs that informed the update. Research was commissioned by TMR to verify issues raised by stakeholders and recommend changes to this Technical Note. Early 2011, an evaluation was undertaken, as per the report cited in your letter "*An Evaluation of Bicycle Awareness Zones*". As part of the consultation process of this work, input was sought directly from the CBD BUG, as well as several other user groups, and state and local government agencies. These comments were taken into consideration and incorporated into this update.

In 2011, further research was undertaken by TMR into the treatment of 'narrow bridges' to enhance cyclists' safety. This research was undertaken at narrow bridges on the Sunshine Coast in conjunction with TMR's North Coast Regional office and the Sunshine Coast Cycling Alliance. The research found that: "*where the local network precludes the provision of alternative cyclist provision such as dedicated bicycle lanes, paths or alternative routes then the BAZ treatment will represent the most cost effective means of improving cyclist safety. It may be desirable to include a 'Watch for Bicycles' and/or 'No Overtaking on Bridge' sign in addition to the BAZ, perhaps using the former on longer bridges and the latter on short bridges (where compliance is more likely). The BAZ without edge line marking is the preferred treatment for narrow bridges*". At the time the update was being developed in early 2013, there was a review undertaken of publicly available research.

Others included were:

- Bicycle Rider Collisions with Car Doors, (2012) Road Safety Action Group Inner Melbourne
- Evaluation of Shared Lane Markings for Cyclists, (2013) Vicroads.

At the time of the update, there were considerable concerns of the risk of 'dooring' crashes resulting from the inappropriate use of this treatment and it was imperative to update the guidelines to remove the use of 'edgeline' BAZ. This removal has also been adopted by Brisbane City Council (BCC) in its recently updated standard drawings. The 2013 revision provided an opportunity to update the text to reflect appropriate usage of pavement marking as a traffic control device. It also ensured that the Technical Note reflected valid feedback from stakeholders, current road safety research and provided accurate instruction to road planners and designers. The changes that took place focused on:

- limiting the use of this treatment by providing a clearer specification of the situations under which this treatment may be used
- illustrating alternative treatments that may be safer and more appropriate
- document the findings of TMR research on the effect of this treatment on influencing motorist and cyclists lateral positioning, overtaking and passing behaviours on roads
- reflecting the findings of current research into minimising the risk of car 'dooring' crashes with bicycles.

The then 2009 version included traffic vehicle speed and volume guideline for the use of BAZ, which were taken directly from the Austroads Guide to Traffic Engineering Practice, Part 14 Section 4.2.3. In the 2013 version these guidelines were replaced with situation specific guidelines. These are listed in Section 2.3 and Section 2.4 of the 2013 version. TMR asserts that this strengthens the appropriate use of this treatment whilst clarifying the inappropriate use of the treatment. In situations where the traffic volume guidelines were exceeded by TMR, these were only ever done under 'trial' conditions and thoroughly evaluated.

Based on the research undertaken by TMR, there are some situations in which it is appropriate to use this as a treatment of last resort. TMR policy has not changed, and it is included in section 1.2 of the 2013 document, which states: "*The BAZ treatment attempts to promote safer road user behaviours, its ability to improve road safety is weak compared to dedicated facilities that separate motor vehicles and bicycles. BAZ treatments shall only be used as a treatment of last resort where the existing road surface cannot be manipulated to support visual of physical separation of motor vehicles and bicycles. BAZ must not be used as a mid-block treatment in greenfield or capital improvement projects*".

Your comments will be added to a register of changes and given due consideration when this Technical Note is next reviewed and updated. This Technical Note is to be reviewed 24 months from the date of adoption and every 24 months thereafter (subject to available resources).

If you would like further information on the technical document review process or the comments and research that was undertaken to inform the most recent update to TRUM 1.39, please contact Mr Michael Langdon, Senior Advisor (Cycling and Walking), on 30668965 or by email at michael.j.langdon@tmr.qld.gov.au.

Your final comment on the extensive use of BAZ treatment by BCC is an issue that you will need to take up directly with BCC. TMR has no ability to direct councils to install specific treatments on local government roads.

Thank you for raising your concerns about BAZ pavement markings on Moggill Road.

Yours sincerely

A handwritten signature in black ink, appearing to read 'APB', with a long horizontal flourish extending to the right.

Andrew Berkman  
**Chief of Staff**