

Meeting at 9:00 on 9 July 2015
Boardroom, NZTA National Office
Victoria Street, Wellington

Attending:

- Gerry Dance Principal Advisor, Network Optimisation, NZTA
- Tim Hughes National Traffic and Safety Engineer, NZTA
- Glen Koorey Civil and Natural Resources Engineering School, Cant.
- Claire Sharland Asset Manager Transportation, Taupo District
- Glenn Bunting Network Manager, NZTA
- Richard Bean Senior Engineer, NZTA
- Susan Lilley Transportation Planner, Dunedin City
- Ina Stenzel Principal Specialist - Walking and Cycling, AT
- Kathryn King Manager-Community Transport, Auckland Transport
- Kirsty Horridge Network Engineer, Hamilton City
- Steve Dejong Traffic Engineer, Christchurch City
- Paul Barker Safe and Sustainable Transport Manager, Wellington
- Wayne Newman RCA Forum Research & Guidelines Group (secretary)

Apologies:

- Dougal List National Manager Cycling, NZTA
- Sandi Morris Transportation Planner, Palmerston North City
- Clare Cassidy Planning Engineer, Transport, Tauranga City
- Mark Haseley Principal Transport Planner, NZTA
- Carl Whittleston Lets Go Project Manager, New Plymouth District

AGENDA

1. Introductions, apologies and emergency briefing
2. Actions arising from last meeting
3. Draft National cycling design guidelines
4. Selecting appropriate cycling facilities
5. Assessing options for safe system outcomes
6. Rural cycle safety research project
7. Sharrows on rural roads
8. Cost:benefit analysis of sharrow trials
9. Sharrow use: where is appropriate
10. Pavement markings
11. Review of TCD Manual to integrate cycling
12. RUR amendments progress
13. Standard facility descriptions
14. General Business
15. Next meeting

ACTIONS

- Glen to circulate recent research on perceptions of safety and effects on safety of different treatments, and Victoria Walks research report on shared paths.
- All those interested in participating in trial of pavement markings to identify sites and prepare applications this month.
- All to consider ideas for research projects for 4th-year civil engineering students, and provide to Glen Koorey.
- Wayne to circulate Opus cost:benefit analysis of Sharrow trials.

1. Introductions and apologies

Introductions and apologies were taken. Ina Stenzel was welcomed.

2. Actions arising from last meeting

Completed actions from the 7 May 2015 meeting were noted. Members had reviewed the proposed prioritisations for the design guide project and for the RUR review and provided feedback to the project team. Flow has finalised and released the Summary Report on the trials. AMIG formally submitted the report, conclusions and Flow's recommendation to NZTA. Tim Hughes had received a response from NZTA Environment Team on possible risks from glass additives to green surfacing.

Kathryn King reported that work is progressing on selecting suitable trial sites and designs for a trial application for the use of symbols marked on, or incorporated into, the pavement in place of signs for shared path transitions. Consultation with the Urban Design Team had resulted in agreement that Stage 2 of the Beach Road facility was not the best-suited trial site.

Gerry Dance reported that agreement had been reached between Flow, AT and NZTA for Flow to provide a proposal to the Transport Agency outlining tasks required to complete national best practice guidelines for sharrows.

3. Draft national cycling design guidelines

Gerry Dance reported on the progress of this project. The gap analysis report is drafted and ready to go to stakeholders for confirmation. As this would not be a full consultation, it is anticipated that a submissions period of three weeks would be sufficient.

The gap analysis has identified about 40 potential quick-wins able to be addressed within available budgets. Of these, nine relate to planning issues, 16 relate to Part 4 of the TCD Manual – Intersections, and 12 relate to Part 5 of the TCD Manual – Between intersections.

The intent is to provide the best practice as quickly as possible and this will require a pragmatic approach. This is likely to involve trials and reporting on

what works. The crucial first step is, therefore, to create a framework that can be populated to allow a problem to be defined and the potential solutions to that problem to be identified.

Tim Hughes will play an important part in peer reviewing solutions to ensure that they represent best practice. NZTA is expanding its resources to allow for the increased pre-design consultation and auditing of designs and implementation. Tim will review all of the proposed quick wins.

Tim raised the possibility of a more collegiate approach to peer review, with proposed solutions being circulated for technical feedback, rather than a formal central authority. The potential difficulty in this is that local authorities will not have the resources for this and there is no legal requirement, but it is roughly similar to the approach in place for new guidance documents to be included on the Register of network standards and guidelines.

There is also a recognised need for training and a one-day refresher course or 'upskilling workshop' is being considered in each of three venues later this year – Auckland, Wellington and Christchurch.

Cycling now represents one of six priorities for the Agency. The focus remains on urban cycling; although rural cycling is the greater safety issue, it is regarded as recreational, whereas urban cycling (rightly or wrongly) is regarded as being transport. The Agency will be not only concerned with the delivery of the infrastructure for cycling, but will have a role to promote cycling.

Discussion recognised the potential significant advantages that would follow from greater national support, and National Government support, in reassuring local politicians and businesses. Being able to propose solutions as part of a national trial and using trials as consultation and reassurance tools will also assist many local authorities.

Gerry noted that 10 million more trips by bicycle annually than at present are now expected by 2019, representing an increase of over 30% over barely more than three years.

4. Selecting appropriate cycling facilities

Tim Hughes led a discussion on updating guidance on the selection of facilities. He presented a fine-grained analysis matrix that considered the LOS offered in terms of safety, mobility, access, network coherence, directness, comfort, risk of delivery and attractiveness. Christchurch and Wellington are using very similar matrices. Auckland has not used anything as fine-grained to date.

The discussion noted that this form of matrix provides a framework and appropriate thresholds for components of a network, but does not provide a composite rating or route or corridor planning tools. For any wider network application, the same assessment would need to be made for each mode in each corridor.

Maintaining a consistent LOS along a corridor was recognised as an unachievable challenge in most NZ situations, because potential conflict zones at property accesses and intersections will vary the potential LOS greatly between points along the route. Providing an acceptable LOS within intersections and in potential conflict zones between different modes was recognised as a significant challenge.

Paul Barker noted that providing a safer alternative path for cyclists will usually reduce the available lane widths within urban roads. If the safer option is then perceived as providing a lower LOS than the traffic lane, because it is slower or interrupted by access crossings, cyclists will remain in the traffic lane and be more likely to be travelling at speed along the door-zone. Providing a safer option puts some of the intended users at greater risk.

Shared paths experience a very rapid deterioration in LOS for any mode as soon as the number of users of another mode increase. For cyclists, pedestrians impede optimum mobility, while cyclists are perceived as travelling too quickly and as a hazard to vulnerable pedestrians. Being able to assess the potential loss in LOS for all users of a facility would be a beneficial tool.

5. Assessing options for safe system outcomes

Tim Hughes led a discussion of risk assessment of cycling facilities. Again, the critical areas for any facility will be at intersections and at driveways. The effect of contra-flow approaches on bi-directional facilities has been found to be 3 x the risk of collision from in-flow approaches. Having cyclists coming from the “wrong direction” reduces their safety. Moving cyclists to an unexpected location within the road has the same effect.

Giving cyclists an increased sense of safety or a perception of priority at an intersection can also place them at greater risk, with cyclists entering a crossing or intersection at too great a speed. Where providing adequate sight-triangles would be impossible or impractical, physical interventions such as a low-profile hump or a dish-drain to slow cyclists before they enter a higher risk area greatly reduces the risks for them and other road users.

6. Rural cycle safety research project

Gerry Dance reported on the progress of this project and circulated drawings and a report on a trial site, prepared by Opus, on Roto o Rangi Rd, Waipa District, south of Cambridge. This road has up to 1000 vehicles and up to 100 cyclists per day. Four separate 2km trial zones will be installed for a two-week period from 24 July 2015. These will involve a control at 100kph with no changes, a 100kph with signage treatment, a 60kph zone with signs and shoulder treatment, and a 60kph zone with “2-1” layout.

7. Sharrows on rural roads

The trial on Roto o Rangi Rd will use a “rural sharrow”, 50% larger than urban sharrows, at vertical and horizontal curves and through intersections. This is a potentially contentious innovation and will need to be assessed carefully for any effect on urban use of the marking. A key outcome for the trial was agreed to be the contribution of the sharrows to a self-explanatory roadway, especially compared to the complex signage requirements for some of the trial zones.

It was agreed that this issue will almost certainly merit further trials and wider discussion, and may involve another study visit to view trials in the field.

8. Cost:benefit analysis of sharrow trials

Opus has prepared a cost:benefit analysis of the trials, based primarily on the results from Wellington and Dunedin. The analysis reflects the conclusions of the Summary Report, that the sharrow marking offered only slight advantages, but had no negative or deleterious effects. The corollary effect of the markings in 50kph speed zones of reducing average traffic speed yields a strong cost:benefit, but in this zone the markings had negligible effect on cyclists' lateral position. In 30kph speed zones there was a shift into the lane by cyclists, but the minimal speed reductions in these zones delivered a marginal cost:benefit.

It was agreed that the trials had made a case for the use of sharrows, but there remains some concern that 30% of surveyed road users did not distinguish the marking from the SVL marking in the trials. Whether a public education programme would remove this level of confusion remains open to doubt.

9. Sharrow use: where is appropriate?

Gerry Dance reported that Flow will deliver guidelines in parallel to the national design guidelines exercise. These will address principles for use and thresholds to be considered, and will be incorporated into the TCD Manual.

10. Pavement markings

Richard Bean discussed the requirements to find an effective contrast ratio that could be achieved on a pavement in a variety of surface and lighting conditions. A brief trial of a steel insert had failed to provide this, and proved to be a slip hazard, too.

Members agreed to investigate joining the trial application to achieve a wider test of treatment and surface options.

11. Review of TCD Manual to integrate cycling

Tim Hughes noted that 28 of the 'quick wins' were changes to update the TCD Manual. Although there is a need to fully integrate provision for cycling into all solutions within the Manual, this review round will be a quick update. At this stage it is anticipated that changes to implement sharrows would be flagged, but not put into effect.

12. RUR amendments progress

Gerry Dance reported that he was still acquiring the resources to progress key aspects of this project. Ina Stenzel sought, and got, confirmation that the review of RUR will look at driving in a SVL in order to execute a turn, cycle Barnes Dances and provision for lower speed limits.

13. Standard facility descriptions

Gerry Dance confirmed that this had been identified as the “number 1 quick win” to achieve consistent interpretation and terminology. It is likely to start from the TCD Manual and NZTA maps and slowly be incorporated into other documents. The discussion identified potential options for many descriptions and a need to consider the positive connotations of terms, such as the different emotional values associated with protected, segregated and separated for a bike facility. This work will need to consider terminology in use throughout the country to arrive at agreed standard descriptions.

14. General business

Paul Barker presented a technical problem. The redesign of Victoria St has left a bus stop loading directly from and onto the cycle lane, with the shelter set back behind the cycle lane and new tree planting. Raising and painting the whole area of the bus stop area of the cycle lane red, with flashing hazard lights on the approach of a bus, has not satisfied the safety auditors or the bus operator that this is a safe design.

The preferred solution was agreed to be a standard ‘floating bus-stop’ with the cycle lane passing behind, but the layout of the tree planting within the new urban design precludes this. A possible solution to emerge from the discussion was to narrow the cycle lane through this point and create a pedestrian refuge by taking a narrow strip of the traffic lane as well, so that passengers would alight to, and board from, outside the cycle lane.

It was agreed that a critical role of the group was the opportunity it provides for informally discussing technical challenges and potential solutions.

Glen Koorey asked for research projects for 4th-year civil engineering students, over the next month or so. Students work in pairs from February to October to produce a final paper, poster and presentation, with about 600 hours available for them to complete their investigations.

15. Next meeting

It was agreed that the intensity of meetings can be relaxed slightly now and the next meeting can be convened at the end of October or start of November. In light of the discussion of the Victoria St problem and the success of the study tour of the sharrow trial sites in Auckland in June 2014, it was agreed that the next meeting would incorporate a study tour of sites within Wellington on the day before the meeting.

The next meeting is confirmed for 5-6 November in Wellington.

The first meeting of 2016 is tentatively set for February in Auckland, and inclusion of a study tour with this meeting will be investigated.