

MINUTES: ACTIVE MODES INFRASTRUCTURE GROUP MEETING

Monday 16 October 2017 – 9.45 am; Meeting Room 1.01, NZTA CIGA Level 1, BNZ Centre, 120 Hereford St, Christchurch

Attending

- Gerry Dance, Principal Advisor, System Design & Delivery, NZTA
- Kirsty Horridge, Network Engineer, Hamilton City
- Tim Hughes, National Traffic and Safety Engineer, NZTA
- Simon Kennett, Senior Project Manager, System Design & Delivery, NZTA
- Glenn Bunting, Network Manager, Safety and Environment, NZTA
- Ina Stenzel, Principal Specialist – Walking and Cycling, AT
- Steve Dejong, Traffic Engineer, Christchurch City
- Paul Barker, Safe and Sustainable Transport Manager, Wellington
- Glen Koorey – representing IPENZ Transportation Group
- Susan Lilley, Transportation Planner, Dunedin City
- Hilary Fowler, Transport Planner, Walking & Cycling, AT
- Kevan Fleckney, Senior Traffic Engineer (ATMS & ITS), NZTA
- Nilesh Redekar, Strategic Transport Engineer, Hastings District
- Wayne Newman, RCA Forum Research & Guidelines Group

By video-conference link for item 7 only:

- Claire Pascoe, Lead Advisor – Multi-Modal, System Design & Delivery, NZTA

Apologies

- Kathryn King, Walking & Cycling Manager, Auckland Transport
- Richard Bean, Senior Engineer, NZTA
- Claire Graham, Senior Specialist – Walking and Cycling, AT
- Nick Marshall, Senior Rooding Engineer, Whangarei District
- Claire Sharland, Asset Manager Transportation, Taupo District
- Jodie Lawson, Sustainable Transport Team Leader, Rotorua Lakes
- Simon Cager, Senior Project Engineer, Hutt City
- Andy High, Senior Engineering Officer, Nelson City
- John Kinghorn, Infrastructure Systems Engineer, Transportation, Hamilton City
- Jemima de Lacey, Adviser, MoT
- Kevin Eames, adviser, MoT

AGENDA

1. Welcome, introductions, apologies and H&S briefing
2. Minutes of 6 July 2017 and actions arising
3. Cyclists and waste collection
4. Signalised parallel pedestrian/cycle crossing separation
5. Signalised intersection with separated cycle path
6. Selection of separators appropriate to planned use
7. Future focus of AMIG – ability to address issues beyond cycling
8. Advanced stop box buffers
9. Door-zone bike lane – virtual buffer
10. Cycle lane surface level of service
11. Cycling contraflow warning sign
12. Shared path design – implications of recent research
13. Bollards on cycleways
14. Other business
15. Next meeting

Actions

The meeting agreed that:

1. **Actions arising from 6 July 2017 remaining open to be progressed.**
2. **Cyclists and Waste Collection – Action: S. Dejong** to contact operator using RG-24 sign on a waste collection vehicle in Christchurch and provide details for him to get in touch with S. Kennett to discuss feasibility of an appropriate active warning sign for collection vehicles.
3. **Separator selection – Action: G. Koorey** to report back to the group on work ViaStrada is doing on separators to next meeting.
4. **Levels of service for cycle path pavements - Action: S. Kennett** to seek further input from Martin Gribble and REG on proposed draft specifications for pavement levels of service for pavements used for cycling, on what further work might be needed to align these with the LoS work being done by REG and whether every cycling facility would have the same pavement level of service and, if not, how the different levels would be defined and determined.
5. **Cycling contraflow advisory sign - Action: S. Kennett** to recommend the agreed design for a contraflow cycling advisory sign to the TCD Steering Group.
6. **Bollards on cycle ways - Action: K. Fleckney** to further refine the draft guidance document for consideration at the next meeting.
7. **Hold-rail and waiting-bay for cyclists before narrow rural bridges - Action: S. Kennett** to report back to next meeting on proposed hold rail and green-marked waiting zone.
8. **Next meeting - Action: W. Newman, G. Dance, N. Redekar** to liaise on a possible date and venue, and inspection tour itinerary, for a meeting over two days in Hastings in mid-February.

NOTES

ITEM 1: WELCOME, INTRODUCTIONS, APOLOGIES AND H&S BRIEFING

Hilary Fowler, Kevan Fleckney and Nilesh Redekar were welcomed. The apologies were noted and Gerry Dance provided the H&S briefing before the meeting commenced.

ITEM 2: MINUTES OF MEETING ON 6 JULY 2017 & ACTIONS ARISING

The minutes of the previous meeting had been circulated and no amendments or corrections were proposed.

Actions arising

- a) **WN** - Send a letter to all councils to encourage representation on AMIG: this action remains open as a letter to all councils might make the group too unwieldy and the future role of the group should be established first; the current process of inviting potentially beneficial members appears to be working, although a very high number of the apologies for this meeting were from more recently invited members;
- b) **RB** - Regulatory supplementary sign 'To Cyclists' to be progressed: this action remains open;
- c) **TH** - CNG will be developed for consultation and ratification, Austroads guides and Christchurch guide will be referenced and best practice notes and case studies will be referred to AMIG for consideration: this action is open; CNG is being continually improved and new case studies being added, but the present ratification process is being reviewed;
- d) **SD, IS, TH** - A case study of the key attributes for separators will be developed; IS to supply photographs to SD, who will provide report to TH; this action remains open, with SD still to complete his contribution, and a report on the work being done by Abley's in this area is also expected before the end of the year;
- e) **SD** - The effect of hook-turn signs will be monitored at another site: this action remains open; the signs have not yet been installed at an alternative site;
- f) **KH** - A case study on Bridge St Hook Turn sign to be supplied in due course: this action remains open;
- g) **PB** - A case study on bus stop design on separated cycle routes will be supplied: this action remains open; PB and SK to discuss further;
- h) **SK** - A trial of different crossing markings is to be developed: this action remains open;
- i) **SK** - A Rule change to make ASBs enforceable will be investigated: this action was taken under Item 8;
- j) **SK/TH** - A Rule change to define a shared path will be progressed: this action remains open and will be subject to the policy directions set by the incoming government;
- k) **SD** - An application is to be made to TCDSG to use symbol in place of "cyclists" on "watch for traffic" sign: this action remains open;
- l) **SD, PB, KK** - Incident/accident trend developing with new infrastructure to be monitored and reported to next meeting; this action remains open, with experienced cyclists continuing to be represented disproportionately in crash stats;
- m) **IS** - Progress of shared-path 2-aspect signal trials to be reported to next meeting: this action is deferred to the first meeting in 2018;
- n) **SK** - Responses used in Vancouver to alert cyclists to tram-line hazards will be researched and reported to next meeting: Signs and markings have been found to

- be broadly similar; edge marking or markings to achieve an approach angle closer to 90° might be tested, but measures to reduce the hazard are very limited;
- o) **KH** - Update for next meeting on Paxster trial in Hamilton: this action remains open; there have been reported issues with Paxsters failing to pull over, but the trial only commenced in mid-September;
 - p) **KK** - Update for next meeting on school zone marking research: this action remains open as the trial has not yet begun;
 - q) **GK** - Circulate report of CCC study of school zone parking restrictions: completed;
 - r) **GK** - Monitor media reports of public confusion over sharrow markings; this action remains open, but media reports have declined; there is still confusion about the use of these markings, however, leading to inappropriate requests from elected representatives, so officials need to be aware of and make use of the guidelines;
 - s) **GK** - Circulate paper on developing options for contraflow cycleways: completed;
 - t) **BF** - A case study of the ramp and platform design for the Glen Innes shared path to be supplied for CNG: a separate case study analysis of this design is being done by ViaStrada; GK will confirm its status and advise IS if any further input is needed.

ITEM 3: CYCLISTS AND WASTE COLLECTION

The meeting noted that cyclists and waste collectors interacting on the road and waste collection across cycle lanes have become issues of concern. Minutes from a meeting of various interested parties held in Auckland in April 2017 had been circulated with the agenda. The reference in the minutes to a trial of a RG-24 sign on a waste collection vehicle in Christchurch was noted with concern. This was an unknown innovation by the operator. It was not a trial and it was not supported by the local RCA.

Nevertheless, the meeting conceded that a hazard is being designed into the road network where a waste collection vehicle is stopping outside a cycle lane and extending its bin collection boom across the cycle lane down to head or neck height. An approaching cyclist cannot pass safely on either the left or the right. One possible mitigation might be to amend CoPTTM to require waste collectors' TMPs to include an active hazard sign that operates when the boom operates and is located to discourage cyclists passing on the left when it is active.

Action: SD to contact operator and provide details to get in touch with SK to discuss feasibility of an active warning sign for collection vehicles.

ITEM 4: SIGNALISED PARALLEL CROSSINGS SEPARATION

The meeting agreed there is a set standard for signalised parallel pedestrian/cycle crossings to have a white line for delineation now provided by RTS 14.

Decision: Where crossings connect separated facilities at parallel pedestrian/cycle crossings three white lines should be used to delineate the separate crossings. Where parallel pedestrian/cycle crossings connect shared facilities, only two lines should be used.

ITEM 5: SIGNALISED INTERSECTION WITH SEPARATED CYCLE PATH

AT has increasingly encountered design pressure to make a separated cycle path a shared path, especially at signalised intersections. Rather than keeping the

separation at the signals, the solution is increasingly being seen to be to push cyclists on to the footpaths.

The meeting agreed that this is poor practice that delivers a reduced level of service for both cyclists and other footpath users, and should be adopted only as a last resort. Nevertheless, the meeting noted that the volumes used to justify separation in Austroads Part 6A set a very high bar. In all cases, however, a separated facility should not abruptly become a shared space without good reason.

ITEM 6: GUIDANCE ON SEPARATOR SELECTION

The meeting noted that further research and guidance is needed around separators and which ones to use for different requirements e.g. temporary, short term/interim, long term. A specific difficulty with every design currently available, however, is that none has been designed for NZ road construction methods. They are designed to be fastened onto concrete roads and any modified installation here, such as using re-bars, voids any warranties. The meeting noted that ViaStrada is doing work in this area and GK will report back to the group.

Action: GK to report on work on separators to next meeting.

ITEM 7: FUTURE FOCUS OF AMIG – ISSUES BEYOND CYCLING

Claire Pascoe joined the meeting by VC at 11.30.

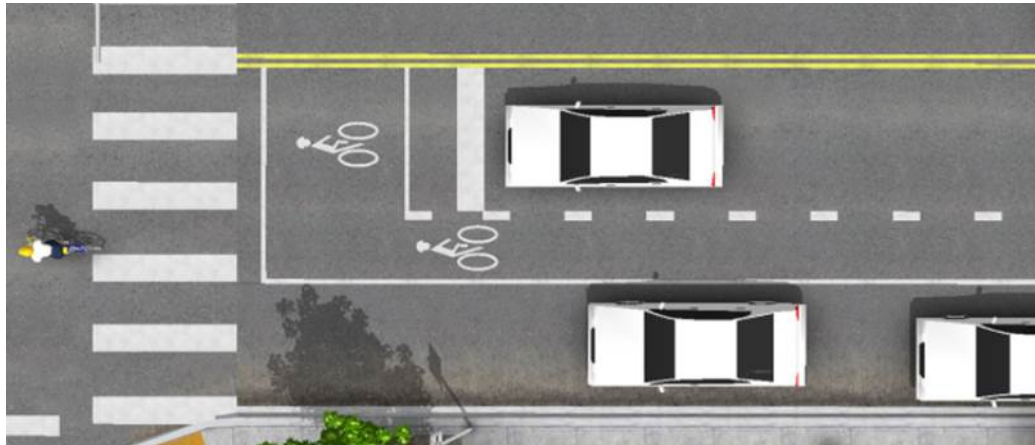
The meeting noted the shift in structure and focus within NZTA from discrete modal teams to a value-chain model and multi-modal approach. This provides a timely opportunity to reassess the sector working groups involved in walking and cycling. The Shared Footpaths Working Group has not coalesced into an effective group able to address the tasks for which it was established. AMIG has continued to be a technical reference group with a specific focus only on cycling infrastructure. The meeting agreed that this is leaving important issues related to active modes unaddressed.

The meeting agreed that walking must be included in discussions on active mode infrastructure and that AMIG will address matters relating to infrastructure for both walking and cycling. Members will have responsibility for bringing new issues to the group and for identifying where an outside input or presentation might be helpful.

ITEM 8: ADVANCED STOP BOX BUFFERS

The meeting considered the concept of a buffer (example shown below) to reinforce an ASB. This is partly in response to claims that an ASB puts the cyclist in a truck driver's blind spot. It was noted that the issue is the inherent fault in HV design that tolerates such an extensive hazard from poor visibility from the cab, which could readily be addressed by blind spot cameras, and adding an effective buffer distance would require 7m for an ASB. This would almost inevitably provoke motorists and prove counter-productive for cyclists.

The meeting agreed that extending the spatial demand for an ASB by adding a buffer zone behind it was not an appropriate response to the issue of poor road visibility from the cabs of heavy vehicles.



ITEM 9: DOOR-ZONE BIKE-LANE – VIRTUAL BUFFER

The meeting considered the potential for developing the design on Carlton Gore Road to encourage cyclists to stay out of the door zone when riding in a door-zone cycle lane (as shown below).



Efforts to shift cyclists out of the door zone while avoiding having car parking expand into any extra space have previously included using a wide diagonal stripe from the cycle lane to the edge of the parking lane, with no extra line on the parking lane, and a diagonal stripe off the parking lane into the cycle lane, with no extra line on the cycle lane. With the former, the cars parked further from the kerb, bringing the door-zone closer to the cycle lane. With the latter, the cars remained close to the kerb, but the cyclists rode along the diagonals within the door-zone.

The meeting agreed that shifting the cycle lane symbol (with the green where used) 300mm further out from the parking lane line uses behavioural nudging to move cyclists into a slightly safer line of travel along the cycle lane.

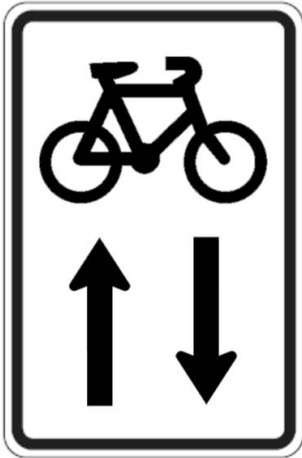
ITEM 10: CYCLE LANE SURFACE LEVEL OF SERVICE

The meeting considered proposed draft specifications for pavement levels of service for pavements used for cycling. It was agreed that further work might be needed to align these with the LoS work being done by REG and to consider whether every cycling facility would have the same pavement level of service and, if not, how the different levels would be defined and determined.

Action: SK to seek further input from Martin Gribble and REG.

ITEM 11: CYCLING CONTRAFLOW WARNING SIGN

The meeting agreed that there is a need for a Contraflow cycling warning sign for drivers and recommended that the example below be referred to the TCD Steering Group for consideration.



Action: SK to recommend the agreed design for a contraflow cycling advisory sign to the TCD Steering Group.

ITEM 12: SHARED PATHS DESIGN – RECENT RESEARCH FINDINGS

The meeting noted recent research from Australia that has found a strong relationship between design features and cyclist speeds on shared paths.

The impact of environmental factors on cycling speed on shared paths (Boufous, Hatfield, Grzebieta) measured speed for 5421 riders cycling on shared paths at 12 Sydney locations and found the average cycling speed was 18.4 km/h.

Minimum speed ranged between 4.2 km/h and 8 km/h. Maximum speed ranged between 23.0 km/h and 43.2 km/h. Nearly 80% of cyclists travelled at 20 km/h or less. Only 3.5% travelled at 10 km/h or lower and 7.8% at more than 30 km/h.

Cyclists were less likely to travel above the median speed on shared paths carrying 20–99 pedestrians/h compared to paths carrying less than 20 pedestrians/h. Maximum speeds of 35 km/h and above were observed at 10 locations, including on narrow paths where such speeds would never be appropriate. On shared paths with visual segregation over 1 in 5 cyclists travelled at speeds over 30 km/h compared to less than 1 in 20 on paths without visual segregation. Cyclists were more than 70% more likely to ride above the median speed of 16 km/h on shared paths with a central line.

The findings suggest that design of shared paths, including the provision of appropriate width and visual segregation on busy paths, is likely to significantly contribute to managing speed on shared paths. The meeting noted that the finding that a centerline and “lane markings” lead to increased speeds was consistent with almost all other research on their effect.

ITEM 13: BOLLARDS ON CYCLEWAYS

The meeting considered a report from Kevan Fleckney in support of draft guidance on Bollards on Cycle Tracks. This identified that the Austroads standard warning before a bollard of a single curved line of 5m in length is inadequate and should be a wider chevron no less than 20m long to give cyclists

approaching at observed normal speeds to have adequate warning. It was noted that use of bollards to reduce speeds is not an inappropriate use, but it was agreed that in all instances the bollard should be clearly marked and extend above handle-bar height.

Action: KF will further refine the draft guidance document for consideration at the next meeting.

ITEM 14: OTHER BUSINESS

- a) The meeting considered a proposed hold rail and green-marked waiting zone before a narrow bridge on a rural road, as a means to encourage cyclists to stop and look back before cycling on to the bridge. While it was agreed that a trial of the proposal should proceed, the meeting noted that the site should be suitable for an ITS (set to fail to safe, not to hazardous) and speed management. There would need to be advanced warning for cyclists of the hold rail and its purpose, as well as for motorists warning of cyclists, and it would need to be designed to avoid any appearance of being a crossing.
- b) The meeting noted that use of pavement markings instead of signs to define a shared path will need to be included in the Omnibus Rule.
- c) The meeting considered the appropriate treatment for a rural road on the Heartland Ride route with a carriageway varying from 5.5m to 6m. It was agreed that the priority should be to provide a wider shoulder on bends. Speed management would include an 80 kmph speed limit, having no centreline and avoiding increasing the width of straight sections of the road.

Action: SK to report back to next meeting on (a) and (b).

ITEM 15: NEXT MEETING

The meeting agreed that a date in mid-February 2018 would be ideal and that a possible meeting over two days in Hastings should be investigated.

Action: WN, GD, NR to liaise on a possible date and venue, and inspection tour itinerary, for a meeting over two days in Hastings in mid-February.

The meeting closed at 4.35pm.