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<https://nzta.govt.nz/walking-cycling-and-public-transport/active-modes-infrastructure-group/>

**MINUTES: Thursday, 3 June 2021 9:00 AM – 12:00 PM.  
Majestic 7.06 and Microsoft Teams Meeting**

### **Attending**

- . Michael Bridge, Activity Manager Active Transport, Palmerston North City
- . Glenn Bunting, Manager Network Safety, Regulatory Services, NZTA
- . Gerry Dance, Team Leader Multi Modal, NZTA
- . Steve Dejong, Senior Engineer, Regulatory Services, NZTA
- . Twan van Duivenbooden, Principal Specialist Active & Shared Modes Design, AT
- . Mike van Enter, Senior Transportation Engineer, Tasman District Council
- . Hilary Fowler, Transport Planner/Engineer, Wellington City
- . Wayne Gallot, Senior Transportation Engineer, Christchurch City
- . Will Hyde, Senior Transportation Engineer, Tauranga City
- . Simon Kennett, Principal Multi-modal Advisor, NZTA
- . Glen Koorey, Director, ViaStrada, representing Transportation Group NZ
- . Malcolm McAulay, Senior Multi-modal Advisor, NZTA
- . Wayne Newman, (secretary)
- . Eynon Phillips, Strategic Transport Engineer, Hastings District
- . Bill Rice, Senior Transport Engineer, Nelson City
- . Claire Sharland, Asset Manager Transportation, Taupo District
- . Erik Teekman, Principal Adviser Walking & Cycling, NZTA
- . James Wratt, Multi-modal Advisor, NZTA

### **Apologies**

- . Chris Lai, Senior Transportation Planner, Palmerston North City
- . Sandi Morris, Road Safety & Traffic Planning Engineer, Far North District Council

### **Guests**

- . Hamish Mackie, Director, Mackie Research & Consulting (3.2)
- . Rebekah Thorne, Researcher, Mackie Research & Consulting (3.2)
- . Claire Pascoe, Lead Adviser, Urban Transformation, NZTA (4.2)

## **A G E N D A**

- 1. WELCOME, INTRODUCTIONS, APOLOGIES**
- 2. MINUTES AND ACTIONS FROM PREVIOUS MEETING**
- 3. TRIAL REPORTS and ISSUES**
  - 3.1 Cycle Loop detection markings
  - 3.2 Dragon's Teeth markings
  - 3.3 Kea and Zebra Crossings
  - 3.4 Modified A40-1 'No Exit' sign
  - 3.5 Visibility Splays
  - 3.6 Shared path widths with growing use of faster bikes
- 4. UPDATES**
  - 4.1 TCD Steering Group report – Steve Dejong
  - 4.2 Innovating Streets – Claire Pascoe
  - 4.3 CNG and PNG developments - Glen Koorey
  - 4.4 New AMIG website – James Wratt
- 5. OTHER BUSINESS**
  - 5.1 Final 2021 AMIG meeting – confirm 17-18 November

## **NOTES**

### **1. WELCOME, INTRODUCTIONS, APOLOGIES**

Gerry Dance welcomed members and guests. The apologies of Chris Lai and Sandi Morris were noted. The agenda was confirmed.

### **2. MINUTES AND ACTIONS FROM PREVIOUS MEETING**

The minutes from the meeting on 1 April 2021 were confirmed.

### **3. TRIAL REPORTS and ISSUES**

#### **3.1 Cycle Loop detection markings**

Simon Kennett introduced this. A lack of guidance was contributing to variations in marking cycle loop detection nationally. Increasing numbers of carbon fibre bikes not easily detected by loops made guidance more urgent. The review of TCD Part 4 identified this gap.

Austrroads adopted the Main Roads Western Australia loop detection markings with six 100 x 100mm diamonds at 300mm centres with a 250 x 220mm cycle symbol marked 500mm before the first diamond (GTM09-19). Local use varies.

The smallest cycle symbol marking permitted by TCD Manual Schedule 2 is 400mm wide and 240mm high. This would be acceptable at a ASB where the approach speed should be slower. The meeting endorsed a national marking to be included in Part 4 with six diamonds and a 400 x 240mm cycle symbol marked in a line at 300mm centres along the centre of the detection loop.

There was some discussion of the effect of the marking on ASB capacity. The

intent of the marking is to place a single cyclist in the optimum position for detection. Once detected, any subsequent cyclist arriving at the ASB could occupy any part of it.

It was noted that the minimum cycle symbol marking for a hook turn box would be 800 x 420mm, as it needs to be visible to motorists in all conditions at greater than 30m.

### **3.2 Dragon's Teeth markings**

Rebekah Thorne presented the preliminary results from trials across 13 approved sites on five different networks. These sites covered five schools, seven speed transitions and one shopping precinct, and employed both the lower and higher speed designs for the marking layout.

The trials compare vehicle speeds before and after installation, and one year after, to assess lasting effects. Driver behaviour was being monitored using video analysis at four sites to assess any changes in driver awareness or alertness.

Preliminary results from lower speed sites indicated effects in line with the overseas literature, with a general reduction in vehicle speed of 1-5 kmph. For higher speed sites there was no consistency with increased variation in behaviour between the sites. One effect noted was a tendency to be more willing to yield to a pedestrian at a formal crossing, but less willing to yield away from a crossing.

The placement and design of the marking for high-speed thresholds was potentially insufficiently conspicuous to be effective on driver awareness. A trial of a longer marking might be justified. Similarly, in a lower speed environment with a high level of pre-existing visual clutter, the effectiveness of the marking appeared to be muted.

While the marking seemed to be beneficial at speed thresholds, at crossings the extensive additional marking appeared to diminish the contrast of the zebra and distract attention from pedestrians using the crossing. For school crossings, in particular, the preliminary results indicated that the multiplicity of signs and markings became visual clutter without offering any marginal benefit.

It was agreed that the effect on speed can be expected to be less significant than any potential change in driver alertness and awareness, and if there is no increased risk from possible distraction caused by the marking then any increase in driver awareness would be beneficial.

### **3.3 Crossings**

#### **a. Kea and Zebra Crossings**

Steve Dejong explained that the TCD rules permit no other unapproved devices at a zebra crossing, but some RCAs have introduced elements of kea crossings at zebra crossings. This was expressly discussed in Traffic Note 29 – Revision 2 (Nov. 2004) at 4.3:

*There have been suggestions flag signs could also be used at marked pedestrian crossings. In addition to the stripes marked on the road surface, indicators at a marked crossing include black and white poles and the Belisha beacon lights or discs. None of these devices can be used at a kea crossing and, in their absence, the flag is an important way to identify the crossing point. Therefore, ... flag signs should only be used for kea crossings.*

(Two additional matters were taken under Crossings)

#### **b. Adding red before Zebra**

Glen Bunting queried the benefit from adding red before a Zebra crossing. There is the potential for red to fade, thereby reducing the required level of contrast between the roadway and the crossing, and for the added colour to alter the perception of the crossing as being more dangerous in the minds of pedestrians. It was agreed that crossings using red in this way should be monitored to assess the effects.

#### **c. New crossing layouts**

Glen Bunting noted that new Zebra crossings should be marked at 600mm bars and 600mm gaps but may be remarked at 450mm bars and 450mm gaps until the next reseal. Some RCAs are blacking out or cutting out existing markings for no practical benefit, and both treatments have the potential to confuse drivers as the black fades or the cut-out casts shadows. RCAs should either reseal and mark at 600/600 or use the 450/450 marking layout until they do reseal.

### **3.4 Modified A40-1 'No Exit' sign**

Wayne Gallot presented a possible means of improving wayfinding for pedestrians and cyclists by showing where egress remained for non-vehicular traffic from streets signed as "No Exit". TCD Part 2 provides for a "No Exit" supplement below the street name either within or beneath the name sign, while RTS2 recommends a separate supplementary beneath the name sign. The current A40-1 sign may be used where a "No Exit" supplement on a street name would not be visible from one or more approaches.

The 2011 Review of Cycle Signs and Markings recommended an extra supplementary "Except pedestrians or cyclists" where the "No Exit" was not applicable. Although this recommendation was not adopted, an existing example is in use on Hills Road in Christchurch.

This is a standard 600 x 600mm A40-1 extended to 600 x 900mm to allow "Except" and pedestrian and cycle symbols to be added below. A mock-up of the sign gave dimensions for the "Except" text as 50mm (with 100 x 180mm pedestrian symbol and 230 x 150mm cycle symbol). Wayne also presented a draft supplementary for a name sign. The extra information extended this from 360 x 150mm to 1050mm long.

The discussion was supportive of improved wayfinding, but queried whether

either option was the solution. The length of the supplementary was seen as impractical in most locations, while the size of the “Except” text was queried for the A40-1 variant. Adding “Except” to “No Exit” was not the preferred means of advising pedestrians and cyclists that an exit was available. An alternative would be to use the approved pedestrian arrow sign, as this would indicate that an egress existed without implying any connection to a specific cycling route. The approved wayfinding signage was otherwise available for connections to cycle routes or pedestrian destinations.

### **3.5 Visibility Splays**

Simon Kennett noted that current guidance for visibility at driveways dated from 1993 (RTS 6 Fig. 5) which recommended a splay of 2.5m tapering 5m back from the footpath. AS/NZS2890.1:2004 requires a minimum splay of 2.0m tapering 2.5m from the property boundary to the driveway to be kept clear of obstructions to visibility (Fig. 3.3). The PNG/PPDG specifies a splay of 2.0m tapering 5.0m back for high-volume driveways (Fig. 14.11).

Apart from the lack of consistency between documents, it was clear that the visibility provided would be inadequate for shared paths and higher speed scooters on footpaths. Current reviews had identified a need to recognize scooters and other new footpath users and to place a higher priority on pedestrian safety.

Wheeled devices may now be expected on any footpath. For the higher speeds of these users the visibility splay needed to be able to stop would be 7.0 – 8.5m. High volume driveways are not currently defined, but the same safety issues would apply for any cyclist or scooter user at any point where a vehicle needed to cross a footpath or shared path to exit any property.

It would be impractical to apply a visibility splay appropriate to shared paths or modern wheeled footpath speeds to existing driveways and any attempt to include such provisions in District Plans would be both challenging and likely to result in frequent applications for consent for lesser splays. Responsibility will fall to RCAs to ensure that infrastructure is installed to minimise risk. Placing a path adjacent to property boundaries will provide a lessened visibility (and consequent increased risk) compared to having a berm between the path and boundary.

Nevertheless, it was agreed that even a minimal splay was better than none and any removal of the provision in AS/NZS2890.1 would constitute an unacceptable increase in risk for all users. AMIG strongly supports retention of the current minimum visibility splay provision in any review of AS/NZS2890.

### **3.6 Shared path widths with growing use of faster bikes**

Simon Kennett also noted the implications of a 2020 survey of speed statistics for bicycle riders on the flat. E-bikes were travelling on average at 5.2kmph faster than bikes, but the difference between the 85<sup>th</sup> percentile for male e-bike riders

and for female bike riders was 11kmph and between the maximum and minimum speeds observed the differential increased to 37kmph. As e-bikes may be used on shared paths, the potential exists for a cyclist to approach a pedestrian from behind with a speed differential between the two of 40kmph.

Austrroads Part 6A provides for relatively high numbers of cyclists on shared paths, but relatively low numbers of pedestrians, before separation is recommended (110 pedestrians two-way per hour with no cyclists, but over 960 cyclists two-way peak per hour at 50 pedestrians two-way peak per hour). This tends to reflect the lesser impact of e-bikes in Australia and the restrictions on their speed there.

A proposed national template for determining facility widths would provide wider paths at lesser numbers in recognition of the greater speeds and speed differential possible in New Zealand. The minimum shared path width would be 3.0m, increasing to 4.0m for lower numbers of both pedestrians and cyclists, with the maximum number of cyclists and e-scooters two-way peak per hour on any shared path not to exceed 500.

Whereas Austrroads Part 6A provides templates for 75:25 and 50:50 directional splits, there would be only one template for New Zealand, recognizing the effect of approaching a pedestrian from behind at 45kmph.

**As the proposed template would increase costs, it will be subject to peer review** and the full ratification process, but initial feedback was sought from AMIG members.

## 4. UPDATES

### 4.1 TCD Steering Group report

Deferred to next meeting.

### 4.2 Innovating Streets

Claire Pascoe joined the meeting. She reported that uptake had been slow, with many projects seemingly stuck in a loop of planning and engaging, with little delivery. The projects that did proceed delivered 187km of extra cycleway, nevertheless.

The new approach allows designs to be tested in a pilot offering a real-time dynamic model, potentially saving significant expense. It also allows engagement with parts of the community often not reached by traditional consultation processes.

Lessons from the projects that failed to eventuate as much as from those that did were that adequate resources for not only the project, but the public engagement and communications, are critical. It is also vital to ensure that politicians and senior officials remain briefed and supported in the face of often intense and abusive opposition. Community champions can make the difference

between success and failure. Pro-active briefings for the media can avoid a reactive and critical reportage. Everything done must be done to build trust.

Equally vital to success was selection of materials and attention to aesthetic appeal. Materials must fit the intended life of the project and be sufficiently robust even for temporary projects to remain fit for purpose for the duration of the project.

Looking forward, the Minister is interested in the effects of projects on mitigating climate change and the Board has approved a further programme, so attention will be on real readiness, delivering fewer but bigger scale projects, potentially moving from individual streets to suburb-wide interventions.

#### **4.3 CNG and PNG developments**

Gerry Dance reported that the deadline for having PNG go live was 1 July.

#### **4.4 New AMIG website**

James Wratt presented the new AMIG pages hosted within the NZTA website at: - <https://nzta.govt.nz/walking-cycling-and-public-transport/active-modes-infrastructure-group/> Email: [amig@nzta.govt.nz](mailto:amig@nzta.govt.nz) It was agreed that it could be helpful for this to include the summaries of decisions and recommendations extracted from the full minutes.

### **5. OTHER BUSINESS**

#### **5.1 Final 2021 AMIG meeting –17-18 November**

It was agreed the primary focus of this meeting will be an opportunity for site visits within Napier and Hastings. Gerry Dance and Wayne Newman would liaise with Tony Mills and Eynon Phillips regarding potential sites and logistics.

#### **5.2 Shared Path Behavioural Markings**

Simon Kennett requested that those able to stay beyond noon consider possible guidance on how and where such markings might be used. Where the Austroads markings had been installed, it was noted that adequate spacing between each was needed for the marking to be effective. Elsewhere, the symbols had been displayed on a sign at the entrance and not repeated.

It was agreed that some markings could reasonably be expected to be repeated or to be location specific. An order of marking might be “Slow Zone”, “Keep Left”, “Keep Dogs Close”, “Warn When Passing” and “Step Aside When Stopped”, but the last could be marked wherever people tended to pause or congregate. For blind corners and bends at the end of long downhill gradients, using “Slow” and “Keep Left” with double yellow lines had proven effective. The potential exists for warning or advisory text to be added to provide the reason for the generic “Slow” marking, too, as this would be the only marking in the suite lacking any obvious definition.

Meeting closed: 12.20 pm