

MINUTES: 28-29 November 2019
The Conference Room, Dunedin Public Art Gallery, 30 The Octagon
Dunedin

Attending

- Paul Barker, Network Improvements Manager, Design & Place Planning, Wellington City
- Glenn Bunting, Manager Network Safety, Regulatory Services, NZTA
- Gerry Dance, Multi Modal Team Leader, Transport Services, NZTA
- Steve Dejong, Traffic Engineer, Christchurch City
- Mark Edwards, Senior Engineer, Regulatory Services, NZTA
- Mike van Enter, Senior Transportation Engineer, Tasman District Council
- Tim Hughes, Principal Safety Engineer, Transport Services, NZTA
- Simon Kennett, Senior Multi-modal Specialist, Transport Services, NZTA
- Glen Koorey, Director, ViaStrada, representing Transportation Group NZ
- Chris Lai, Transportation Planner, Palmerston North City
- Ted Massey, Transportation Engineer, AT
- Wayne Newman, (secretary)
- Eynon Phillips, Strategic Transport Engineer, Hastings District
- Hjarne Poulsen, Transportation Team Leader, Dunedin City
- Ina Stenzel, Principal Specialist – Walking and Cycling, AT

Guests

- Claire Pascoe, Lead Adviser Urban Mobility, Transport Services, NZTA (items 5, 10, 11)
- Kylie Huard, Senior Transportation Planner, Active Modes & Complete Streets, Stantec NZ (item 22)
- Nick Sargent, Group Manager Transport (Acting), Dunedin City

Apologies

- Adam Beattie, Technical Lead, Active Modes, Network Management, AT
- David Brown, Traffic and Safety Engineer, New Plymouth
- Simon Cager, Senior Project Engineer, Hutt City
- Claire Sharland, Asset Manager Transportation, Taupo District
- Andy High, Senior Engineering Officer, Nelson City
- Jodie Lawson, Sustainable Transport Team Leader, Rotorua Lakes
- Nick Marshall, Team Leader-Road Safety & Traffic Engineering, Northland Transport Alliance
- Kelera Qaraniqio, Network Engineer, Hamilton City
- Ethan Young, Network Engineer, Hamilton City

AGENDA

1. Introductions, apologies and H&S briefing;
2. Confirm Minutes of 7 August 2019;
3. Actions arising
4. Updates from the TCD Steering Group –
 - Cycling greenway sign
 - Use of coloured surfacing
 - Platform and hump ramp-markings
 - Protocol for referring AMIG decisions to TCD Steering Group
5. TCD Rule changes
6. Trials of Dragon’s Teeth marking
7. Pedestrian-activated Belisha beacon development project
8. Development of new shared-path behaviour markings
9. Cyclist-pedestrian combined Barnes dance trials
10. Benchmarking for walking and cycling
11. Innovating Streets project
12. New crossings treatments in Tasman
13. Accessible Streets
14. PT Guidance
15. Guidance for interchanges between micro-modes and PT
16. Point hazard signage for pedestrians
17. New tactiles –trial Auckland (NZTA project St Lukes)
18. ‘R660 - Factors affecting Cycling levels of Service’
19. Advanced loop detection for cyclists - guidance on use and LOS
20. Bridge Barrier height and fencing guidance update
21. Alternative materials for walking and cycling infrastructure
22. Guidance on point hazard avoidance in cycling infrastructure design
23. Pedestrian Crossing Research: report from Kylie Huard
24. Next tasks in Cycling Network Guidance development
 - (task 19) Facility Cost Estimates
 - (task 33) Buffered bike lanes – revised diagrams
 - (task 107) Paired cycle priority / zebra crossings
 - (task 113) Coloured surfacing
 - (task 134) Contra-flow cycle signs at side roads
 - (task 3) Cycleway separators – choice of separator colour
 - (task 10) Access Control Devices –feedback on revised drawings
 - (task 133) Walking signs for touring –further sign concepts
25. Pedestrian Network Guide (PNG) development
26. Guidance on options for dealing with shared path conflict
27. Infrastructure design training update
28. NZTA webinar: Safe walking and cycling treatments for intersections and crossings
29. He Ara Kotahi pedestrian/cycle bridge in Palmerston North
30. Walk21 Rotterdam report
31. Brisbane conference report
32. Next meeting and schedule of meetings for 2020

ACTIONS

1. AMIG members to supply examples of delineators actually in use to Mark Edwards (Item 4).
2. Steve Dejong to supply the original final design for the Greenway sign to Mark Edwards; and Mark to ensure font is correct and white border to roundel is removed (Item 4(a)).
3. Mark Edwards to arrange for inclusion of the recommended change to TCD Manual Part 5 (Item 4(c)).
4. Glen Koorey to seek trial extension from Mark Edwards (Item 9).
5. Claire Pascoe to circulate benchmarking survey to AMIG members (Item 10).
6. Mike van Enter to liaise with Fabian Marsh at NZTA on work done on putting crossings on to platforms (Item 12).
7. Steve Dejong will arrange for Tim Hughes to be invited to join the SNUG working group; and Mark Edwards will alert Jeff Greenough to the relevance of the work and need for it to come to AMIG (Item 19).
8. Ina Stenzel will confirm whether the AT research is able to be shared with AMIG (Item 21).
9. Mark Edwards to include in the Omnibus Rule change increasing the width of the white bars on zebra crossings to 600mm; Tim Hughes to draft guidance on courtesy crossings and platform and ramp design for reporting back to AMIG (Item 23).
10. Members will provide feedback to Glen within a fortnight of the meeting, identify any specific concerns with revised drawings, and identify uses that they want and uses that they do not want (Item 24).
11. Mark Edwards to draft advisory sign for next meeting (Item 24, Task 134).

NOTES

1. Introductions, apologies and H&S briefing

Ted Massey was welcomed, introductions made, and apologies noted.

2. Confirm Minutes of 7 August 2019

The minutes of the meeting on 7 August 2019 were confirmed as a true and proper record.

3. Actions arising

It was confirmed that the actions from 7 August were:

1. Closed. "Flow Transportation Specialists" added after the names of the authors, Sandi Mills and Karl Hancock, on the Sharrow Guide.
2. Closed. Mark Edwards responded to Jodie Lawson along lines discussed regarding the size and use of reflective tape on barriers.
3. Closed. Item on agenda.
4. Closed. Item on agenda.
5. Closed. Steve Dejong confirmed that Christchurch was not a participant in the current trial of combined cyclist/pedestrian Barnes dances.
6. Closed. Mark Edwards confirm that the wording of the Gazette notice and layout of the site did not permit the Auckland site to be added to the current trial of combined cyclist/pedestrian Barnes dances.
7. Open. Simon Kennett is looking at adapting for local conditions the Queensland checklist that considers land uses, devices and flows to identify options for dealing with conflict.

4. Update from TCD Steering Group

Mark Edwards reported on recent decisions of the TCD Steering Group. He noted that WSP is now concluding work on incorporating the results from consultation on Part 5 into the draft with a view to publication at the end of the current financial year. In connection with this work the Steering Group has identified a need for examples of delineators actually in use in NZ to be provided. Within the same contract, WSP is tasked with creating a consultation draft of Part 4 (Intersections) for consultation in 2020 with a view to final publication by the end of the 2020/21 financial year.

Action: AMIG members to supply examples of delineators actually in use to Mark.

a) Greenway signs

The Greenway threshold sign previously endorsed by AMIG was approved by the Steering Group in both an urban form (adult and child cyclists under 30 roundel) and a new rural form (adult cyclist only under 60 roundel) that is likely to be a useful addition to the RCA toolbox. It was agreed that guidance on the use of the signs needs to be available before they are Gazetted (likely to be early in New Year).

Action: Steve Dejong to supply the original final design for the Greenway sign to Mark; and Mark to ensure font is correct and white border to roundel is removed.

b) Use of coloured surfacing

A report written by Viastrada was presented to the TCD Steering Group under the AMIG papers item in relation to the use of coloured surfacing. The summary and conclusions of this report stated:

‘In general, it would appear that coloured surfacing is being provided in accordance with policy at locations where cyclists feel under stress from potential conflict with motor vehicles such as:

- start of a cycle lane;
- where a cycle lane crosses over the end of a side roads;
- in mid-block locations at curves (especially where the road curves to the left);
- alongside parking; and
- where an on-road cycle lane turns into an off-road shared path facility.

However, there are now inconsistencies in the application of the surfacing being used in these locations and it should be standardised for road users to be able to understand.

Furthermore, where guidance hasn't been provided for newer facility types, designers are creating their own applications which is leading to inconsistency and potential for confusion. Coloured surfacing should be limited to the above locations, in addition to signal-controlled intersections. This ensures that the surfacing provides the impact that it is intended. It should not be used for wayfinding purposes, or to assist with mitigating bad designs.’

After considering the report and the conclusions, the TCD Steering Group agreed that there needed to be more formal control of the use of coloured surfacing use associated with special vehicle lanes and cycling facilities. The Steering Group resolved to amend the TCD Rule to prescribe the use of coloured surfacing in relation to special vehicle lanes, shared path facilities, cycle paths, for Advanced Stop Boxes and for use beneath ‘sharrows’.

In further discussions during the AMIG meeting the use of “red” was also debated and it was agreed that a similar form of guidance in the Rule relating to the use of red for platforms and speed limit thresholds could be useful. Use of red under zebra crossing stripes was not endorsed.

A reference in the report to TCD Rule 5.3(b) as potentially providing for RCAs to define an area of road that is used for a specific purpose to permit the use of coloured surfacing was discussed and shown to be an incorrect interpretation of the sub-clause, which permits colour only to supplement a regulatory marking or sign.

c) Platform and hump markings

A paper on current ramp marking practice had not been considered by AMIG before being submitted to the TCD Steering Group and was referred back to AMIG, given that the Steering Group felt AMIG was the appropriate forum as the marking is not described in the TCD Rule and is a matter of best practice. The paper noted the development of inconsistent marking practises nationally as a result of a lack of guidance. The meeting considered the use of zigzag or shark's teeth markings (with apex up or down and with or without additional white lines) for ramps and humps.

AMIG recommended that the TCD Manual be amended to include that any change in vertical surface level in a traffic lane should be marked by a minimum of three shark's teeth with the points uppermost and extending to the full height of the change in level, with no additional lines. Restricting the use of lines to indicate an additional hazard, such as placement of a zebra crossing on a platform, was agreed to provide a potentially clearer message for motorists.

Action: Mark Edwards to arrange for inclusion of the recommended change to TCD Manual Part 5.

d) Protocol for referring AMIG submissions to TCD Steering Group

It was agreed that any paper presenting AMIG decisions or discussions must be signed off as being reflective of those discussions. This need be no more than a cover note signed by the convenors, but the Steering Group needs to be assured that the paper is genuinely reflective of the AMIG view.

5. TCD Rule changes

Claire Pascoe reported that there has been minimal progress on this. The 2019 Omnibus Rule change has been peer reviewed and approved, but it is now proposed that it be opened for consultation again. While it might be possible to include some minor additional amendments within the Omnibus Rule change, it is not intended to be used for introducing substantial changes and it is conceivable that the Omnibus Rule change and a more substantive Rule change would be both before the House at the same time.

6. Trials of Dragon's Teeth marking

Interest in participating has been confirmed and the trial is likely to involve three sites in Hamilton, one site in Dunedin, five sites in Christchurch, two sites in New Plymouth and sites in Auckland. An issue has arisen with the design of the trial, in that, while the Gazette notice prescribes the layout, there is some support from experience in Singapore for modifying the layout to reflect the speed environment. As it is unclear whether this should be a longer layout with more teeth or with more widely spaced teeth, and as only one of the proposed trial sites could be suitable for testing any variation for a higher speed environment, it was agreed that this variation could not be included in the current trial.

A second issue raised in the meeting was what, if any, treatment would be used to reinforce the change in the speed environment being signalled by the Dragon's Teeth. It was agreed that the Dragon's Teeth should mark a threshold and should not be continued into the zone in any way, but some marking of the road, such as a noticeably narrower lane marking, needed to be adopted to sustain the visual cue given by the threshold.

7. Pedestrian-activated Belisha beacon development

Mark Edwards reported on continuing efforts to explore what could be achieved within the Rule in terms of flashing rate and luminescence. One idea being investigated is changing the pulse length for the flash. Steve Dejong questioned efforts to “re-invent the wheel”, given that LED discs offer such variability and now meet the requirements for reflectorised aspect. The meeting repeated that the concern is not with the beacon or disc, but with the activation, which must be timely enough to offer a meaningful opportunity for the motorist to stop without being activated by passing pedestrians not wishing to cross. The activation needs to be sensitive enough to recognise small children, without being activated by passing animals or wind-blown litter.

8. Development of new shared-path behaviour markings

Simon Kennett reported on progress. Research undertaken for AT had revealed widely contradictory beliefs about what is appropriate behaviour. To develop new markings, hundreds of ideas had been culled together. From these, the options for further testing would be selected over December-January, with field testing of those markings expected to take place over February-June.

9. Cyclist-Pedestrian combined Barnes dance trials

Glen Koorey reported on the two trials in Dunedin that have been proceeding since August, where cyclists may cross diagonally on the signal. Data from video surveys in place during September and October has yet to be analysed, but the primary focus will be on unusual movements and increased risks for users. Data from user-perception surveys being collected by on-line survey will be analysed to determine whether perceptions match expectations. The results from both surveys will be reported to the next meeting.

The implications of these trials for wider Rule changes were discussed briefly. In that cyclists would be entering a controlled area from a vehicular lane on the pedestrian signal, how and where else might this be permitted. Glen also noted that delays in starting the trials possibly required the Gazetted trial period to be extended.

Action: Glen Koorey to seek trial extension from Mark Edwards.

10. Benchmarking for walking and cycling

Claire Pascoe identified a window of opportunity for establishing a useful comparative tool able to demonstrate effective performance and good practice, not just for walking and cycling, but across the whole mode-shift in personal mobility. Resources are currently available to progress this. The meeting noted that resourcing benchmarking activities, especially in keeping the data current, can be a major challenge, but welcomed this initiative.

Action: Claire Pascoe to circulate benchmarking survey to AMIG members.

11. Innovating Streets Project

Claire Pascoe provided an update on progress with this project. Although the Minister is keen for an early start, this remains contingent on the passage of a change to the TCD Rule.

12. New crossing treatments in Tasman

Mike van Enter presented a proposed innovative intervention at the Salisbury Road/Champions Road roundabout. The Nelson Railway cycle trail disgorges onto Salisbury Rd before this roundabout, which is one of three within 270m that link Salisbury Rd to SH6 via the Richmond Deviation. Any delays at the Champions Rd roundabout, therefore, cause queues that can extend back into the other two roundabouts. Traffic modelling has suggested that the crossing could be moved 20m along Champions Rd from the roundabout and the lane could split into two immediately after the crossing.

The meeting noted that the crossing would become the point at which the lane became two and insisted that such a design would require robust physical controls to enforce the single lane up to and through the crossing, which would need to be placed on a platform. It was also noted that the minimal deviation required by the design of the roundabout failed to slow approaching traffic and some form of calming intervention before the roundabout would be required to ensure that vehicles turning towards the crossing had been slowed sufficiently to be able to stop.

Action: Mike van Enter to liaise with Fabian Marsh at NZTA on work done on putting crossings on to platforms.

13. Accessible Streets

Simon Kennett reported that progress on this project is waiting on Cabinet decisions on the detail of the programme.

14. PT Guidance

Gerry Dance reported that Brenda O'Donaghue has identified five broad topic areas for potential guidance and the report on this work should be presented to the next AMIG meeting. The meeting noted a particular concern with buses being stationary at bus stops beyond the customary time for setting down and picking up passengers. Bus stops legally cannot be used as layovers, but ordinary bus stops were also usually inadequately inset to allow cyclists to pass safely when the bus driver remained on the stop for scheduling purposes. It was agreed that such 'timing stops' need to be indented to remove the bus from the active lanes and also sign-posted with the maximum waiting time allowed.

15. Guidance for interchanges between micro-modes and PT

Gerry Dance noted that one effect of increasing shared-use micro-modes for first and last mile journeys has been street clutter near bus stops, hubs and train stations. There is increasing recognition that PT guidance might involve providing for control of spaces. Provision of corrals and initiatives to give users of shared-use micro-modes incentives to put used devices into corrals have already been introduced. Gerry noted that, for guidance on shared-use bike parking, the bike parking guidance had been published and was on the CNG.

16. Point hazard signage for pedestrians

Mark Edwards presented several potential signs for locations principally on rural roads where pedestrians were walking alongside roads where the shoulder abruptly narrowed or crossing roads at locations where pedestrians were otherwise unexpected, as where a walking trail intersected a road.

17. New tactile pavers trial

Ina Stenzel reported on research arising from problems encountered on the slip-lane refuges installed in the St Luke's Project, where users were finding the installed TGSi paving too slippery. The research has identified a modified paver material that has a higher co-efficient for skid resistance without a concomitant loss of tensile strength and these will now be installed at trial sites at St Luke's and near the Blind Foundation study area in Newmarket. Ina expected to be able report on the trial results to the June or August AMIG meetings.

18. 'RR660: Factors affecting cycling levels of service'

Tim Hughes presented the background to this research and the methodology and results achieved. The work arose from a desire to compare the cost-benefits delivered from different levels of expenditure in terms of the delivered levels of service for cyclists. The surveys revealed wide differences in perceived and actual safety, with a continued perception of greater risk from traffic

behind the cyclist and travelling in the same direction, rather than from motorists approaching from the side at intersections. The research revealed that painted cycle lanes remain a cost-effective and viable tool to link up the network and can improve crash statistics for motorists in some locations, too.

19. Advanced loop detection for cyclists

Steve Dejong noted the work being done by SNUG on effective alternatives able to detect bikes built from carbon-fibre and other non-metallic materials, and the need for this work to come to AMIG and to inform guidance for layout and detection. It was agreed that this work would be directly relevant to the review of the TCD Manual and efforts to create a new section on signals, and that it needs to be considered by AMIG before being submitted to the TCD Steering Group.

Actions: Steve Dejong will arrange for Tim Hughes to be invited to join the SNUG working group; and Mark Edwards will alert Jeff Greenough to the relevance of the work and need for it to come to AMIG.

20. Bridge barrier height and fencing guidance

Tim Hughes noted that the current recommended barrier height of 1.4m for cycling infrastructure is now regarded as too high, except in situations where there is a vaulting risk or severe risk from a drop. The new Austroads standard, except for those situations, is 1.2m. It was noted that this aligns with the Building Code fencing standard for pools, which has been the guidance used for cycling barrier height by several authorities. The emphasis of the Building Code is on avoiding horizontal elements, however, whereas the emphasis of cycling barriers needs to be on avoiding vertical elements that can catch a handlebar or pedal. Metal mesh with gaps less than 25mm across is preferred, and removes the need for a buffer rail projecting into the space.

It was also noted that the guidance on clearances is in separate sections of Austroads, leading to infrastructure designs with inadequate clearances from the sides when cyclists need to lean into turns or between cyclists travelling in opposite directions.

21. Alternative materials for walking and cycling infrastructure

Gerry Dance noted that providers can expect increased interest in use of recycled materials and, while recycled and composite materials can be more expensive, they can have advantages over natural alternatives in terms of level of service delivered. Ina reported that a colleague in AT had prepared research on alternative materials to deliver a non-slip decking surface for the Waterview project.

Action: Ina Stenzel will confirm whether the AT research is able to be shared with AMIG.

22. Guidance on point hazard avoidance in cycling infrastructure

This item was taken with item 20 and referred to the use of vertical elements and projections, such as railing brackets, that can catch a cyclist's handlebar.

23. Pedestrian crossing research

Kylie Huard presented research undertaken towards a Master of Transport Planning degree that examined the adequacy of pedestrian crossing facilities in NZ. This noted that the standard zebra crossing without any physical modification is perceived as safe by the public but recognised to have a -28% effect on pedestrian crash reduction rates by engineers. The response has been the proliferation of frequently non-compliant modified crossings, employing surface colour, additional threshold markings, or alternative surface materials to indicate "courtesy crossings".

Courtesy crossings, in particular, appear to be poorly understood and inconsistently designed. It is reasonable to conclude that they are not intuitive from the multiple sources offering explanations and guidance on their use.

NZ practice in marking and protecting zebra crossings also now appears to be out of alignment with Australia and UK, where 600mm wide white bars with a 300mm gap was shown to be demonstrably more visible for approaching motorists than the 300mm bar and 300mm gap used here. The minimum restriction on parking within 6m of the crossing is 30% of the restriction in Australia and 40% of that for the UK, although an RCA may set parking restrictions greater than the minimum.

Kylie presented five recommendations arising from her research:

1. (a) increase the width of the bars on zebra crossings
(b) increase the no-stopping distance before zebra crossings
(c) find an alternative to the diamond symbol
2. (a) require courtesy crossings to be on platforms
(b) ensure an appropriate speed environment for courtesy crossings
(c) require TGSI and hold rails for courtesy crossings
3. review the RUR
4. undertake zebra crossing education and enforcement
5. undertake courtesy crossing education

The meeting agreed that speed management is critical. In view of the practical difficulties with removing parking, especially near shops, a viable alternative is to use kerb extensions to make the pedestrian at the crossing more visible to motorists approaching from both directions. Placing the zebra crossing on a platform with mid-block islands was recognised best practice, although this abrupt narrowing of the lane could create a pinch point for cyclists. A trial of increasing the width of the bars was supported, but it was recognised that this could be done only where all trace of any previous zebra marking had been removed or concealed. It was agreed that the specified width for the white stripes of a zebra crossing should be increased to 600mm in the TCD Rule.

It was noted that courtesy crossings have been favoured by urban designers and were initially a response to situations that failed to meet the conditions for a warrant to install a zebra crossing, but they fail to meet the needs of a section of the community. It was agreed that it would be timely to issue a TN on courtesy crossings to give full guidance on where and how they should be installed.

It was also agreed that guidance on platform design was needed to address both drainage and noise or vibration nuisances being created by them. A "Swedish table" or aerofoil profile, with steeper entry ramp and extended departure ramp, has been shown to alleviate much of the vibration generated by the standard Watts profile hump.

Kylie was thanked for an extremely topical and timely presentation.

Action: Mark Edwards to include in the Omnibus Rule change increasing the width of the white bars on zebra crossings to 600mm; Tim Hughes to draft guidance on courtesy crossings and platform and ramp design for reporting back to AMIG.

24. Next tasks in Cycling Network Guidance development

Glen Koorey reported on progress with the current tasks.

- *Facility Cost Estimates (task 19)*

A first attempt at costing typical facilities had been produced using three typical examples for each to derive an indicative average cost for high-level planning purposes before detailed design is begun.

This draft gives linear costs only; later versions could deliver point costs, such as for intersections or crossings.

Action: Members will provide feedback to Glen within a fortnight of the meeting.

- Buffered bike lanes – revised diagrams (task 33)

The diagrams had been revised to remove distracting anomalies, such as too narrow footpaths and trees placed on them. It was noted that the minimum footpath width describes the useable width available to pedestrians, rather than the width of the berm or from kerb to fence, and a question was raised on for how much longer a minimum width of 1.5m might be fit for purpose.

Action: Members to identify any specific concerns with the revised drawings to Glen.

- Paired cycle priority / zebra crossings (task 107)

New text and images had been inserted to illustrate more examples and design considerations. This included the alternative of a hump before the crossing instead of placing the crossing on a platform and the measures, signs and markings required to avoid cyclists rushing into the road.

Action: Members will provide feedback to Glen within a fortnight of the meeting.

- Coloured surfacing (task 113)

The report seen by the TCD Steering Group had been further refined to identify the uses of coloured surfacing. In many situations the uses being made were multiple and overlapping. Blue, yellow and white have specific purposes, and green now has recognised uses. The uses of red now need to be clarified.

Action: Members to identify uses that they want and uses that they do not want to Glen.

- Contra-flow cycle signs at side roads (task 134)

The example of Federal St, Auckland, was used to indicate a problem for cyclists and motorists approaching from side streets needing to be alerted that cyclists could approach from either direction. It was agreed that an “Except cyclists” supplementary under the “One Way” sign would inform cyclists that they could travel in both directions, but was not adequate and there was strong support for a new advisory sign showing arrows in two directions under the cycle symbol to warn motorists at such junctions.

Action: Mark Edwards to draft advisory sign for next meeting.

- Cycleway separators – choice of separator colour (task 3)

Simon Kennett noted the report of an accident resulting from a cyclist hitting the start of a separator that was laid entirely in black, providing minimal visible contrast against the road surface. It was agreed that although yellow does give adequate visible contrast, yellow should not in theory be used in a situation where there would otherwise be a white, not yellow, line. The risk with separators laid in black and white, however, was that they could have the appearance of a dashed white line, confusing motorists and potentially being a greater trip hazard for pedestrians.

- Access Control Devices – feedback on revised drawings (task 10)

The revised drawings had been circulated and the meeting had concerns at the length of taper being proposed, at 1:40 about 4x longer than might be expected using the usual taper proportions. The meeting agreed that the revised drawings could not be approved.

Deferred items

The following items were deferred to the next meeting:

24. - Walking signs for touring –further sign concepts (task 133)
25. Pedestrian Network Guide (PNG) development
26. Guidance on options for dealing with shared path conflict
27. Infrastructure design training update
28. NZTA webinar: Safe walking and cycling treatments for intersections and crossings
29. He Ara Kotahi pedestrian/cycle bridge in Palmerston North
30. Walk21 Rotterdam report
31. Brisbane international Cycling Safety Conference report

32. Next meeting and schedule of meetings for 2020

The next meeting will be on 27 February in Room 5.16 in the NZTA offices in the Majestic Centre in Wellington.

The schedule of meetings for the year is:

- 27 February Wellington
- 4 June Wellington
- 13 August Wellington
- 26-27 November Hastings

Hjarne Poulsen and Dunedin City Council were thanked for their generous and successful hosting of this meeting and arranging for two site inspection tours over the two days.

The retirement of Paul Barker from AMIG was recorded with regret and best wishes for his new responsibilities.

Meeting closed: 3:15 p.m.