

MINUTES OF MEETING: Thursday 10 May 2018
Meeting Room 5.16, NZTA Offices, Majestic Centre, 100 Willis St,

Attending

- Gerry Dance, Principal Advisor, System Design & Delivery, NZTA
- Andrea Timings, Network Engineer, Hamilton City
- Tim Hughes, National Traffic and Safety Engineer, NZTA
- Simon Kennett, Senior Project Manager, System Design & Delivery, 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
- Richard Bean, Senior Engineer, NZTA
- Adam Beattie - Walking and Cycling, AT
- Simon Cager, Senior Project Engineer, Hutt City
- Mark Edwards, Senior Engineer, NZTA
- Claire Pascoe, Lead Advisor – Multi-Modal, System Design & Delivery, NZTA (Item 3.3)
- Wayne Newman, RCA Forum Research & Guidelines Group

Apologies

- Kathryn King, Walking & Cycling Manager, Auckland Transport
- Glenn Bunting, Network Manager, Safety and Environment, NZTA
- Claire Sharland, Asset Manager Transportation, Taupo District
- Andy High, Senior Engineering Officer, Nelson City
- Claire Graham, Senior Specialist – Walking and Cycling, AT
- Glen Connolly, Senior Transportation Engineer, Palmerston North City
- Nick Marshall, Senior Roding Engineer, Whangarei District
- Jodie Lawson, Sustainable Transport Team Leader, Rotorua Lakes

A G E N D A

- 1. WELCOME, INTRODUCTIONS, APOLOGIES AND H&S BRIEFING**
- 2. ACTIONS FROM PREVIOUS MEETINGS**
- 3. UPDATES**
- 4. DESIGN ISSUES**
- 5. OTHER BUSINESS**

ACTIONS AND DECISIONS FROM THE MEETING

1. S. Kennett/G. Dance - incorporate the three heights now being used for Copenhagen kerbs into the guidance.
2. T. Hughes/G. Dance - prepare trials for Copenhagen kerb heights to assess the risks of pedestrian and cyclist injury.
3. T. Hughes - prepare a paper for possible trials for a delineator with a 12mm double-ribbed profile that could be replicated in concrete or thermoplastic and avoids appearing to be only a white line for the visually impaired.
4. S. Kennett/G. Dance - update the guidance for minimum widths and turning radii for wider and longer cycles and devices using cycling infrastructure to specify a radius of 2.5m as the absolute minimum and 4m as preferred, including for chicanes.
5. M. Edwards/G. Bunting - investigate establishing a working group to work with the industry and TCD Steering Group to agree on a better specification to define the glass size and hardness and required longevity for skid-resistant Apple Green surfacing.
6. S. Kennett - report back on the complexity and potential cost of the arrangements for contractors marking or remarking the road, the effect on RRPM placement and the effect on both cyclists and motorists of having the ATP 'move' inside and outside of the edgeline with the proposed ATP guidance.
7. S. Kennett - amend guidance to be more emphatic in requiring a platform for a cycle crossing, so that if the crossing cannot be put on a platform, it should not be installed.
8. S. Dejong - investigate a trial of a "green and black zebra" to avoid the continuous green lane across the road at a cycle crossing giving visual cues that encourage unsafe behavior.
9. A. Beattie and R. Bean/M. Edwards - investigate a possible marking based on a variant of the "pass with care" signage to moderate speed behavior on shared paths and report back.
10. S. Kennett - include additional determinants, including the length of narrow shoulders (pinch points of <40m would be viable), percentage of HCV traffic and the operating speed, in adding a Grade 6 to the NZCN and investigate marking pinch points on the map with a star to indicate a higher grade at that point (permitting only one grade increase at that point to remain acceptable).
11. R. Bean - approve the addition of the Albany St intersection to the shared Barnes dance trial to provide a result that would indicate the effect for a higher volume intersection.
12. G. Dance - confirm venue for next meeting on 17 August is Majestic Centre, Wellington.
13. A. Beattie - investigate hosting the November meeting in Auckland.

Decisions – AMIG 10 May 2018

1. The appropriate width for a ‘virtual buffer’ beside the parking lane alongside a cycle lane is one third of the cycling lane width. This creates a consequential need for the M-2 cycle symbol to be marked off-centre in the cycle lane and placed further from the door zone.
2. A platform is required for a cycle crossing; if the crossing cannot be put on a platform, it should not be installed. Blocks of green rather than a continuous green lane across the road should be used to avoid visual cues that encourage unsafe behavior by cyclists. Green blocks used across vehicle entrances have been shown to be effective in slowing cyclists and encouraging caution.
3. The “pass with care” cyclist symbol (duplicated at reduced scale to indicate a child cyclist) superimposed on a car beneath a 30 kmph roundel has been recommended to the TCD Steering Group as the threshold sign for any 30 kmph low volume shared road space meeting the criteria for marking Sharrows, as it gives a stronger and clearer visual cue for the desired behavior in terms of low-speed sharing of the road space than the suggested alternatives:



4. Where waste collection trucks are permitted to occupy or block a cycle lane when engaged in waste collection, an RG-24 sign may not be used to comply with TMP requirements. In locations where it would be safe to divert cyclists into the traffic lane a RD-6R variant might be used. Ideally the sign would be hinged or active to be able to be used only when the truck was actively blocking a cycle lane and engaged in waste collection.



NOTES

1. WELCOME, INTRODUCTIONS, APOLOGIES AND H&S BRIEFING

Mark Edwards was welcomed and a round-table introduction of each member was made. Apologies were recorded and Gerry Dance provided the H&S briefing for the meeting. In taking the apology from Glen Connolly it was noted that he is moving from PNCC to Beca.

The agenda was confirmed, with item 3.3 to be taken before 3.1 and 3.2, and 4.8 deferred to Other business.

2. ACTIONS FROM PREVIOUS MEETING

Actions arising from 16 February 2018 were reported:

1. Actions from 3.5:

T. Hughes has followed up on the work done on bollards and reported that Kevan Fleckney has begun the revision to compress his draft guidance;
G. Koorey has still to complete researching the work done by ViaStrada on Riley and Safe Hit posts;
G. Koorey had yet to receive local photos of separators, any case studies or local experiences.

2. Action from 3.6:

G. Dance and S. Kennett noted it is a priority to ensure best practice in local innovations has been adopted in national guidance in time to inform Austroads revision of pedestrian/ cycling guidance due to begin in October.

3. Actions from 4.a:

T. Hughes has circulated guidance on minimum discernable heights and trip hazards from local and foreign research, which tend to indicate that a kerb height of 65mm for a Copenhagen lane would place it in the 'most at risk' zone. The summary of trips related to defect height from the PPDG on pages 3-9 to 3-11:

<https://www.nzta.govt.nz/assets/resources/pedestrian-planning-guide/docs/chapter-3.pdf>

A subsequent report by Bill Frith had compared the risks of a fall and being hit by a car, and also the obstacle types (page 39):

<http://www.nzta.govt.nz/assets/resources/research/reports/431/docs/431.pdf>

I. Stenzel reported that AT has chosen to adopt a 65mm kerb at a 1:3 gradient after consultation with the Blind Foundation. P. Barker noted that this is more than double the 30mm chosen by WCC and S. Dejong noted that CCC had adopted a 50:50 split for the standard 100mm kerb, so three different Copenhagen kerbs, with varying gradients, have been adopted nationally.

It was agreed that the three heights need to be incorporated into the guidance, but trials are needed. While T. Hughes saw a risk of a pedestrian turning an ankle on a 65mm 1:3 kerb, S. Dejong was concerned to avoid cyclists attempting to mount such a kerb and falling. A tactile edge to the kerb might also be needed.

4. Action from 4.b:

I. Stenzel reported that investigations of the potential adaptation and application of a low thermoplastic guidance strip to provide detectable delineation on a shared path resulted in strong opposition on urban design and amenity grounds and this will not be used.

S. Dejong noted that the paths are not "shared", but segregated by a "white line" and this has not been effective. It was agreed that, while able bodied pedestrians and cyclists might use any path at their own risk, the RCA responsibility to ensure that the visually impaired are not put at risk. A delineator therefore needs to avoid appearing to be only a white line and needs to be tactile.

After considering the design of a German example of a delineator tile and designs and profiles developed in the UK about 15 years ago, the meeting agreed that the 12mm double ribbed profile could be replicated in concrete or thermoplastic. T. Hughes will prepare a paper for possible trials.

5. Action from 4.c:

S. Kennett reported on the guidance for minimum widths and turning radii for wider and longer cycles and devices using cycling infrastructure. Using a tandem to test, he found a radius of 2.5m to be the absolute minimum, while 4m is preferable. It was agreed that this would be applicable to chicanes and the CNG and PPDG need to reflect this. I. Stenzel noted that provision for inclusive cycling will require paths to accommodate tricycles (generally 700mm wide, but 800mm at handlebar height) and cargo bikes that can be up to 1.2m wide.

6. Actions from 4.e:

S. Kennett reported on recommending use of apple green for lanes used by both buses and cyclists, and red for lanes not available to cyclists. The use of green for lanes that can and cannot be used by cyclists was confusing both motorists and cyclists. It was agreed that use of red should be restricted to indicate lanes not available to cyclists and lanes available to cyclists should be the same green already agreed for specifications.

Regarding these specifications, S. Dejong reported that they are inadequate for a number of critical features. They do not define the glass size or hardness and do not specify a required longevity. S. Lilley noted that skid-resistant Apple Green was not the correct hue and tone. As these surfacings cost up to four times the asphalt they are applied to, there is a clear need for an effective standard.

It was agreed that a working group would need to work with the industry and TCD Steering Group to agree on a better specification.

7. Actions from 4.f:

S. Kennett sought to clarify the wording to be used within the TCD Guidance for the M-2 cycle symbol to be marked off-centre in the cycle lane. It was agreed that it should be placed “further from the door zone” rather than “nearer the outer edge of the lane” to ensure the virtual buffer lane is effective, to avoid confusion.

8. Action from 5.b:

W. Newman reported that the terms of reference had been amended to emphasise that members represent those with responsibility for the delivery of infrastructure for active modes and have a role to bring any issues related to this to the group.

9. Action from 5.c:

G. Dance reported that with G. Connolly leaving Palmerston North and N. Redekar having left Hastings it was no longer appropriate for either later meeting to be held in its planned venue.

The minutes of the meeting of AMIG on 16 February 2018 were confirmed as a true and proper record.

3. UPDATES

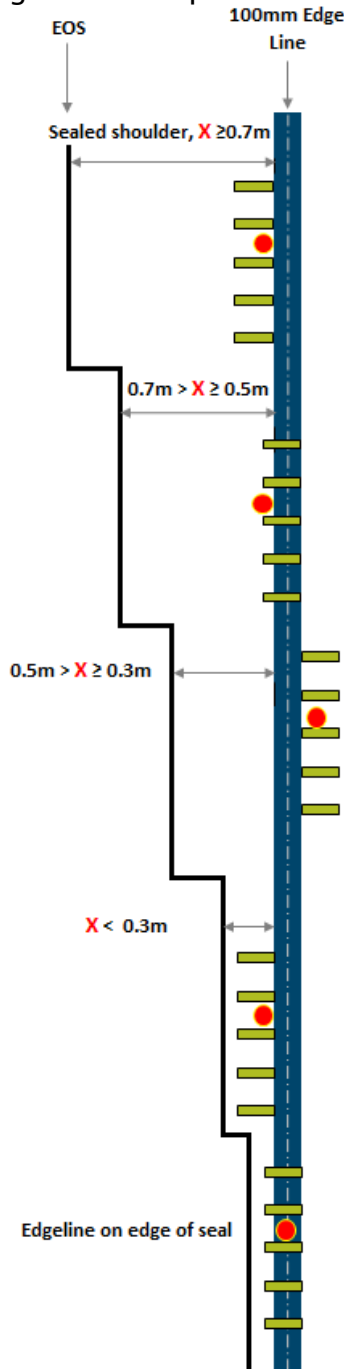
1. Use of Pedestrian Guidance & Policy – Research

G. Dance reported on the preliminary response to the survey on use of the guidance, with 160 responses received. The PPDG will be revised and issues identified from the survey will be priorities to address, including perceived obstacles to use. One of these might be the number of single-mode specific guides now needing to be considered. A more mode-neutral approach might require an integrated guidance package.







2. Draft ATP guidance as part of TCD Part 5

G. Dance and T. Hughes reported on work to provide guidance for using audio tactile

paving and S. Kennett presented five scenarios for placement of ATP relative to the edge line to improve the level of service delivered to cyclists:



Legends

ATP	
150mm Rib 250mm Pitch	
    	
	RRPMs on Greenfield projects or in sections where these are present.

If the sealed shoulder is between 300 and 500mm then either:
a) widen the sealed shoulder to 500mm and refer to the layout above
b) widen the lane (narrower sealed shoulder) and refer to the layout below
c) if the above two options are cost restrictive or impractical and lane widths are greater than 3.5m instal ATP on traffic side of the line.

- Where the sealed shoulder extended beyond the edgeline by $\geq 700mm$ ATP (150mm rib at 250 mm pitch) would be entirely outside the edgeline;
- Where the sealed shoulder extended beyond the edgeline by 500-699mm ATP would be on the edgeline extending outwards by 50mm;
- Where the sealed shoulder extended beyond the edgeline by 300-499mm ATP would be entirely inside the edgeline;
- Where the sealed shoulder extended beyond the edgeline by $< 300mm$ ATP would be entirely outside the edgeline; except
- Where the sealed shoulder does not extend beyond the edgeline ATP would be on the edgeline extending outwards by 50mm.

Placement of RRPMs would also vary (outside the edgeline for scenario a, b and d, inside the edgeline for c and on the edgeline for e).

The group queried the complexity and potential cost of the arrangements for contractors marking or remarking the road, the effect on RRPM placement and the effect on both cyclists and motorists of having the ATP 'move' inside and outside of the edgeline.

3. Training and Capability

C. Pascoe joined the meeting to report on the training needs survey and investigation of internal and external cultures. These had demonstrated a strong demand for multi-modal or mode-neutral training as well as training in the fundamentals. It was also found that there is a need and desire for training aimed at educating decision makers and for greater integration of transport and land use ("placemaking" or "liveable cities") in training. Specific weaknesses appear to be in road safety auditing experience and skill to audit multiple modes or modal intersections equally and in designing for "place and movement". The GPS has shifted the emphasis for urban transport, in particular, to place safety ahead of movement in priority.

A capability development and implementation plan for 2018-19 was discussed that provided training strands for elected members, senior managers, project managers, concept planners, concept designers and detail designers.

4. DESIGN ISSUES

1. Paired Pedestrian and Cycle Priority Crossing - TCD elements required for installing

S. Dejong reported on the approvals process for a paired crossing installed on Ilam Road, which required supplementary signage warning "CYCLISTS LOOK FOR TRAFFIC" and motorists to "GIVE WAY TO CYCLISTS AND PEDESTRIANS". He then presented a video of a collision in which a cyclist was knocked over while crossing.

It was noted that the cyclist entered the road without looking or slowing and crossed on the pedestrian crossing, and that neither crossing is on a platform. The decision to install without a platform reflected strong opposition from the bus operator, as this is a bus route. It was agreed that the incident demonstrated that a platform was required and that the guidance should be more emphatic in requiring a platform; if the crossing cannot be put on a platform, it should not be installed.

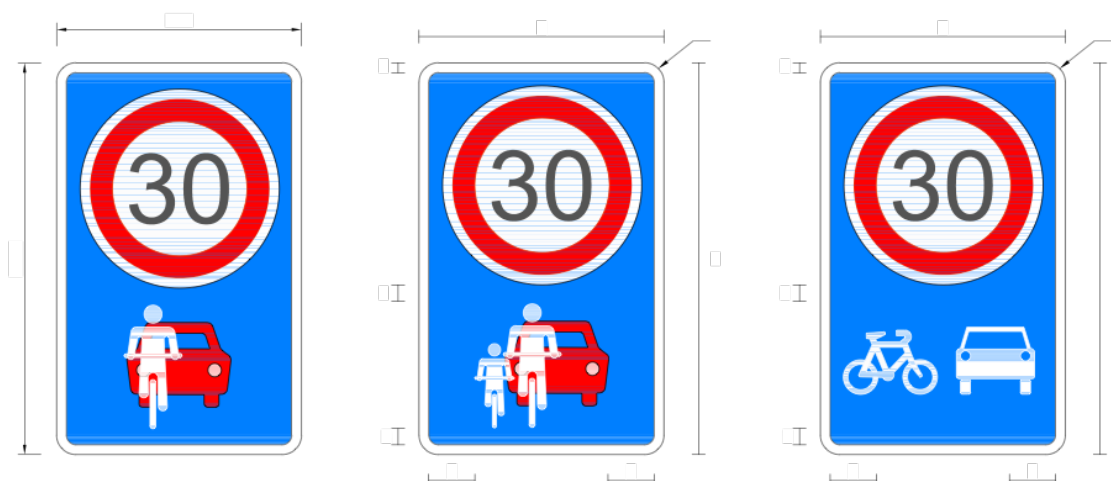
It was also agreed that the incident indicated that the speed management was insufficient for the cyclist, with the sign to "look for traffic" ineffective, and the continuous green lane across the road giving visual cues that encouraged unsafe behavior. The green blocks used across vehicle entrances have been shown to be effective in slowing cyclists and encouraging caution. It was agreed that a trial of a "green and black zebra" (i.e. use of discontinuous blocks of green across the road) should be undertaken.

2. Separators - NZTA guidance

G. Koorey reported on a survey of available separators and their merits and weaknesses. A matrix to indicate possible situations and separators indicated preferable separator types. Feedback on these will be used to update the CNG. There was some discussion around vertical posts, which are favoured by cyclists, but regarded as ugly and temporary by urban designers. It was agreed that for many situations the data are insufficient to support modeling for permanent designs and it is likely to be more cost-effective to trial a temporary solution first.

3. Threshold sign design for Christchurch's neighbourhood greenways

R. Bean presented three options for a 30kmph low volume shared road space:



The meeting agreed that the “pass with care” cyclist symbol (especially duplicated at reduced scale to indicate a child cyclist) superimposed on the car gave a stronger and clearer visual cue for the desired behaviour than the use of the M2 cycle symbol placed to the left of the car, which indicates that bikes and cars might be present with no information on how they are desired to interact. It was agreed that this sign could be used for roads meeting the criteria for marking Sharrows.

4. Waste Management Trucks - Good Practice Guidelines for Cycle Lanes and Bikes

S. Kennett reported on the waste management industry reaction to the restriction on the use of an active RG-24 sign on the rear of collection trucks and to the agreed signage. The waste management industry is opposed to the removal of the RG-24 and to the use of a M-2+RD-6R sign to instruct cyclists to pass on the right. It would prefer to retain only a “DO NOT PASS ON THE LEFT” sign to avoid any possible liability for directing cyclists to pass on the right. The meeting agreed that the RG-24 sign could not be used and the required sign for waste collection trucks to comply with TMP requirements should be the RD-6R variant:



Ideally the sign would be hinged or active to be able to be used only when the truck was actively blocking a cyclist lane or engaged in waste collection.

5. Speed limits on shared paths

A. Beattie reported on increasing requests being received for speed limits to be set and posted for shared paths. P. Barker agreed that the same pressure on WCC, with limits of 10 or 15 kmph being discussed. S. Dejong noted that CCC had gazetted every path within Hagley Park at a limit of 10 kmph, but the limit was not posted. It was agreed that it would be unlikely and impractical to have enforcement, therefore the issue is one of achieving appropriate speed behavior on shared paths.

S. Lilley noted that the current suite of shared path markings is deficient in indicating appropriate speed behavior and T. Hughes pointed to the research showing that shared paths have the highest crash rates as indicating a need for speed management.

It was agreed that A. Beattie and R. Bean/M. Edwards will investigate a marking based on a variant of the “pass with care” signage to moderate speed behavior on shared paths and report back.

6. NZCT Grade 6 road characteristics

S. Kennett presented the grading formulae used for determining the viability of cycle routes on open roads and noted that these presently deem anything exceeding Grade 5 for combined traffic volume and shoulder width criteria as unacceptable. This currently includes some popular cycle routes, such as Crown Range, and urban commuter routes. Is a Grade 6 needed to cater for cyclists who would be comfortable cycling at this grade?

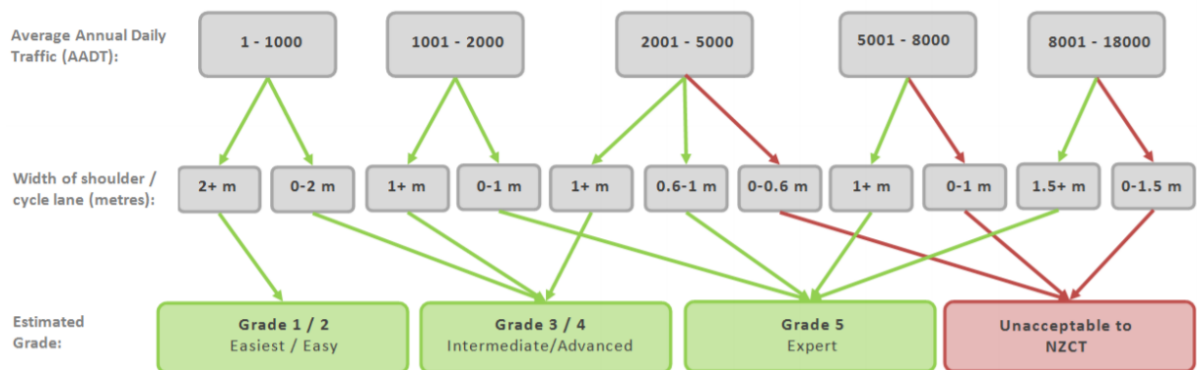
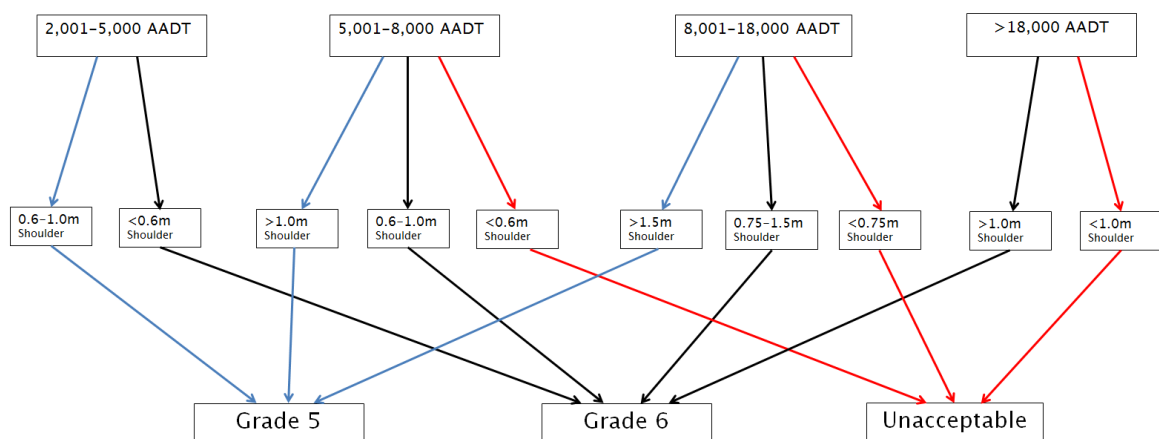


Figure 37: determination of viability of cycle routes on open roads

The meeting agreed that additional determinants would need to be considered, including the length of narrow shoulder (pinch points of <40m would be viable), percentage of HCV traffic and the operating speed. It was agreed that adding a Grade 6 would give potential cycle tourists better information and provided an opportunity to mark pinch points on the map with a star to indicate a higher grade at that point (permitting only one grade increase at that point to remain acceptable).

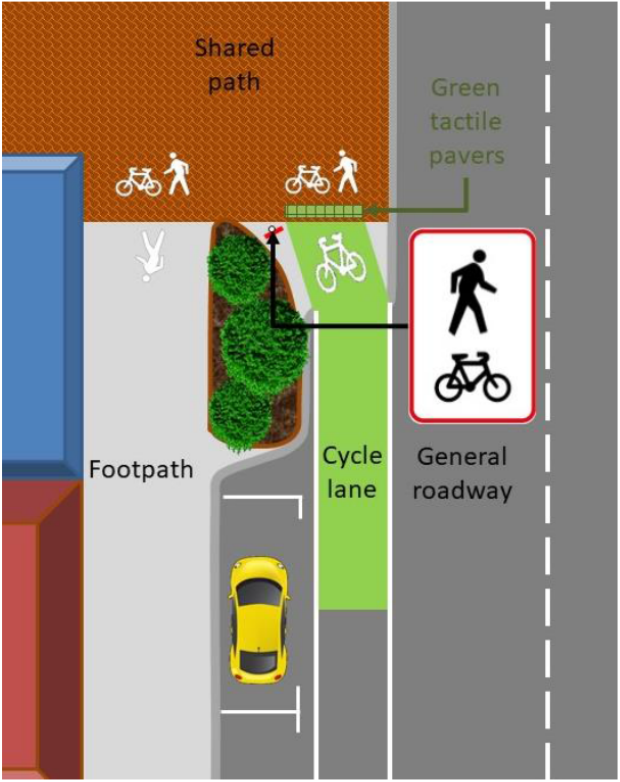
NZCN Grade 6 at 100 kph - draft 7 May 2018



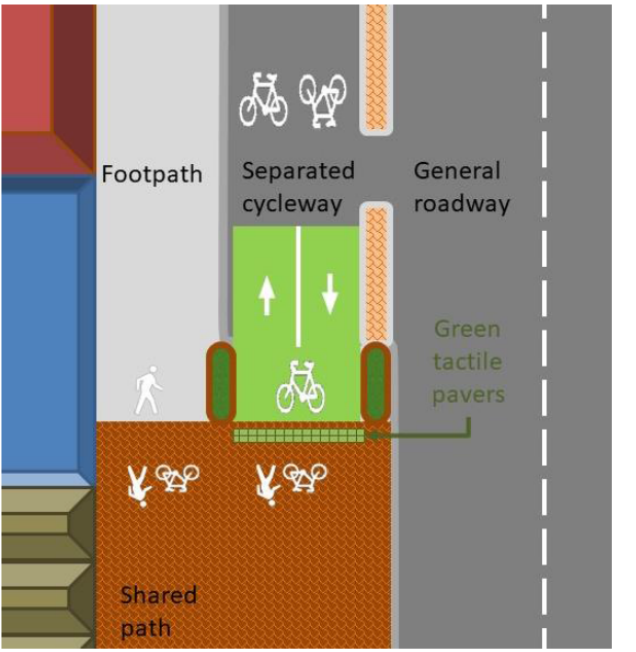
7. Shared Path Markings

S. Kennett presented the revised illustrations for signage and marking at a transition involving an on-road cycle lane (Figure 4-1) and a separated cycleway (Figure 5-1). These were approved.

4.1. Transition involving an on-road cycle facility

Description	Illustrations / examples
<p>A transition involving on-road cycling (from a cycle lane, a general traffic lane, or a separated cycleway with a very low degree of separation from the adjacent general traffic lane) and an off-road path (i.e. a shared path or an exclusive cycle path).</p> <p>Except for the case of a side street crossing (see 5.2)</p>	
Provision	
<p>If there is any physical possibility of a motor vehicle entering the off-road facility via the transition point: must include a regulatory sign indicating the path nature (this would also be useful in the case where cyclists may transition from the roadway to the off-road path, to inform cyclists). Supplementary “begins” plates are not required, as the shared path sign communicates this message sufficiently.</p>	<p>Figure 4-1: Transition involving on-road cycle lane</p>

5.1. Transition involving paths separated from general traffic

Description	Illustrations / examples
<p>A transition involving paths where there is no physical possibility for motor vehicles to access the cycleway / shared path near the transition.</p> <p>Could involve a 2-way separated cycleway.</p>	
Provision	
<p>No signage required (as motorists are blocked by the cycleway separators and path kerb).</p> <p>Markings required to inform users of the change in provision.</p>	<p>Figure 5-1: Transition involving a separated cycleway</p>

8. Shared Barnes Dance phases along cycleway route

G. Koorey presented the arguments for pedestrian and cyclist Barnes dance at Albany St on the Great King St/Cumberland-Castle St cycleway through northern Dunedin. It was agreed that this would need a countdown and 300mm aspect signals. A combined Barnes dance would permit cyclists to proceed from a traffic lane, too, in theory, which would improve traffic flow for all users.

R. Bean noted that the original agreement to a shared Barnes dance trial was for a low volume intersection, but the result of such a trial would not indicate the result for a higher volume. It was agreed that the meeting recommended that the Albany St intersection be included in the trial.

5. OTHER BUSINESS

1. Audible signals at stand-alone cycle crossings

G. Koorey raised the possibility of adding an audible signal. T. Hughes noted that this would generate no added cost as the facility was already available, but it could not be used at any location where a visually impaired pedestrian might, on hearing it, step into a live traffic lane.

2. Cycling Level of Service research

T. Hughes provided an update report on this. The problems with analysis of the video data reported to the last meeting had caused the team to go back to the group who actually rode the routes and it now appears likely that good data might still be retrieved from the real-time riders. The problems have meant that several planned workshops have been cancelled and it is now likely that a single workshop will be convened to examine the results and make a detailed analysis.

3. Draft Investment Assessment Framework for 2018-21

G. Dance presented concerns raised by N. Marshall that the CNG contains the necessary means to “guide appropriate levels of service” or a prioritisation process/matrix suitable for “ranking projects for investment”. It was agreed that the draft Investment Assessment Framework made several assumptions and lacked definitions for key words used.

6. NEXT MEETING

The programme of meetings adopted for 2018 was:

- Next - 2 August in Palmerston North
- Last - 21/22 November in Hastings, combining a full-day meeting with a half-day inspection tour and involving an overnight stay for those doing both.

It was agreed that, with G. Connolly leaving Palmerston North and N. Redekar having left Hastings, it was no longer appropriate for either meeting to be held in its planned venue.

The August meeting was, therefore, shifted from 2 August to 17 August and from Palmerston North to Wellington, and will meet again in room 5.16 of the Majestic Centre.

It was agreed that the November meeting should not be in Wellington and A. Beattie offered to investigate hosting the meeting in Auckland.

Meeting closed at 3.40.