

SIGNS AND MARKINGS TO DESIGNATE PATHS FOR PEDESTRIANS AND CYCLISTS

Best practice guidance note

1 APRIL 2019

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1. BACKGROUND

Prior to June 2019, the Traffic Control Device (TCD) Rule signage required that cycle paths and shared paths be signed at frequent intervals and wherever the type of path changed. A trial was carried out in 2017/18 to see if markings would be sufficient and where signs would still be required.

The trial resulted in three recommendations:

- RCAs should have the flexibility of choosing whether or not to install signs on these paths, provided suitable markings are provided at transition points between different path types.
- The marking regime should include pedestrian symbols wherever a shared path ends and a footpath begins.
- RCAs should retain the flexibility to specify the relative placement of the pedestrian and cycle symbols in their shared path markings, and whether or not to use elongated cycle symbols.

As a result the Traffic Control Devices rule was amended, effective 1 June 2019.

This best practice guidance note recommends where and how to use markings and/or signs that designate paths for pedestrians and/or cyclists.

Note that the <u>Cycling network guidance</u> (CNG) includes guidance on signs and markings that might be used on paths for pedestrians and cyclists other than for designating modes.

2. PRINCIPLES

Designers should consider the following properties of signage and markings to designate paths for pedestrians and cyclists:

	ADVANTAGES	LIMITATIONS
SIGNS	 Generally visible from a greater distance – therefore particularly good for informing motorists about the path designation. Commonly used in other traffic applications (driving, parking, etc.) 	 Require users to look up, which they often don't do. Too many signs can result in a 'sign forest' visual clutter could place too much demand on users' cognition overuse may result in users being desensitised and paying less attention.
MARKINGS	 Pedestrians and cyclists tend to look down, so they are more likely to see markings on the ground. Less obvious from longer distances so don't contribute to visual clutter. (Pedestrians and cyclists travel relatively slowly, so signs/markings don't need to be visible from long distances.) 	 Could be less visible (than signs) under certain conditions: rain/surface water covered with leaves hidden under other users.

A key consideration is whether it is necessary to communicate the path designation to motorists, or whether only path users (pedestrians and cyclists) need be informed.

3. SPECIFICATIONS FOR SIGNS AND MARKINGS ON PATHS

3.1. Signs for designating path use

The TCD Rule outlines the requirements for signs for paths for pedestrians and cyclists, and transitions to other facilities. In particular see the following sections:

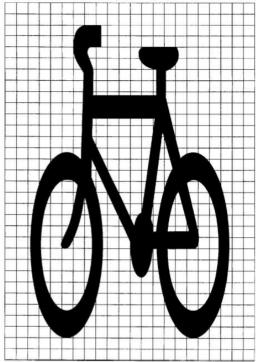
- 4.1 Purposes of traffic signs (a-c)
- 11.2 Special vehicle lanes
- 11.4 Facilities for cycles, wheeled recreational devices and mobility devices
- Schedule 1:
 - R4-9 Cycle lane
 - R4-9.1 Cycle only
 - R4-11 Shared path
 - R4-11.1 Shared path defined positions for users
 - A40-7 Shared zone

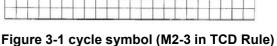
The updated TCD Rule allows for markings alone to be used in some locations (see Appendix A for the current rule). The traffic control devices manual (TCD Manual) provides guidance on industry good practice, including, where necessary, practice mandated by law through legislation such as the TCD Rule. This best-practice note recommends locations where signs, as well as markings, should be used.

3.2. Markings for designating path use

The current TCD Rule and TCD Manual outline the requirements for the appearance and placement of path markings to designate shared and cycle paths; the key points are:

- Where the pedestrian symbol is used, it must conform to TCD Rule figure M2-4.
- Where the cycle symbol is used, it must conform to TCD Rule figure M2-3; note this has some possible variations:
 - On shared paths (but not on exclusive cycle paths) there is the option of using a variation that is not elongated, ie so that the wheels of the bicycle appear as circles to slower users (such as pedestrians) or when viewed from the side.
- The TCD manual specifies sizes for cycle and pedestrian symbols, depending on the path / lane type; cycle symbols in separated cycleways should be as per cycle lanes and according to the speed limit for adjacent traffic.
- The markings should communicate any subdivision of the path by mode or direction.
- The markings should contrast sufficiently with the surface they are marked on.
- Markings designating shared or cycle paths should be used at the start and end of each path, including either side of an intersection.
- Additional (ie repeated) markings can be used along a path, to discourage unauthorised use of the path by other road users.
- The cycle and pedestrian symbols may be located one above the other, or side by side, but they must not overlap.





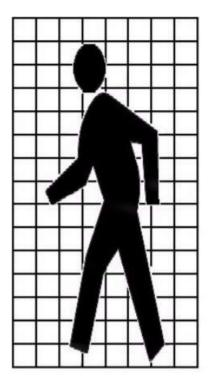


Figure 3-2 pedestrian symbol (M2-4 in TCD Rule)

In addition, the recommended best-practice approach is that:

- there should be some way of indicating the transition point between two path types (ie shared path, cycle path, footpath). This could be:
 - a change in surface colour, texture, and / or pattern
 - marking a threshold line
 - associated threshold treatments, such as landscaping, to create a gateway at the transition
- the symbols designating the path types either side of the transition should be marked:
 - except for a 2-way cycleway (where cycle symbols and potentially arrows would normally be
 used to show that cyclists should keep left): at the transition with a shared path, mark only
 the symbols for the direction entering the cycleway at the transition, on the appropriate side.
 This is to avoid confusion with the cycle in the shared path symbol. Mark both cycle symbols
 further down
- for a shared path with two directions of travel, the path symbols at a transition should be aligned in the direction of travel of a user entering the path
- a pedestrian symbol be used anywhere a shared path transitions to a footpath, to distinguish between the two types of path
- at the transition, there should generally be at least one symbol per 3m of path width (eg if a shared path is 4m wide, there should be two shared path symbols marked at the transition); except if this is superseded by any of the above points
- at a transition involving a shared path and an exclusive path (ie footpath or cycleway), a larger symbol could be used to emphasise the exclusive path, which has a higher degree of restriction on user types.

Most of the above elements are incorporated in figure 4.1 and figure 5.1.

LOCATIONS WHERE SIGNS AND MARKINGS 4. SHOULD BE USED

The following applications are intended to help guide RCAs in their decisions about where to use signs as well as markings.

Transition involving an on-road cycle facility

DESCRIPTION

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 offroad path (i.e a shared path or an exclusive cycle path).

Except for the case of a side street crossing (see 5.2)

PROVISION

If there is any physical possibility of a motor vehicle entering the off-road facility via the transition point: should 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.

Where a shared path ends and cyclists must exit onto a roadway, consider using a shared path 'ends' sign, using green paint and a cycle marking to encourage riders off the path, and placing a pedestrian marking on the footpath.

ILLUSTRATIONS/EXAMPLES

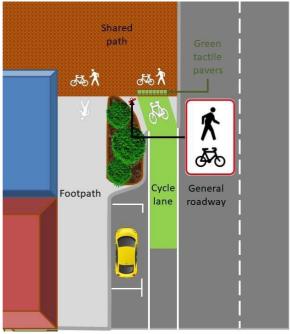


Figure 4-1 Transition involving on-road cycle lane

Site-specific factors

Other factors that mean it might be useful to use signs as well as markings:

- Sites likely to experience surface water on the path, that may cover pavement markings (note: this suggests a bigger problem with path design).
- Sites with large quantities of deciduous trees, where fallen leaves may cover payement markings (note: authorities should endeavour to clear fallen leaves as promptly as possible, especially when this coincides with rain and where gradients and/or curves in the path are involved, as leaves can be a slipping hazard for cyclists).
- Sites with stimulating environments and/or high path quality, where people may want to look up more often, and feel comfortable doing so.
- Sites where markings have been applied according to the recommendations, but the paths are being misused in terms of mode and/or direction.

5. LOCATIONS WHERE MARKINGS ALONE SHOULD SUFFICE

The following applications are intended to help guide RCAs in their decisions about where markings alone should suffice.

5.1. Transition involving paths separated from general traffic

DESCRIPTION ILLUSTRATIONS/EXAMPLES A transition involving paths where there is no physical possibility for motor vehicles to access the cycleway / shared path near the transition. Could involve a 2-way separated cycleway. **PROVISION** General No signage required (as motorists Separated Footpath are blocked by the cycleway cycleway roadway separators and path kerb). Markings required to inform users of the change in provision. Shared path Figure 5-1 Transition involving a separated cycleway



Figure 5-2: Transition between shared path, footpath and separated cycleway, Matai Street, Christchurch



Figure 5-3: Transition between shared path, footpath (note: missing recommended pedestrian symbol at start of footpath) and separated cycleway, Beach Rd, Auckland

5.2. Shared paths or cycleways crossing side streets

A shared path or separated cycleway crossing a side street is analogous to a footpath crossing a side road; assuming there's an obvious change in level and/or surface colour/texture between the path and road, there is no need to use any signage to designate the path type. However, the use of other TCDs, physical elements and markings is crucial and <u>Technical Note 002</u> of the Cycling Network Guidance should be consulted regarding the design of cycleways and shared paths at side streets.

5.3. Paths crossing driveways

A shared path or cycle path should be considered as continuous across a driveway and motorists crossing over the path must give way to path users. Therefore, signs designating the path type are not required. <u>Technical Note 002</u> of the <u>Cycling Network Guidance</u> outlines treatments (including, but not limited to, different path markings) that may be applied on cycle paths at driveways; similar treatments should also be used where shared paths cross driveways.

5.4. Bus stops

It is not necessary to use signs to designate the path type where it intersects a bus stop. It is, however, important to indicate to path users and bus patrons where they should be, and what the appropriate give way behaviour is. The Cycling Network Guidance should be consulted on designing bus stops at paths.

6. APPENDIX A

2018 Omnibus amendment to Land Transport Rule: Traffic Control Devices 2004

In clause 11.4 (Facilities for cycles, wheeled recreational devices and mobility devices) clause 11.4(1) was replaced with:

- 11.4(1) For a shared path used by cycles, a road controlling authority—
- (a) must install appropriate signs or markings that comply with Schedule 1 or Schedule 2, defining the class or classes of path user—
- (i) at the start of the shared path; and
- (ii) after each roadway or any other pathway with which it intersects; and
- (b) must install signs or markings advising users that the shared path ends, if no signs or markings are installed to advise who may use any path that continues beyond the end of the shared path; and
- (c) may install signs or markings at other intervals along the shared path.

Replace clause 11.4(2) with:

- 11.4(2) If pedestrians, cycles, wheeled recreational devices, or mobility devices are restricted to a specific side or part of a path, or where the path is separated for users travelling in different directions, a road controlling authority—
- (a) must install signs or markings indicating the nature of the restriction—
- (i) at the start of the restricted section of path; and
- (ii) after each roadway or any other pathway with which it intersects; and
- (b) must install signs or markings advising users that the restriction ends, if no signs or markings are installed to advise of any restriction or who may use any path that continues beyond the end of the restricted or separated section of path; and
- (c) may install signs or markings at other intervals along the restricted section of the path.