Darwin Shared Path & Bicycle Lane Technical Notes

11. Managing Speed on Shared Paths

Objective

The objective of the *Darwin Shared Path & Bicycle Lane Technical Notes* is to provide direction and guidance for the planning and delivery of cycling facilities within the City of Darwin area. These technical notes are also intended to provide information for other stakeholders including the NT Government, cycling groups and the community.

References

Throughout this document, references have been made to the following technical standards and guidelines:

- Austroads *Guide to Road Design Part 6A: Pedestrian and Cycle Paths* (2009)
- Department of Transport WA *Shared Path Design – Technical Guidelines* (Draft 2016)
- Road and Traffic Authority *NSW Bicycle Guidelines* (2005)

This technical note should be read in conjunction with these documents.

Introduction

This technical note provides direction and guidance on Speed signage on pathways and also addressing enforcement of the speed signs. The information is compiled from multiple sources detailing good design practices adopted throughout Australia.

Bicycle operating speeds

Bicycle operating speeds are influence by a number of factors such as age, physical fitness and type of rider (commuter or recreational). In most situations, cyclists typically operate at speeds of 20 to 30 km/h and are capable of speeds in excess of 50km/h on moderate gradients. However, speeds of cyclists do need to be moderated in constrained environments or in areas with high pedestrian usage.

Managing Speed on Shared Path

Bicycle speed is a significant factor in the level of conflict between path users on shared paths. Higher bicycle speeds can result in an increased potential for injury for both bicycle riders and pedestrians.

Bicycle speeds are generally self-regulating, subject to the physical ability of the rider to achieve and maintain speed. The consequences of risky behaviour for cyclists encourage a greater level of individual risk-management compared to drivers of motor vehicles. Research has also identified improved behaviour between road users where direct eye contact is made and this is also applicable to the path network. Higher pedestrian usage of shared paths also assists in reducing cyclist speeds by encouraging faster cyclists to divert onto the road network.

Generally the above factors contribute to cyclists self-regulating at appropriate speeds and every effort should be made to ensure that the design of the shared path caters safely for cyclists travelling at the desired speed. However there may be some locations on shared paths where speed needs to be managed on shared paths, for example:

- Approaching a hazard which is not likely to be adequately identified by the cyclists before reaching it – e.g. a sharp corner or road crossing hidden behind a retaining wall.
- Approaching a high pedestrian usage area – e.g. a shopping / dining strip or an entrance to a major recreational facility.

In these locations, if the hazard cannot be removed, it may be appropriate to implement one or more speed management methods to encourage cyclists to slow to a speed which enable them sufficient time to react to the hazard.

Methods of Managing Speed on Shared Paths

The management of speed on shared paths is very different to the typical management of speeds on roads and needs to be approached with a mindset which is suitable for the different user types.

Generally blanket speed limits are unnecessary as these are either too high to adequately manage conflict in busy periods or too low to be reasonable during periods of light pedestrian traffic.

Some of the common methods for managing speed are outlined below.

Speed Limit Signage

Speed limit signage is not recommended for use on paths as compliance is low and enforcement is unlikely. As a result, the desired message (slow down) is likely to be ignored by path users.

Advisory Speed Signage

Advisory speeds of 20km/h are currently included on the regulatory shared path signs in Northern Territory, however these have no legal status under the *NT Traffic Regulations*. These signs are considered to have very minimal to no benefit at reducing speeds at specific locations, mainly confined to advising new path users to moderate their speed. The City of Darwin still supports the use of advisory speed signage.

'Soft' Treatments

Soft treatments are the preferred first stage of addressing a need to manage speeds on shared paths and can be incorporated in the design stage.

Examples of soft treatments include:

- A curved alignment (e.g. an s-bend) on the approach to a high pedestrian conflict zone
- Differential surface treatments in areas where it is desirable for cyclists to reduce speed – e.g. concrete or paving rather than asphalt
- Pavement markings or decals with messages such as 'Slow Down'
- Rumble strips on approach to the conflict zone (e.g. for a particularly high speed approach or an area where a curved alignment is not achievable)
- Warning signs

These treatments should be implemented and their effects monitored before more aggressive physical treatments are considered for implementation.

More innovative options for encouraging a lower speeds can also be explored at specific locations.

Physical Treatments

Physical treatments are a hazard to path users, particularly cyclists, and should only be used where soft treatments have proven to be ineffective at encouraging appropriate behaviour.

Care needs to be taken with the use of physical treatments to ensure that passage for gophers, cargo bikes, tandem bikes and bicycle trailers are not prevented or made significant more dangerous (e.g. increased risk of a trailer containing a child tipping over).

All physical treatments must be appropriately line marked, delineated with reflective material and ideally should be provided with lighting in order to minimise the risk of a path user not seeing the hazard. Austroads *Guide to Road Design Part 6A: Pedestrian and Cyclist Paths* provides appropriate guidance under Chapter 10 'Path Terminal Treatments'. NTG Standard Drawings also detail various path treatments..