

Signposting for contra-flow bicycle facilities

| Summary: | Audience: |
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| <p>Contra-flow bicycle facilities enable bicycle riders to travel in both directions in a one-way street.</p> <p>This technical direction guides the application of the regulatory and supplementary devices used to regulate and manage contra-flow bicycle facilities.</p> | <ul style="list-style-type: none">• Local council traffic and transport planners and practitioners.• Roads and Maritime traffic and safety practitioners. |

Introduction

Bicycle riding is supported by the NSW Government as a low cost, environmentally friendly mode of transport that can help to improve the liveability of our towns and cities. Bicycle riding is very often a localised transport option that primarily occurs on local roads. To encourage more people to ride more often and safely, local and state governments need to improve the safety and amenity of cycling infrastructure and make riding a real and convenient option for short local trips.

The Austroads Guide to Traffic Management Part 8 (7.5.3) suggests one-way streets can increase opportunities for dedicated facilities for bicycle riders and may improve bicycle safety. It recommends the use of contra-flow bicycle lanes, which permit two-way bicycle movements on roads that are one-way for other vehicles.

Contra-flow bicycle facilities are a cost effective treatment that enhance the cycling experience by improving the permeability of neighbourhoods and by reducing bicycle trip lengths.

Background

The Guide to Road Design Part 3 (4.8) provides for the geometric design of bicycle lanes generally. The guide also notes some specific considerations for contra-flow bicycle lanes, which include:

- Physical separation where road speeds exceed 50 kilometres per hour. Separation should be in the form of a raised traffic island or safety strip 1.0 metre wide (0.6 metre as an absolute minimum).
- The width of the contra-flow lane should be 1.8 metres or more (1.5 metres as an absolute minimum).
- The contra-flow lane can be placed between parked cars and the kerb if riders do not need to frequently leave or join the facility and where cycling speeds are low. These require a 1.0 metre separator to allow for vehicle overhang or opening doors.

Approvals:

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|----------------|---|--|--------------|------------|
| Owner: | General Manager Network Optimisation | Review Date: | April 2016 | |
| Authorised by: | Ken Kanofski, Director Journey Management | Date: | 4 April 2014 | Page 1 5 |
| RMS 14.119 | | Printed copies of this document are uncontrolled | | |

Technical Direction – Traffic Management and Road Safety Practice

The NSW Bicycle Guidelines (section 5.1.4) also provides guidance for implementing bicycle contra-flow lanes, including the use of green coloured pavement and the placement of signs and linemarking.

(Note: Figure 5.8 in the NSW Bicycle Guidelines appears to suggest contra-flow bicycle lanes are only suitable where traffic volumes are less than 3000 per day. Contra-flow bicycle lanes have been implemented on roads where volumes exceed 8000 vehicles per day with no discernible reduction in road safety. However, road safety audits should be performed for every proposed installation and risks mitigated using physical separation and/or other traffic calming measures as appropriate.)

Lane markings on roads are not mandatory under the road rules, although the rules do require drivers to keep left of oncoming vehicles and left of the centre of the road where practicable. Research indicates that, under specified conditions, contra-flow bicycle movements on roads without marked lanes do not present an unacceptable road safety risk.

Therefore, a contra-flow bicycle facility may take the form of a marked lane or as a movement designated by signs only. Both facilities require combinations of regulatory and supplementary signage. Pavement markings that raise awareness of bi-directional bicycle movements are also recommended. Examples of contra-flow bicycle facilities are provided in figures 1 and 2.

Application

Contra-flow bicycle facilities should be assessed as a potential treatment on all local low speed, low volume one-way streets, including shared zones.

Ideally, all contra-flow bicycle movements will be delineated by a bicycle lane. A bicycle lane **must** be installed in locations where:

- Sight distances are restricted due to bends in the road or other features.
- Motor traffic volumes or speeds present a safety risk.
- Bicycle traffic volumes or speeds present a safety risk.
- The gradient and/or other road geometry increase the risk of collisions or unsafe driving or riding behaviours.
- The number or location of driveways present a safety risk.

Note: The NSW Road Rules prohibit parking in signposted bicycle lanes.

If the road space is too narrow to permit a marked bicycle lane **and** there is good sight distance, motor traffic volumes and speeds are low and the road geometry does not present an unacceptable safety risk, the contra-flow movement can be provided by signage alone.

Because motor vehicle drivers will be focused on their own direction of travel, they may have a reduced awareness of the possibility of bicycles travelling in the opposite direction on one-way streets. Therefore, coloured pavement, pavement markings and warning signage may help to improve awareness and reduce conflict, particularly at intersections.

Contra-flow bicycle facilities will not be appropriate for every one-way street.

The suite of applicable regulatory signs, warning signs and linemarking are detailed below.

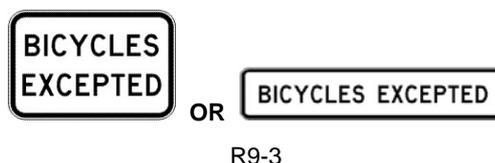
Regulatory one-way road/movement signs

The following signs (singly or in combination) are used to restrict vehicle movements to one direction only. Refer to AS 1742.2, AS 1742.13, the RMS Supplement to AS 1742 (Part 2), and the Austroads Guide to Traffic Management (Part 8) for guidance on how to use these signs.



Implementing a contra-flow bicycle facility

The R9-3 sign (right) is the key sign associated with a contra-flow bicycle facility. It **must** be used in conjunction with every R2-2, R2-17, R2-4, R2-6, or R2-14 sign that is installed along the length of, or in association with, the contra-flow facility.



The R7-1-4 sign (right) **must** be used if a contra-flow bicycle lane is delineated.

Refer to AS 1742.2 and AS 1742.9 for guidance on how to use these signs.



Warning or advisory signs or pavement markings

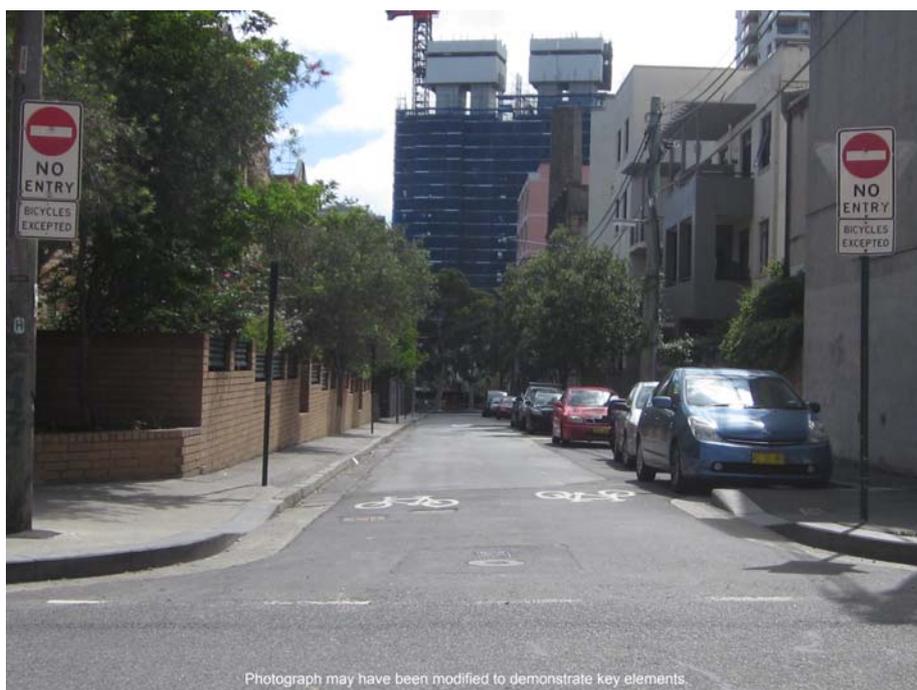
Warning or advisory signs may be required at intersections to alert drivers to the possibility of two-way bicycle traffic. Pavement markings will also raise awareness of possible bicycle traffic and may assist way-finding for bicycle riders. Refer to AS 1742.9 and the NSW Bicycle Guidelines for guidance on how to use these signs and pavement markings.





Photograph may have been modified to demonstrate key elements.

Figure 1. Example of a contra-flow bicycle lane illustrating the use of the bicycle lane (R7-1-4), one way (R2-2) and bicycles excepted (R9-3) signage. (Note: green coloured pavement is not necessarily a requirement of contra-flow bicycle lanes. Refer to the NSW Bicycle Guidelines for guidance on the use of coloured pavements for bicycle facilities.)



Photograph may have been modified to demonstrate key elements.

Figure 2. Example of a contra-flow bicycle facility designated by signs only.

Action

This technical direction is effective immediately and must be followed when the relevant road authority determines the need for a contra-flow bicycle facility.

As a recommendation only, councils may want to assess their existing one-way streets for suitability for contra-flow bicycle facilities.

Updates

To ensure this technical direction remains current and relevant, minor updates may be made from time to time. This may be done through the Roads & Maritime Services' website using the Traffic & Transport Policies & Guidelines Register which can be found at:

<http://www.rms.nsw.gov.au/doingbusinesswithus/guidelines/index.html>.

The Register should always be checked prior to using this technical direction.

References

Australian Standard 1742 (parts 2, 9 and 13)

Austroads 2010. Guide to Road Design Part 3.

Austroads 2008. Guide to Traffic Management Part 8.

[NSW Road Rules 2008](#).

Roads and Maritime Services 2012. [Supplement to AS 1742](#).

RTA 2010. [Delineation Manual \(Part 12\)](#).

RTA 2005. [NSW Bicycle Guidelines](#).