

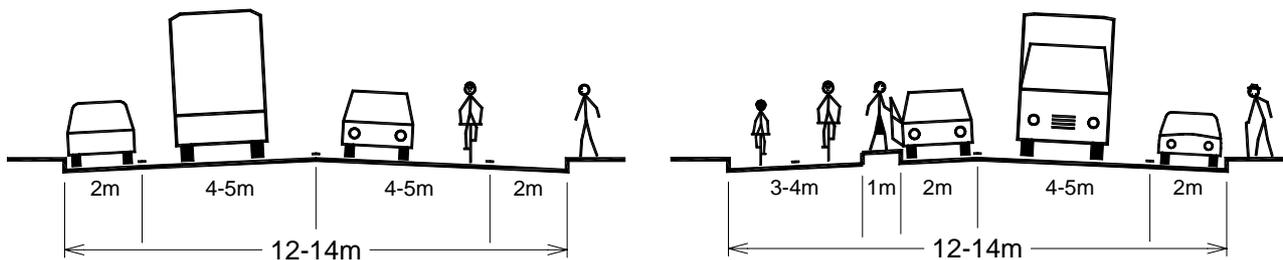
## Designing For Cyclists

### GOING AGAINST THE FLOW

One way to encourage cycling is to give them an advantage over motorists in terms of getting around town conveniently. For example, by having a pedestrian/cycle-only bridge while motorists have to go the long way around.

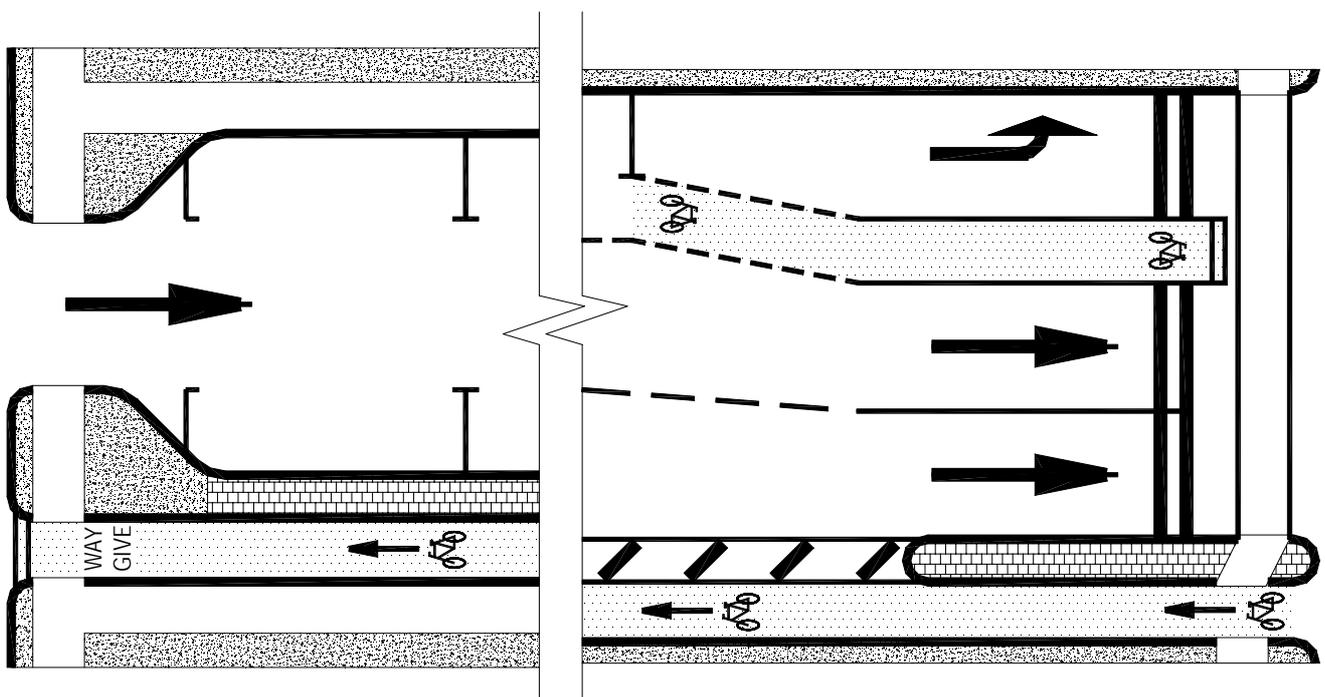
Another way to achieve this advantage is by "contra-flow" lanes. This is where cyclists can travel in either direction on a road that is only one-way for motorists. This technique still allows access for motor vehicles (often a major concern for central city areas; they will learn one day...) but with less convenience than cyclists in terms of the overall network. A short piece of contra-flow path may also help to provide route continuity where a one-way street currently prevents this (e.g. Tuam St in Christchurch).

Consider a typical urban street, 12-14m wide. Normal two-way operation would probably see parking lanes and traffic lanes on each side. The same width could however be converted into a one-way lane (with enough width for vehicles to manoeuvre past each other if necessary), with parking lanes each side and a two-way cycleway with a separation strip, as indicated in the figures below.



There are a number of different permutations on this design. For example, for cyclists who are travelling in the same direction as the motorists, you might keep them on the road in a cycle lane (particularly for continuity along a route). Or you might remove parking on the same side as the contra-flow lane to avoid pedestrian-cyclist conflicts. Your choices will be dictated somewhat by the available road width, the land uses adjacent to the street and the adjoining road sections.

Two important principles should be supported. Firstly the opposing cyclists should ideally be physically separated from other traffic by a barrier/kerb/median of some sort. This is particularly important on higher speed roads or where encroachment by opposing traffic is likely (e.g. curves and intersections). Secondly, the end treatments at intersections need to be very clearly laid out so that everyone is aware who can go where. In most cases, physically separating the contra-flow lane at this point is recommended. The diagrams below show typical end treatments.



As with many cycling treatments, the use of coloured surfacing at "stress" points and copious cycle signs and markings can help to highlight things better, particularly where there is no physical separation. Direction arrows next to cycle signs and markings would help to eliminate any confusion over which cyclists can use the facility. For fully on-road facilities, it probably pays to put the contra-flow cyclists to the right of the one-way traffic, i.e. where they would expect them to be in a two-way situation.

Another way to achieve a similar effect, particularly in local area traffic management schemes, is to create a "false" one-way entrance. This allows either entry only or exit only to a two-way street for motorists at one end, but lets cyclists bypass this restriction. The picture below shows an example from Australia, where only cyclists are allowed to exit the street here (with a cycle signal provided at the intersection).



Many people often feel that, in this day and age, cyclists are pedalling against the mainstream. Now you can make them do so legally!

#### **Some Relevant Reading**

- Austroads, 1999. *Guide to Traffic Engineering Practice, Part 14: Bicycles*, Section 4.4.3 (Contra-Flow Road Treatments) and Section 5.3.4 (Contra-Flow Intersection Details)
- Sustrans 1997. *National Cycle Network: Guidelines and Practical Details* - some good design details.
- DETR, 1998. *Contraflow Cycling*. Traffic Advisory Leaflet 06-98, UK Dept of the Environment, Transport and the Regions. Web: <http://www.roads.dtlr.gov.uk/roadnetwork/ditm/tal/cycle/0698/index.htm>.

*All feedback please to **Glen Koorey** ([koorey@paradise.net.nz](mailto:koorey@paradise.net.nz)).*