

Bike Boulevards in Perth: Expanding the Safe Cycling Network and Introducing 30km/h Zones

Andrew McClurg, Tim Petersen

Department of Transport (Western Australia)

Abstract

With fear of sharing the road with motorists being a major barrier to cycling, and limited opportunities to retrofit off-road cycling paths in existing built-up areas, an innovative WA State Government initiative is trialling the implementation of Bicycle Boulevards on local streets of inner-to-middle suburban Perth. Each Bike Boulevard is planned to form part of the wider Perth Bicycle Network, applying traffic calming measures to achieve a self-enforcing 30km/h speed limit and a safer, more comfortable environment for cyclists and pedestrians. The paper will discuss the route selection, design processes and present survey results from users and residents.

Background

A major barrier to cycling in Australia is a fear of sharing the road with motorists (see, e.g., RAC 2015), but it is a major challenge to retrofit urban areas with safe facilities that can attract cyclists with differing levels of confidence and experience. Where land is available along infrastructure corridors or linear parks, it is often possible to install off-road paths, which are among the safest and most comfortable cycling facilities. Between these corridors, however, large network gaps exist.

On arterial roads, high utilisation of existing road capacity and restrictions on further expansion often limit the options for segregated bicycle paths, especially if paths are to be protected from general traffic by more than a painted line. This typically leaves the local street network; and in older suburbs with grid street patterns, these local street-based routes can still provide direct connections which are largely free from high volumes of motor vehicles.

In Perth, however, traffic operating speeds on many of these streets are too high (above 50 km/h) to attract less confident bike riders, and frequent stops for traffic controls (often intended to discourage motorist ‘rat running’) also discourage cyclists. Building segregated cycle paths along such streets, while still maintaining vehicular access to properties and on-street parking, would likely require property acquisition, paving of nature strips or verges, relocation of services and/or removal of street trees, making projects unpopular and financially unviable. Safe interaction between paths and driveways would also be problematic.

Perth’s bike boulevard program

An innovative approach, less disruptive to local streets and more likely to gain the support of residents and municipalities, is currently being trialled by the Western Australian Department of Transport and local government partners. As part of the ‘Safe Active Streets’ program (DoT 2017), several Bike Boulevards are being implemented in the inner-to-middle suburbs of Perth, inspired by examples from Europe and North America, in particular by the Netherlands’ *fietsstraat* or ‘bicycle street.’

Without adopting Dutch-style regulations, these projects aim to use traffic reduction and calming measures to fill the missing links in a larger strategic bicycle network (all projects form part of an eventual one-by-one kilometre route grid). They also support WA’s road safety strategy *Towards Zero* by protecting pedestrians through traffic calming and providing “demonstration projects to illustrate the effects of speed limit reduction” (ORS 2009, pp. 36, 40). The goal is to create attractive, comfortable riding environments in low-speed streets that can be shared safely by cars,

bicycles and pedestrians. Schools and other community groups are involved to raise awareness, develop a sense of ownership and increase comfort levels with riding bikes to local destinations. Awareness and education for motorists is also being addressed.

Streets are designed to achieve a self-enforcing 30 km/h speed limit, by applying measures such as narrowed carriageways, one-way slow points, raised plateaus at intersections, turn bans, and reduced lines-of-sight through horizontal deflection and streetscaping. Existing kerb lines are retained where possible to reduce costs. Given the importance of street design in adherence to posted speed limits (TRB 1998), the program also trials measures needed to support potential wider introduction of 30km/h limits on residential streets, which would cut serious injuries and fatalities for pedestrians and cyclists (ORS 2009, pp. 37–38; Austroads 2012, pp. 4–5).

Approach of the paper

This paper/presentation will discuss the process for bike boulevard route selection, steps and considerations in design, the traffic speeds and numbers of cyclists measured (before and after implementation), and any other survey results of users and residents available at the time of submission (covering demographic characteristics, trip purposes and connectedness with the street).

References

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