

## Bicycle paths and bicycle lanes

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On arterial roads - any road where speeds of 50 km/h are allowed - cyclists should be separated for safety reasons from through traffic, according to Duurzaam Veilig. Cyclists strongly prefer separate bicycle paths. But often other interests are opposed and bicycle lanes may appear to be an alternative. After all, that is separation, too, isn't it? And is that not safe? This article provides a number of guidelines how to manage this type of discussion in actual practice.

Intuitively it seems obvious that a bicycle path should be safer than a bicycle lane. After all, a lane is really not quite separate at all, as prescribed by Duurzaam Veilig. Just ask parents with small children where they would rather cycle. And if parking spaces adjoin the bicycle lane as well, cars will be crossing the lane anyhow. And as a matter of fact, a comparative survey by Welleman and Dijkstra (1988) did find that bicycle paths on stretches of road are considerably safer than bicycle lanes. Jensen & Nielsen (1996) discovered in Denmark that narrow bicycle lanes (up to 1.2 metres wide) are three to four times as dangerous as wide lanes. The Fietersbond recommendation that lanes should preferably be 2 metres wide and in any case wider than 1.50 metres, is therefore not unreasonable.



Where there is room for a bicycle lane, there is also room for a bicycle path (Jan Evertsenstraat, Amsterdam)

Most casualties, however, do not occur on stretches of road but at intersections. This goes for cyclists too. And in the Welleman & Dijkstra study (1988) that is where bicycle lanes outperformed bicycle paths. Apparently drivers overlook cyclists more easily when these are at a greater distance to the main road. Welleman & Dijkstra's study predates the first ideas on Duurzaam Veilig. At that time speed-reducing facilities at intersections were rare, mopeds were on bicycle paths everywhere and roundabouts came only in the shape of large rotary intersections.

Since those days intersections have become much safer and may be made even more safe by specific measures. This proves that major gains in safety are to be made on stretches of road, while at the same time paying extra attention to intersections.

For these reasons Ontwerprijzer Fietsverkeer (CROW, 2006) states that bicycle lanes are only acceptable in the basic bicycle network (with less than 750 cyclists per 24 hours). On (principal) cycling routes separate bicycle paths are preferred, with additional measures on the intersections. That this is successful in actual practice, was demonstrated among other examples by the renovation of the first part of the Amsterdam Bilderdijkstraat. Construction of a separate bicycle path there led to a 50% reduction in the number of casualties.

### **Parking**

Surprisingly many accidents occur when cars are being parked. Not only due to the actual parking manoeuvres themselves, but also by opening doors, double-parking and evasive behaviour, where cyclists are hit by cars from behind. These problems hardly ever occur with separate bicycle paths, as parking cars is done to the left of the cyclist. Therefore ASVV 2004 (the CROW manual on designing roads within built-up areas) discourages the combination of bicycle lanes and parallel parking along arterial roads. Every time bicycle lanes are mentioned, the danger of opening car doors is pointed out.

From a Duurzaam Veilig point of view an arterial road without parallel parking and with separate bicycle paths is preferred. Alternatively bicycle lanes, but not in combination with parallel parking. Or the reverse: alternatively parallel parking, but not in combination with bicycle lanes.

But isn't often the space lacking for this? On page 118 of Ontwerprijzer it is revealed that this oft-heard argument is actually not true. Where there is room for a bicycle lane along parking spaces, there is also room for a separate bicycle path, even though this will admittedly have a minimal width. Consequently even on rather narrow roads a decision can be made in favour of a profile with parallel parking and separate bicycle paths.

Amsterdamsestraatweg in Utrecht is an excellent example: a complete cross-section displays on both sides a sidewalk, bicycle paths and parallel parking at a distance between façades of 21 metres. This is highly effective and is an enormous improvement over the old situation without bicycle paths.

### **In summary**

Cyclists prefer bicycle paths over bicycle lanes. Paths are safer as well, albeit that intersections require special attention. Parallel parking only increases the necessity for bicycle paths. When there is room for bicycle lanes and parallel parking, there is also room for parallel parking and bicycle paths.

### **References**

- CROW, 2004: ASVV 2004
- CROW, 2006: Ontwerprijzer fietsverkeer (particularly table 14, p. 108)
- Jensen, S.U. & M.A. Nielsen, 1996: Cykelfelter; Sikkerhedsmaessig effekt i signalregulerede kryds.
- Welleman, A.G. & A. Dijkstra, 1988: Veiligheidsaspecten van stedelijke fietspaden. R-88-20 SWOV, Leidschendam