

Widths and other aspects of bicycle lanes

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In the last edition of the Verkeersplein, I promised that next time I would discuss the desired width of bicycle lanes. Before I do, I will discuss the sense and nonsense of bicycle lanes.

What is a bicycle lane?

A bicycle lane is a marked lane on the main carriageway containing a bicycle symbol. It can be segregated from the main carriageway by a solid or a broken line. Bicycle lanes are often a different colour (red), but this is not compulsory.

The following traffic regulations apply to a bicycle lane:

- motor traffic is not allowed to stop (or park) on the carriageway or alongside a bicycle lane;
- motor traffic and scooters should not generally drive on the bicycle lane;
- if the bicycle lane is segregated by a broken line, other road users may drive on it for a specific purpose, for example to access an adjacent parking bay or to pass oncoming traffic;
- in the case of a solid line, other road users may not drive on the bicycle lane.

In legal terms, scooter lanes do not exist, nor do non-compulsory bicycle lanes, i.e. lanes which resemble bicycle lanes but which do not contain the official bicycle symbol. The above regulations do not apply to such lanes (scooters may use them and cars may park on the lane).

Type of bicycle lanes according to functionality

You can classify bicycle lanes into two functional types, which I will call 'bicycle lanes alongside the main carriageway' and 'bicycle lanes on the main carriageway':

1) Bicycle lanes alongside the main carriageway are bicycle lanes on which there is no motor traffic or only motor traffic with a particular purpose (parking, access).

2) Bicycle lanes on the main carriageway are bicycle lanes on which motor traffic frequently drives, for example to pass oncoming traffic.

The first type is the classic bicycle lane, as referred to in Tekenen voor de Fiets¹ [Signing for the Bicycle]. These kinds of bicycle lanes are a kind of extension of the carriageway and act as an adjacent bicycle path. We tend to find them along distributor roads (50 km/hour roads within the built-up area and occasionally along an 80 km/hour road outside).

The second kind was only introduced around ten years ago. Because cars have to drive on the bicycle lane when passing oncoming traffic, they can only be used on quieter roads. We therefore tend to find them on access roads outside the built-up area.

Because each kind of bicycle lane has a different functionality, different considerations apply with regard to their application. Other recommendations, with regard to width for example, also vary according to the type of lane. I will discuss these separately.

Bicycle lanes alongside the main carriageway within the built-up area

Bicycle lanes alongside the main carriageway act like adjacent bicycle paths. They are therefore mainly used along busier roads within the built-up area (50 km/hour roads). There are advantages and disadvantages compared with separate bicycle paths.

Advantages:

- possibly fewer accidents at junctions;
- take up less space (does not apply when parking is allowed);
- easier to maintain (e.g. clearing snow);
- always good surface.

Disadvantages:

- less safe on road sections;
- is generally experienced as less safe;
- frequent cases of illegal parking;
- many accidents with cars parked in bays.

In practice, there are different views about the advantages and disadvantages. A municipality like Zwolle uses many bicycle lanes and is happy with the results. On the other hand, the combination of bicycle lane and parked cars definitely results in many accidents. The use of a 75 cm warning lane between parking bay and bicycle lane can reduce this risk, but it is less ideal. (Illegal) parking and loading/unloading on bicycle lanes also cause extra obstructions and danger.

Based on these considerations, the ASVV 2004² recommended the preferred option of a separate bicycle path without parking bays on distributor roads within the built-up area (50 km/hour roads). The second-best option is a bicycle path with parking options or a bicycle lane. The combination of bicycle lane with parking is explicitly advised against.

The Fietsberaad (Bicycle Consultancy) makes similar recommendations in a Table presenting bicycle provisions³. Bicycle lanes would only be the preferred option in areas with restricted (actual) car speeds and bicycle intensity.

With regard to the desired width of bicycle lanes, the same considerations apply as for one-way bicycle paths⁴. This results in a desired width of 1.80 – 2.00 metres and an absolute minimum width of 1.5 metres. Bicycle lanes with high volumes of bicycle traffic should be wider to enable people to cycle next to each other.

Bicycle lanes alongside the main carriageway outside the built-up area

Bicycle lanes are not really a good solution along 80 km/hour roads. The difference in speed between bicycles and cars is too great and the road sections are too long. However, if there is no other option, the following conditions apply:

- always use a solid line along the bicycle lane;
- the bicycle lane must be 1.00 metre wider than the width mentioned above; an extra 50 cm to facilitate overtaking and another 50 cm as a buffer from the fast traffic.

Bicycle lanes on the main carriageway

We mainly find bicycle lanes on the main carriageway on 60 km/hour roads outside the built-up area. Besides facilitating bicycle traffic, these kinds of lanes tend to optically narrow the road in order to slow down motor traffic. When passing oncoming traffic, cars will always have to partially move onto the bicycle lane. For this reason, there is always a broken line between the bicycle lane and driving strip. The results of a SWOV survey show that cars drive a little more slowly on roads with bicycle lanes on the main carriageway. They also keep a little less distance from cyclists when overtaking; motorists are apparently afraid to impinge with their left wheels on the bicycle lane of the oncoming traffic. However, both effects are minimal. What we learn is that there must be a good balance between the width of bicycle lanes and the width of the driving strip on these kinds of roads. This is why the Infopunt Duurzaam Veilig⁵ [Information Point Sustainable Safety] lets the recommended width of a bicycle lane depend on the total width of the road.

Table 1: Recommended widths of bicycle lanes for a given road surface width according to ^{5,6}.

Road surface width (m)	Width of driving strip (m)	Width of bicycle lane (m)
< 5.00	Don't apply	
5.00	2.50	1.25
5.50	2.50	1.50
6.00	3.00	1.50
6.50	3.00	1.75
7.00	3.50	1.75
7.50	3.50	2.00
> 7.50	Too wide for access road	

With regard to the Fietsersbond [Cycling Association], the recommendation for a 5 metres road surface width is a desperate move: on a 1.25 m wide bicycle lane, you cannot cycle comfortably in pairs. This is why the Fietsersbond as a whole is calling for 1.50 m wide bicycle lanes. Where the road surface is 5 metres or less, one might question the suitability of bicycle lanes at all.

Kerb lanes

Besides bicycle lanes, on access roads outside the built-up area we see more and more 'kerb lanes'⁷. These should be fairly narrow lanes, segregated by a broken line, which aim to narrow the driving strip slightly and prevent unnecessary damage to verges. The problem of such lanes is that motorists often see them as bicycle lanes, while cyclists (rightly) do not consider them as such. Thus the following recommendations:

- be cautious when applying kerb lanes;
- ensure that the driving strip is sufficiently wide (minimum 3.50 metres);
- make the kerb lane 25 – 40 cm wide, certainly not wider⁸.

The last recommendation is a refinement of the Handboek Wegontwerp⁹, which mentions a maximum of 50 cm.

Notes

1 On page 80, for example.

2 ASVV 2004, CROW publication.

3 Fietsverkeer no. 9, page 33.

4 Ketting 173, page 4-6.

5 Duurzaam Veilige inrichting van wegen buiten de bebouwde kom – een gedachtevorming. [Sustainable Safety design for roads outside the built-up area – ideas]

6 The original value in 5 for a road width of 6.50 m seems illogical to me and has therefore been amended.

7 See the section 'Rare Fratsen' in the last Vogelvrije Fietser (29/6, page 7).

8 Richtlijn essentiële herkenbaarheidskenmerken van weginfrastructuur. [Guideline essential recognisability features of road infrastructure] CROW publication 203.

9 Handboek Wegontwerp, erftoegangswegen. [Road Design manual, access roads] CROW publication 164d. Incidentally, there is an annoying discrepancy between the text and the figures in this manual, particularly at Figures

7-3 to 7-5. CROW has confirmed to me that the figures are incorrect. This error will be amended in the next print.

Source: Ketting 174, December 2004, p 16-18. Fietsersbond