



Signposting

Objective and purpose of cycle signing

Cycle route networks bear characteristics that are different from those of the classic road network. Networks of interconnected roads, for example, have a hierarchical structure. In addition, there is a wider range of options available to cyclists. Often, cycle routes incorporate byways and various types of traffic-free paths (e.g. forest paths, agricultural roads, quiet residential streets) to reduce total route length. Traffic-calmed side roads represent especially pleasant alternatives to very busy roads – and are often even faster, as they have fewer traffic lights than the main roads running parallel to them. Cycle signing is required to make such routes visible to users. Signing helps cyclists who are unfamiliar with the area find their way and directs cyclists onto safe and pleasant routes.

The desired characteristics of a route – directness, freedom from traffic or pleasant surroundings – vary depending on the cycling target group. Commuters will prefer a certain route, i.e. the one that is most timesaving. They have a good knowledge of the area but need roads that are suitable for everyday use (i.e. also after dark and in wet weather conditions). Recreational cyclists with or without children are not in a hurry; they look for routes that are car free, easy to follow without tedious orientation and preferably in an attractive landscape. The orientation provided by traffic signs is by no means adequate for cyclists, as such signs are only for routes accessible by motor vehicles and often do not in-

dicating the shortest, but rather the fastest route or a route bypassing the town or village.

Hence, cycle routes for tourists, for example, are often provided with their own signing; and many cycle-friendly municipalities and regions design systems of signing for cycle routes as well. However, the use of multiple signing systems results in sign clutter at intersections of various cycle routes, which is confusing for the cyclists. Therefore, in Germany, direction signing has been standardised through the 'Recommendations for Cycle Facilities' ('Empfehlungen für Radverkehrsanlagen', ERA 2010) and explained in detail in the form of a fact sheet. These standards were initially implemented in North Rhine-Westphalia. In the meantime several Länder have published detailed guidelines for standardised cycle

Cover image: Example of standardised signposts in North Rhine-Westphalia with auxiliary signs indicating the Industrial Heritage Trail.

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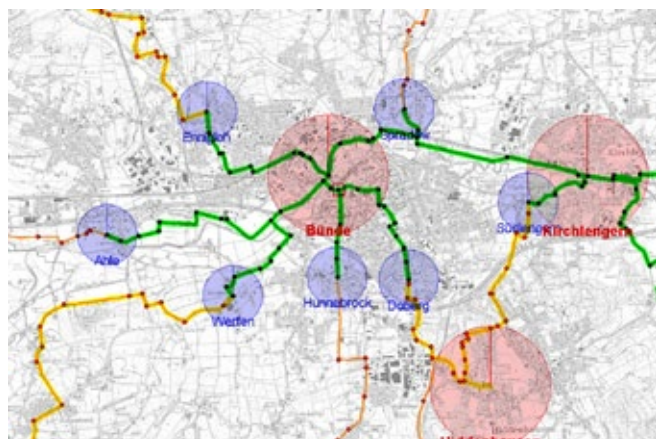
signing on their routes and, in some cases, made them a prerequisite to obtain funding for local projects.

Signing standards according to the ERA

Principles: continuity and regional networking

In a designated planning area, cycle signing should be fully networked and function like a cohesive system. When it comes to cycle route signing, the 'chain' is only as strong as its weakest link. Therefore, it must be ensured that there are no gaps in the signing. A route can only be said to have continuity if its users are able to get to a selected destination by following the cycle signs along the route. This requires direction signing in every location where users are faced with various options as to which way to turn.

In the planning process, this continuity assessment can be carried out with the help of so-called 'Zielspinnen', routes to a certain destination from various directions. Destinations located outside the planning area should only be included if continuous signing can be provided in the neighbouring municipalities through co-ordinated efforts.



Network planning with main and secondary destinations as a basis for the „Zielspinne“.

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Route planning

Cycle route signing is based on cycle network planning and can take account of already existing (tourist) routes, as well as newly planned routes or sections of routes. The decision regarding which routes will be included in a cycle route network is based, in general, on the hierarchisation of the network into trans-regional, regional and municipal paths.

Cyclists will have varying opinions about the attractiveness and length of a route, which makes the signing of alternative parallel routes all the more useful, provided they differ significantly in terms of these criteria. For example, signing can differentiate between direct routes suitable for everyday use and particularly attractive scenic routes for leisure cycling (with the tree symbol).

Hierarchy of destinations

With regard to the information it provides about destinations, signing is organised into two levels of hierarchy: main and secondary destinations. Main destinations will typically be urban centres, possibly boroughs or points of interest with regional significance, such as train stations or universities. Secondary destinations include boroughs, neighbouring towns or villages, as well as nearby recreational destinations and places of interest.

Junction numbering system

First developed in Flanders, the junction numbering system is now used across the Netherlands and neighbouring regions of Germany. In this scheme consecutive numbers are allocated to all junctions of the network, serving – in addition to the destination name shown on the sign – as both direction signing and destination markers. When planning a route using a cycling map with junction numbers, cyclists can simply note the order of junction numbers along their desired route and then follow the route by travelling from one junction to the next, guided by the junction numbers shown on the signs.



The junction numbering system in Flanders with auxiliary signs indicating thematic routes.

© Sara Van Boeckhout

Cycle signs

The signposts provide information on destinations, distances and directions and can include auxiliary signs for special, themed routes or junction numbers. In locations where the route should merely be confirmed to users, i.e. where there is no major intersection at which the cyclist must choose a course, a simple continuity

Sources

Information on direction signing on North Rhine-Westphalia's cycle network (HBR NRW – Hinweise zur wegweisenden Beschilderung für den Radverkehr) (www.radverkehrsnetz.nrw.de/RVN_hbr01.html) [German]

Road and Transport Research Association (FGSV 2012): Fact sheet on direction signing on cycle route networks (Merkblatt zur wegweisenden Beschilderung für den Radverkehr – M WBR 2012) <in preparation> [German]

sign with an arrow, cycle symbol and junction number is sufficient. Further information about the route, such as significant changes in elevation, can be provided using pictograms. The fact sheet also specifies standards for diversion-route signing.

Design and standards

For practicality and safety reasons, signs must be designed so that they can be easily read and understood at a glance from the typical distance of approaching cyclists. Cyclists should not be overloaded with information. Ideally, signposts should include no more than two destinations per direction, including distances. In order to show more destinations, signs could use abbreviated descriptions, such as 'Centre', or two signs could be combined. Additional information boards can be used to give more detailed information, such as an overview of the cycle route network, background information about places of interest and information on food and lodging in the area. All signs are designed in accordance with the standards specified by the ERA, with respect to sign size, colour, font and font size, as well as the use of symbols. Such standardisation not only ensures that users can easily recognise signage. The standards have also been designed to prevent cycle signs from being confused with other signing systems.



The design standard according to the ERA with hierarchy of main („Fernziel“) and secondary („Nahziel“) destinations.

Maintenance

The maintenance of signing is essential: If a single sign gets lost or turned in the wrong direction, the entire system of route navigation is interrupted. On route monitoring trips, small repairs can be carried out, signs can be cleaned, and any overhanging vegetation that ob-

structs the visibility of signs can be removed. If further repair work is required, this information can be registered, and the respective work orders submitted. The responsibility for the maintenance of signing lies with the respective road-maintenance authority or the owners of the road – or the municipality or region, regardless of the responsible entity.

Cyclists, as users of the route, can be actively involved in the monitoring and maintenance of routes. For this purpose either special stickers can be attached to the poles, showing the phone number users can call to report necessary repair/maintenance to the relevant office, or smartphone apps can be offered that allow for the digital registration of the problem with the help of photographs and geo-positioning.

Forerunner in Germany: North Rhine-Westphalia

Most German Länder now have regionally coherent systems of cycle signing. North Rhine-Westphalia (NRW) began working on a coherent system of signing for its cycle network as early as 1985. The Land has adopted many ideas from the Netherlands, where cycle route signing, together with general traffic signing, has been



The NRW Cycle Network measuring 13800 km (8500 mi) in 2008. © Ministerium für Bauen und Verkehr des Landes Nordrhein-Westfalen

perfected for decades. The coherent signing that is in place today in North Rhine-Westphalia was developed in 1995, together with the NRW cycle network ('Radverkehrsnetz NRW'), in accordance with ERA standards. These plans were implemented across NRW over the following years, and the system was completed in 2008. The signing also includes train stations as destinations, optimising the promotion of multimodal, environmentally friendly transport.

In order to completely and permanently resolve the problem of poor maintenance, the government of NRW has given its entire system of cycle signing official status by including it in the German Road Traffic Regulations (StVO) through an injunction (Anordnungsverfahren). Thus, the provisions for the erection and maintenance of traffic signs by the responsible authorities also apply to cycle signing.

The informational resource 'Information on direction signing on North Rhine-Westphalia's cycle network' ('Hinweise zur wegweisenden Beschilderung für den Radverkehr in Nordrhein-Westfalen', HBR NRW) also describes procedures for changing and modifying signage in the likely event that the cycle route network is altered over time, for example, through expansion of the route network or route changes

SwitzerlandMobility

Switzerland has elaborated and adopted a national „human powered mobility strategy“ (Langsamverkehr), both on walking and cycling. Since many years official yellow signs show walking and hiking routes, red signs show cycle routes. In order to become world market leader in car-free „soft mobility“ an internet portal shows the most attractive, officially signposted routes covering the entire nation: for walking, cycling, mountainbiking, skating and canouing.

The maps on www.SwitzerlandMobility.com are referring to the signpost system on location. On the web these routes were also linked to budget accommodation and public transport timetables.



Integrated official signposting system (walking & cycling) in Switzerland. ©Jörg Thiemann-Linden

Conclusion

Cycle routes require a separate system of signing that is clear, recognisable and gapless. The standard that has been developed includes principles of network planning, a hierarchical system of destinations and specifications for sign design. In the medium term, the implementation of these standards at the Länder level will create a coherent, standardised cycle signing system. Owing to the official status of the standardised network of cycle signs across North Rhine-Westphalia, the maintenance of signing is covered particularly well. Moreover, cycle signing should be seen as a way of clearly showing that cycling is important to the region and that cyclists are welcome.



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More information on signposting and orientation can be found in the following editions

CyE S-8 Mapping – Routing – Navigation for Cycling
CyE O-2 Municipal Cooperation to Promote Cycling

“Cycling Expertise“ is available online:
www.nrvp.de/en/transferstelle

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