



## Cyclists and Pedestrians on Promenades and Pedestrian Zones

### Walking and cycling as active travel

Under the term ‘active travel’ (Nahmobilität = individual, non-motorised transport within a neighbourhood or community), the transport modes walking and cycling are currently receiving increasing attention. The emphasis is no longer on the absence of a motorised drive or the alleged slowness, but rather on the fact that walking and cycling help establish an intense relationship with the local surroundings, vitalise the public space and strengthen social cohesion in the neighbourhood. Moreover, they ensure low-cost mobility, especially for children and elderly people, and are prerequisites for a successful local public transport system. In addition, the associated physical activity offers health benefits and is emission-free.

Owing to the many commonalities, pedestrians and cyclists have similar requirements. Without a motor and fuel they are less inclined to take longer routes and require direct connections and networks that are as gapless as possible. Pedestrians and cyclists are also highly aware of the quality of the street space and environmental pollution. In addition, with respect to their desire for lively, diverse and traffic-calmed street environments, there are hardly any differences between the two types of road users. The provision of ample space, the feeling of not constantly being exposed to the risk of accidents and an attractive design are absolutely essential if pe-

destrian and cycling traffic are to ‘thrive’ in a local community.

Until now, pedestrians and cyclists have often shared the same roadside facilities when faced with incompatibly fast motor traffic, for example on heavily trafficked through roads.

Today however, encouraging findings from research and practice suggest that cyclists should use the roads, while the pavement should be reserved for pedestrians only, without having to feel disturbed or threatened by cyclists. Even though pedestrians and cyclists often coexist in harmony, and only few serious accidents happen, there still are repeated conflicts of use resulting from their interaction. A growing cause for concern is the presence of faster electric bikes and Segways.

*Cover image: The best solution in cases of high traffic density: enough space, indicated separate paths on the Baltic Sea island of Usedom.*

### Contents

Walking and cycling as active travel	1
Fundamental principles for shared use	2
Measures to improve compatibility	3
Conclusion	4

## Fundamental principles for shared use

Cyclists and pedestrians coexist on the winding streets of historic city centres, on waterfront promenades, in parks and sometimes also in pedestrian zones. Here, major destinations and travel paths are located away from roads with heavy motor-vehicle traffic. With a purposeful mix of road users travelling at slow speeds and negotiating shared use through eye contact, many busy streets are even able to handle limited motorised traffic (concept of shared space).

First of all, one argument for mixed traffic is that it requires little space, as opposed to allocating separate areas to each mode of transport. In particular, inexperienced and slow cyclists value cycle routes away from roads with heavy motor-vehicle traffic, which, particularly in inner cities, is generally only possible on paths and in areas shared by pedestrians. The shared use of especially attractive spaces, such as pedestrian zones or waterfront promenades, can prevent the public space from becoming deserted shortly before and during the hours of darkness, increasing the users' personal sense of security.

On the other hand, there is a certain potential for conflict between pedestrians and cyclists due to their differing patterns of perception and behaviour. The biggest differences between them are the higher speeds at which cyclists travel, as well as their riding dynamics. Cyclists tend to use their bikes to get from A to B and try to minimise their energy expenditure by avoiding braking, diversion routes and uneven road surfaces.

Pedestrians, on the other hand, often choose or change their path, direction and speed spontaneously and without advanced warning to other users. Cyclists often underestimate this behaviour. However, the responsibility lies above all with them to watch out for other users, especially when travelling at higher speeds. Normally the slower road users, i.e. the pedestrians, are more likely to be distracted by conversations, phone calls or letting their minds wander. The situation is made all the more complicated by the fact that both groups travel quietly most of the time and may not become visible to other users until later due to stationary cars, vegetation, bus shelters or advertising panels.

Conflicts between cyclists and pedestrians are of little significance in accident statistics. Pedestrians were in-



*Promenade along the Rhine in Koblenz – also a tourist cycling route.*

involved in only around six per cent of all accidents in which cyclists were injured. While around 15 per cent of accidents in which pedestrians were injured involved a cyclist. In more than 60 per cent of accidents involving both groups, the cyclist is the main cause. These are mainly collisions caused by cycling at inappropriate speeds and abrupt changes in direction. Normally, the severity of the accidents is low because the kinetic energy released during the collision is limited due to the low speed at which cyclists travel, compared to motor vehicles, and their low vehicle weight. However, it is pedestrians who clearly bear the risk of being hurt in an accident.

Against the backdrop of these characteristics and behavioural patterns of cyclists and pedestrians, the main cause of conflicts between them is the limited space available for mixed traffic. In the past, street environments were divided and allocated based on the requirements of motorised traffic while pedestrians and cyclists had to make do with the remaining spaces at the



*Footway/cycle path crossing a T-junction (Kreuzlingen, Switzerland).*

All images by Jörg Thiemann-Linden



edge of the road. In many places pavement cycle paths were introduced to provide a minimum space for cycling without obstructing motor-vehicle traffic. This was done at the expense of the public space available to pedestrians, thus creating areas of potential conflict.

## Measures to improve compatibility

It is necessary to co-ordinate the schemes for cycling and pedestrian traffic, given that the requirements and needs of both groups of road users are mostly similar. A good example of this is the joint initiative of the Swiss advocacy associations 'Pro Velo Switzerland' and 'Pedestrian Mobility Switzerland'. Their recommendations for 'Pedestrian and Cycling Traffic in Shared Space' ('Fuss- und Veloverkehr auf gemeinsamen Flächen') take into consideration the interests and concerns of both road users within the shared space.

In 2011 Berlin presented its own pedestrian strategy (Fußverkehrsstrategie) that, together with its cycling strategy (Radverkehrsstrategie), is part of Berlin's urban transport development plan (Stadtentwicklungsplan Verkehr). Both concepts demand, for example, on-road parking spaces for bicycles in order to keep pavements free for pedestrians, or the testing of 'encounter zones' (Begegnungszonen) in city spaces with a high frequency of pedestrian crossings, modelled after the Swiss example.

It is essential to use the latest expertise and techniques for the planning of measures. The ideal cross section should be developed 'from the edge to the centre', i.e. beginning with the standards for pedestrian areas and subsequently 'moving on' towards the traffic lane rather than vice versa, i.e. from the traffic lane to the remaining space. With this reversal of the planning principle for street environments, all road users are given equal consideration.

The opening up of pedestrian zones for bicycle use is becoming more widespread, but shared use is often limited to more quiet periods of the day. The main reason for this is that pedestrian zones are very safe environments for cyclists and include many destinations. In addition, barring cyclists from such areas could force them to take long detours. In most cases, shared use works well on the basis of social control, depending on the time of day and pedestrian density. Cyclists respond to

high pedestrian density by dismounting, thus becoming pedestrians themselves.

An important rule for shared-use designs is to minimise situations where sudden evasive action or stopping are necessary. On shared pedestrian and cycle paths, as well as pedestrian areas opened up to cyclists and footways – especially in cases of high densities of use – the principle of mutual respect and consideration among users must also be reflected in the design. Delineation lines and a clear designation of space using pictograms or other indicators must be avoided as this can cause space to be 'claimed' for the exclusive use by one group. Downhill gradients increase cycling speed and can be a justification for separating pedestrian and cycle traffic.



*Hanover: Cycling traffic moved from the pavement onto the roadway.*

Surfaces with a somewhat higher rolling resistance (small cube-paving, sandy paths) will help keep cyclists off pedestrian surfaces and prompt them to intuitively use the smoother surface available. However, many pedestrians, for example those with a walking frame, also prefer a smooth surface, which is why the surfaces of the two paths should not differ too greatly. A 'soft', self-explanatory separation that does not obstruct any of the users might be the best possible solution (see photo, top). This is advisable, for example, in cases of increased and faster cycle traffic on greenways. Shallow channels, as well as surfaces in contrasting tones, have a traffic-directing effect and can help partially sighted pedestrians orientate themselves. Tactile segregation using surfaces with contrasting levels of 'roughness' reassures blind pedestrians that they are not using the cycle area by mistake.

A raised kerb separating the cycle lane presents obvious advantages for blind pedestrians using a cane, as well as disadvantages as a small barrier for pedestrians with walking frames, wheelchair users and cyclists entering the lane. This conflict may not seem easy to resolve at first. Detailed design solutions combining tactile surface indicators and varying kerb heights also allow, under certain conditions, flush dropped kerbs for cyclists. In any case, it is important that a clear overall design exists, enabling all users to use the space safely: In the best case, routing, material choices, markings/indicators, and signing should be coherent and clearly indicate the 'desired' behaviour.

When exploring innovative solutions, time-limited pilot projects with accompanying studies can be used for gaining valuable experience and provide a framework in which the concept of shared use can gain acceptance over time, even in cases of initial resistance and scepticism. A pedestrian audit can identify weaknesses from a pedestrian's perspective. Monitoring or evaluations can be used as a means to help make modifications to temporary measures if needed and to undo them if the desired effects have still not been realised in spite of these modifications.

This is an approach used by the German cities of Mannheim and Mainz, for example, when pedestrian zones



*On foot or by bike: Mobility also requires 'non-mobility' from time to time*



*Sign: Slow down when passing pedestrians (Zaragoza, Spain)*

were first opened up to cyclists on a temporary basis. The city of Kassel seized this opportunity and also organised a street party with several information points. In the city of Chur, experience showed that, in spite of the successful opening up of the pedestrian zone to cyclists, an event that was accompanied by the police, there is still a continuous need for communication. In Spain, for example, a new type of sign asks cyclists to reduce speed in sections of high-speed cycle paths with pedestrian-crossing activity.

## Conclusion

High proportions of pedestrian and cycling traffic are beneficial to cities, and, therefore, the promotion of cycling must not be carried out at the expense of pedestrians. Regardless of the existing differences, it is important to focus on the commonalities between walking and cycling. Shared use is likely to be successful provided that enough space is available, that implied priority for any means of transport is removed, and that the overall impression is clearly transmitted to cyclists that they are 'guests' on pedestrian spaces and thus have to adjust their cycling speed.



Funded by



Federal Ministry  
of Transport, Building  
and Urban Development

More information on target group oriented street design can be found in

CyE A-11 Ageing Society  
CyE I-4 Shared Space

"Cycling Expertise" is available online:  
[www.nrvp.de/en/transferstelle](http://www.nrvp.de/en/transferstelle)

## Imprint

Publisher: German Institute of Urban Affairs (Difu) gGmbH  
Zimmerstraße 13–15, 10969 Berlin  
Department for Mobility and Infrastructure  
Editors: Jörg Thiemann-Linden, Wolfgang Aichinger  
[cycling-expertise@difu.de](mailto:cycling-expertise@difu.de)