



FACT SHEET H-03 – CYCLING FACILITIES OFF THE ROAD

Application of cycle paths

Deciding on the appropriate type of cycle facility in urban areas is a complex process involving the careful consideration of criteria such as motor vehicle volumes, proportion of heavy goods vehicles, speed of motor vehicles and street gradient, among others. The main factors influencing the decision to implement a physically separated cycle track alongside the carriageway are available space, motor vehicle speed and car volume. In general cyclists should be physically separated from motorised traffic in streets where vehicle speeds exceed 50 km/h. For more information on choosing the appropriate form of cycle provision see Fact Sheet H-02 and the speed-volume diagram in the Central MeetBike strategy recommendations [Ahrens/Schubert (2014), p.48].

Intersections and other crossings represent conflict points between cyclists and drivers. The number of intersections (including property access roads or driveways) and their frequency of use are therefore also important factors influencing the decision to use off-carriageway cycle paths. Cycle paths are generally appropriate for road segments with few interruptions [Deffner et al. (2012), p.78]. Because cycle paths are often separated from the carriageway through a row of parked cars or a planted area it is especially important to ensure a high level of visibility at in-

tersections (see Fact Sheet H-04). As such, for road segments with a relatively high number of intersections or crossings it is recommended that cycle provision be provided on the carriageway in order to maintain good visibility between cyclists and (in particular turning) drivers (see Fact Sheet H-02).

Types of cycle paths

Cycle paths are physically separated from the carriageway through a kerb, parking lane or planted area. In general there are three main categories of cycle paths: dedicated cycle tracks, shared use sidewalks and greenways.

Dedicated cycle tracks run parallel to the carriageway and are for the exclusive use of cyclists. Their use may be obligatory, indicated using a posted sign and/or pavement markings, as long as

they meet current standards of safety and quality. The standard width for **one-way cycle tracks** is 2,00 m, which allows also cyclists to overtake slower bicycles. According to German guidelines, larger widths may be necessary for:

- Segments which are main routes within the bicycle network
- High volumes of cyclists in order to achieve an appropriate level of service and comfort level
- Frequent peaks in demand (groups of cyclists)
- Moderate to high activity in adjacent pedestrian areas
- Steep declines

Two-way cycle tracks may be used in exceptional cases and after careful consideration. The standard width in German guidelines for a **two-way cycle track** on one side of the street



Example of a good solution (left), where vehicles must cross the cycle path; Example of an old fashioned cycle path (right) - the path is too narrow and there is no space for pedestrians (source: Jan Schubert)

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is 3,00 m. Because turning drivers do not expect cyclists to be riding against the flow of traffic, two-way cycle tracks should be used only in situations in which there are few intersections or other crossings and there is good visual contact between cyclists and motorists. They should be well signposted so that drivers are aware of cyclists riding in the opposite direction.

Cycle tracks may be separated from the pedestrian sidewalk through a planted median or they may be located directly adjacent. The minimum separation between cycle track and sidewalk should be 0,30 m. The divider also helps guide the visually impaired through its tactile properties. It should be level with the sidewalk and cycle track so as to not present a tripping or crossing hazard to pedestrians and cyclists.

The **shared use of a sidewalk by both pedestrians and cyclists** is no longer in accordance with present planning guidelines. Cyclists riding on

the sidewalk can cause pedestrians to feel uncertain and uncomfortable. In most cases sidewalks also do not meet the needs of cyclists. Joint use of the sidewalk through cyclists should be especially avoided in streets with high commercial usage, in areas with many pedestrians, children, disabled or elderly people, for main routes in the bicycle network or for segments with a steep decline (speeds for cyclists travelling downhill much higher compared to pedestrians) among other criteria.

Dedicated cycle tracks and shared use sidewalks should be separated from the carriageway by a safety buffer. The width of the buffer depends on motor vehicle speeds, the presence of a parking lane and whether or not street furniture is within the buffer area. The minimum buffer width should be 0,50 m when there is no parking lane, no street furniture (e.g. signposts etc.) in the buffer area and motor vehicle speeds on the adjacent travel lane do not exceed 50 km/h. When there is street furnitu-

re in the buffer area or motor vehicle speeds are greater than 50 km/h the buffer width should be 0,75 m. For cases in which a parking lane is present, the type of parking – vehicles parallel, angled or perpendicular to the kerb – determines buffer width. If vehicles are parked parallel to the kerb the buffer should be 0,75 m wide to protect cyclists from car doors. Where vehicles are angled or perpendicular to the kerb the buffer should be 1,10 m to protect cyclists from elements of parked vehicles that may extend beyond the kerb.

Greenways are stand-alone cycle paths (or multi-use paths) which do not follow the contour of a street. They are not as common in built-up urban areas, although they can be found in parks, along old railroad rights of way or rivers and on formerly private roads from agricultural or industrial uses. For more information on greenways see Fact Sheet H-06 – Rural Cycling.

Best Practice: Gdansk bicycle paths

In Gdansk, most of the main streets were built with high-quality cycle paths from the beginning. The paths provide for comfortable cycling without being too influenced by motorised traffic. For Polish cities, where motor vehicle speeds are often relatively high, off-carriageway cycle paths present a suitable option. All bicycle paths are able to be used for travel in both directions. It remains to be seen what influence bi-directional cycle paths and the relatively large separation from the carriageway will have on traffic safety. In Germany, such a constellation would tend to be viewed critically.

In addition, the City of Gdansk has started to implement speed 30 zones in residential areas in order to enable cyclists convenient and safe provision when leaving the main network. For more information see Central MeetBike Fact Sheet H-07 – Traffic Calming.



Gdansk – bicycle path in both directions with special markings at intersections (source: Jan Schubert)

Lessons learned: In general cyclists should be provided a physically separated cycle path in streets where motor vehicle speeds are more than 50 km/h and there are few intersections. A safety buffer between the cycle path and parked cars protects cyclists from overhanging vehicle elements and car doors which may suddenly open. Cycle paths should be at least 2 m wide to allow for overtaking. The cycle path should be separated from pedestrian traffic through a tactile divider or green area.

For further resources, links and best practice examples visit the Sustainable Urban Transport Project website: <http://www.sutp.org/>

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