



## FACT SHEET H-08 – BICYCLE PARKING FACILITIES

### Introduction

Quality bicycle parking contributes to the promotion of cycling by providing an easily accessible and safe place to leave or store bicycles when commuting, shopping or enjoying leisure activities both at the destination and place of residence. Parked bicycles also take up much less space than parked cars: 8 bicycles can be parked in the space required for one car (classic curved steel tube with space for two bicycles).

Bicycle parking facilities can generally be categorized as short-term or long-term depending on the duration for which a bicycle is parked. Additionally parking facilities can be erected to serve temporary needs such as sporting events, festivals, outdoor concerts or other one-time events.

Parking should be part of a cycling strategy that assumes improved cycle parking options can stimulate a significant potential for increasing everyday cycling. The department responsible for the cycling strategy “is required to:

- a. Prepare a strategy for bicycle parking, including proposed funding resources
- b. Identify systematically deficiencies that emerge in bicycle parking facilities in public space.” [CDV (2013), p.3]

Further details, including dimensions, can be found in the “Handbook on Cycling Inclusive Planning and Promotion” from Mobile2020.

### Location and design requirements

Many location and design aspects are applicable to both short and long-term parking. Parking needs to be well lit, at street level or accessible via ramps (no stairs or other barriers) and easily visible. Signs alerting users to a facility’s location may be necessary. Facilities must be stable and support the bicycle frame, not just part of a wheel, and allow the frame and a wheel to be locked with one lock. They should be close to origins and destinations and fit aesthetically into the surrounding built environment.



Individually designed, short-term bicycle parking in Wroclaw, Poland (source: Jan Schubert)

### Short-term parking

Convenience is a key factor in short-term parking, meaning facilities should be as close to destinations as possible, since cyclists might only need to park for as little as 30 minutes. Space should be provided for manoeuvring, as cyclists may have shopping bags, panniers, a child seat or trailer.

One of the simplest forms is the inverted U-shaped rack. This allows the bicycle to be supported along the frame and the user has the ability to lock the frame and front wheel with a single lock. Consideration should be given to making rack and facility design complementary to the surrounding built environment and other street furniture since short-term parking is often in public spaces such as pedestrian zones.

### Long-term parking

The demands on safety and protection from weather and theft are generally greater at long-term facilities, since bicycles are parked for at least several hours. Covered facilities such

### Best Practice: Individually designed parking racks

Individually designed bicycle parking can help a town create a unique identity. It can enhance an area’s image, as compared to standard parking facilities (e.g. inverted U-shaped racks) when designed to complement the surrounding built environment. Additionally, requesting design or location proposals from residents helps promote public participation. Wroclaw (pictured on p.1) and Gdansk have both implemented individually designed bicycle parking racks.

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as shelters, garages and individual or collective cycle lockers are preferred. Higher-capacity options include staffed parking or automated parking systems. These services may be fee-based or, particularly for regular users such as commuters, provided on a subscription or membership basis.

Bicycle stations are an attractive long-term parking option. A bicycle station is the combination of staffed parking with other services such as bicycle repair, an information point, cycle hire, showers, locked storage, tyre pumps, inner tube vending machines etc. These services also function as a complementary revenue source and increase the attractiveness of cycle parking.

Long-term cycle parking should provide a mix of facilities, since not all cyclists are willing to pay for staffed facilities or cycle lockers.

### Bicycle parking at train stations and transit stops

Cycling greatly increases the catchment area of train stations and transit stops as compared to walking. Thus attractive cycle parking at public transport facilities can ensure the mobility of non-car owners and even reduce the need for owning a vehicle.

Parking facilities for cyclists at public transport nodes vary in form depending on current, expected or desired demand. Demand will also depend on the importance of the train station or transit stop within the transport system, i.e. how many train lines, transit and cycle routes service a given node.

System nodes can generally be divided into interchanges and simple transfer points [Rupprecht et al. (2012b)]. Interchanges are characterized by larger catchment areas (e.g. commuter rail station) or the convergence of multiple train, bus, or tram routes. The station or immediate vicinity may also be a destination in itself. As a result the demand for cycle parking at such (intermodal) hubs is not always limited to those transferring between bicycle and public transport. Parking facilities at interchanges should provide a mix of long-term options. Because of varying user needs, particular consideration should be given to 24-hour accessibility, safety and security of the facilities. Bike stations are an appropriate solution for intermodal hubs with high demand. Any limited access parking facility, however, should have hours of operation that coincide with the operating hours of the

public transport system.

Simple transfer points, in contrast, may be as small as a terminus or stop along a public transit route at which cyclists choose to switch modes. Because distances between transit stops are often shorter than distances between commuter rail stations, their catchment area and, therefore, bicycle parking demand are usually smaller than those of interchanges. However, parking at transfer points is also long-term and requires corresponding facilities.

### Determining demand

In general, demand can depend on turnover rate (usually higher for short-term parking) and surrounding uses including retail space, number of seats (e.g. in a theatre), number of employees, number of households, dwelling area etc.

The easiest way to get a very rough estimate of demand for bicycle parking is to count the bicycles parked in public spaces at different times of day. For cycle parking at public transit stops or stations PRESTO recommends adding a capacity buffer of 10-20% to the estimated (counted) demand. Bicycle theft rates will also offer clues as to where secure parking may be lacking.

In addition, surveys can be conducted in residential and business districts. Surveys can also be used to allow residents or users to recommend locations for bicycle stands. Since accurately determining demand is difficult, parking facilities are most flexible when they are easily expanded.

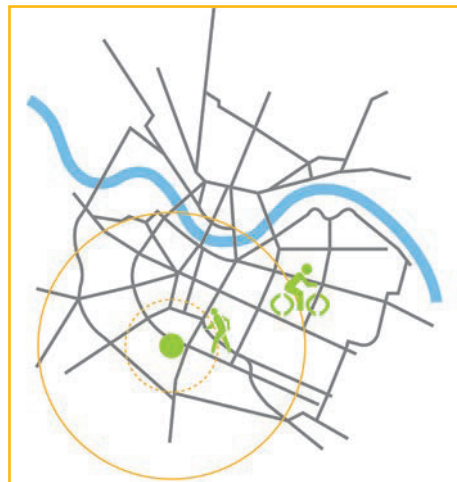


Figure 1: 10 min. catchment area of Dresden Main Station walking (dotted line) and cycling (solid line)

**Lessons learned:** Safe, secure bicycle parking in the immediate vicinity of destinations helps promote cycling for daily travel. Facilities should be visible, easily accessible and protected from weather. Short-term parking should be dispersed throughout shopping districts or other highly frequented areas. Long-term parking should be centrally located near train stations and transit stops among other places. Bike stations are a particularly attractive option for combining cycle parking with other services.

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

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**Sources:**

Deffner, Jutta; Ziel, Torben; Hefter, Tomas; Rudolph, Christian Eds.: "Handbook on Cycling Inclusive Planning and Promotion". Capacity development material for the multiplier training within the Mobile2020 project. Frankfurt/Hamburg. 2012

FGM-AMOR – Austrian Mobility Research: "Bicycle Parking Made Easy – A guide to the construction of bicycle parking facilities". BICY – Cities and Regions for Cycling. Ferrara/Austria. 2011.

Rupprecht, S.; Urbanczyk, R.; Laubenheimer, M. (project coordinators): "Factsheet: Bicycle Parking and Storage". PRESTO. 2012a

Rupprecht, S.; Urbanczyk, R.; Laubenheimer, M. (project coordinators): "Factsheet: Cycle Facilities at Interchanges". PRESTO. 2012b

Transport Research Centre (CDV): "Cycling Parking, Intermodality: Pilot Implemented Investment Actions 5.3.3". Document developed in the course of the project Central MeetBike. Brno. 2013.