

Provision of secure bicycle parking facilities is necessary if the level of theft and the cost to the community is to be reduced.

10.3.3. General Requirements of Devices

In general every bicycle parking device should:

- enable wheels and frame to be locked to the device without damaging the bicycle;
- be placed in public view (i.e. where they can be viewed by passers-by, shopkeepers, station attendants, teachers or fellow workers);
- be located outside pedestrian movement paths;
- be easily accessible from the road;
- be arranged so that parking and unparking manoeuvres will not damage adjacent bicycles;
- be protected from manoeuvring motor vehicles and opening car doors;
- be as close as possible to the cyclist's ultimate destination;
- be well lit by appropriate existing or new lighting;
- be protected from the weather; and
- be designed to fit in harmony with the surrounding environment.

10.3.4. Location of Bicycle Parking Facilities

Bicycle parking facilities should be provided at common commuting and recreational destinations of bicycle trips. These locations include schools, shopping centres, railway stations, bus terminals and interchanges, work places, sports grounds, cafe's, cinemas, theatres etc.. Secure, long term, weather protected parking should be provided for workers and multi mode commuters, and secure short term parking should be provided for visitors, customers or couriers. The locations of these facilities should be identified on bicycle network maps made available to the public.

If parking facilities are not conveniently located cyclists will ignore the facility and continue the disorderly practice of securing bicycles to nearby railings, posts, seats, parking meters, trees etc. Short-term parking, in particular, needs to be very convenient if it is to be effective. Parking facilities are more effective if provided in small clusters close to various destinations rather than as one large parking area.

Experience has shown that:

- long term parking should generally be provided no more than 100 metres from the cyclists destination; and
- parking rails for short term parking should be placed individually every 20 to 30 metres throughout strip

shopping centres or in small clusters near the entrances to major shopping complexes or offices.

In public areas, especially in prominent locations, every endeavour should be made to provide attractive, well designed facilities. The need for an aesthetic appearance should not, however, override the requirements for security and ease of use.

10.3.5. Types of Parking Devices

There are three classes of bicycle parking facilities that offer various levels of security, from high to low. These classes and the main types of user are described in Table 10-2. Bicycle parking devices that do not allow the frame and both wheels to be conveniently and effectively locked to the facility cannot be regarded as secure.

Class	Security Level	Description	Main User Type
1	High	Fully enclosed individual lockers	Bike and ride commuters at railway and bus stations.
2	Medium	Locked compounds fitted with Class 3 facilities. Communal access using duplicate keys or electronic swipe cards.	Regular employees, students, regular bike and ride commuters.
3	Low	Facilities to which the bicycle frame and wheels can be locked.	Shoppers, visitors to public offices. Places of employment where there is security supervision of the parking facilities.

Table 10-2: Classification of Bicycle Parking Facilities

(a) The Bicycle Locker

Bicycle lockers such as those shown in Figure 10-3 offer the highest level of bicycle parking security currently available. They are appropriate for all day and night parking, the most common venue being railway stations and bus terminals to encourage the use of multi mode travel. They should also be considered at other locations where passive surveillance is not available. They have the added advantage that helmets and other gear can be securely stored along with the bicycle, perhaps overnight, thus giving the cyclists more flexibility in their travel arrangements. It is important that the use of lockers is managed by an appropriate authority such as the managers of the relevant shopping centre, major building or railway station.



Users of bicycle lockers should not be allowed to supply their own locks as lockers may end up being appropriated by occasional users and remain empty and locked. It is essential that those responsible for the management of the lockers supply the locks for a fee, retain a duplicate key to enable regular checking of the usage, and maintain a register of regular users. Alternatively, a coin deposit operated system may be preferred although this will not remove the need for occasional checking of usage.

Lockers should normally be situated in a well lit public place to deter vandalism. Lockers used in locations close to the sea should be fabricated from materials that will resist corrosion.



Figure 10-2: Bicycle Lockers

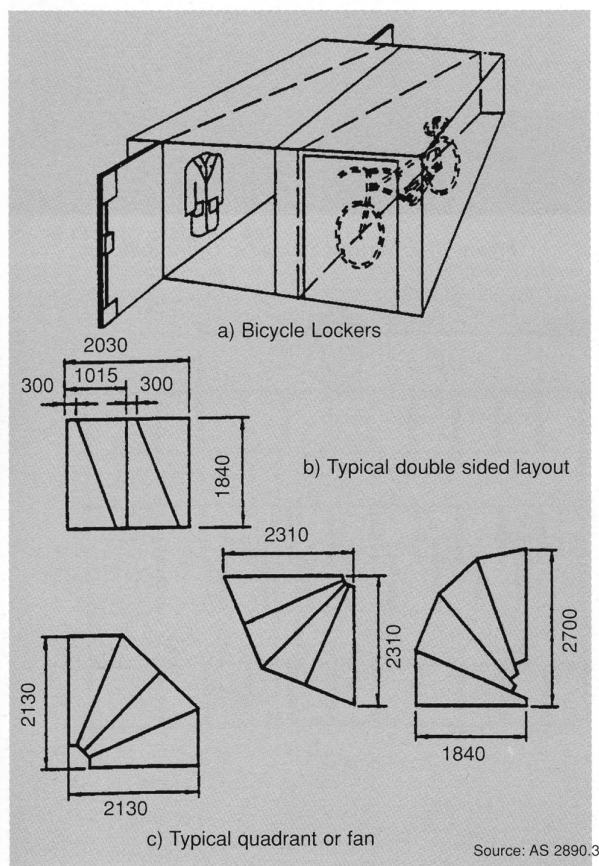


Figure 10-3: Bicycle Locker Design Examples

It is recommended that lockers of similar size and layout to those shown in Figure 10-3(b), be arranged so that the separation between locker units is not less than 2.0 metres.

(b) Bicycle Enclosure

Bicycle enclosures offer a medium level of security in that while the owner can lock the bicycle within the enclosure, other users also have access to the enclosure. They are also suitable for all day parking at locations such as railway stations, workplaces and schools. Because there are many users involved and the bicycles are easily seen they are not as secure as lockers and hence some level of surveillance should be provided to ensure satisfactory operation. Public lighting is desirable where they are located in a public place and used after dark.

A cage suitable for railway stations or workplaces is shown in Figure 10-4 while a compound layout suitable for use at schools is shown in Figure 10-6. The aisle widths suitable for various bicycle parking angles are shown in Table 10-3.

In some cases commercially produced standard sized enclosures may provide an economical alternative for a bicycle enclosure.

Where space is limited, and with staff agreement, it may be acceptable to provide an enclosure designed for vertical storage of bicycles. Figure 10-8 illustrates a device suitable for vertical storage although some systems allow for the bicycle to be suspended from a hook.

Type of Parking	Minimum Aisle Width (metres)
Horizontal Storage*	
90° angle	1.5
60° angle	1.3
45° angle	1.1
30° angle	1.1
Vertical Storage	2.0

* Refer Figure 10-11

Table 10-3: Bicycle Parking Aisle Widths

(c) Bicycle Parking Rails

The parking rail shown in Figure 10-10 is amongst the most versatile methods of bicycle parking currently available in that it is:

- low in cost;
- easily fabricated, in mild steel with chain insert for extra security if required;
- able to be located close to cyclist destinations;
- suited to short and medium term parking; and
- also able to be used for longer term parking if a high level of surveillance can be provided.

