

# End Of Trip Facilities In Government Buildings

## FOR CYCLISTS

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### 1.0 Introduction

Many cyclists are becoming aware of the personal benefits associated with cycling such as improved health, opportunities for social contact, and significant economic advantages. The bicycle is acknowledged for its cost effectiveness and efficiency over short distances in urban areas. Cycling to access government services for work or business is increasing in popularity and can be encouraged with end of trip facilities.

End of trip facilities such as bicycle lockers, secure parking areas and change room facilities are a requirement of most bicycle trips. Appropriate end of trip facilities assist in making the potential cycling trip a reality for students, employees and visitors to Government buildings.

Employees and visitors who cycle to work or to conduct business are generally aware of the health benefits associated with cycling. Providing end of trip facilities for cyclists at the workplace can influence the trip to work and have a positive benefit on the health and well being of employees.

The *Bike Ahead: Bicycle Strategy for the 21st Century*, released by the Premier in August 1996, identifies key actions that are needed to ensure that the safety and convenience of cyclists are taken into consideration when other actions and decisions are being made such as end of trip facilities in new and refurbished buildings.

### 2.0 Bike Ahead - *Perth Bikeplan Recommendation 31*

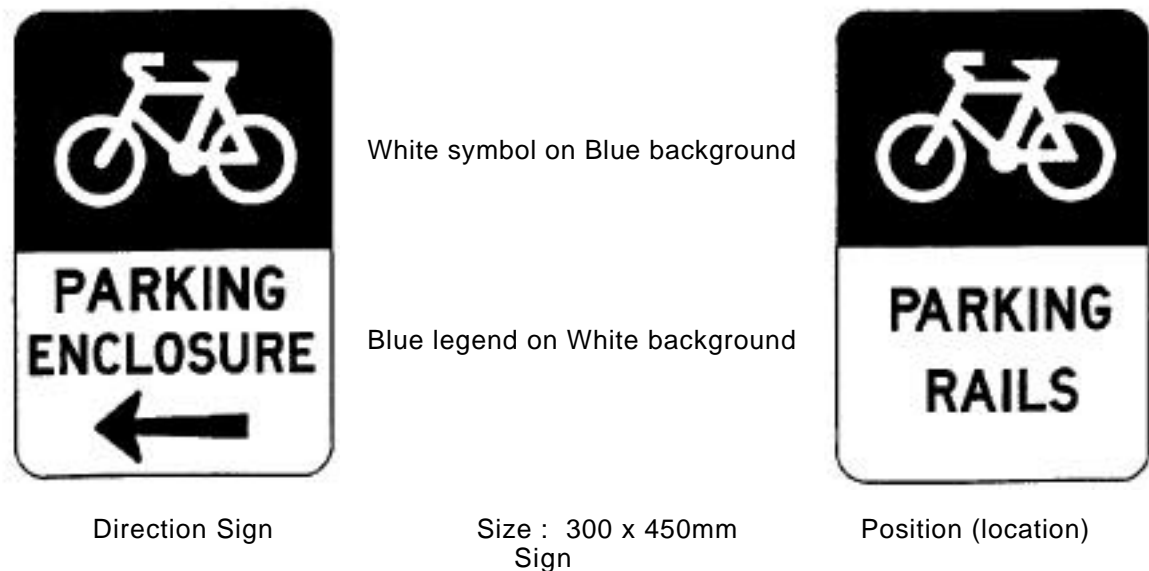
Bike Ahead identifies a number strategy actions and recommendations which aim to contribute to the environmental and social well-being of Western Australia. Recommendation 31 notes that *State Government offices should provide adequate secure bicycle parking, showers and change rooms for employees, wherever possible, and short-term secure bicycle parking for people transacting business at those offices.*

Many Government facilities now have end-of-trip facilities as part of new or refurbished buildings. However, it is important provide guidelines to ensure appropriate facilities are identified for government buildings.

### 3.0 Signage Indicating The Location Of Bicycle Parking

Bicycle parking should be provided at government offices, institutions and other workplace/business facilities. Information signs indicating the direction and location of parking facilities will encourage usage (Figure 1).

**Figure 1. Information signs for bicycle parking facilities**



Source: Austroad Guide to Traffic Engineering Practice Part 14 Bicycles.

### 4.0 Bicycle Parking

Cyclists prefer conveniently located bicycle parking facilities in secure surroundings to minimise the risk of theft and damage to the bicycle. Secure undercover bicycle parking facilities are fundamental to encourage people to access services by bicycle.

The preferred method for long term parking for employees' bicycles is in a lockable compound or enclosure with **U** bar parking or in secure bicycle storage lockers.

**Figure 2. A bicycle compound at a school.**



Source: Guidelines for Design of Bicycle Facilities. Transport

Bicycle compounds are usually located in car parking areas and often in the parking area in the basement of buildings. They are mostly constructed in tubular steel poles and covered with heavy duty wire mesh. A lockable gate needs to be at least 1 metre wide to allow ease of access for both the rider and their bicycle.

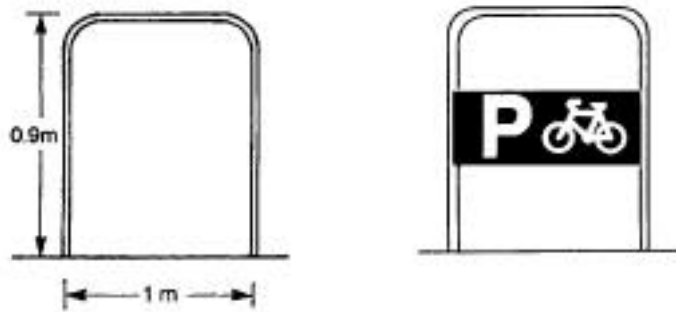
In buildings with basement parking, the location of the compound or bicycle lockers should be considered in terms of traffic movement to minimise bicycle/pedestrian and motor vehicle conflict.

Within the compound there should be provision for individual locking of bicycles to a permanent fixture such as a **U** bar. The preferred style of bicycle parking facility within a parking compound or for short term parking is a simple rail bent into a **U** shape from steel pipe. Each parking rail can accommodate two (2) bicycles. Parking rails or **U** bars can be arranged as angle parking, in parallel or end to end (Figure 4).

*Austroads Part 14* identifies general requirements for bicycle parking devices which should:

- Enable both wheels and the frame to be locked to the device without damaging the bicycle;
- Be placed in public view (ie, where they can be viewed by passers-by, shopkeepers, station attendants, teachers or fellow workers).
- Present no hazard to pedestrians.
- Be easily accessible from the road.
- Be arranged so that parking and unparking manoeuvres will not damage adjacent bicycles. Be as close as possible to the cyclist's ultimate destination.
- If intended to be used at dusk or night, should be well lit by appropriate security lighting.
- Preferably protection from the weather; most desirable for all day parking.

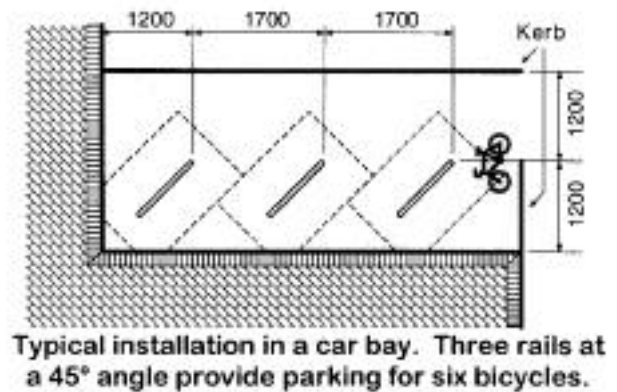
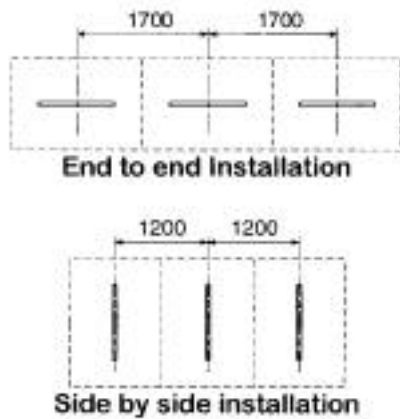
**Figure 3 Specifications of U bar parking**



- Tubing** 50mm diameter steel pipe with 5mm wall (90mm maximum diameter. Permapine is an alternative).
- Base Plates** 8mm plates. 200mm hole centres
- Anchor Bolts** 4 x 12mm diameter, concrete anchor bolts (Weld nuts to bolts after assembly or burr over).
- Finish** Hot dip galvanised or paint finish optional.
- Attachments** Can be fastened for information or advertisement purposes.

Source: Guidelines for Design of Bicycle Facilities. Bikewest

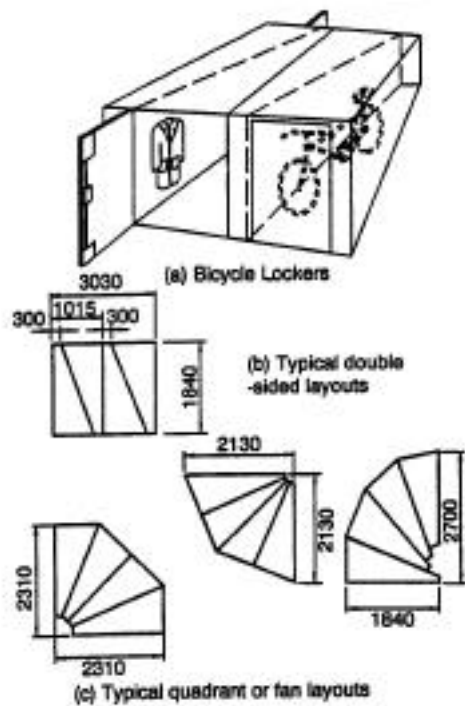
**Figure 4. Bicycle parking arrangements**



Source: Bicycle Transport Alliance Inc.

Bicycle lockers offer the highest level of bicycle parking security. They have the added advantage of allowing storage of bicycle and personal equipment such as helmets, panniers and backpacks.

**Figure 5. Bicycle lockers**



Source : Austroad Guide to Traffic Engineering Practice Part 14 Bicycles.

Short term parking for people visiting Government buildings is ideally located under cover and adjacent to the building's entrance. For security purposes **U** bars need be within sight of an activity area such as a reception desk. The extent of bicycle parking provision is noted in the attached table.

## **5.0 Change Rooms, Lockers and Showers.**

Hygienic and functional change rooms, showers and secure lockers need to be provided in the workplace for female and male cyclists. Such facilities may also be used by employees who recreate before work or during lunchtime periods.

**5.1 Change rooms** must be secure facilities capable of being locked and preferably located in well lit areas as close as practicable to bicycle storage areas. Well designed change rooms will include showers, non-slip floor surfaces and lockers for personal gear such as towels, toiletries and clothing. Lockers located within the change room ensures privacy for users.

**5.2 Personal Lockers**, capable of storing clothing and damp towels, cycling gear and other effects, need to be well ventilated, secure and lockable. Full length lockers (figure 6) are preferred because of their storage capacity and ventilation qualities.

**Figure 6. Well designed change room with lockers close to showers.**



Source: Austroad Guide to Traffic Engineering Practice Part 14 Bicycles

**5.3 Showers** need to be sufficient in number so users can make efficient use of facilities. There should be a minimum of;

- one (1) shower per 0 - 19 staff.
- two (2) showers, 1 male and 1 female in separate change rooms, per 20 - 49 staff.
- four (4) showers, 2 male and 2 female in separate change rooms, per 50 - 149 staff.
- six (6) showers, 3 male and 3 female in separate change rooms, per 150 - 299 staff.
- eight (8) showers, 4 male and 4 female in separate change rooms, per 300 - 500 staff.
- additional shower facilities will be required at a rate of 1 female and 1 male shower for every 250 staff.

*NB. The standards provided in this document are broadly consistent with those in Austroads Part 14 : Guide to Traffic Engineering Practice : Bicycles :*

**Table 1. END OF TRIP FACILITIES - LEVEL OF PROVISION**

<b>GOVERNMENT FACILITY</b>	<b>LONG TERM PARKING</b>	<b>SHORT TERM PARKING</b>	<b>SHOWERS</b>	<b>LOCKERS</b>
<b>DESIGN STANDARD</b>	1 bicycle <b>U</b> bar / bike locker per 300 sq.m of floor space  or 1 <b>U</b> bar / bike locker per 10 staff	3 bicycle <b>U</b> bars per 300 sq.m	as per design standard noted in section 4.3. (page 3 above)	2 personal lockers per 10 staff
<b>OFFICE</b>	1 <b>U</b> bar / bike locker per 200 sq.m, or  1 per 20 staff min.	1 <b>U</b> bar per 750 sq.m over 1000 sq.m	As per Design Standard	As per Design Standard
<b>UNIVERSITY &amp; TECHNICAL INSTITUTE</b>	5 <b>U</b> bars / bike lockers per 100 f/t students	3 - 5 <b>U</b> bars per department	5 male & 5 female per 100 f/t students	20 male & 20 female per 100 f/t students
<b>SCHOOL</b>	1 <b>U</b> bar per 5 students over year 4	n/a	n/a	n/a
<b>RESEARCH CENTRE</b>	As per Design Standard	As per Design Standard	As per Design Standard	As per Design Standard
<b>POLICE STATION</b>	As per Design Standard	As per Design Standard	As per Design Standard	As per Design Standard
<b>COURT HOUSE</b>	As per Design Standard	As per Design Standard	As per Design Standard	As per Design Standard
<b>GEN. HOSPITAL</b>	1 <b>U</b> bar or bike locker per 20 staff	As per design standard	As per Design Standard	As per Design Standard
<b>HEALTH FACILITIES (OTHER)</b>	2 <b>U</b> bars or bike lockers per 400 sq.m	As per design standard	As per Design Standard	As per Design Standard
<b>SWIMMING POOL</b>	1 <b>U</b> bar or bike locker per 200 sq.m pool area	4 <b>U</b> bars per 200 sq.m pool area	As per Swimming Pool Standard	As per Swimming Pool Standard
<b>LIBRARY</b>	1 <b>U</b> bar or bike locker per 500 sq.m	6 <b>U</b> bars per 500 sq.m	As per Design Standard	As per Design Standard