The bicycle parking handbook

Your expert guide to:

✔ Choosing a location
✔ Evaluating your needs
✔ Selecting the right rails
✔ Designing a layout that works
At BHP Billiton we appreciate the tremendous benefits that cycling brings to our organisation: reduced environmental impact and a healthier and more productive workforce. These all contribute to our business success.

The new BHP Billiton headquarters in Melbourne has secure bicycle parking, lockers, showers, and changing facilities for our staff. For the cost of three car spaces we have provided for over 50 cyclists.

I ride to work regularly. Cycling to work is a great way of incorporating exercise into my daily routine. Cycling provides an outlet from the demands of the job and gives me time to think. It also beats sitting in traffic. For some employees the ride to work is 30 minutes quicker than driving or catching public transport.

Bicycle Victoria has been a valuable source of practical information to help BHP Billiton and our staff get the most out of cycling. This handbook is a terrific resource for helping you provide practical bicycle parking facilities. I encourage you to provide good facilities for cyclists and get more people to ride instead of drive.

Chip Goodyear
Chief Executive Officer
BHP Billiton
Successful bicycle parking solutions

We understand riders’ needs and we know what works
Bicycle Victoria has designed, manufactured and installed bicycle parking facilities for more than 10 years. Our installations are successful because we understand the specific needs of riders.
Bicycle Victoria is a self funded community organisation. All proceeds go to getting More People Cycling More Often.

>>> “It’s so much better, we now have a great place to lock up.”
People who ride

>>> “We’ve had a lot of positive feedback from staff. It’s been great for morale.”
Employer

>>> “There used to be bikes all over the place. It’s certainly made my job easier.”
Property Manager

>>> “We came up with a cost effective way of meeting the new regs.”
Property Developer

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Acknowledgements:
Printed with assistance from
The Cycling Promotion Fund.
Consider where riders want to park, not necessarily where it is thought they should park.

**Flowing freely**
Parking needs to be easily accessible from the road or bicycle path. The entrance and exit should be designed to minimise conflict with flows of pedestrians and motor vehicles.

**Rider convenience**
The most frequently used parking is within 30 metres of the building entrance. This is usually appropriate for open-air parking such as on-street rails. People will travel further for a more secure facility such as a locked cage or bike locker, but even these need to be located within 70 metres of the destination.

Bike parking for employees is best situated close to showers, clothes lockers and change rooms. Parking for visitors needs to be within 30 metres of the building entrance.

**Shelter from the storm**
Just like people, bicycles age prematurely if unprotected from the weather. Parts will wear, paint-work will fade, and tyres will perish ahead of time with long-term exposure to the sun and rain.

Long-term bicycle parking facilities (over four hours) need to provide employees, students, residents and others with a weather-protected and secure place to park. For short-term parking (customers, messengers and visitors) proximity to entrances is critical. Twenty metres may be the difference between a well-used facility and one that is ignored in favour of a banister, pole or tree.

**In clear view**
Parking should be visible for safety and security of people as well as their bikes, and so visitors can easily find it. The less surveillance of the facility, the more security required.

**Dead space comes to life**
Many sites have spaces that are unusable for cars or other purposes due to their location or size. These spaces may be appropriate for bike parking, with little or no opportunity cost incurred.

The location needs to be sensitive to the design and management of the area as well as user needs. If appropriate, involve the building and car park manager in the process when deciding on the location of bicycle parking facilities.

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**CASE STUDY**

**Royal Children’s Hospital, Melbourne – Less theft, more riding**

With bike theft on the rise and existing bike parking scattered over the grounds, Royal Children’s Hospital staff began to store their bikes in offices and other indoor locations. This raised occupational health and safety concerns, with bikes blocking emergency exits and stairs.

During 2000, a hospital Bicycle User Group (BUG) was formed to find a solution. They approached Bicycle Victoria to help design the enclosure.

The facility is adjacent to the hospital’s cafeteria, and offers excellent natural surveillance and easy access to the main building. It is a freestanding, roofed structure with fencing, a self-closing gate with coded access and parking for 65 bicycles.

Bicycle Victoria designed the layout and supplied the parking rails and custom framing. The enclosure uses a combination of wall mounted Ned Kelly hanging rails and floor mounted Flat Top rails, with enough room for easy entry and exit. The result is a cost-effective bicycle parking facility that is well used throughout the year, a safer building, and more people cycling.

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**Key 1: Choose a popular location**

Separate from pedestrians and traffic

Close to the entrance and facilities

Visible for safety and security
The quantity of rails must satisfy existing demand and cater for growth in rider numbers.

Plan for growth
When deciding on the number of rails to install:
• Consult with current riders, and any Bicycle User Groups (BUGs) in your area or workplace.
• Carry out a site inspection to note where people are locking their bikes informally. For example: to signs, balustrades, and plumbing.
• Consider current and expected user numbers, and the likely use of bicycles to travel to and from the location.
• Remember, improved facilities will encourage new riders.
• Think of visitors arriving by bicycle.

New buildings and new uses
For new and renovated buildings or for a change in use of an existing building, specific planning provisions will apply in some states. For more details on the Victorian Planning Provisions (VPPs) refer to page 13.

Retrofitting existing buildings
There is usually unrecognised demand for bike parking, so it is wise to install more than current demand would suggest. When providing parking for existing buildings, the VPP’s are an excellent guide, or you can use the alternatives below.

When increasing existing bike parking facilities use the VPP’s or:
• one bike parking space* for every 10 long-term users of the location (over four hours)
• one bike parking space for every 25 short-term users of the location

When no facilities currently exist use the VPP’s or:
• one bike parking space for every 20 long-term users of the location
• one bike parking space for every 50 short-term users of the location

If clothing storage, showers and change rooms are appropriate (see Key 6), then the following should be provided as a minimum.
• 1 clothes locker should be provided per bicycle parking space
• 1 shower should be provided for the first 5 bicycle parking spaces
• 1 shower for every 10 subsequent bicycle parking spaces
• 1 change space for each shower, or direct access to a communal change space.

*: A space must contain a bicycle parking rail or bicycle locker.
Key 3: Design a layout that works

There needs to be space to get in and out when the bicycle parking facility is full to capacity.

Accessibility
Space between each rail needs to allow for the length of the bike, width of the handlebars while it is parked, and access for riders to lock and unlock their bike. Corridors within the facility need to provide enough room for riders to freely walk side by side with their bike. Riders need enough room to park and remove their bike without bumping into other bikes.

Design
Consider:
• The number of bike parking spaces the designated area can accommodate.
• The style of rails that best suit the needs of users. Combinations of rail types provide parking alternatives for different user preferences. For example: it is inappropriate to use hanging style rails in schools as students may be unable to lift their bikes.
• The style of rails that provide optimum usage of space in the designated area. Combinations of rail styles provide flexibility in layout.
• The entrance to the facility needs to provide room for riders to get on and off bikes away from pedestrian or motor vehicle traffic flows.

Case Study: Southgate commercial and retail complex, Melbourne – Easy access

Paul Pinkney, head chef at Blue Train Café, cycles 10km each day from home. He parks in one of 31 spaces in a secure bike parking compound in the Southgate underground car park.

The 6 metre by 7 metre facility is surrounded by car spaces. If cars had used the area they could be blocked in by other motor vehicles. This rendered the space unusable for cars, but usable for bike parking.

Four Flat Top rails have been mounted on the floor providing eight bike parking spaces, leaving enough room for easy access to the 23 Ned Kelly hanging rails. This combination of rails provides the greatest number of spaces, while leaving enough room for easy entry and exit even when the compound is full.

Until Bicycle Victoria installed the new facility for the complex, Paul was storing his new bike on the café premises. This caused concern about space and safety issues from his fellow chefs and the café management. Now several chefs and half a dozen staff from Blue Train ride to work and park their bikes in the secure compound at Southgate.
Key 4: Select the right parking products

When choosing the style of product to install, consider the type of user, the available space and the level of security required.

Selection

The products need to:
• Meet the Australian Standard AS 2890.3 if installed for public use. (All Bicycle Victoria rails meet AS 2890.3)
• Allow for different heights and strengths of users
• Be appropriate for the length of time riders will park their bikes and the security of the location
• Be securely fixed to the floor or wall and non-removable when security is an issue
• Be the correct height and width to support the bike in two places. This minimises the chance of damage to the bike
• In the case of rails: allow the frame and at least one wheel to be locked with a U-shaped lock
• In the case of lockers: allow the bike to be fully enclosed, and provide a unique key
• Fit a standard sized adult bicycle
• Be constructed of durable and easily maintained materials
• Allow for the efficient use of space.

For more detailed product information refer to pages 8 – 12.

CASE STUDY

HM@S Apartments, Port Melbourne
– The right rail for the space

In 2001, the managers of HM@S Apartments called in Bicycle Victoria to provide a solution to their bike parking problem. Even though construction of the complex was incomplete, the apartments were filling fast and bikes were starting to appear in inappropriate places in the building.

On-site visits by Bicycle Victoria and consultation with the building manager resulted in the installation of four different types of rails in several locations in the car park. The car park, which had secure access, provided room for 53 bike parking spaces without the need to reduce the number of car spaces.

The unusual spaces required four different models of rail to be installed. The Ned Kelly, Mona Lisa, Flat Top and Towel Rail were all used for different applications in the one building. The different rails cater for different heights and strengths of the residents along with a wide range of bike styles and sizes.

Installation was completed in June 2002 and all spaces were eagerly snapped up. ‘I only get to hear about things when they’ve gone wrong,’ said John Beaney the building manager, “and I haven’t heard a peep about the bike rails.”

For more detailed product information refer to pages 8 – 12.
Key 5: Make it safe and secure

Riders will use bike parking facilities only if they feel safe and their bicycle is secure.

People and property
Safety of people and security for their bikes are closely linked to the location (see Key 1). Consideration needs to be given to:

Location – visible to passers-by, security guards and cameras
Access – keyed, coded or swipe card entry for long term parking facilities (more than 4 hours) e.g. residents and employees
Lighting – good visibility within the facility, and a sense of safety
Product design – bike frame and at least one wheel to be locked to the rail, or the bike to be fully enclosed in a locker
Permanent – products to be fixed in place and made immovable
Signage – procedures for locking bicycles and doors or gates

Richmond Recreation Centre – Visible security

The management at Richmond Recreation Centre in Melbourne, wanted to improve their bike parking facilities. The original parking was on the street. It allowed only one wheel to be locked to the rail and hindered pedestrian access to the Centre and along the street. The accessibility of the rails, combined with the inadequate locking options, meant bikes were extremely vulnerable to theft.

Bicycle Victoria proposed the installation of 12 Anaconda rails providing 24 bike parking spaces within an existing fenced space where security was assured. The rails were secured to small concrete footings poured for the purpose. The new bike parking area is visible from the gym, and is only accessible once visitors have paid to enter the recreation centre.

When leaving, bikes must be wheeled past the front counter in full view of staff, thus providing an added level of security. Importantly, the Anaconda allows the bike frame and wheels to be securely locked to the rail.

Operations Co-ordinator Mark Collins said, “We get a number of tri-athletes doing their training here. Most of them own decent machines and they appreciate not having to lock their bikes on the street.”

Patrons and staff love the new facilities. “It’s winter, and during peak use times there are only a couple of bike spaces left,” said Mark. “It’ll be interesting … when summer comes.”
If it’s a pleasant place to park, then riders will use it.

**Keep it nice**
Clean, brightly coloured, well-lit spaces will attract riders to use bike parking facilities. It may be as simple as a coat of paint, better lighting and a regular sweep to transform a poorly used facility into one that riders will use.

Bike parking is often behind a locked gate or door and may not be accessible for normal cleaning routines. Keep a broom, a dust-pan and brush and a couple of rags on hand for a quick clean each week.

**Freshen up**
Availability of showers, change rooms and clothing storage can be significant when people are deciding to ride to a location. Workplaces in particular need to provide these facilities for staff members that ride or take part in other forms of exercise.

If it’s not possible to provide these types of amenities at a location, negotiate with a nearby gym or club as an alternative.

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**Bicycle Victoria – Clean, bright and dry**
Bicycle Victoria moved to 446 Collins Street, Melbourne, in December 2001. As part of the lease, a single undercover car space was provided to allow for staff bicycle parking.

To brighten the garage, the drab concrete walls were painted sunflower yellow. The space looks clean and bright, and feels cheerful and welcoming.

The automatic roller door is raised and lowered by key. On raising the door, the lighting system is activated and turns off on closing. There’s no fumbling for a light switch when it’s dark, and no wasted power when it’s not in use.

Campaigns Manager at Bicycle Victoria, Bart Sbeghen, says “It’s great that it’s warm and undercover especially when it’s raining. No more wet saddles on my ride home at the end of the day. Upstairs I can shower and change, and there’s a cloak room for storing my work clothes and riding gear.”

“I can also pump up my tyres, and lube and tune my gears if I need to,” says Bart, pointing to the tool-kit in the corner.

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Shelter protect from the weather  
Clean a pleasant space to be  
Refresh provide showers and change rooms
In response to demand from employers, architects and builders, we have developed a comprehensive range of bicycle parking products and services. Over the last 10 years we have gained expert knowledge while producing bicycle parking solutions for organisations and individuals.

Solutions provided by riders for riders
Bicycle Victoria is in contact with riders every day, we know what they want and need. The result is solutions that work the first time.

- A comprehensive design and consultation service
- A wide range of bicycle parking products to suit your needs
- A complete construction and installation service
- All proceeds go to getting More People Cycling More Often

Storage and home parking – Keep it tidy
Bicycle Victoria has a wide range of products specifically designed for home and business storage of bicycles in secure locations. Storage solutions include suspending the bike from the ceiling, mounting it on the wall or storing it in a freestanding system on the floor.

Product Range

<table>
<thead>
<tr>
<th>Product name</th>
<th>Type of use</th>
<th>Technical</th>
<th>Special features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ned Kelly</td>
<td>When space is a limiting factor. Wall mounted</td>
<td>Mounted on solid or hollow masonry walls, or Bicycle Victoria’s custom framing</td>
<td>Space effective, front wheel and frame easily locked. Hooks support front wheel evenly</td>
</tr>
<tr>
<td>Mona Lisa</td>
<td>Above car bonnets. Wall mounted</td>
<td>Mounted on solid or hollow masonry walls, or Bicycle Victoria’s custom framing</td>
<td>2 bicycles per rail. Bike easily locked. Supports frame under top tube</td>
</tr>
<tr>
<td>Flat Top</td>
<td>All-purpose. Floor mounted</td>
<td>Attached to concrete slab, Bicycle Victoria’s custom framing, or concreted in-situ</td>
<td>2 bicycles per rail. Bike easily locked. Supports bike in upright position</td>
</tr>
<tr>
<td>Flat Top Jnr</td>
<td>All-purpose multi rail parking</td>
<td>Attached to concrete slab, concrete footing or semi-permanent to other hard surface</td>
<td>2 bicycles per rail. Low cost per bike. Freestanding, supports bike in upright position, bike easily locked. Permanent or temporary installation</td>
</tr>
<tr>
<td>Anaconda</td>
<td>All-purpose multi rail parking</td>
<td>Attached to concrete slab, concrete footing or semi-permanent to other hard surface</td>
<td>2 bicycles per rail. Low cost per bike. Freestanding, supports bike in upright position, bike easily locked. Permanent or temporary installation</td>
</tr>
<tr>
<td>Little Annie</td>
<td>All-purpose multi rail parking</td>
<td>Attached to concrete slab, concrete footing or semi-permanent to other hard surface</td>
<td>2 bicycles per rail. Low cost per bike. Freestanding, supports bike in upright position, bike easily locked. Permanent or temporary installation</td>
</tr>
<tr>
<td>Towel Rail</td>
<td>All-purpose. Wall mounted</td>
<td>Mounted on solid or hollow masonry walls</td>
<td>Space effective. Supports bike in upright position, bike easily locked</td>
</tr>
</tbody>
</table>

All of Bicycle Victoria’s own parking products exceed the requirements for class 3 (secure) parking facilities of Australian Standard AS2890.3
Ned Kelly bicycle parking rails are ideal for locations where there are space constraints. They can be mounted on solid or hollow masonry walls, or to Bicycle Victoria’s custom framing.

**Features**
- Staggered heights and vertical hanging of bicycles makes best use of space
- Smooth and durable powder coating looks smart
- Front wheel and frame are easily locked
- Two hooks evenly support the front wheel without bending spokes
- Options: For narrow spaces Ned Kelly rails can be mounted on 45° angle brackets (2 per rail)

**Basic dimensions required for installation**
- Recommended rail spacing 500mm. Minimum spacing 400mm. Optional 45° angle brackets require spacing of 600mm
- Rails alternate in height 1750mm and 2050mm
- Minimum ceiling height 2200mm
- Bicycles will extend 1200mm from the wall or custom framing.
- Bicycles will extend only 850mm if using optional 45° angle brackets
- Minimum access corridor width 1500mm

The hooks on the Ned Kelly evenly support the front wheel.

“Ned Kelly rails allowed us to park more bikes in the limited space we had available.”
Mona Lisa – Above the bonnet

The Mona Lisa rail lets you use previously wasted space above your car bonnet to park or securely store your bike. They can be bolted to solid or hollow masonry walls, or Bicycle Victoria’s custom framing.

Features

• Each rail stores two bicycles
• Provides economical use of space
• Easy to use with any bike lock
• Has a smooth and durable nylon coating that looks smart and will not damage the bicycle
• Supports the bicycle frame under the top tube

Basic dimensions required for installation

• Recommended horizontal rail spacing centre to centre 2000mm. Minimum spacing 1800mm.
• Above a passenger car space mount at 1800mm from floor. Above a 4WD space 2050mm
• Minimum ceiling height above a passenger car space 2300mm. Above a 4WD space 2550mm.
• From the wall or custom framing one bicycle extends 600mm. Two bicycles extend 800mm.

“It was great to get the bikes out of the apartment, and now they were still secure.”
The familiar Flat Top rail is the all-purpose rail for both public and private spaces. The Flat Top Junior is for smaller bicycles and is ideal for schools. They can be bolted to a concrete slab, concreted in-situ or attached to Bicycle Victoria’s custom ground framing.

Features
- Stainless steel, powder coated or galvanised finish
- Each rail parks two bicycles
- Accommodates all types and sizes of bicycle
- Supports the entire bicycle in an upright position so it won’t slip or fall over
- Easy to use with any bike lock.

“Staff and students are much happier with the ease of access.”

Flat Top – Yo Sergeant

Flat Top parking rails at Melbourne Business School
Anaconda – Slither or still

Anaconda rails are freestanding and provide a simple solution when multiple bikes need to be parked. Little Annie is for smaller framed bicycles.

**Features**

- Lowest cost per bike and easy to use with any bike lock
- Can be pegged down for temporary public parking
- Freestanding, self-supporting and can be fastened to most surfaces
- Use a joining sleeve to form a bank of continuous parking rails
- Powder coated or galvanised finish.
- Each rail parks two bicycles
- For all styles of bicycle. Supports the bike in an upright position

“"The Anaconda rails were low cost and easy to install.""

Towel Rail – Hugging the wall

The Towel Rail is a space-effective solution for parking single bikes against a wall.

**Features**

- Space-effective
- Powder coated or galvanised finish
- Accommodates all types and sizes of bicycle
- Is easy to use with any bike lock

**Basic dimensions required for installation**

- Recommended rail spacing centre to centre 2000mm.
- Minimum spacing 1800mm.
- Mount horizontally approximately 700mm from the floor
- The bicycle will extend the width of the handlebars (up to 700mm) from the wall
Resources and contact details

**Bicycle Victoria**

Bicycle Victoria is Australia’s largest and fastest growing cycling organisation. We are a self-funded community organisation that is independent of government. Availability of good bicycle parking and end-of-trip facilities is a key part of our aim of getting *More People Cycling More Often.*

- **p** 03 8636 8888
- **f** 03 8636 8800
- **e** bicyclevic@bv.com.au
- **w** www.bv.com.au

**The cycle-friendly workplace**

This booklet is the ideal starting point for managers and employers who wish to explore the benefits of creating a vibrant, cycle-friendly workplace.

**Australian Standard and AUSTROADS Guide**

There are Standards and a Guide that apply specifically to cycling and act as important references. These aim to develop and promote national practices so that there is uniformity in the design of cycling facilities across Australia.


**Bicycle User Groups (BUGs) and cycling clubs**

Bicycle Victoria maintains a comprehensive list of groups and clubs around the state:

- A-Z listing of Bicycle User Groups
- A-Z listing of cycling clubs

Bicycle Victoria can assist you in setting up a BUG in your area or workplace. Visit www.bv.com.au (Keyword: Clubs)

**VicRoads**


**Bike Maps**

Bicycle Victoria keeps a comprehensive list of available bike maps. Many local councils have free bike maps, notably the City of Melbourne. Melway shows shared paths and has an overview map of bicycle facilities in Melbourne.

**TravelSmart**

TravelSmart is an innovative program that helps people reduce their dependency on the car and choose sustainable travel alternatives such as cycling, walking or catching public transport. For more information visit www.travelsmart.vic.gov.au.

**Victorian Planning Provisions**


**Local Council**

Contact your local council for maps and information on local cycling routes. You can talk with them about their plans for improving facilities near you.

The Department of Infrastructure website has a comprehensive list of local council contact information. Visit www.doi.vic.gov.au.

**We value your comments**

Please tell us what you think of this handbook by contacting Bicycle Victoria. Email us at parking@bv.com.au

**Some of our customers**

We have been parking bikes for over 10 years for up to 200 bicycles at a time.

<table>
<thead>
<tr>
<th>Type of site</th>
<th>Organisation</th>
<th>Location</th>
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<tbody>
<tr>
<td>Workplace</td>
<td>National Australia Bank</td>
<td>Docklands Parkville</td>
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<tr>
<td></td>
<td>Royal Children's Hospital</td>
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<tr>
<td>Apartment building</td>
<td>HMI@S Apartments</td>
<td>Port Melbourne St Kilda Road</td>
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<td></td>
<td>Botannica Apartments</td>
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<td>School</td>
<td>Merri Creek Primary School</td>
<td>North Fitzroy Elwood</td>
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<td></td>
<td>Columba's Primary School</td>
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<td>Public open space</td>
<td>Public Facilities</td>
<td>City of Yarra Docklands</td>
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<td></td>
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<td>Public building</td>
<td>Swimming and Recreation Centre</td>
<td>Richmond Royal Park</td>
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<td></td>
<td>State Hockey and Netball Centre</td>
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<tr>
<td>Residential housing</td>
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<td>Australia wide</td>
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</tbody>
</table>
This handbook is the ideal starting point for:

- People who ride
- Employers and managers
- Architects and builders
- Developers and property managers
- Governments at all levels

**Encouraging cycling by providing good bicycle parking and end-of-trip facilities**

- Saves money by reducing the need for car parking
- Improves health, workplace productivity and wellbeing
- Reduces greenhouse gas emissions
- Removes bicycles from stairwells, plumbing pipes, offices and apartments

**Bicycle Victoria – The Bicycle Parking Experts™**

- A comprehensive design and consultation service
- A wide range of bicycle parking products to suit your needs
- A complete construction and installation service
- All proceeds go to getting More People Cycling More Often

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“Bikes are part of the inner-city lifestyle our clients want so we need to provide good bike parking”

Paul Bett
Project Manager
Jager Developments
Winner HIA Awards 2004

“Bicycle Victoria solved our parking problem for us.”

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