

A Guide to the Design and Provision of

# **SECURE PARKING FOR MOTORCYCLES**

*Parking Bays*

*Locking Devices*

*Motorcycle Theft*

*Anchor Points*



**Motorcycle Action Group**

© 27 April 2002

May not be reproduced without permission of MAG (UK) Copyright owner

## **CONTENTS**

### INTRODUCTION

1. Design Considerations
2. The Role of Local Authorities
3. Examples of on-street facilities
4. Examples of off-street facilities
5. Signing secure parking places and recommended routes to them

### Appendix A

Secondary locking devices typically used by riders

### Appendix B

Design detail of continuous rail device

### Appendix C

Useful addresses

## Introduction

Vehicle crime is a widespread problem that demands a range of specific measures to reduce its impact on the community. This guide is designed to help local authorities and other operators of public and private parking facilities to combat a significant aspect of vehicle crime – the theft of motorcycles. It is estimated that over 25,000 motorcycles are stolen annually and that around 80% of these remain unrecovered. Soaring insurance losses, problems resulting from so-called ‘joy-riding’ – danger, injuries, abandoned, often burnt-out vehicles etc. The constant drain on Police resources can be added to the pain, financial loss and inconvenience suffered by owners following a theft.

Motorcycles – including scooters and mopeds – are especially vulnerable to theft. Scotland Yard estimates that around half of all stolen motorcycles are taken by opportunist thieves – including removal of locked motorcycles using a van or truck. By providing secure, robust anchorage’s local authorities and other responsible bodies can drastically reduce the possibility of motorcycles theft.

In 1992, a survey of more than 400 motorcyclists found the lack of secure parking facilities is the issue of greatest concern to riders – even more so than driver safety education or road maintenance. The survey, by the Bristol branch of the Motorcycle Action Group, also found; driver safety education or road maintenance. The survey, by the Bristol branch of the Motorcycle Action Group, also found;

- 88% of respondents were not satisfied with provisions for motorcycle parking
- 98% said provision of anchor-points at parking places would encourage them to use a lock
- 82% were already using some form of extra security.

The cost of motorcycle theft runs into millions of pounds. Riders are increasingly concerned to see improved security at public and commercial parking places. Site operators and local authorities are under pressure to provide secure motorcycle parking places, both on and off the highway. Fortunately, many have responded positively and found that this can be done cheaply and effectively.



Powers have been included in the Transport Act 2000 to enable local authorities to install secure parking devices on street and in their car parks. Until now, there has been concern that such devices could comprise unlawful obstructions in the highway. This has deterred many authorities from installing them. The new powers will enable authorities to provide secure parking for PTWs, helping to reduce the high level of PTW theft.

The Integration and Traffic Management Task Force of the Advisory Group on Motorcycling identified that little technical guidance was available to those needing to take account of motorcycling in the public or private sectors, either from the Department or elsewhere. A number of local authorities are active in increasing the amount of PTW parking they provide.

It was therefore decided that the Task Force should devise a Traffic Advisory Leaflet, for publication by the Department, on PTW parking. This is in preparation. It will cover various aspects of the planning and provision of parking facilities, including secure parking. These leaflets are aimed mainly at practitioners in local authorities, consultants and other organisations involved in local transport matters.

The leaflet is now available for downloading from the DTLR web site at (Details in useful addresses) or contact 02079 442478 and order leaflet 'Traffic Advisory Leaflets 02/02: Motorcycle Parking'.

### **Transport Act 2000**

2000 Chapter 38

<http://www.hmso.gov.uk/acts/acts2000/00038-ap.htm#271>

271. (1) The Road Traffic Regulation Act 1984 is amended as follows.

(2) In section 63 (power of authorities to provide stands and racks for bicycles), for "and racks for bicycles" substitute "or racks for, or devices for securing, bicycles or motor cycles".

(3) In section 136(4) (meaning of "motor cycle"), for "section 57" substitute "sections 57 and 63".

**(Guidance on Full Local Transport Plans - DETR, 2000)** 'Local authorities.. should consider specific measures to assist motorcyclists in making integrated journeys, such as secure parking at public transport interchanges..'

### **(Welsh Office Guidance for Local Transport Plans 1999)**

'Another key factor for encouraging the use of powered two wheelers for commuting journeys is the provision of safe parking facilities.'

## 1. DESIGN CONSIDERATIONS

A number of secure parking schemes are in use across the country. Motorcycles can be locked when parked by using an integral steering lock or a secondary device such as a chain and padlock. As noted, this does not prevent the locked machine from being removed by thieves. At on-street parking places, anchor points may be set into the carriageway near to the kerb-edge or into the wall or floor of off-road parking places. Anchor points can be provided quite easily and cheaply, allowing riders to secure their bikes when parked. Such designs are generally easy to use, although a few basic considerations should be addressed to avoid potential problems.

The most successful designs are often the most simple. These are often based on simple steel rails or loops of various sizes especially in outdoor locations. Devices with moving parts that lie flat on the carriageway may present problems in use, and present greater need for maintenance; hinges may be subject to wear and tear, distortion or interference from foreign bodies. There is the potential for pedestrians to trip or fall over them and the possibility that riders' feet or motorcycle wheels may slip on smooth metal when wet – non-slip surfacing can be used to good effect if necessary.

Ideally, secure motorcycle parking facilities should be designed with the following points in mind.

### 1 LOCATION

They should be provided at appropriate and popular sites – near to workplaces, shops, leisure facilities etc. – and should be well sign-posted from major routes. Locations which are well lit and where there are many passers-by will deter thieves who might otherwise be able to breach the security device undisturbed.

The site chosen should not be affected by flooding, falling tree sap, bird droppings etc., nor should the anchor points be placed over gully gratings, where keys to locks and vehicles are easily dropped. Protection of the site from encroachment or obstruction by other vehicles is also desirable.

### 2 MANOEUVRING SPACE

Care should be taken to allow reasonable manoeuvring space by placing the anchor points away from obstructions.

Where anchor points are installed along more than one side of the parking bay, care should be taken to ensure that enough space is allowed for larger machines without obstructing access to anchor points on another side.

### 3. CONSTRUCTION

The anchor point should offer a useful degree of protection from theft and interference. At the very least, the anchorages should be able to defeat attempts to lift them out of the ground or breach them with hand tools and withstand reasonable wear, tear and abuse.

The anchor point must be easy to use yet be compatible with a wide range of motorcycles and the locking devices commonly used by their riders. In particular, consideration should be given to the height at which anchor points are set – a height of about 60cm will accommodate a wide range of wheel sizes but hinder thieves using the floor or carriageway as leverage for bolt-cutters and jacks.

#### 4. **OTHER ROAD USERS**

The design of the anchor point(s) and layout of the site should not present additional hazards to or from, other road users and vehicles.

Pedestrians, especially those with a visual or mobility impairment can be especially vulnerable – a rail set at shin height may be acceptable when mounted on a wall at the rear of an off-road parking bay, but not in the street where extra measures will need to be taken to provide protection.

#### 5. **CONTAINING COSTS**

The costs of design, construction, installation and maintenance need to be kept low whilst still achieving the required level of performance. This will allow the number of anchorage points and sites to be maximised.

Designs based on familiar materials, methods of construction and installation, etc. are likely to be the least costly, yet are often the most successful. Local businesses may wish to advertise at such sites, indeed motorcycle dealers may be interested in sponsoring these facilities at the outset.

Incorporating a message board in the design gives an opportunity to generate revenue and to promote security or road safety messages to users – the cost of on-street schemes can be largely recouped within the first two years through advertising and sponsorship.

#### 6. **ENVIRONMENTAL IMPACT**

In some locations – historic town centres, conservation areas, etc. – sensitive design of secure parking facilities is recommended. Choice of size, shape, colour and location must be appropriate to the surroundings, perhaps featuring architectural bollards or rails in the design. This can be achieved without compromising security or safety.

Providing it is well thought out, formal parking places can reduce the frequency of illegal and inappropriate parking in sensitive area dramatically.



## 1. THE ROLE OF LOCAL AUTHORITIES

The power and responsibilities for parking control held by local councils can generally be divided between:-

- County Councils - responsible for on-street parking, and
- District Councils - usually responsible for off-street parking, although
- Unitary Authorities - will generally be responsible for both.

Each authority will have its own policy on parking provision, which should include dedicated parking facilities and exemptions, exclusions and other special rules for motorcycles. These policies may be rigid or flexible – officials may have enough scope within the parking policy to authorise secure parking facilities for motorcycles, or they may feel a need to refer to elected members before proceeding.

Local councils with powers as highways authorities may control on-street parking through a range of measures including designed parking bays, metered parking, residents parking schemes etc. – it is worth noting that some councils operate residents parking schemes that fail to recognise motorcycles as eligible or discourage their use by requiring the same fee as for cars.

Many local authorities provide dedicated motorcycle parking places. This may reflect pressure from the public or recognition of the benefits in terms of higher parking density, lower demand on road space and reduced levels of congestion and traffic pollution offered by motorcycle users. An increasing number of authorities are installing purpose designed anchoring points at motorcycle parking bays.

The main sources of general guidance on the design of parking bays and street furniture are;

<i>ROADS AND URBAN TRAFFIC</i>	<i>HMSO 1987</i>
<i>THE TRAFFIC SIGNS MANUAL</i>	<i>HMSO 1977</i>
<i>TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS</i>	<i>HMSO 1994</i>
<i>REVISED GUIDELINES FOR REDUCING MOBILITY IMPAIRMENT – TOWARDS A BARRIER-FREE ENVIRONMENT</i>	<i>IHT 1991</i>

Selected extracts from these publications indicate both the constraints and possible latitude available when installing motorcycle parking facilities at the kerb side.

The introduction to *ROADS AND TRAFFIC* calls for a balancing of the needs of road user groups, safety and efficiency.

“In every situation professional practitioners and decision makers alike will be faced with competing demands from different sections of the community and difficult choices will have to be made...no one policy or technique should be slavishly applied to every situation. All problems need careful, individual attention and a range of alternative solutions should be examined before deciding upon a particular course of action which might involve a variety of complementary measures.”

(Paragraph 1.8)

The same publication goes on to consider on-street parking in some detail.

“The amount of road space made available for parking in an area will depend on the Highway Authority’s parking policy, which should take account of the road space required for moving vehicles, environmental considerations, the local parking demand and the extent to which parking facilities are available off-street”.

(paragraph 21.4)

“Careful consideration must be given to the siting of any on-street parking places to take account of the following points:

To avoid creating a road safety hazard by obstructing visibility near bends, junctions or places where significant numbers of pedestrians cross the road.

To create suitable crossing points for pedestrians to avoid the inconvenience and danger caused by long unbroken rows of parked vehicles.

To avoid impeding the free flow of traffic at places where it is important to the role of the street in question.

To maintain reasonable and adequate access to premises including access for loading and unloading, particularly where there are security considerations (e.g. for mail and bank deliveries); and

To avoid obstructing access to fire hydrants, interfering with traffic detection loops etc.

Individual bays should be large enough to permit most (riders) to park reasonably quickly, avoiding any danger or significant interruption to traffic flow. If individual bays are not marked, the number (of motorcycles) that can park in a length of road may be greater than if it were”.

(paragraph 21.9)

### **“SIZE AND POSITION OF BAYS”**

The minimum size for a bay parallel to the kerb should be 1.7m in width and 4.5m in length but variations up to 2.5m and 6.0m respectively are common to allow for different site conditions and sizes of vehicles ... (see also Refs. 5 and 11) (NI 34)”.

The following details are found in TRAFFIC SIGNS MANUAL

“5.159 Two patterns of marking are prescribed, one to indicate the limits for parallel parking and one for angled parking bays \*. Both types of marking may be used outside or inside controlled parking zones.

5.160 Upright signs carrying a ‘P’ symbol together with the conditions that apply at the parking places unless parking meters are present... must always accompany the markings. (Details of these are given in chapter 2, Informatory Signs).”

(\* See also TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS 1994 pages 158 and 159)

## **ROADS AND URBAN TRAFFIC** considers the requirements for clear road widths for traffic;

“ The extent to which it is necessary to preserve a clear width of carriageway for traffic flow depends upon the type of road in question and some suggested widths are given below for locations remote from road junctions where some disruption to traffic movement may be tolerated: -

On **main traffic routes** (with 24 hour flows in excess of 5000 vehicles) and roads carrying HGV's with 3 or more axles or a frequent two way bus flow, the minimum clear running width should preferably be 7 metres with 6 metres the absolute minimum.

On **lesser traffic routes** (with 24-hour flows between 2000 and 5000 vehicles) the preferred minimum clear running width is 6 metres, with 5 metres as the absolute minimum.

On **minor roads** (with 24-hour flows between 500 and 2000 vehicles) the preferred minimum clear running width is 6 metres with 4.5 metres as the absolute minimum.

In very **minor residential roads**, short cul-de-sacs etc., (with 24-hour flows less than 500 vehicles) the clear running width should be at least 3.5 metres. This does not permit the free flow of two-directional traffic but is sufficient to allow access for emergency and service vehicles.”

There are no specific instructions on kerb-side anchor points for secure parking, however motorcycle security rails are often of similar design to pedestrian guardrails.

“Guard rails should be set back (normally 500mm) from the kerb to give adequate clearance for passing vehicles and should leave sufficient room on the footway for two prams to pass (usually taken as 1.2m). Widening of the pavement may sometimes be necessary before guard rails can be erected...The deterrent value of guard railing against illegal or obstructive parking could be an additional consideration at critical locations.”

(Paragraph 24.14)

The **INSTITUTION OF HIGHWAYS AND TRANSPORTATION** recommends clear widths of footways along with some basic dimensions for street furniture and other features placed on or near the footway – **REVISED GUIDELINES FOR REDUCING MOBILITY IMPAIRMENT**. From these recommendations a number of dimensions seem applicable to the design of secure parking facilities:

### **FOOTWAY AND FOOTPATH WIDTHS**

Minimum obstacle-free footway width	1800mm
Minimum preferred width	2000mm
Width at bus-stops	3500mm
Width at shops	4500mm
Minimum width at local restrictions	1350mm
Absolute minimum at obstacles	900mm

### **POSITIONING OF POLES**

Distance from edge of Carriageway	minimum	450mm
	Maximum	600mm
Width of white band marking (assists visually impaired)	140 – 160mm	
Height of lower edge of white band marking	1500 – 1700mm	

### **BOLLARDS AND FREESTANDING OBJECTS**

Height	1000mm
--------	--------

There are competing views on the whole subject of street furniture. The prevailing view concentrates on the needs of vehicular traffic and the effects of vehicle overhang, e.g. where the effect of a pronounced camber may be to tilt larger vehicles' bodywork over the pavement edge, exposing edge-mounted street furniture to damage. In this respect it is worth noting that one of the large motoring organisations has called on the Department of Transport to ensure that street furniture is set back from the kerb edge. This may present difficulty in providing on-street parking in some locations.

Conversely, there is the view that streets should be more pedestrian friendly. Street furniture located at the kerb edge can provide protection from traffic encroaching on the pavement and reduce obstruction to visually or mobility impaired pedestrians.

The recommended distance for such a device to be set back from the kerb edge (500mm) is of little use to the motorcyclist, although a walk down many city streets will provide a number of examples of existing guardrails etc. positioned much closer to the kerb edge. There are a number of alternative strategies for avoiding this situation.

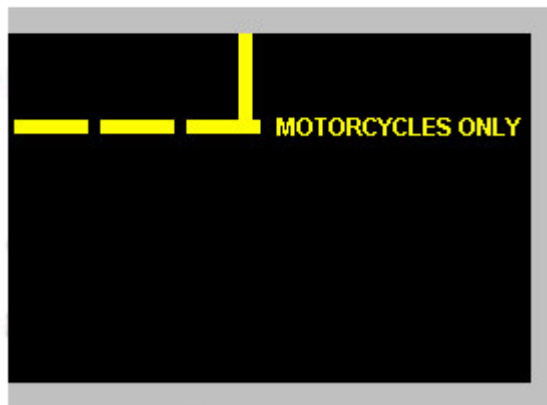


One Solution may be to realign the pavement edge so that a rebate is formed in which to fit the device, see figure A



Alternatively, sites can be selected already set back from the carriageway line as in figure B, or where there is a facility for through traffic, e.g. at the end of a cul-de-sac or other permanently stopped-up NE5 10S roadway's as shown in figure C.

FIGURE C



The cost of providing secure on-street parking can vary considerably according to the site chosen and the capacity required.

It is estimated that installing the on-street scheme in Bristol and Reading – described in more detail below – cost between £60-100 per space @ 1992 prices.

Off-street parking devices can be much cheaper to provide, as low as £30 per space, where suitably protected locations allow the use of smaller and less sophisticated devices.

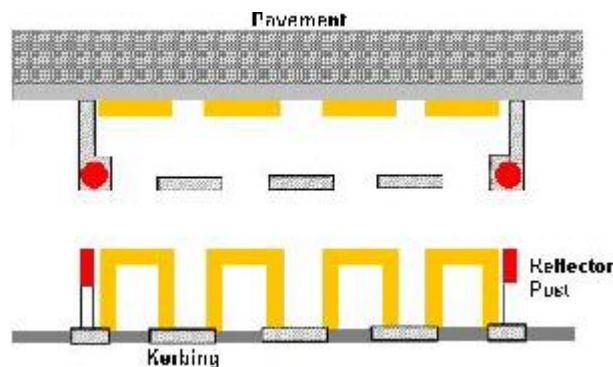


### 3. EXAMPLES OF ON-STREET FACILITIES

#### READING

It is believed that Reading District Council installed the first kerb-side devices as an experimental scheme in February 1992.

A number of 'Sheffield-type' pedal cycle rails were erected at the kerb-edge. Whereas painted boundaries would normally be applied at on-street parking bays, in this instance kerbing and reflectors have been placed in the carriageway itself to provide greater protection.



Reports indicate that this approach has proven awkward for riders to use and that problems with drainage mean the surface can be unreliable. It may also be that this type of build-out presents potential hazards to other road users.

#### BRISTOL

Around the same time, the author first published designs for a continuous rail anchor intended primarily for on-street use – working detail can be found in APPENDIX A.

Avon County Council developed this design for installation at four sites in the centre of Bristol. Although the original specification calls for these devices to be painted white, City Planners who insisted on black since all four sites are in a conservation area vetoed this feature. The inclusion of a sponsorship/message board and the upper rail on each device makes it easy to see and reduces the potential hazard to pedestrians. The Bristol sites were chosen because the locking-rails could be installed directly on front of the kerb without presenting potential hazards to other traffic, or reducing pavement width – see figure B, opposite.

Observations of riders at these sites indicates that over a period of time, most riders using these sites do use the anchor points as intended, however:

- some riders may park at the anchor point without attaching their machine to it,
- some anchor points were installed too close to each other, so not all the spaces can be used,
- anchor points erected under trees are not popular because of falling sap and other debris.

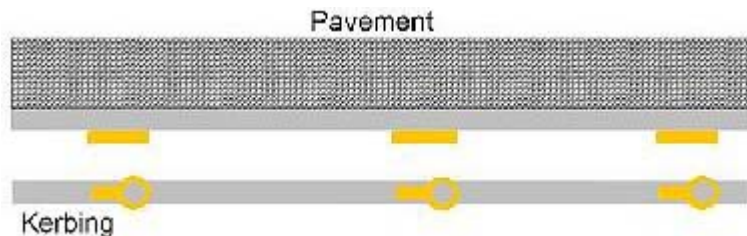
#### 4. EXAMPLES OF OFF-STREET FACILITIES

##### BRISTOL

In addition to Avon County Council's on-street scheme, Bristol City Council has provided "Sheffield" cycle parking rails for motorcycle use in some off-road parking areas. These may prove unsuitable to withstand the weight of a motorcycle, or concerted attempts by thieves to breach them. However, their ready availability and low cost make them attractive to potential providers.

##### HASTINGS

A number of smaller devices are commercially available – most commonly, locking rings designed for wall or floor mounting and capable of securing one or two machines, e.g. in the owners garage. Hastings Borough Council is among a number of local authorities that provide such devices in public car parks. For smaller scale scheme, say between 5-10 vehicles, ring-type anchor points are generally cheaper and easier to purchase and install, although they may also prove less robust than barrier type devices.



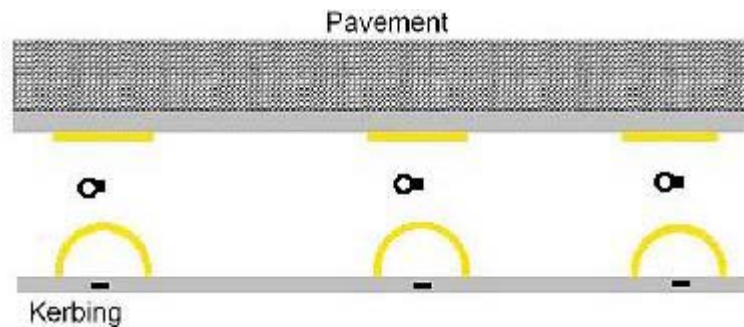
Bike Secured to floor mounted ring

## BATH

Bath City Council has installed a simple rail mounted 600mm above floor level and running along the boundary of motorcycle parking bays in two of its multi-storey car parks.

## BIDDULPH

Staffordshire Moorlands District Council embedded a series of steel tubular hoops at one of its surface car parks. Each hoop contains a steel cable anchored loosely at each end, the semi-circular shape of the hoops accommodating a variety of wheel sizes. These could be adapted from scrap scaffold.



In addition, a number of smaller floor mounted anchor points are provided about 1.5m back from each of the large hoops to allow the motorcycle frame to be secured in addition to, or instead of, the wheel.

## MIDDLESBOROUGH

Brentnall Car Park (Multi-storey), Newcastle, Darlington, with Blyth & Alnwick under consideration.

## SANDWELL STRATEGY FOR MOTORCYCLES

PTW riders in the area are benefiting from the installation of 50 secure motorcycle parking bays in West Bromwich town centre. Two of the main objectives of the Strategy were to reduce motorcycle crime in Sandwell and to provide powered two-wheeler riders with an adequate supply of safe and secure parking.

17 new anchor points are currently being installed, providing an additional 38 secure motorcycle parking bays which compliment the existing 12 spaces in the borough.

These new anchor points are located next to the disabled parking areas thereby offering riders prime access to local facilities. All will be free of charge and spread across the 7 car parks in West Bromwich. It is intended to sell advertising space on the anchor points and to use the money raised for 'in-situ' signs, "secure motorcycle parking", and to produce location maps and leaflets.

## ISLINGTON COUNCIL

Installing anchor points in their motorbike bays. These are floor level devices with a loop that you pull to raise the main post, which has a hole for a chain!

5. ***SIGNING SECURE PARKING PLACES AND RECOMMENDED ROUTES TO THEM.***

Secure parking places for motorcycles are still relatively novel. This raises the need for clear signing of their location and purpose, including the need to sign routes to them.

Some authorities have identified the location of these facilities with novel informatory signs, often a variation of the approved motorcycle and 'P' symbols and/or a message plate with a brief explanatory legend.

All signs used on the highway should be approved by the DOT – who have indicated that they would be prepared to authorise a supplementary plate 'Secure Parking' (variant of the diagram 563 in Schedule 1 of The Traffic Signs Regulations) to a directional sign showing the 'P' symbol and the motorcycle symbol.

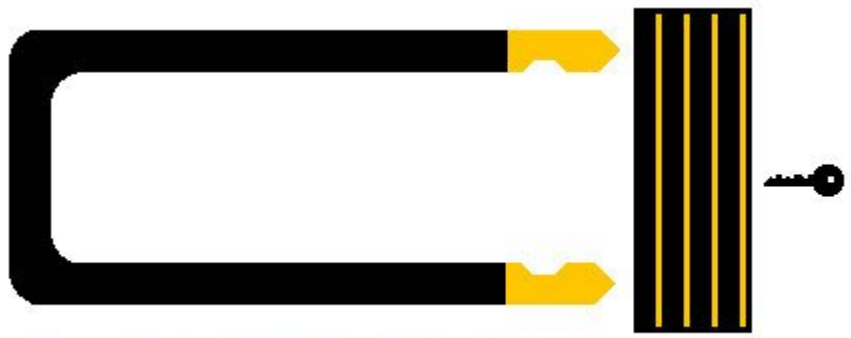
The Motorcycle Action Group promotes adoption of a simple generic logo – as shown below – to identify such facilities.

One advantage to adopting this logo is that motorcycle users will be aware of its purpose from exposure to the logo at motorcycle related premises.

Local MAG groups using a poster that incorporates this logo often advertise locations for local secure parking places in dealerships.



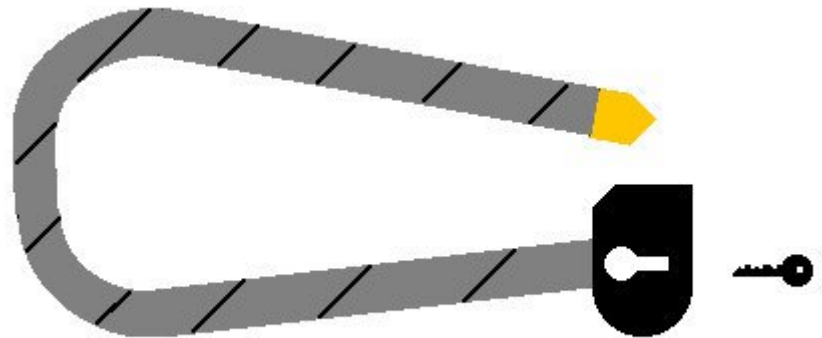
## TYPICAL SECONDARY LOCKING DEVICES



Steel Shackle (U or D Lock)



Chain with Padlock



Armoured steel cable with integral lock



## *Appendix B*

### **DESIGN DETAIL OF CONTINUOUS RAIL DEVICE**

The author first published this design in 1992. Originally designed for on-street use at appropriate locations, it can be easily adapted for off-street applications. A number of local authorities have found that this type of device can be fabricated locally at reasonable cost.

### **DESIGN FEATURES**

- ◆ A waist-height barrier obviates the potential trip hazard from the securing rail.
- ◆ Tubular steel construction is of similar design to typical pedestrian guardrails.
- ◆ In use, riders attach their own locking device (chain, cable, U-lock etc.) to the lower horizontal bar, which offers easy locking opportunities for most types of wheel, the vertical frame members providing alternatives.
- ◆ A multi-strand steel cable or high tensile steel chain runs from a welded pin at the base of each leg and through the lower cross-member. This provides a high degree of security, especially from opportunist theft of motorcycles attached to the device. Alternatively, a freely revolving high-tensile steel rod could run the length of the lower cross member.
- ◆ The bay is located at least one metre from any access cover or open drainage grating.
- ◆ The design is suitable for installation at paved or asphalted sites, requiring only limited excavation and backfilling. Paving slabs can be lifted, notched to fit the legs of the frame and re-laid or replaced by a concrete infill.

A non-slip surface, laid on the carriageway where petrol and oil can collect, would improve the safety of motorcycle users when manoeuvring to park. In addition, a non-slip, coloured surface within the motorcycle parking area would reduce any hazard to visually impaired pedestrians and deter unauthorised types of vehicle from invading the bay.

The cost of providing this facility has been offset by selling space on integral advertising/message plates. This space has also been used to explain to riders how to use the barriers and to pass on road safety advice.

**FREE PARKING FOR  
MOTORCYCLES  
MOPEDS AND SCOOTERS**



Cutaway view of Secure Parking Barrier Showing anchor and anti-breach details:

AVON COUNTY COUNCIL BRISTOL ON STREET SCHEME

**PLEASE MAKE FULL USE OF THIS SECURITY RAIL**

**LOOK AFTER YOUR MACHINE  
YOUR RIDING GEAR AND YOURSELF**

**Secure your machine to the rail with a strong chain or  
locking device**

*Appendix C*

**USEFUL ADDRESSES**

**MOTORCYCLE ACTION GROUP – MAG (UK)**

PO BOX 750  
RUGBY  
CV21 3ZR

UK's Leading Motorcycle riders' organisation  
campaigning for secure parking places with  
over 200 local groups.

**Tel: 0870 444 8448**  
<http://www.mag-uk.org>

'Traffic Advisory Leaflets 02/02: Motorcycle Parking'

DTLR web site [http://www.roads.dtlr.gov.uk/roadnetwork/ditm/tal/parking/02\\_02/index.htm](http://www.roads.dtlr.gov.uk/roadnetwork/ditm/tal/parking/02_02/index.htm)

or contact 02079 442478 and order leaflet.

BRITISH PARKING ASSOCIATION  
2 CLAIR ROAD  
HAYWARDS HEATH  
WEST SUSSEX  
RH16 3DP  
Tel. 01444 447300

SPECIALIST TRADE BODY

SOLD SECURE  
5C GREAT CENTRAL WAY  
DAVENTRY  
NORTHANTS NN11 3PZ.  
Tel.01327 264687  
<http://www.soldsecure.com>

SECURITY PRODUCT TESTING

THATCHAM  
THE MOTOR INDUSTRY  
INSURANCE REPAIR RESEARCH CENTRE  
COLTHROP WAY  
THATCHAM  
BERKS RG19 4NR  
Tel. 01635 868855

SECURITY PRODUCT TESTING

**MANUFACTURERS AND SUPPLIERS**

DIAMOND SECURITY  
3 ASHGROVE ROAD  
ABBAY GRANGE  
NEWCASTLE UPON TYNE  
Tel. 0191 267 1628

DIAMOND HARD SECURITY RING

DIXON BATE  
UNIT 45  
FIRST AVENUE  
DEESIDE INDUSTRIAL PARK  
DEESIDE  
CLWYD  
CH5 2LG  
Tel. 01244 288925

GRIPPA

CHELSEA METALWORKS  
UNIT 6 PARSONS GREEN DEPOT  
33-35 PARSONS GREEN LANE  
LONDON  
SW6 4HS  
Tel. 0207 731 3673

SPECIALIST SECURITY MANUFACTURERS

PPB SECURITY  
44 CHANNONS HILL  
FISHPONDS  
BRISTOL  
BS16 2DY  
0117 965 9240

AUTOPA LTD.  
UNIT 7 TRITON PARK  
BROWNSOVER ROAD  
RUGBY  
WARWICKSHIRE  
CV21 1SG  
01788 550 556  
<http://www.autopa.co.uk>

BOLLARDS, RAILS, STANDS, ETC

FALCO  
PO BOX 433  
LEEK  
STAFFORDSHIRE  
ST13 7TZ  
Tel. 01538 304555

RACKS, RAILS, POSTS, FURNITURE, BOLLARDS, ETC.

AREMCO PRODUCTS  
FOXOAK STREET  
CRADLEY HEATH  
WEST MIDLANDS  
B64 5DQ  
Tel. 01384 568566 & 564526

POSTS, BARRIERS, RAILS, ETC

GLASDON MANUFACTURING LIMITED  
INDUSTRIAL ESTATE  
POULTON-LE-FYLDE  
LANCASHIRE  
FY6 8JW  
Tel. 01253 891131  
<http://www.glasdon.com>

SHELTERS, LOCKERS, BOLLARDS

MOTOLOC  
PO Box 336  
PR8 4XB  
Tel. 0845 6014038  
<http://www.motoloc.com>

SPECIALIST SECURITY MANUFACTURERS

**MAG (UK) - Motorcycle Action Group PO Box 750, Rugby, CV21 3ZR**  
**Tel 0870 4448 448 Fax. 0870 4448 449 <http://www.mag-uk.org>**

© 27 April 2002

May not be reproduced without permission of MAG (UK) Copyright owner