BOLLARDS

The fundamental use of bollards is to segregate vehicles from pedestrians, buildings, and stonework. In addition, bollards can be used as a means of traffic calming due to increased traffic and population levels. They have also been adapted as a security measure against ram-raiding.

Furnitubes offer over 200 bollards in a variety of designs and materials, including fixed removable, base plated and telescopic.
 CAST IRON & ALUMINIUM 

bollards

Cast Iron bollards have been used as early as from the eighteenth century. They are durable, strong and can be easily cast into several shapes and styles.

Furnitubes offers more than fifty cast iron bollards, with the majority of these available from stock.
Many, like the Manchester and Trafalgar, are as substantial and ornate as the Victorian originals they replicate.
Others, such as the City and the Capital, have been designed to balance the need for strength and protection with the desire for modern aesthetics within a changing landscape.

A comprehensive range of styles, sizes and options are available, enabling specifiers to meet site requirements such as aluminium removable versions, service bollards or taller bollards to suit the visually impaired.

New bollards can be manufactured to any given specification. As a result, the variety available is constantly increasing and it is advisable to ask about new products when making an enquiry.

Bollards over 1000mm in height can aid the visually impaired and can assist with the requirements of the recent BS8300 guidelines.
OPTIONS

cast iron bollards

HIGHLIGHTING

Most bollards can be enhanced by highlighting specific features in a contrasting colour. Metallic gold and silver are available in addition to standard RAL & BS colours. For applications that require higher visibility, Furnitubes also offer reflective tape in either white, red or yellow - see page 78.

STANDARD ADAPTATIONS

Many of Furnitubes’ bollards can be adapted to suit other applications, for example, the popular Cannon bollard can serve as a feeder post, cycle rack, railing post or as a base for finger and lamp columns. Furnitubes’ staff can provide information on the correct positioning and most appropriate bollard for particular applications. Please call sales to discuss the full range of possibilities.
OPTIONS

**cast iron bollards**

**BOLLARDS WITH CHAINLINK**
To reduce public access to specific areas, Furnitubes are able to fit eye bolts to bollards onto which lengths of chain can be hung. The photo here shows how Gunner bollards with a spiked chain link helped protect landscaped areas from public intrusion at Canterbury Cathedral. Furnitubes range of standard chain, reflective tape and other accessories are shown in detail on page 78.

**BOLLARDS AS RAILING POSTS**
Modern railings can prove unsympathetic in traditional locations. Utilising cast iron bollards as barrier posts can often better suit the heritage of the area. Furnitubes are able to supply many bollards with holes to accept steel rails. A combination of End, Intermediate and Corner posts can be used to create a simple, yet effective pedestrian barrier. For more information contact Furnitubes’ Sales Team or for other railing systems see the Railings section.

**REPLICA & NEW DESIGNS**
Furnitubes’ heritage in pattern making and foundry casting using time honoured methods enable us to manufacture bollards to diverse specifications. By casting from original or existing bollards, we are able to produce exact replicas so that the aesthetic value of an area may be kept in balance.
SECURITY

cast iron bollards

Ram raids cost retailers thousands of pounds, not only in stolen goods, but also in damage to their premises and trading disruption. Targets range from high street shops to large superstores, including distribution and storage facilities.

THE ORIGINAL DIXONS ANTI-RAM RAID BOLLARD

Following an epidemic of raids, Dixons approached Furnitubes to solve the problem. The result was the dedicated anti ram raid Gunner Security bollard. Attractive and effective, it has become the retailers most popular bollard for protecting store fascias from attack. Thousands have been supplied to sites throughout the UK including Currys, Tesco and PC World.

These bollards are reinforced with a steel security core and tie bars. This 600mm deep core provides the utmost security for premises, providing impact resistance and foundation anchoring.

In 1989, Dixons, Currys and PC World were being relentlessly attacked by so called ‘ram raiders’. This crime, of deliberately crashing stolen vehicles (usually a sporty saloon car) through town centre shop front windows or the stock room shutters of out-of-town retail units, had reached costly and endemic proportions across the country.

I approached Furnitubes for help in the development of a ‘target hardening’ solution to this crime. A range of demountable anti-ram and fixed security bollards were designed and successfully trialled by Furnitubes, who were then contracted to install the protective bollards nationwide.

This urgent ‘roll-out’ programme was achieved with commendable reliability and efficiency, and had the ultimate effect of bringing an end to ‘ram-raids’. The bollards remain an enduring landscape feature in retail parks nationwide, protecting vulnerable shop elevations from this offense.

John Burr, Security, Design & Equipment Specifications Manager

Security Products are available on video CD-ROM
Please contact our sales office for your copy
Other bollards may be used as a visual deterrent or may be reinforced in the same way as the Gunner, with a thick-walled steel inner core, such as a **Trafalgar Medium** shown here protecting a Comet store.

---

**REMOVABLE & TELESCOPIC BOLLARDS**

Removable bollards, such as the **Warminster Medium** pictured here, may be produced and supplied with a hinged, flush fitting ground socket for occasional access or for use with Fire Brigade locks if emergency access is required. It is usual to specify smaller or cast aluminium bollards since they are naturally easier to lift in and out of the socket.

Alternatively, Furnitubes offer a composite socket that does not require a padlock, plus a full range of telescopic bollards.
### BOLLARDS

**TECHNICAL**

**Material**
Furnitubes cast iron and aluminium bollards are 100% recyclable.

**Finish**
Standard finish is primer. We recommend that top coats are applied on site after installation.

**Removable Bollards**
Two types of socket are available for removable bollards:

- **Steel Socket**
  See details on page 59.
- **F1 Socket**
  See details on page 60.

**Disability Conscious**
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

Product Codes are in **bold** type. Dimensions are in mm, are approximate and do not form any part of the contract. We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

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<table>
<thead>
<tr>
<th>BATTLE</th>
<th>BELSIZE</th>
<th>BERESFORD</th>
<th>BRIGHTON</th>
<th>BRUNEL</th>
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<td>BEL 506</td>
<td>BER 507</td>
<td>BRN 707</td>
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<tr>
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<td>Cast Aluminium Removable</td>
<td>Cast Iron Removable</td>
</tr>
</tbody>
</table>

See Note 1

See Note 1

See Note 1

See Notes 1 & 2

See Note 1

See Note 1

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Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

▲ BATTLE shown in Gidea Park, L B Havering

▲ BERESFORD installed in China Town, Soho, London

▲ BRUNEL installed in Dublin City Centre

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Cast Iron & Aluminium Bollards

1:25 FRONT ELEVATION & GROUND LEVEL SECTION

**CANTERBURY**
- CTB 930 Cast Iron Bollard
- OPTIONS:
  - Cast Aluminium Removable

**CAPITAL**
- CAP 100 Cast Iron Bollard
- OPTIONS:
  - Cast Aluminium Removable

**CAPSTAN**
- CAP 520 S Cast Iron Bollard
- OPTIONS:
  - Cast Iron Removable

**CITY**
- CIT 538 Cast Iron Bollard
- OPTIONS:
  - Cast Aluminium Removable
  - Integral Cast Raised Plinth to accept 201 x 120 sign

**DOCKSIDE**
- DOC 704 Circular Cast Iron Bollard
- OPTIONS:
  - Half Bollard
  - Three Quarter Bollard

---

**TECHNICAL**

**Material**
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**Finish**
Standard finish is primer. We recommend that top coats are applied on site after installation.

**Removable Bollards**
Two types of socket are available for removable bollards:
- Steel Socket
  - See details on page 61.
- F1 Socket
  - See details on page 62.

**Disability Conscious**
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

**Note 1**
Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

**Note 2**
For security installation, see page 344.

For removable options, see pages 59 - 61.

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## TECHNICAL

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### Finish
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### Removable Bollards
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- **Steel Socket**: See details on page 59.
- **F1 Socket**: See details on page 60.

### Note 1
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### Note 2
Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

### Product Codes
Product Codes are in **bold** type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

### Door Aperture Dimensions
- **CAN 500 E**: 450mm high, 125mm wide at top, 140mm wide at base
- **CAN 500 ME**: 685mm high, 185mm wide at top, 210mm wide at base

### Section Dimensions
- **CAN 500**: Ø 168mm, max height 140mm
- **CAN 500 E**: Ø 160mm, max height 145mm
- **CAN 500 ME**: Ø 145mm, max height 185mm

### Depth For Mountings
- **CAN 500**: 95mm max at top, 110mm max at base
- **CAN 500 E**: 110mm max at top, 130mm max at base
- **CAN 500 ME**: 110mm max at top, 145mm max at base

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<table>
<thead>
<tr>
<th><strong>CANNON</strong></th>
<th><strong>CANNON SERVICE</strong></th>
<th><strong>CANNON MAJOR</strong></th>
<th><strong>CANNON MAJOR SERVICE</strong></th>
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<tr>
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<td><strong>CAN 500 E</strong></td>
<td><strong>CAN 500 M</strong></td>
<td><strong>CAN 500 ME</strong></td>
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<td>Cast Iron Ballard</td>
<td>Cast Iron Service Ballard</td>
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<td></td>
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<tr>
<td>See Notes 1 &amp; 2</td>
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</tbody>
</table>
DORIC RANGE

DORIC SLIMLINE
DOR 520 S
Cast Iron Bollard
OPTIONS:
Cast Iron Removable

See Note 1

DORIC
DOR 520
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable
Anti-Ram Rad version

See Note 1

DORIC EXTENDED ROOT
DOR 520 ER
Cast Iron Bollard

DORIC MAJOR
DOR 520 M
Cast Iron Bollard

DORIC MAJOR SERVICE
DOR 520 ME
Cast Iron Service Bollard
with Hinged & Locking Door

Door Aperture Dimensions:
700mm high
diameter
600mm max at top
160mm max at base

Backboard Dimensions:
720mm high
diameter
130mm wide at top
160mm wide at base

Section

NOTE 1
Disability Conscious
Bollards installed over
1000mm aid the visually
impaired and can assist
with the requirements of
BS8300.

NOTE 2

Details of reflective tape,
eye-bolts, chain and other
standard fittings can be
found on page 78.

For security installation,
see page 344.

For removable options,
see pages 59 - 61.

TECHNICAL

Material
Furnitubes cast iron and
aluminium bollards are
100% recyclable.

Finish
Standard finish is primer.
We recommend that top
coats are applied on site
after installation.

Removable Bollards
Two types of socket are
available for removable
bollards:

Steel Socket
See details on page 59.

F1 Socket
See details on page 60.

Product Codes are in bold
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CORPORATION
EDINBURGH
ENNISMORE
GLOBAL

TECHNICAL

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Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

▼ EDINBURGH
installed in Hitchin Town Centre, Herts

CORPORATION SLIMLINE
COR 740
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable
See Note 1

CORPORATION
COR 741
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable
See Notes 1 & 2

EDINBURGH
EDN 526
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable
See Note 1

ENNISMORE
ENN 567
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable
See Note 1

GLOBAL
GLB 400
Cast Iron Bollard

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### TECHNICAL

#### Material
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#### Finish
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#### Note 1
Removable Bollards
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  - See details on page 60.

#### Note 2
Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

#### Note 3
Security Bollards
See Appendices at the back of this catalogue for details of spacing, foundation & installation.

---

**GAINSBOURGH**

**GSB 511**
Cast Iron Bollard

**OPTIONS:**
- Cast Aluminium Removable
  - See Notes 1 & 2

---

**GUNNER**

**GUN 503**
Cast Iron Bollard

**OPTIONS:**
- Cast Aluminium Removable
  - See Note 1

---

**GUNNER SECURITY**

**GUN 503 SC**
Cast Iron Anti-Ram Raid Bollard
- Reinforced with Steel Security Core and Tie Bars
- Primer Finish

**OPTIONS:**
- Cast Aluminium Removable
  - See Note 3

---

**GUNNER MAJOR**

**GUN 100**
Cast Iron Bollard

**OPTIONS:**
- Cast Aluminium Removable
  - Security Version
  - See Notes 1, 2 & 3

---

**GUNNER MAJOR SECURITY**

**GUN 100 SC**
Cast Iron Anti-Ram Raid Bollard
- Reinforced with Steel Security Core and Tie Bars
- Primer Finish

**OPTIONS:**
- Cast Aluminium Removable
  - Security Version
  - See Notes 2 & 3

---

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.
TECHNICAL

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Note 3
Lambeth Range
Other products are available in the Lambeth Range. See page 6 for more information.

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For security installation, see page 344.

For removable options, see pages 59 - 61.

MANCHESTER ROUND BASE
installed at the Chimes, Uxbridge

HAMMERSMITH

HAM 500
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Notes 1 & 2

JERMYN

JER 115
Cast Iron Bollard with octagonal dome cap

OPTIONS:
Domed (spherical cap)

See Note 2

MANCHESTER SQ BASE

MAN 536 SB
Circular Cast Iron Bollard with Square Base

OPTIONS:
Cast Aluminium Removable Anti-Ram Raid

See Note 1

MANCHESTER ROUND BASE

MAN 536 RB
Circular Cast Iron Bollard with Circular Base

OPTIONS:
Cast Aluminium Removable Anti-Ram Raid

See Note 1

LAMBETH

LAM 510
Cast Ductile Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Notes 1, 2 & 3

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Note 2
See Note 2

Note 3
See Notes 1, 2 & 3

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Lambeth Range
Other products are available in the Lambeth Range. See page 6 for more information.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

Furnitubes cast iron and aluminium bollards are 100% recyclable.

Finish
Standard finish is primer. We recommend that top coats are applied on site after installation.

Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

Lambeth Range
Other products are available in the Lambeth Range. See page 6 for more information.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.
NEW KENNINGTON
PALACE
REGENTS PIE CRUST
SPINNER
SHERRATT

TECHNICAL

Material
Furnitubes cast iron and aluminium bollards are 100% recyclable.

Finish
Standard finish is primer. We recommend that top coats are applied on site after installation.

Note 1
Removable Bollards
Two types of socket are available for removable bollards:

Steel Socket
See details on page 59.

F1 Socket
See details on page 60.

Note 2
Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

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Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.
SOUTHWARK
TELFORD
TRAFALGAR

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

TECHNICAL

Material
Furnitubes cast iron and aluminium bollards are 100% recyclable.

Finish
Standard finish is primer. We recommend that top coats are applied on site after installation.

Removable Bollards
Two types of socket are available for removable bollards:

- Steel Socket: See details on page 59.
- FI Socket: See details on page 60.

Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BSEN100.

Security Bollards
See Appendices at the back of this catalogue for details of spacing, foundation & installation.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

SOUTHWARK

SOU 130
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable
Integral Cast raised Plinth to accept 210 x 120mm sign.

See Note 1

See Notes 1 & 2

TRAFALGAR LARGE

TRA 632
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Note 1

See Notes 1 & 2

TRAFALGAR MEDIUM SECURITY

TRA 631 SC
Cast Iron Anti-Ram Raid Bollard Reinforced with Steel Security Core and Tie Bars Primer Finish

See Note 3

FRONT ELEVATION & GROUND LEVEL SECTION

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.

TECHNICAL

Material
Furnitubes cast iron and aluminium bollards are 100% recyclable.

Finish
Standard finish is primer. We recommend that top coats are applied on site after installation.

Removable Bollards
Two types of socket are available for removable bollards:

- Steel Socket: See details on page 59.
- FI Socket: See details on page 60.

Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BSEN100.

Security Bollards
See Appendices at the back of this catalogue for details of spacing, foundation & installation.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

SOUTHWARK

SOU 130
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable
Integral Cast raised Plinth to accept 210 x 120mm sign.

See Note 1

See Notes 1 & 2

TRAFALGAR LARGE

TRA 632
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Note 1

See Notes 1 & 2

TRAFALGAR MEDIUM SECURITY

TRA 631 SC
Cast Iron Anti-Ram Raid Bollard Reinforced with Steel Security Core and Tie Bars Primer Finish

See Note 3
**Viceroy**

**Warminster**

**Cast Iron & Aluminium Bollards**

### Technical

**Material**
Furnitures cast iron and aluminium bollards are 100% recyclable.

**Finish**
Standard finish is primer. We recommend that top coats are applied on site after installation.

**Note 1**
Removable Bollards
Two types of socket are available for removable bollards:

- *Steel Socket*
  - See details on page 59.

- *F1 Socket*
  - See details on page 60.

**Note 2**
Disability Conscious
Bollards installed over 1000mm aid the visually impaired and can assist with the requirements of BS8300.

**Note 3**
Security Bollards
See Appendices at the back of this catalogue for details of spacing, foundation & installation

Product Codes are in **bold** type. Dimensions are in mm, are approximate and do not form any part of the contract.

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**VICEROY**

**VIC 521**
Cast Iron Bollard

**OPTIONS:**
- Cast Aluminium Removable

See Note 1

**Warminster SQ Base**

**WAR 511 SB**
Circular Cast Iron Bollard with Square Base

**OPTIONS:**
- Cast Aluminium Removable Anti-Ram Raid

See Notes 1 & 2

**Warminster Round Base**

**WAR 511 RB**
Circular Cast Iron Bollard with Circular Base

**OPTIONS:**
- Cast Aluminium Removable Anti-Ram Raid

See Notes 1 & 2

**Warminster Medium**

**WAR 811**
Cast Iron Bollard

**OPTIONS:**
- Cast Aluminium Removable Anti-Ram Raid

See Note 1

**Warminster Medium Security**

**WAR 811 SC**
Cast Iron Anti-Ram Raid Bollard Reinforced with Steel Security Core and Tie Bars Primer Finish

See Note 2

**Warminster MEDIUM installed in Thornbury Square, London**

Details of reflective tape, eye-bolts, chain and other standard fittings can be found on page 78.

For security installation, see page 344.

For removable options, see pages 59 - 61.
Furnitubes popular Doric and Cannon bollards are also available as power service bollards. Service bollards are used in locations where water or electrical services are required.

The timber backboard provides an ideal mounting point for a range of either electric or water service units and the lockable hinged door offers protection from vandalism and prohibits unauthorised use. An earthing bolt is also supplied.

- Cast iron main body provides strength and protection
- Lockable door prohibits unauthorised use
- Timber backboard is ideal for mounting service units
- Corrosion resistant hinges
- Available for water or electrical service
- Access hole at the base of the door to allow cables to pass through
Furnitubes range of traffic bollards are designed to deflect the wheels of vehicles to prevent them mounting kerbs and to restrict access.

The contemporary Avector traffic bollard is ideal for modern areas, and the traditional Bell bollard is available in a variety of styles and options.
The Avector bollard is the latest addition to Furnitubes range of Traffic Control bollards.

Conventional bollards are often overturned or damaged by vehicles that drift onto the pavement, especially on the corner of roads.

The Avector bollard is designed to enable the deflection of a vehicle's wheels. Its sleek modern form is designed for contemporary locations. For sites which require a more traditional design our Bell bollard range is ideal.

- PEDESTRIAN SAFETY
- PROTECTION OF PROPERTY
- WIDTH RESTRICTOR
- PROTECTION OF ROAD SIGNS & STREET FURNITURE

**AVECTOR**

AVECTOR bollard

The Avector Bollard deflects the wheels of a vehicle, protecting the pavement, pedestrians and property.
Modern, heavy-duty commercial vehicles can carry large and heavy payloads, often weighing up to 38 tonnes. These huge beasts may be efficient and profitable to their owners, but to pedestrians, roadside structures, and street furniture they can present a constant source of damage and danger. Less obvious structures like overhanging or historic buildings are also at risk and in need of protection.

Unnecessary damage means costly repairs and does nothing to enhance the appearance of our environment that we’re now trying so hard to improve and preserve.

Until now, the only answer has been to place conventional bollards close to the areas that need protection, but these are often easily overturned, causing damage to the vehicle involved, pavement, bollard and resulting in an even greater hazard to the pedestrian, as shown.

THE SOLUTION

The revolutionary Bell 100 Bollard, manufactured by Furnitubes, is a simple yet effective solution. Following an extensive study of lorry wheels and undercarriages, a design was created to enable the deflection of a vehicle’s wheels, whilst itself remaining firmly in place and undamaged. The bollard’s profile is designed to encourage a vehicle’s tyres initially to mount its lower curve. By increasing the slope-angle of the bollard above this point, any attempt by the vehicle to rise further is prevented by deflecting the tyre sharply away.

The video footage above shows the bell in action.
BELL BOLLARD

Bell Bollards can provide a stable vehicular barrier, as even high axled lorries would not be able to drive over an obstruction of this height, without causing irreparable damage to its drive train and steering mechanisms.

Positioned and aligned at appropriate distances across the road, Bell Bollards can also act as effective width restrictors, preventing oversize vehicles from passing through.

Bell Bollards
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Paul M. Harris
Innovation and New Product Design.

Product Codes are in bold type. Dimensions are in mm, are approximate and do not form any part of the contract.

We reserve the right to change the design and specification on any item offered and, where possible, notification will be made.

Furnitubes cast iron and aluminium Bell bollards are 100% recyclable.

Finish
Standard finish is primer. We recommend that top coats are applied on site after installation.

Furnitubes Identification
We are proud of our products and they will therefore be identifiable with our name.

Material

BELL 100 Bollard will deflect the largest lorries

▲ BELL 100
installed as width restrictors supplied to the London Borough of Wandsworth
VARIATIONS
For protection to corners of buildings and exposed brickwork the Bell 340 is an ideal solution. The shape is the same as a standard bell, but with a segment removed, to allow for easy installation without having to disturb the fabric of the corner.

Decorative use of the Bell can be made using the Bell 500 version. It is the same size as the standard bollard, but instead of the deep root, there are four shallow flanges. With proper foundations it is ideal for use on bridges and areas where it is not possible to install the Bell 100.

Furnitubes’ new Bell 500 X has a unique steel subframe that performs as well as the Bell 100 in situations where underground services make installation difficult, whilst also being easier to transport and handle.

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**Bell Bollard\(^\text{®}\)**

**new additions**

**BELL 115**

The *BELL 115* has been designed to allow the installation of a Bell Bollard and a 115mm diameter post or bollard within the same footings. The combination will deflect vehicles and protect structures from damage, whilst also acting as a high visibility post.

The ability of the *BELL 115* to act as a pedestrian barrier is further enhanced by incorporating the Bell Bollard into the *Linx 100 railing system*. By combining the two products it is possible to design an integrated, cost effective vehicular and pedestrian barrier, with the Bell Bollard protecting any corner post from damage by passing vehicles.

When the *BELL 115* is installed with a bollard or post of 1000mm height or greater, the Bell Bollard will conform to disability discrimination guidelines for partially sighted pedestrians.

**BELL 138**

Furnitubes new *Bell 138* is a variation of the popular *Bell Bollard* range. The *Bell 138* variation has a recess designed specifically to house a *CIT 538 City Bollard*. In addition to providing improved visibility, it also enables the Bell to blend seamlessly within locations where City bollards are used.

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**TECHNICAL**

*Material*

Furnitubes cast iron and aluminium *Bell bollards* are 100% recyclable.

*Finish*

Standard finish is primer. We recommend that top coats are applied on site after installation.

*Disability Conscious*  
Bollards over 1000mm aid the visually impaired and can assist with the requirements of BS8300.
**TYPICAL INSTALLATIONS**
The diagrams below show how Bell bollards can be installed along a kerb to prevent a vehicle from mounting the pavement.

Bell Bollards can also act as effective width restrictors when positioned at appropriate distances across the road, thus preventing oversize vehicles from passing through.

**INSTALLATION**
Care should be taken when preparing the foundations for the Bell Bollard. Diagrams (A) and (B) show the recommended minimum foundation size. In cases of doubt, a professional engineers’ advice should be sought.

To ensure the Bell Bollard works effectively it should always be set so that the height above ground level remains the same regardless of the type of base. If the Bell Bollard is set on sloping ground the height above ground level should be determined from its centerline, not edge.

**INTERNATIONAL APPEAL**
Since its introduction over twenty years ago, the Furnitubes Bell Bollard has been installed in many locations all over the world, making it Furnitubes’ most famous international product!
The Lambeth® Traffic Bollard is available with any Ø300mm DfT traffic sign, which is held on mechanically without any visible fixings. The Lambeth Traffic Bollard is made from 100% recycled S.G Iron, and is supplied painted black. It is part of the Lambeth range, that consists of streetscape elements manufactures in tough S.G (Ductile) Iron for longevity and vandal resistance.

Manufactured in tough medium density polyethylene, the reflective Luton traffic bollard rebounds on impact. The reflective ‘keep left’ panels are rebated into the faces of the bollards, offering added protection from vehicular impact.

Approved by DfT, the Luton Traffic Bollard can be used in conjunction with the F1 50 socket to provide a flexible traffic solution, allowing completion on a site before the installation of the bollard. See page 135 for more details on the F1 50 socket.