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.
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.
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.

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.

STEEL REMOVABLE SOCKETS

As standard, removable bollards are supplied with a socket & hinged cover plate. The bollard has a hasp that passes through the cover plate allowing an FB14 padlock to be used. Padlocks are not supplied.

See page 59 for full details

STEEL SECURITY pg 38

HI COMPOSITE SOCKETS

An ‘F1 Socket’ is available as an alternative to the standard socket & does not require a padlock.

See page 60 for full details

TELESCOPIC BOLLARDS

Furnitubes offer a range of Steel telescopic bollards. These lockable bollards can be lowered into the ground when not in use. Anti-Ram Raid versions are also available. See page 66 for full details

other security options

Avector pg 38
Bell pg 29
Burr Bloc pg 62
Steel Security pg 38
Stainless Steel pg 51
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.

^ BERESFORD
shown in Gidea Park, Lb Havering

^ BATTLE
installed in China Town, Soho, London

^ BRUNEL
installed in Dublin City Centre

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.
Fr1 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.

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

---

BAT 750
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

BEL 506
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

BER 507
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

BRN 707
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

BRU 523
Cast Iron Bollard
OPTIONS:
Cast Iron Removable

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Cast Iron & Aluminium Bollards

CTB 930
Cast Iron Bollard
Options: Cast Aluminium Removable

CAP 100
Cast Iron Bollard
Options: Cast Aluminium Removable

CAP 520 S
Cast Iron Bollard
Options: Cast Iron Removable

CIT 538
Cast Iron Bollard
Options: Cast Aluminium Removable Integral Cast Raised Plinth to accept 201 x 120 sign

DOC 704
Circular Cast Iron Bollard
Options: Half Bollard Three Quarter Bollard

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 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.

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.

See Notes 1 & 2

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

Note 2
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For security installation, see page 344.
For removable options, see pages 59 - 61.

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Front Elevation & Ground Level Section

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 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.

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.

See Notes 1 & 2

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.
CANNON RANGE

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.

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.

CANNON
CAN 500
Cast Iron Bollard
Options:
- Cast Aluminium Removable

See Notes 1 & 2

CANNON SERVICE
CAN 500 E
Cast Iron Service Bollard with Hinged Slam Lock Door
Backboard Dimensions: 460mm high
110mm wide at top
110mm wide at base
Door Aperture Dimensions: 450mm high
125mm wide at top
140mm wide at base
Depth For Mountings: 95mm max at top
110mm max at base

See Note 2

CANNON MAJOR
CAN 500 M
Cast Iron Bollard

See Note 2

CANNON MAJOR SERVICE
CAN 500 ME
Cast Iron Service Bollard with Hinged Slam Lock Door
Backboard Dimensions: 680mm high
150mm wide at top
170mm wide at base
Door Aperture Dimensions: 685mm high
185mm wide at top
210mm wide at base
Depth For Mountings: 220mm max at top
240mm max at base

See 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.

Door Aperture Dimensions:
450mm high
125mm wide at top
140mm wide at base

See 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.

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

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For removable options, see pages 59 - 61.

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.
DORIC RANGE

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.

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.
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.

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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

### TECHNICAL DETAILS

**CORPORATION SLIMLINE**

**COR 740**
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

**COR 741**
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

**EDINBURGH**

**EDN 526**
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

**ENNISMORE**

**ENN 567**
Cast Iron Bollard
OPTIONS:
Cast Aluminium Removable

**GLOBAL**

**GLB 400**
Cast Iron Bollard

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

**Note 2**
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.

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.

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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Removable Bollards
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- Steel Socket
  See details on page 59.
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  See details on page 60.

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Security Bollards
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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.

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 BSI8300.

Note 3
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.

### LAMBERTH

- **HAM 500**
  - Cast Iron Bollard
  - **Options:** Cast Aluminium Removable

- **HAM 500**
  - Cast Iron Bollard
  - **Options:** Dimpled (spherical cap)

- **MAN 536 SB**
  - Circular Cast Iron Bollard with Square Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

- **MAN 536 RB**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

- **LAM 510**
  - Cast Ductile Iron Bollard
  - **Options:** Cast Aluminium Removable

See Notes 1 & 2
See Note 2
See Note 1
See Notes 1, 2 & 3

### HAMMERSMITH

- **HAM 500**
  - Cast Iron Bollard
  - **Options:** Cast Aluminium Removable

- **HAM 500**
  - Cast Iron Bollard
  - **Options:** Dimpled (spherical cap)

- **MAN 536 SB**
  - Circular Cast Iron Bollard with Square Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

- **MAN 536 RB**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

See Notes 1 & 2
See Note 2
See Note 1
See Notes 1, 2 & 3

### JERMYN

- **JER 115**
  - Cast Iron Bollard with octagonal dome cap
  - **Options:** Cast Aluminium Removable

- **JER 115**
  - Cast Iron Bollard with octagonal dome cap
  - **Options:** Dimpled (spherical cap)

- **MAN 536 SB**
  - Circular Cast Iron Bollard with Square Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

- **MAN 536 RB**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

See Notes 1 & 2
See Note 2
See Note 1
See Notes 1, 2 & 3

### MANCHESTER

- **MAN 536**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Cast Aluminium Removable Anti-Ram Raid

- **MAN 536**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Dimpled (spherical cap)

- **MAN 536**
  - Circular Cast Iron Bollard with Circular Base
  - **Options:** Dimpled (spherical cap)

See Notes 1 & 2
See Note 2
See Note 1
See Notes 1, 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

### 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.

---

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Dimensions</th>
<th>Weight</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEW KENNINGTON</strong></td>
<td>KEN 525</td>
<td>Cast Iron Bollard</td>
<td>300 x 900</td>
<td>Cast Aluminium Removable</td>
</tr>
<tr>
<td><strong>PALACE</strong></td>
<td>PAL 150</td>
<td>Cast Iron Bollard</td>
<td>300 x 900</td>
<td>Cast Aluminium Removable</td>
</tr>
<tr>
<td><strong>REGENTS PIE CRUST MK.2</strong></td>
<td>REG 524</td>
<td>Cast Iron Bollard</td>
<td>300 x 900</td>
<td>Cast Aluminium Removable</td>
</tr>
<tr>
<td><strong>SPINNER</strong></td>
<td>SPN 656</td>
<td>Cast Iron Bollard</td>
<td>300 x 900</td>
<td>Cast Aluminium Removable</td>
</tr>
<tr>
<td><strong>SHERRATT</strong></td>
<td>SHE 502</td>
<td>Cast Iron Bollard</td>
<td>300 x 900</td>
<td>Cast Aluminium Removable</td>
</tr>
</tbody>
</table>

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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.

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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.

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.

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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SOUTHWARK

SOU 130  
Cast Iron Bollard

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

See Note 1

TELFORD

TEL 550  
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Note 1 & 2

TRAFALGAR LARGE

TRA 631  
Cast Iron Bollard

OPTIONS:
Cast Aluminium Removable

See Note 1 & 2

TRAFALGAR MEDIUM

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

See Note 3

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 SQ Base**
- WAR 511 SB: Circular Cast Iron Bollard with Square Base
  - Options: Cast Aluminium Removable Anti-Ram Raid
  - See Note 1

**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
  - Primer Finish
  - 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 1

**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 BS8300.

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

**Notes**
- Note 1: Disability Conscious
- Note 2: Security Bollards

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

**Technical**
- Furnitubes cast iron and aluminium bollards are 100% recyclable.
- 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 BS8300.

**Technical**
- See Appendices at the back of this catalogue for details of spacing, foundation & installation.

**Notes**
- Note 1: Disability Conscious
- Note 2: Security Bollards

**Technical**
- Furnitubes cast iron and aluminium bollards are 100% recyclable.
- 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
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POWER bollards

Furnitubes popular Doric and Cannon bollards are available as power service bollards. These bollards are designed to house electricity or water supply points, allowing an easily accessible source of power.

The timber backboard provides an ideal mounting point for service units and the lockable hinged door prohibits vandalism and unauthorised use. The door of the bollards can be fully closed even while the units are in use ensuring complete protection. An earthing bolt is also supplied - see pages 18-19 for technical details.

Popular with market traders, the power service bollards have also been installed in recreational ground, parks and camping sites.

The Cannon Service (shown left) is the same size as a regular Cannon bollard. The Doric and Cannon Major Service (shown centre and right) contains a larger mounting space. The Cannon Major Service bollard (shown right) has been supplied with a special crest for Gibraltar.

- durable: cast iron main body provides strength and protection
- slam lock 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

The Doric Major Service bollard has been supplied to many locations through the UK, including Bedford High street, Margate, St Albans, Herts (left images) and London (shown right). The centre right image shows an electrical version of the Doric Major Service, and the far right images shows a water version.
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

**TECHNICAL**

<table>
<thead>
<tr>
<th>Material</th>
<th>Furnitubes cast iron Avector bollard is 100% recyclable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finish</td>
<td>Standard finish is primer. We recommend that top coats are applied on site after installation.</td>
</tr>
<tr>
<td>Name Identification</td>
<td>We are proud of our products and they will therefore be identifiable with our name.</td>
</tr>
</tbody>
</table>

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.

![Avector Bollard deflects the wheels of a vehicle, protecting the pavement, pedestrians and property](image)
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 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.
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.

Bell Bollards

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Paul M. Harris
Innovation and New Product Design.
Bell Bollard®
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 CITY 538 City Bollard. In addition to providing improved visibility, it also enables the Bell to blend seamlessly within locations where City bollards are used.

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
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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**

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% recyclable 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.

**LAMBETH® RANGE**

- Bollards pg 22
- Cycle parking pg 100
- Seating pg 170
- Litter pg 216

**LAMBETH® & LUTON**

**LAMBETH®**

- LAM 300 Cast Ductile Iron Bollard
- Wet Spray Black
- DfT Traffic Sign

**LUTON®**

- LUT 300 Medium Density Polyethylene
- Diamond Grade Reflective Panels
- DfT Traffic Sign

To be used in conjunction with F1 50 socket (not included, see page 135)

**F1 50**

- Composite Removable Socket with Steel Lid
- To accept 50 mm square

**TECHNICAL**

**LAMBETH TRAFFIC BOLLARD**

- Material: Furnitubes Cast Ductile Iron is 100% recyclable.
- The Luton Traffic Bollard contains recyclable parts.
- Luton Traffic Bollard: The Luton Traffic Bollard is also available in black.

**LUTON TRAFFIC BOLLARD**

- Material: Medium Density Polyethylene
- Fully Recyclable
- Anti-Twist Design & Quick Recovery
- F1 50 Socket for Easy Replacement

**F1 50 SOCKET**

- Composite Removable Socket with Steel Lid
- To accept 50 mm square

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